

# **AOS-S and AOS-CX Transceiver Guide**

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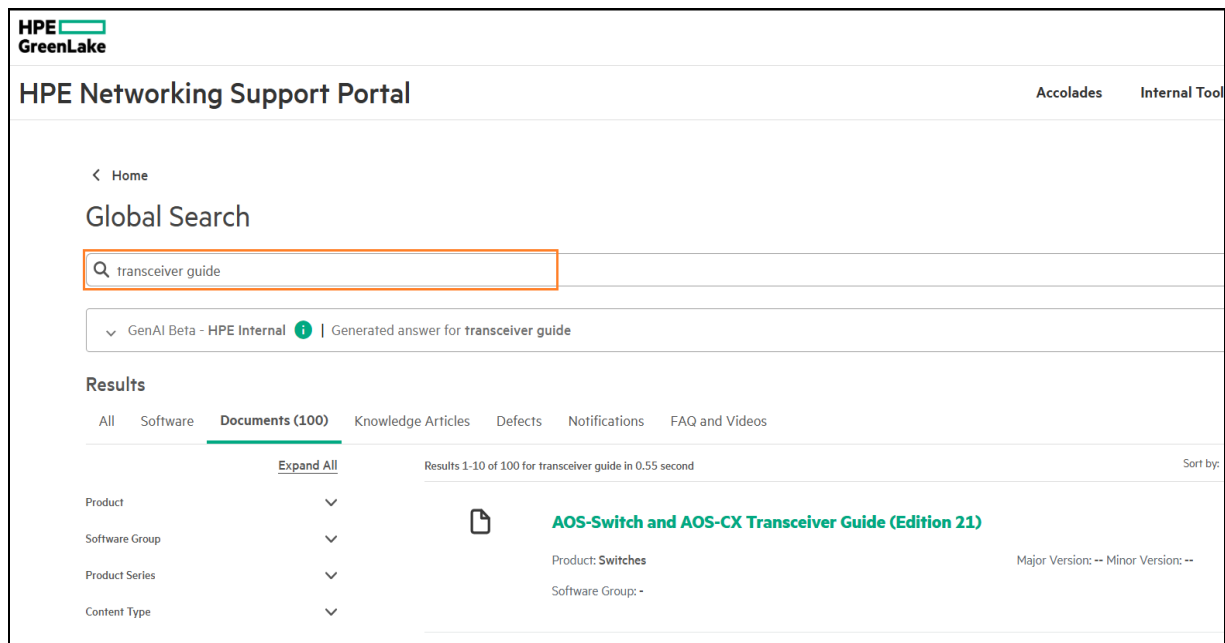
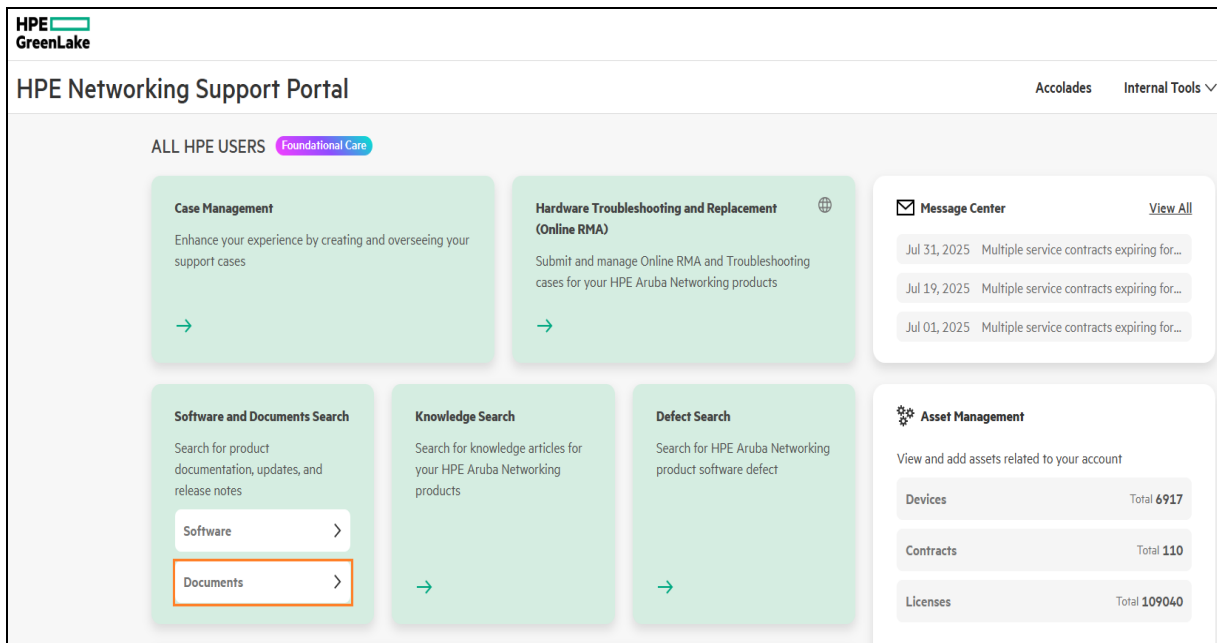
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## Chapter 2

# Updates to this edition

The latest version of the AOS-S and AOS-CX Transceiver Guide can be found on <https://networkingsupport.hpe.com> by navigating to **Software & Documents** > **Search files** and entering "Transceiver Guide" in the search window:



## **General updates**

- This edition reflects support up to the AOS-CX 10.16.1010 release
- CX 10.16.0001 is a restricted release, made available to select customers and not widely available across the CX switching line. The upcoming 10.16.10xx release will be generally available to the entire CX product line.

## **New switch introductions in this edition**

- 6300M models (SKUs: S4P41A, S4P42A, S4P43A, S4P44A, S4P45A, S4P46A, S4P47A, S4P48A)
- 10040 series (SKUs: S4R54A, S4R55A, S4R56A, S4R57A, S4R58A, S4R59A)

## **Overview chapter**

- Added temperature ratings information
- Added information regarding the difference between QSFP28 and QSFP56

## **QSFP-DD (400G-200G) chapter**

- Added new 10040 switch support
- Updated 9300S support status:
  - S3N94A (supported)
  - S4B35A (PLR8) (not supported)

## **QSFP28 (100G) chapter**

- Added new 10040 switch support
- Added note for QSFP56 to SFP56 DAC cable to support on new 6300 S4Pxxx models

## **QSFP+ (40G) chapter**

- Added new 10040 switch support

## **SFP56 (50G) chapter**

- Added new 6300 S4Pxxx models

## **SFP28 (25G) chapter**

- Added new 10040 switch support
- Added 5420 Switch modules S0U63A/S0U73A & S0U68A/S0U78A, optical only
- Added new 6300 S4Pxxx models

## **SFP+ (10G) chapter**

- Added 9300/9300S added support for DACs to the low-speed ports
- Added new 10040 switch support (in low-speed ports and via QSA28)
- Added 5420 Switch modules S0U64A/S0U74A
- Added new 6300 S4Pxxx models

## **SFP (1G and 100Mbps) chapter**

- Added new 6300 S4Pxxx models
- Added 8325P and 8325H models

## **HPE storage products support chapter**

- No updates in this edition

The transceivers listed in this document represent the currently available and End of Sale products at the time of this publication. Not all transceiver products are supported in every switch available from Aruba. Consult the datasheets for the applicable switch product for a list of supported transceiver products. Datasheets can be found at <https://www.arubanetworks.com/resources/product-and-solution-information/>.

## How to use this Guide

Read this Overview chapter for basic understanding of technologies and features, such as split ports and breakout cables.

1. Find the chapter with the port type you are interested in – usually related to the speed of the interconnect:
  - Q-DD or QSFP-DD = 400G. Supports 200G/100G/40G.
  - QSFP56 = 200G. Supports 100G and 40G. Also supported by Q-DD ports.
  - QSFP28 = 100G. Supports 40G. Also supported by Q-DD and QSFP56 ports.
  - QSFP+ = 40G. Also supported by Q-DD ports and in QSFP56 and QSFP28 ports
  - SFP56 = 50G. Supports 25G and 10G (in some cases 1G).
  - SFP28 = 25G. Supports 10G and 1G. Also supported by SFP56 and through a QSA28 Adapter for QSFP ports.
  - SFP+ = 10G. Supports 1G and in some cases 100Mbps. Also supported by SFP28 and SFP56 and through a QSA28 Adapter for QSFP ports.
  - SFP = 1G, 100Mbps (may also be supported by SFP+, SFP25, SFP56 ports - see specific comments by switch model).
2. See the details of the Transceiver, DAC or AOC including connector type, wavelength and distance supported over which type of medium.
3. Find the switch of interest, and note the minimum software version required to support the transceiver, DAC, or AOC and any exceptions (such as limitations to select ports or port configuration requirements).



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HPE Server and Systems and HPE Storage interconnect products (DACs, Split DACs/AOCs) are noted. Some products may not be available to Aruba-exclusive resellers.

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## Conventions

This section describes the conventions used in the documentation.

## Note on product images



Product images in this guide may differ from actual product.

## Port numbering in examples

The port numbers in this document are for illustration only and might be unavailable on your device.

## Types of transceiver modules and network cables

| Transceiver module type |                                                                                 | Connector head                                                                     |
|-------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| QSFP-DD (Q-DD)          | QSFP-Double-Density (different physical edge connector than QSFP28 or QSFP56)   | Depending on technology, MPO-12 strand, MPO-16 strand, SN 2-strand, or LC 2-strand |
|                         | Q-DD AOC (Active Optical Cable for interconnecting devices) 3m to 50m reaches   | Optical cable permanently attached                                                 |
| QSFP56 module           | QSFP56 same size as QSFP28/QSFP+ (optical)                                      | MPO 12-strand or LC 2-strand                                                       |
|                         | QSFP56 DAC (copper cable for interconnecting devices) 1m and 2.5m reaches       | Twinax cable permanently attached                                                  |
|                         | QSFP56 AOC (Active Optical Cable for interconnecting devices) 3m to 30m reaches | Optical cable permanently attached                                                 |
| QSFP28 module           | QSFP28 same size as QSFP56/QSFP+ (optical) QSFP28 optical transceiver module    | MPO 12-strand or LC 2-strand                                                       |
|                         | QSFP28 DAC (copper cable for interconnecting devices) 1m to 5m reaches          | Twinax cable permanently attached                                                  |
|                         | QSFP28 AOC (Active Optical Cable for interconnecting devices) 2m to 30m reaches | Optical cable permanently attached                                                 |
| QSFP+ module            | QSFP+ same size as QSFP56/QSFP28 (optical) QSFP+ optical transceiver module     | MPO 12-strand or LC 2-strand                                                       |
|                         | QSFP+ DAC (copper cable for interconnecting devices) 1 - 5m reaches             | Twinax cable permanently attached                                                  |
|                         | QSFP+ AOC (Active Optical Cable for interconnecting devices) 7m to 30m reaches  | Optical cable permanently attached                                                 |
| SFP56 module            | SFP56 same size as SFP28/SFP+ (optical)                                         | LC 2-strand (new tri-speed; refer to <a href="#">SFP56 Modules</a> )               |
|                         | SFP56 DAC (copper cable for interconnecting devices) 0.65m and 3m reaches       | Twinax cable permanently attached                                                  |
|                         | SFP56 DAC (copper cable for interconnecting devices)                            | Twinax cable permanently attached                                                  |

| Transceiver module type                  |                                                                                | Connector head                                                                                                    |
|------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| SFP28 module                             | SFP28 same size as SFP+/SFP (optical)                                          | LC 2-strand                                                                                                       |
|                                          | SFP28 DAC (copper cable for interconnecting devices) 0.65m to 5m reaches       | Twinax cable permanently attached                                                                                 |
|                                          | SFP28 AOC (Active Optical Cable for interconnecting devices) 3m to 15m reaches | Optical cable permanently attached                                                                                |
| SFP+ module                              | SFP+ same size as SFP56/SFP28/SFP (optical) SFP+ optical transceiver module    | LC 2-strand or 1-strand (for BiDi)                                                                                |
|                                          | SFP+ DAC (copper cable for interconnecting devices)                            | Twinax cable permanently attached                                                                                 |
|                                          | 10GBASE-T copper transceiver module                                            | RJ-45<br>(Requires Cat6a for maximum supported distances. Shielded 6a cable recommended to eliminate EMI issues.) |
| Small form-factor pluggable (SFP) module | 100-Megabit SFP optical transceiver module                                     | LC 2-strand                                                                                                       |
|                                          | Gigabit SFP optical transceiver module                                         |                                                                                                                   |
|                                          | 1G SFP copper transceiver module                                               | RJ-45<br>(1G requires Cat5e for maximum supported distances.)                                                     |

The available transceiver modules and network cables vary by device models and are subject to change over time. For the most up-to-date list of transceiver modules and network cables, contact your Aruba sales representative or technical support engineer.

For information about the transceiver modules and network cables available for each device model, see the Datasheets or QuickSpecs for the applicable switch product. Refer to the tables within this guide for use-case limitations for specific switch models.

## Data rate

Data rate is the number of bits transmitted per second. The unit of measure for data rate is Megabits per second (Mbps) or Gigabits per second (Gbps). Transceiver modules, optical, Direct Attach over Copper (DAC), and Active Optical Cables (AOC) products provide the following levels of data rates:

- 400 Gbps (optical, DAC, and AOC)
- 200 Gbps (optical, DAC, and AOC)
- 100 Gbps (optical, DAC, and AOC)
- 50 Gbps (optical and DAC at this time)
- 40 Gbps (optical, DAC, and AOC)

- 25 Gbps (optical, DAC, and AOC)
- 10 Gbps (optical, DAC, and RJ45 10GBASE-T)
- 1000 Mbps ((gigabit) optical and RJ45 1000BASE-T)
- 100 Mbps ((Fast Ethernet) optical only)

## Nominal wavelength

Nominal wavelength (wl) represents the wave band used for optical signal transmission. The following nominal wavelengths are available for common optical transceiver modules representing three wavebands:

- 850 nm waveband: Used for short-reach typically "SR" type transceivers.
- 1310 nm and 1550 nm waveband: Used for middle-reach (DR, FR) and long-haul (LR, ER) transceivers.

## Fiber

### Fiber types

Fibers are classified as multimode fibers and single-mode fibers.

### Multimode fibers

Multimode fibers (MMFs) have thicker fiber cores and can transport light in multiple modes. However, the intermodal dispersion is greater and worsens as the transmission distance increases.

In an optical fiber network, the dispersion effect means that the wavelengths arrive at their destination at slightly different times to one another. All light begins to disperse as soon as it leaves its source, and the same is true for the light in an optical network.

Multimode fibers can be classified into multiple grades according to their diameters and modal bandwidth. The modal bandwidth of a multimode fiber is determined by the expression of the maximum modulation frequency pulse that can pass a fiber  $\times$  the fiber length. The modal bandwidth is a comprehensive index reflecting the optical characteristics of a multimode fiber.

International Telecommunication Union (ITU) defines multimode fiber types in its G series standards. The commonly used multimode fiber is defined in the ITU G.651 standard. The G.651-compliant fiber transmits light at the wavelength range 800 nm to 900 nm or 1200 nm to 1350 nm.

| Fiber mode      | Fiber grade | Fiber diameter ( $\mu\text{m}$ ) | Modal bandwidth at 850 nm (MHz*km) |
|-----------------|-------------|----------------------------------|------------------------------------|
| Multimode fiber | OM1         | 62.5/125                         | 200                                |
|                 | OM2         | 50/125                           | 500                                |
|                 | OM3         | 50/125                           | 2000                               |
|                 | OM4         | 50/125                           | 4700                               |

Other factors that influence the transmission distance of multimode fibers include interface type, nominal wavelength, and fiber grade. The modal bandwidth values shown above are for the fiber grades listed. There are multimode fibers that have different modal bandwidth characteristics and do not necessarily match the OM1 - OM4 grades. See the individual transceiver specifications for distances supported when using MMF OM1-OM4. OM5 is a grade of multimode fiber that is primarily designed for

short wave division multiplexing (SWDM) used by 40G speeds and higher. There usually is no distance advantage for 10G through 40G speeds that use single wavelengths over an OM5 fiber.

## Single-mode fibers

Single-mode fibers (SMFs) have a small core size, typically 9 µm or 10 µm, and can transmit light in only one mode. Single-mode fibers suffer little intermodal dispersion and are suitable for long-haul communication. Single-mode fibers transmit light at the nominal wavelength of 1310 nm or 1550 nm. Telecommunication Industries Alliance (TIA)/Electronic Industries Alliance (EIA) defines that single-mode fibers use yellow outer jackets with the mark "SM".

ITU defines single-mode fiber types in its G series standards. The most commonly used single-mode fibers are defined in ITU G.652 and G.655 standards. The following table describes features of the G.652 and G.655-compliant fibers.

| Single-mode fiber type                                    | Wavelength (nm)              | Features                            | Applications                                                                    |
|-----------------------------------------------------------|------------------------------|-------------------------------------|---------------------------------------------------------------------------------|
| G.652-compliant fiber (standard single-mode fiber)        | 1260 to 1360<br>1530 to 1565 | Zero dispersion at 1310 nm          | Connecting transceiver modules with a nominal wavelength of 1310 nm or 1550 nm. |
| G.655-compliant fiber (non-zero dispersion shifted fiber) | 1530 to 1565                 | Near-zero dispersion around 1550 nm | For 1550 nm wavelength-division multiplexing (WDM) transmissions.               |

## Fiber diameter

Fiber diameter is expressed as core diameter/cladding diameter, in µm. For example, 9/125 µm means that the fiber core diameter is 9 µm and the fiber cladding diameter is 125 µm.

For the HPE devices, the following fiber diameters are recommended:

- **G.651 standard multimode fiber:** 50/125 µm or 62.5/125 µm
- **G.652 standard single-mode fiber:** 9/125 µm
- **G.655 non zero dispersion shifted single-mode fiber:** 9/125 µm

## Connector types



Cover the connector with a dust cap when it is not connected to any optical fibers.

Connectors connect transceiver modules to the corresponding transmission media. The transceiver modules available for Aruba products use the following types of connectors:

### Lucent connector or local connector (LC)

Single LC connectors (also known as Simplex) are typically used for BiDi (BiDirectional) optics.

Dual LC connectors (Duplex) are typically used in normal optical types.

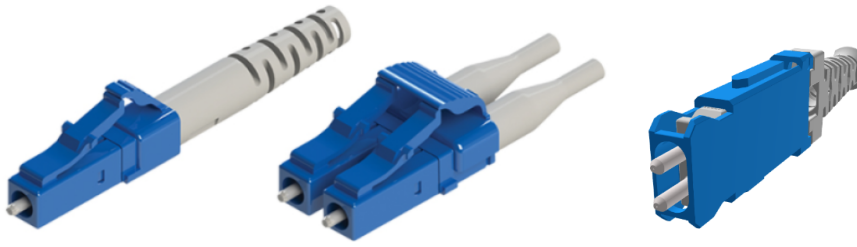
Fiber connectors used for insertion into optical transceivers are typically of the ferrule polish type PC (Physical Contact) or UPC (Ultra Physical Contact). These minimize the air gap when inserted into a

transceiver or when fiber to fiber mating. The terms PC and UPC are used interchangeably and when not specified use PC or UPC connectors.

Another type of polished end is the APC (Angled Physical Contact) usually with an 8° polished angle. Although this reduces reflected signal loss, the difficulty in mating the two angled surfaces limits it to only the most demanding splicing conditions. For each type of transceiver in this guide, note what type of connector is used, and whether it is APC or UPC/PC.

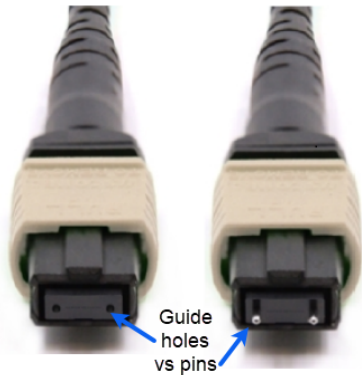
Refer to the transceiver specifications to determine whether to use fiber connectors of PC, UPC or APC.

***LC connector (Simplex = single fiber, Duplex = dual fiber), SN connector***



## **Multifiber Push On (MPO) connector**

***MPO connector: Female (guide holes) and Male (guide pins)***



The 40G SR4, 100G SR4, 200G MPO, and 400G MPO transceiver modules use cables with female MPOs (connectors which have guide holes in the end face of the MPO connector). The transceiver has guide pins within the MPO receptacle.

- MPO12 connectors are used by QSFP+ 40G SR4 and QSFP28 100G SR4 optics (12 multimode fibers). 400G eDR4 (12 singlemode fibers) only use 8 fibers mapped to the 4 channels. Because the 4 center fibers are not used some products call this an MPO8, however the connector is still a 12-fiber connector.
- MPO16 connectors are used by QSFP-DD 400G SR8 optics where all 16 fibers are mapped to the 8 channels used by 400G Short Reach SR8 technology. MPO16 connectors have the key in a different position than MPO12, preventing either from plugging into the wrong type of transceiver.

MPO12 or MPO16 cables can either be MMF for short reach applications or SMF for long reach applications. MPO12 connectors have a centered "key" to ensure proper up/down insertion.

MPO12 connectors have 12 fibers

4-channel technologies:

40G SR4 / 100G SR4 (MMF) / 400G eDR4 (SMF) use 4 pairs (Txn/Rxn)

Fibers 1 and 12 form a pair for channel 0

Fibers 2 and 11 form a pair for channel 1

Fibers 3 and 10 form a pair for channel 2

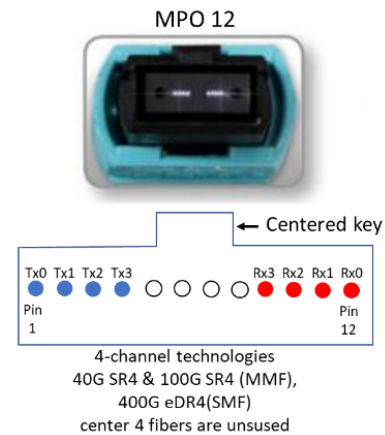
Fibers 4 and 9 form a pair for channel 3 and center 4 fibers are unused

2-channel technologies:

100G SR2 (MMF)

Fibers 1 and 12 form a pair for channel 0

Fibers 2 and 11 form a pair for channel 1 and center 8 fibers are unused



MPO16 uses an offset "key" to assure that MPO12 are not used where an MPO16 is required.

MPO16 uses all 16 fibers; depending on the opposite end transceiver or port type the fibers are mapped differently.

Fibers 1 and 16 for channel 0

Fibers 2 and 15 for channel 1

Fibers 3 and 14 for channel 2

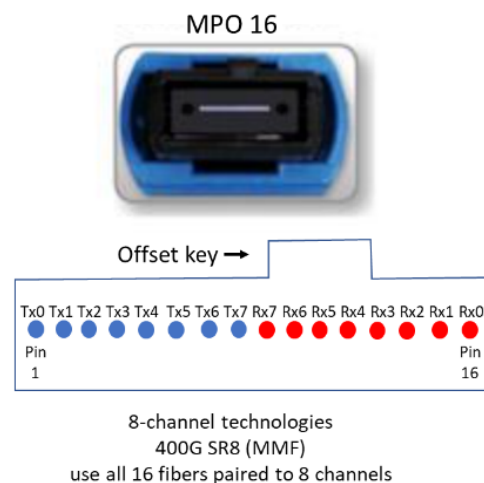
Fibers 4 and 13 for channel 3

Fibers 5 and 12 for channel 4

Fibers 6 and 11 for channel 5

Fibers 7 and 10 for channel 6

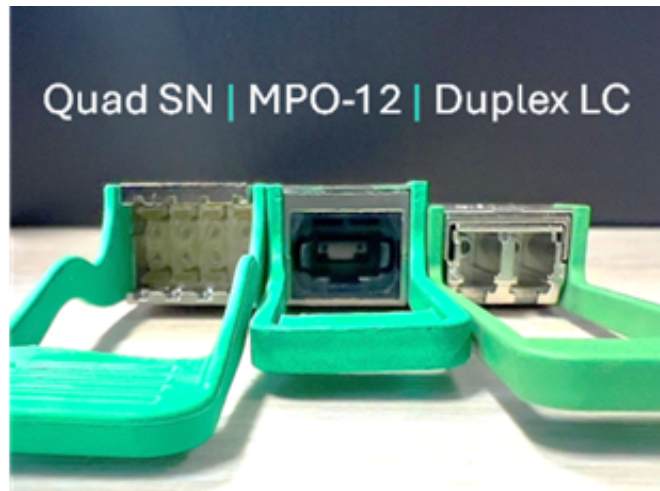
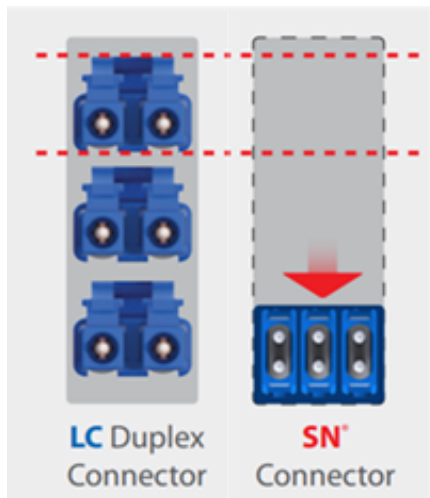
Fibers 8 and 9 for channel 7



## Senko nano (SN) connector

A senko nano (SN) connector is a very small form factor (VSFF) designed and optimized for 400G QSFP-DD transceivers. It has a push-pull boot for simple installation and removal. Similar to an LC connector, it has robust 1.25mm ferrule technology (vs MPO-12's ferrule with 12 fibers of 125um in diameter).

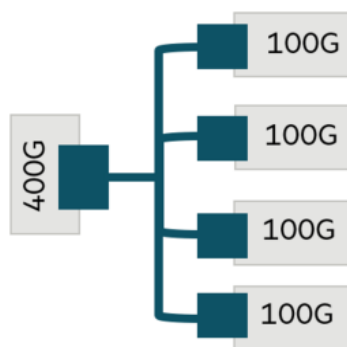
What's different is the physical size and location of fiber pins. When seen from the front both fibers of SN connector are aligned vertically as opposed to the LC connectors which are aligned horizontally. The pins of an SN connector are vertically aligned which takes up less space compared to an LC connector.



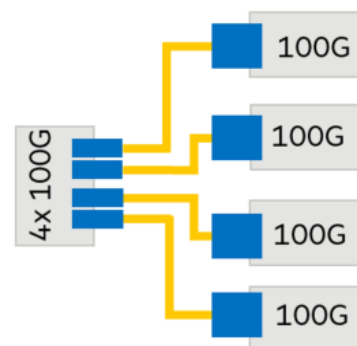
Due to its compact size, a QSFP-DD form factor can accommodate four vertically aligned SN connectors at once when they are stacked next to each other.



400G QSFP-DD transceivers with SN support are designed for next-generation data centers to reduce the space and effort required for cable installation. A 400G physical port can breakout into 4 independent links of 100G using SN connectors when inserted with full capacity in a Q-DD transceiver. Doing so replaces the requirement for breakout cables. Currently these 4x 100G SMF transceivers are compatible with respective 100G xcvr standards which support LC connectors. As a result, an SN to LC SMF patch cable is required to deploy these 100G links. These SN and LC connectors are simply UPC or PC types. APC are not required at 100G speeds.



100G split using MPO to MPO/LC breakout

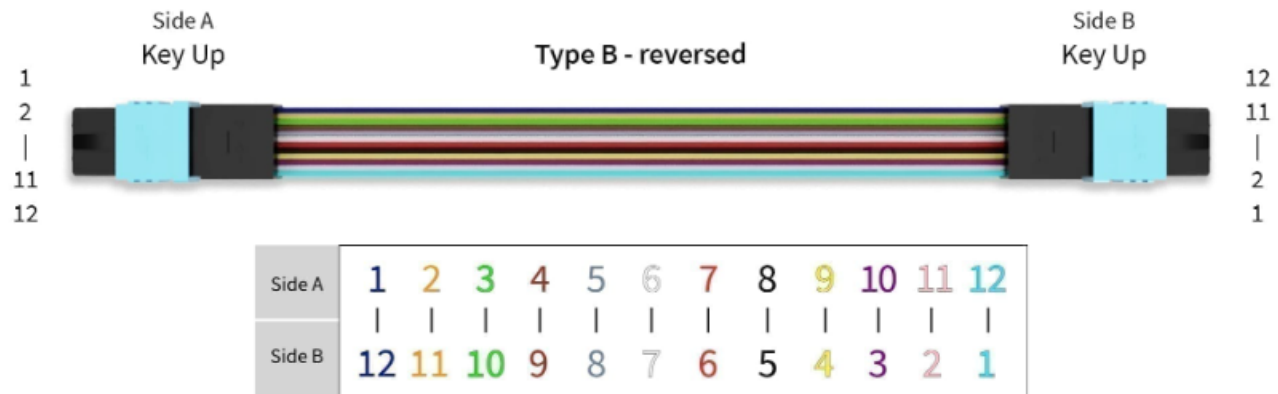


100G split using SN to LC SMF cable

## Proper crossover mapping

Patch cables and structured cabling from endpoint to endpoint must create a proper crossover connection to link transmit to the other ends receive, with attention to each channel selection.

The MPO cable types used by 40G SR4/eSR4 and 100G SR4 and used for "patch" cable connections or direct transceiver to transceiver connection are typically referred to as female "Type B", key-up crossover cables. Type B cables route fibers 1 through 12 to fibers 12 through 1 on the opposite end to create a crossover and matching transmit to receive channels.



MPO16 type B cables are mapped in a similar fashion with fiber 1 to 16, 2 to 15, and so on.

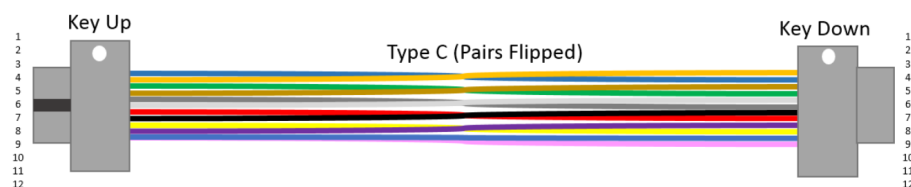
Be aware that using two (an even number of) crossover cables in series cancels this crossover effect and no connection will be established. This can occur if you are unaware of how your cable-plant infrastructure is mapped from patch panel to patch panel. If your fiber plant is already structured with crossover connections, then two more patch cables at both endpoints that are also crossover will create a proper crossover connection (essentially an odd number of crossovers).

If your cable-plant is connected as straight-through (i.e. 1-1, 2-2, ..., 12-12) then you will need one crossover cable on one end, and a straight through cable on the other end of the cable run (i.e. an odd number of cross-over points).



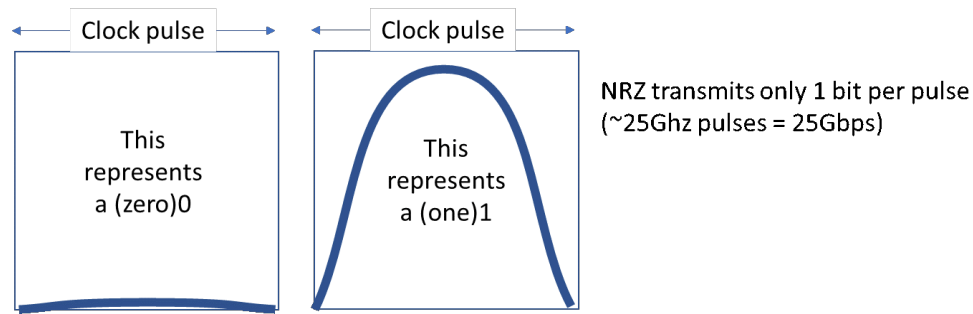
Do not use Type A (straight-through) or Type C (paired crossovers) MPO cables for direct transceiver to transceiver connections.

Type C cables are not correct because the Tx for channels 0 and 1 are paired, instead of a pairing of TX0 (1) and RX0(12), etc.

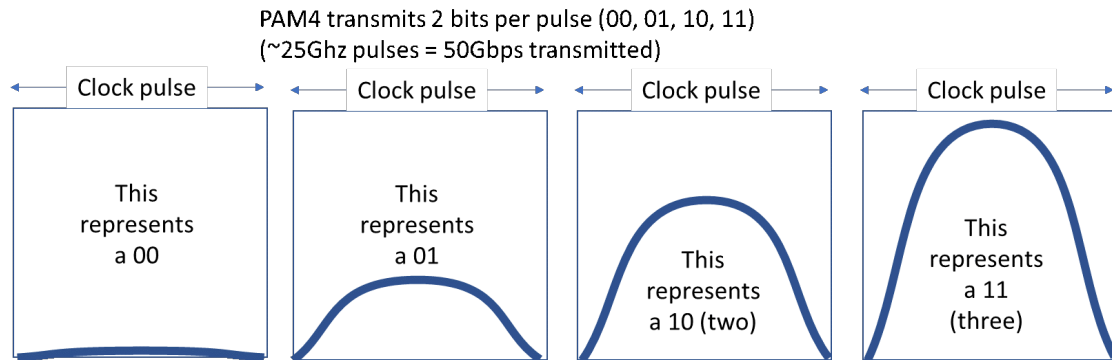


## Optical encoding methods (NRZ vs PAM4)

1G, 10G and 25G use an optical encoding method called Non-Return to Zero (NRZ). NRZ sends data by representing a 1 as a high signal and 0 as a low signal. The optical signal is detected as a pulse for a 1 and no pulse for a 0. At a clock rate close to 10Ghz (10.31Ghz) or 25Ghz (26.56Ghz) you can transmit 10Gbps or 25Gbps using NRZ encoding.



50G optics use another optical encoding method called Pulse Amplitude Modulation, 4 levels (PAM4). The optics still transmit at a 26.56Ghz signalling rate, however each pulse now transmits 2 bits of data. Since each pulse can be interpreted in any of 4 values (00, 01, 10, or 11) it can effectively transmit 50Gbps of data per wavelength. A similar technique can use a ~50Ghz signal and effectively transmit 100Gbps.



| Speed | Form factor               | Channels | Speed/Channel and type                                              | Split mode where applicable                                                                                          |
|-------|---------------------------|----------|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 40G   | QSFP or QSFP+ SR4 or LR4  | 4        | 10G NRZ                                                             | 40G SR4 => 4x 10G SR<br>40G LR4 (can't be split)                                                                     |
| 100G  | QSFP28 SR4, LR4, ER4L     | 4        | 25G NRZ                                                             | 100G SR4 => 4x 25G SR<br>100G LR4, ER4L (can't be split)                                                             |
| 100G  | QSFP28 SR2                | 2        | 50G PAM4 (25G signal, 4 levels)                                     | Not applicable                                                                                                       |
| 100G  | QSFP28 LR4                | 4        | 25G NRZ                                                             | 100G LR4 can't be split                                                                                              |
| 100G  | QSFP28 LR                 | 1        | 100G PAM4 (50G signal, 4 levels)                                    | Not splittable<br>Connects to 1 link of the 400G 4xLR (S3N92A)                                                       |
| 200G  | QSFP56 SR4                | 4        | 50G PAM4 (25G signal, 4 levels)                                     | 200G SR4 => 2x 100G SR2<br>(100G SR2 is not the same as 100G SR4)                                                    |
| 400G  | QSFP-DD or Q-DD SR8, eDR4 | 8<br>4   | 50G PAM4 (25G signal, 4 levels)<br>100G PAM4 (50G signal, 4 levels) | 400G SR8 => 2x 100G SR4 (8 fibers each)<br>400G SR8 => 4x 100G SR2 (4 fibers each)<br>400G eDR4 => 4x 100G FR1 (SMF) |

Where 40G is composed of 4 channels of 10G streams, parallel optics (40G SR4) are used with discrete 4 pairs of fibers. Each pair is transmitting at 10G and can connect to 10G SR optics for each channel. 100G SR4 also uses 4 discrete channels (all 8 fibers are required for the 100G SR4 link), or split into 4 separate channels of 2 fibers each, transmitting at 25G connecting to 25G SR optics for each channel. With 100G using a QSFP56 form factor port (capable of utilizing PAM4 optics) where the bandwidth is 50G over 2 discrete channels, each paired fiber can now connect to 2 separate 50G SR optics.

## Difference between QSFP28 and QSFP56

QSFP28 and QSFP56 are both quad, small form-factor, pluggable transceivers used to support high-speed data transmission in modern network. Refer to the table below to compare the two transceivers.

### Differences between QSFP28 and QSFP56

| QSFP28 Transceivers                                                                                      | QSFP56 Transceivers                                                                                                              |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Supports 4 lanes of 25 Gbps via NRZ <sup>1</sup> modulation, and can support QSFP+ (4x10G NRZ) products. | Supports 4 lanes of 50 Gbps via PAM4 <sup>2</sup> modulation, and can support QSFP28 (4x25G NRZ) and QSFP+ (4x10G NRZ) products. |
| Reaches a total bandwidth of 100 Gbps.                                                                   | Reaches a total bandwidth of 200 Gbps.                                                                                           |

<sup>1</sup>Non-Return-to-Zero

<sup>2</sup>Pulse Amplitude Modulation 4 Levels

While both modules share the same physical QSFP form factor, the internal electrical signaling and encoding techniques make QSFP56 a significant leap forward, especially for applications demanding higher throughput like data center spine-leaf fabrics or AI/ML cluster interconnects.

## Splitting of QSFP+ (40G) and QSFP28 (100G) ports

Quad-SFP (QSFP+ and QSFP28) ports allow for four channels of lower-bandwidth communication.

AOS-CX release 10.05 introduced this feature for select switches and modules. Split port is not available for AOS-S products.

- A QSFP+ 40G port can be split into four(4) 10G speed connections
- A QSFP28 100G port can be split into four(4) 25G or 10G speed connections

Most QSFP28 ports can be used with either 40G or 100G optics, DAC or AOC cables. Not all QSFP28 port can be split into channels of 10G or 25G: what's required are MACs and PHYs that can support both 10G and 25G speeds. Some designs will allow only splitting into the four (4) channels at 10G because they lack a 25G MAC (for example, the Aruba 8400 Switch Series JL366A 6port 40G/100G module). Some switches/modules also limit only certain ports to be split because of design combinations of PHY/Ports or limitations of the maximum number of MACs in a switching ASIC.

An example CLI configuration for port 1/1/52:

```
switch(config-if)# interface 1/1/52
switch(config-if)# split
This command will disable the specified port, clear its configuration,
and split it into multiple interfaces. The split interfaces will not
be available until the next system or line module reboot.
```

```
Continue (y/n)? y

switch(config-if)# show interface brief
-----
Port      Native Mode Type      Enabled Status Reason      Speed  Description
      VLAN
-----
1/1/52:1  --   routed QSFP+DA3x4 yes    up      10000  Aruba-AP
1/1/52:2  --   routed QSFP+DA3x4 yes    up      10000  --
1/1/52:3  --   routed QSFP+DA3x4 yes    down    Waiting for link --    --
1/1/52:4  --   routed QSFP+DA3x4 yes    down    Waiting for link --    --
```



AOS-CX release 10.05 and 10.06 requires the config to be saved and the switch or module to be rebooted to take on the new configuration for the port. This requirement is removed in AOS-CX 10.07 and later releases.

## Split mode on QSFP-DD ports for the 9300 and 9300S series

QSFP-DD ports on the Aruba 9300 32D and 9300S Switch Series are capable of operating with different speeds for the split ends.

Using the CLI command: **split [<COUNT>][<SPEED>][confirm]**

The **<COUNT>** parameter specifies the number of child interfaces to activate upon splitting the port. The **<SPEED>** parameter specifies the speed for the child interfaces. For additional information on the **split** command please refer to the *Fundamentals Guide* for the Aruba 9300 Switch Series.

The 9300 32D is capable of splitting ports two, four, or eight ways. The 9300S is architecturally limited to only splitting two or four ways.

When the **split** command is used on a QSFP+ port it always implements 4 links at 10G. On a QSFP28 port 4 links at either 25G or 10G (provided that the optic and port can support a 4x10G configuration).

\* Solution on the far end of the link

\*\* For additional information please refer to the product datasheet.

| Number of child interfaces | Child interface speed                 | Examples**                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4                          | 100G split AOCs or 100G split optical | <b>split 4 100</b><br><br>R9B48A Aruba 400G Q-DD to 4xQSFP <b>56</b> 100G 7m AOC<br>* connect to HPE Server Adapters that are 100G QSFP <b>56</b><br>R9B42A Aruba 400G Q-DD MPO12 eDR4 2km SMF xcvr<br>* R9B63A ARUBA 100G QSFP28 LC FR1 2KM SMF xcvr                                                                                                                                            |
| 4                          | 100G (over MMF)                       | <b>split 4 100</b><br><br>R9B41A Aruba 400G Q-DD MPO16 SR8 100m MMF xcvr using a custom MPO16 split to 4 MPO12 connecting to 4x S1C93A Aruba 100G QSFP28 MPO SR2 100m 12-fiber MPO MMF transceiver.<br>400G SR8 16 fiber map to 4 sets 100G SR2 optics. SR2 only uses 4 fibers (1-2 and 11-12 of the MPO12). Refer to <a href="#">400G Q-DD optical interoperability</a> for additional details. |

| Number of child interfaces | Child interface speed | Examples**                                                                                                                                                                                                                                                                      |
|----------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2                          | 200G                  | <b>split 2 200</b><br><br>R9B53A Aruba 400G Q-DD to 2xQSFP56 200G 7m AOC<br>* connect to HPE Server Adapters that are <b>200G QSFP56</b>                                                                                                                                        |
| 2                          | 100G                  | <b>split 2 100</b><br><br>R9B58A 200G QDD to 2xQSFP28 100G 7m AOC<br>* connect to ports that are 100G QSFP28                                                                                                                                                                    |
| 2                          | 100G (over MMF)       | <b>split 2 100</b><br><br>R9B41A Aruba 400G Q-DD MPO16 SR8 100m MMF xcvr using a custom MPO16 split to 2x MPO12 connecting to 2x JL309A Aruba 100G QSFP28 MPO SR4 100m 12-fiber MPO MMF Transceiver.<br>MPO16 to 2x MPO12 maps fibers 1-4 & 12-16 to MPO(1) and 5-11 to MPO(2). |
| 4                          | 25G                   | <b>split 4 25</b><br><br>(845420-B21) HPE QSFP28 to 4x25G SFP28 7m AOC {HPE Server product}<br>* connect to ports that are 25G SFP28<br>JL309A Aruba 100G QSFP28 MPO SR4 MMF xcvr<br>* Connect to 25G SR transceivers                                                           |
| 4                          | 10G                   | <b>split 4 10</b><br><br>For 10G optical connections, use 40G SR4/eSR4 transceivers (JH231A or JH233A)<br><br>JH233A HPE X142 40G QSFP+ MPO eSR4 300M xcvr<br>* J9150D Aruba 10G SFP+ LC SR 300m MMF xcvr                                                                       |

\* Solution on the far end of the link

\*\* For additional information please refer to the product datasheet.



400G to 400G products do not require the **split** command.

## DAC breakout cables



DAC breakout cables typically have a QSFP-type connector on one end and four (4) SFP-type connectors at the other end.

DAC cables are passive devices and used for short (<5m lengths) distances. 40G breakout and 100G breakout DACs look the same, but they are different parts (different Part Type information encoded on both ends). A 100G cable is an incompatible product. Inserting one into port that is only capable of 40G will usually generate an error. The same goes for the SFP ends. Putting a 25G into a 10G port may not work.

40G splits into 4 channels of 10G and the SFP+ ends identify as a 10G DAC part.

100G ports may be split in a similar manner:

- The QSFP28 port is configured as a 100G split into 4x 25G channels or
- QSFP28 ports can also support and run at 40G and split into 4x 10G channels
- The cable speed is not configurable and cannot be mixed speeds
  - QSFP28 cables are always encoded as 100G, split ends identify as a 25G DAC part and
  - QSFP+ cables are always encoded as 40G, split ends identify as a 10G DAC part

Refer to the the [QSFP-DD modules](#) chapter for more about split cables at 400G or 200G speeds.

## Breakout optical cables



Parallel optical technologies such as 40G SR4/eSR4 and 100G SR4 optical transceivers can also split into four separate optical streams to connect to 10G SR or 25G SR. 400G SR8 is also a parallel technology, however it can be split into 8 streams to connect to 25G SR/eSR or 50G SR optics. 40G, 100G, and 400G use optical split cables (usually MPO to 4xLC) to connect to existing cable infrastructure.

LR4/ER4 technologies use a Singlemode Fiber (SMF) in each direction, and multiplex (combine) 4 different wavelengths over a single fiber in each direction (hence LR4/ER4 use a 2-fiber LC connector). The wavelengths are de-muxed on the receive side. Unlike SR4 technologies, where each channel can be split into separate channels, LR4/ER4 technologies cannot be optically split into separate 10G or 25G LR technologies. Aruba offers a 400G PLR4 transceiver as of March 2024 (S3N94A 400G PLR4 QDD MPO SMF). This S3N94A xcvr would require an SMF MPO split cable to effect 4x 100G connections to 100G LR connections (100G LR is not compatible with 100G LR4).

The fiber breakout cable used is an MPO to 4x LC type of cable with Multimode Fiber (MMF) pairs in a specific configuration (see above MPO Fiber channel assignment).

The LC ends can be connected to your fiber patch panel to reach the end of the link to a 10G or 25G SR/eSR transceiver (depending on which speed is being split). Ensure you obtain a female (no pins) MPO 12-fiber connector mapped to only 4 LC connectors of Multimode Fiber of OM3 or better. Fiber breakout cables that have 6 LC connectors are usually mapped for a different type of application and cannot be used with 40G or 100G transceivers.

The distance this optically split link can support is determined by the 40G or 100G transceiver, not the 10G or 25G transceiver on the other end of the link. For example, a 100G SR4 can reach 70m over OM3 or 100m over OM4 -- this is the same distance as a 25G SR on the other end of the links. Using a 25G eSR4 (JL485A) transceiver with a longer reach of 200m over OM3 or 400m over OM4 will not accomplish the longer reach, but it is indeed optically compatible and can link to the 100G SR4 limits of 70m/100m.

The following optical breakout cables can be used with 40G SR4/eSR4 to split into 4x10G SR, or with 100G SR4 to split into 4x25G SR compatible streams.

These cables are ordered from fiber cable vendors or the HPE Compute and Server or Storage business units. They may not be available to Aruba-only resellers.



Fiber split cables are readily available from cable vendors. Ensure that any acquired cables are mapped properly and have the proper APC or UPC ends per transceiver requirement.

### Fiber breakout cables (from HPE storage products)

The HPE Storage division offers fiber cables for direct and split-cable use cases. HPE Storage SKUs are noted with an "\*".

Aruba-only distribution partners and resellers may have difficulty placing orders for these items. Contact your HPE account team for assistance. The following list of MPO style cables will depend on the transceiver type being used to split into lower speed connections. Certain MPO-style transceivers use an MPO12 (also simply called MPO) meaning that the connector only has 12 fibers. In the case of 100G SR4 and 40G SR4/eSR4 only 8 fibers are in use. The 4 center fibers are not used (in some cases described as MPO8). Higher speed transceivers (QSFP-DD 400G SR8) use an MPO16 with 16 fibers, of which all 16 are used and broken out into split groupings of 4xMPO12 to 100G SR2 (SR2 where only 4 fibers are used per 100G SR2 transceiver being different than SR4). Use this table to match the fiber split cable to the transceivers for your use case.

#### ***MPO16 to MPO16 cables - Direct connection between two high speed short reach transceivers***

| SKU #   | Description                              | Notes                                  |
|---------|------------------------------------------|----------------------------------------|
| *R4D51A | HPE Premier Flex MPO16/MPO16 OM4 2m Cbl  |                                        |
| *R4D52A | HPE Premier Flex MPO16/MPO16 OM4 5m Cbl  |                                        |
| *R4D53A | HPE Premier Flex MPO16/MPO16 OM4 10m Cbl | 400G SR8 (R9B41A) to 400G SR8 (R9B41A) |
| *R4D54A | HPE Premier Flex MPO16/MPO16 OM4 15m Cbl |                                        |
| *R4D55A | HPE Premier Flex MPO16/MPO16 OM4 30m Cbl |                                        |

The above MPO16 cables are all angle physical connector (APC)-appropriate for the 400G SR8 transceiver (R9B41A) to connect to another 400G SR8 directly.

They are not appropriate for SMF type 400G DR4 (S3N93A) or eDR4 (R9B42A).

#### ***MPO16 to 4x MPO8 cables - Higher speed short reach to 4x lower speed transceivers***

| SKU #   | Description                               | Notes                                     |
|---------|-------------------------------------------|-------------------------------------------|
| *S2T36A | HPE Premier Flex MPO16/4xMPO8 OM4 5m Cbl  | 400G SR8 (R9B41A) to 4x 100G SR2 (S1C93A) |
| *S2T37A | HPE Premier Flex MPO16/4xMPO8 OM4 10m Cbl |                                           |

HPE Storage SKUs are noted with an "\*".

The MPO16 is an APC and the MPO8 is a standard PC type. The above cables are fanned out approximately 2m from the 4xMPO8 end. E.g. S2T37A is 8m to where the cable splits to the the 4xMPO8 ends and provides roughly 2m for each of the MPO8 ends.

### ***MPO16 to 2x MPO8 cables - Higher speed short reach to 2x lower speed transceivers***

| Product | Description                                    | Notes                                      |
|---------|------------------------------------------------|--------------------------------------------|
| *S1H57A | HPE Premier Flex MPO16 to 2xMPO8 OM4 5m Cable  | 400G SR8 (R9B41A) to 2x 200G SR4 (*R5Z83A) |
| *S1H58A | HPE Premier Flex MPO16 to 2xMPO8 OM4 10m Cable |                                            |



\*HPE Storage product.

Aruba-only distribution partners and resellers may have difficulty placing orders for these items.

The above cables are fanned out approximately 2m from the 2xMPO8 end. E.g. S1H58A is 8m to where the cable splits to the 2xMPO8 ends and provides roughly 2m for each of the MPO8 ends.

### ***MPO12 to 4x LC cables - Higher speed Short Reach transceiver to 4x lower speed transceivers***

| SKU #   | Description                          | Notes                                         |
|---------|--------------------------------------|-----------------------------------------------|
| *K2Q46A | HPE Premier Flex MPO to 4xLC 5m Cbl  | 40G SR4 to 4x 10G SR;<br>100G SR4 to 4x25G SR |
| *K2Q47A | HPE Premier Flex MPO to 4xLC 15m Cbl |                                               |
| *Q1H68A | HPE Premier Flex MPO to 4xLC 30m Cbl |                                               |
| *Q1H69A | HPE Premier Flex MPO to 4xLC 50m Cbl |                                               |

The above cables are fanned out approximately 2m from the 4xLC end. E.g. Q1H68A is 28m to where the cable splits to the 4xLC ends and provides roughly 2m for each of the LC ends.

If you buy cables from other internet sources, ensure that the cables are split in the following manner (for use with 100G SR4, or 40G SR4 transceivers):

| MPO connector fiber numbers | LC connector | Logical interface (using port 1/1/52 as an example) |
|-----------------------------|--------------|-----------------------------------------------------|
| 1 and 12                    | LC #1        | 1/1/52:1                                            |
| 2 and 11                    | LC #2        | 1/1/52:2                                            |
| 3 and 10                    | LC #3        | 1/1/52:3                                            |
| 4 and 9                     | LC #4        | 1/1/52:4                                            |



MPO connector fibers 5 through 8 are unused.

## **Compatible split optical transceivers to lower-speed transceivers**

The following optical transceivers can be split and downstream connect to a lower speed optical transceiver:



Not all QSFP ports can split even when using a "splittable" optic. See details for specific switch models in the QDD, QSFP28 and QSFP+ chapters. See information in the following section "Split capabilities of specific models".

| Upstream Hi-speed transceiver             | Downstream lower-speed transceiver                                                                                                                                                               | Notes                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| QDD 400G SR8                              | Multimode fiber, 16 fibers split into 4 groups of 4 to 100G SR2 (70m/OM3; 100m/OM4)<br><br>CX 10.15.1000 added functionality to split the MPO16 into 8 groups of 2 to 50G SR (70m/OM3; 100m/OM4) | 100G SR2 is not the same as 100G SR4. 100G SR2 requires only 4 fibers (1,2 & 11,12), using an MPO12 connector. The 400G SR8 uses an MPO16 broken out into four groups of four fibers for each 100G connection. Can be split 8x ways to 50G SR connections (or via 8x Split DAC). Refer to <a href="#">400G Q-DD optical interoperability</a> . |
| QDD 400G DR4(S3N93A) or 400G eDR4(R9B42A) | Single mode fiber, 8 fibers split into 4 groups of 2 fibers to 100G DR1 (500m reach) or 100G FR1 (2km reach).                                                                                    | Uses SMF MPO12 to 4x LC (2 fibers each)<br>100G DR 500m (S3N88A) and 100G FR1 2km (R9B63A) use a different wavelength than 100G LR4 (JL310A)                                                                                                                                                                                                   |
| QDD 400G PLR4                             | Single mode fiber, 8 fibers split into 4 groups of 2 fibers to 100G LR. (2km reach)                                                                                                              | Uses SMF MPO12 to 4x LC (2 fibers each) 100G LR technology (10 km) uses a single wavelength per fiber, whereas 100G LR4 uses 4 wavelengths per fiber. For example, 400G PLR4 will not connect to 100G LR4.                                                                                                                                     |
| QSFP28 100G SR4                           | Multimode fiber, 8 fibers split into 4 groups of 2 fibers to 25G SR or eSR (70m/OM3, 100m/OM4)                                                                                                   | Uses MMF MPO12 to 4x LC Distance reach is limited by the 100G SR4 optic (OM3/70m; OM4/100m)<br>25G eSR is compatible, but you may get longer reaches than the above, but not as far as a 25G eSR to 25G eSR.                                                                                                                                   |
| QSFP+ 40G SR4 or eSR4                     | Multimode fiber, 8 fibers split into 4 groups of 2 fibers to 10G SR (40G SR4: 70m/OM3, 100m/OM4 40G eSR4: 300m/OM3, 400m/OM4) Not compatible to connect to 10G LRM, nor use over OM1/OM2         | Uses MMF MPO12 to 4x LC Distance reach is limited by the 40G SR4 optic (OM3/100m; OM4/150m). 40G eSR4 has longer reach (OM3/300m; OM4/400m) and matches the full potential reach of 10G SR optics.                                                                                                                                             |

## Split capabilities of specific models

Starting with AOS-CX 10.05, the following switches and modules are capable of splitting a QSFP+ or QSFP28 port with the noted restrictions. Configure the ports for split mode. 10.05 and 10.06 require the configuration to be saved and the switch to be rebooted to enable the split operation on the ports. Starting with the 10.07 release, the need to save and reboot is now removed for the 8320, 8325, and 8360 series; the 8400 still requires a save and reboot (no support for split ports on the 6400 series).



The Aruba 8400 Switch Series still requires a save and reboot as of AOS-CX 10.10.1000.

| Part number (PN)                                                                                                          | Description/notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Port info                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 6300 Series</b><br>S0E91A, S0X44A<br>- models with 4x QSFP28 ports                                               | No support for split ports. This is a Hardware limitation and cannot be enabled by any software update.                                                                                                                                                                                                                                                                                                                                                                                | Contact product management if split use case is needed.                                                                                              |
| <b>Aruba 6400 Series</b>                                                                                                  | V1 or v2 series: No support for split ports.                                                                                                                                                                                                                                                                                                                                                                                                                                           | Contact product management if split use-case is needed.                                                                                              |
| <b>Aruba 8100 Series</b><br>R9W94A (R9W86A/R9W87A)<br>- 24XF4C models<br><br>R9W95A (R9W88A/R9W89A)<br>- 24XT4XF4C models | 48 port models cannot split the QSFP28 ports as there not enough MACs in the system.                                                                                                                                                                                                                                                                                                                                                                                                   | 24XF4C models: 25-28 (40G or 100G)<br>24XT4XF4C model: 29-32 (40G or 100G)<br>48XF and 40XT8XF models cannot split the QSFP28 ports(not enough MACs) |
| <b>Aruba 8320 Series</b><br>- JL479A<br>- JL579A<br>- JL581A                                                              | Aruba 8320 48 10/6 40 X472 5 2 Bdl<br>Aruba 8320 32 40G X472 5 2 Bdl<br>Aruba 8320 48 T/6 40 X472 5 2 Bdl                                                                                                                                                                                                                                                                                                                                                                              | 49-54 (40G)<br>5-28 (40G, center 24 ports)<br>49-54 (40G)                                                                                            |
| <b>Aruba 8325 48Y8C models</b><br>JL635A (base system)                                                                    | Base system SKU displayed by <b>show system</b><br>JL624A Aruba 8325-48Y8C FB 6 F 2 PS Bdl<br>JL625A Aruba 8325-48Y8C BF 6 F 2 PS Bdl                                                                                                                                                                                                                                                                                                                                                  | 49-56 (40G or 100G)                                                                                                                                  |
| <b>Aruba 8325 32C models</b><br>JL636A (base system)                                                                      | Base system SKU displayed by <b>show system</b><br>JL626A Aruba 8325-32C FB 6 F 2 PS Bdl<br>JL627A Aruba 8325-32C BF 6 F 2 PS Bdl                                                                                                                                                                                                                                                                                                                                                      | 1-32 (40G or 100G)                                                                                                                                   |
| <b>Aruba 8325P 32C models</b><br>S4A48A (base system)<br><br>S0G12A (base system) for TAA bundles                         | Base system SKU displayed by CLI (show system)<br>S4A49A - HPE ANW 8325P 32C FB 6Fs DC PSU Bdl<br>S4A50A - HPE ANW 8325P 32C BF 6Fs DC PSU Bdl<br>S4A51A - HPE ANW 8325P 32C FB 6Fs AC PSU Bdl<br>S4A52A - HPE ANW 8325P 32C BF 6Fs AC PSU Bdl<br><br>S0G07A(TAA) - HPE ANW 8325P 32C FB 6Fs DC PSU TAA Bdl<br>S0G08A(TAA) - HPE ANW 8325P 32C BF 6Fs DC PSU TAA Bdl<br>S0G09A(TAA) - HPE ANW 8325P 32C FB 6Fs AC PSU TAA Bdl<br>S0G10A(TAA) - HPE ANW 8325P 32C BF 6Fs AC PSU TAA Bdl | 1-31 (40G or 100G)<br><br><b>NOTE:</b> last port cannot be split - but can use a single QSA28 adapter (MACs reserved for the 2x SFP+ ports).         |

| Part number (PN)                                                   | Description/notes                                                                                                                                                           | Port info                                                                                                                                                                                               |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 8325H models</b><br>TAA/Non-TAA:                          | S2T42A(TAA)/S4B20A - 18Y4C model (FB)<br>S2T46A(TAA)/S4B21A - 18Y4C model (BF)<br>S2T47A(TAA)/S4B22A - 16C model (FB)<br>S2T48A(TAA)/S4B23A - 16C model (BF)                | 19-22 (40G or 100G)<br>19-22 (40G or 100G)<br>1-15 (40G or 100G) 1-15 (40G or 100G)<br><br>Port 16 on the 16C models cannot be split. It can use a QSA28 adapter (MACs reserved for the 2x SFP+ ports). |
| <b>Aruba 8360 32Y4C models</b><br>JL717A/JL717C(v2)(base system)   | Base system SKU displayed by <b>show system</b><br>JL700A / JL700C (v2) Aruba 8360-32Y4C<br>Prt2Pwr3F2PS Bdl<br>JL701A / JL701C (v2) Aruba 8360-32Y4C<br>Pwr2Prt3F2PS Bdl   | 33-36 (40G or 100G)                                                                                                                                                                                     |
| <b>Aruba 8360 16Y2C models</b><br>JL718A/JL718C(v2)(base system)   | Base system SKU displayed by <b>show system</b><br>JL702A / JL702C (v2) Aruba 8360-16Y2C<br>Prt2Pwr3F2PS Bdl<br>JL703A / JL703C (v2) Aruba 8360-16Y2C<br>Pwr2Prt3F2PS Bdl   | 17-18 (40G or 100G)                                                                                                                                                                                     |
| <b>Aruba 8360 48XT4C models</b><br>JL720A/JL720C(v2)(base system)  | Base system SKU displayed by <b>show system</b><br>JL706A / JL706C (v2) Aruba 8360-48XT4C<br>Prt2Pwr3F2PS Bdl<br>JL707A / JL707C (v2) Aruba 8360-48XT4C<br>Pwr2Prt3F2PS Bdl | No support for split ports. Limitation of MACs on this ASIC. This model does allow the use of the QSA28 (in ports 50 and 51 only) because it only uses 1 MAC per port.                                  |
| <b>Aruba 8360-12C models</b><br>JL721A/JL721C(v2)<br>(base system) |                                                                                                                                                                             | 1-12 (40G or 100G)                                                                                                                                                                                      |
| <b>Aruba 8360 24XF2C models</b><br>JL722A/JL722C(v2)(base system)  | Base system SKU displayed by <b>show system</b><br>JL708A / JL708C (v2) Aruba 8360-12C<br>Pwr2Prt3F2PS Bdl<br>JL709A / JL709C (v2) Aruba 8360-12C<br>Prt2Pwr3F2PS Bdl       | 25-26 (40G or 100G)                                                                                                                                                                                     |
| <b>Aruba 8360 48Y6C models</b><br>JL719C (base system)             | Base system SKU displayed by <b>show system</b><br>JL710A / JL710C (v2) Aruba 8360-24XF2C<br>Prt2Pwr3F2PS Bdl<br>JL711A / JL711C (v2) Aruba 8360-24XF2C<br>Pwr2Pwr3F2PS Bdl | 49-54 (40G or 100G)<br>MACsec available on ports 53-54 and available to the split 10G or 25G links through ports 53-54                                                                                  |
|                                                                    | Base system SKU displayed by CLI <b>show system</b>                                                                                                                         |                                                                                                                                                                                                         |

| Part number (PN)                                                                    | Description/notes                                                                                                                                                                                                                                                                                       | Port info                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                     | JL704C (v2) Aruba 8360-48Y6C v2 FB 5F 2AC Bdl<br>JL705C (v2) Aruba 8360-48Y6C v2 BF 5F 2AC Bdl                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Aruba 8400X modules</b>                                                          | JL365A Aruba 8400X 8p 40G QSFP+ Adv Mod<br>JL366A Aruba 8400X 6p 40G/100G QSFP28 Adv Mod                                                                                                                                                                                                                | 1-8 (40G)<br>1-6 Only capable of 40G split into 4 x 10G<br>JL366A modules do not have 25G MACs to support split 100G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Aruba 9300 32D models</b><br>R8Z96A (base system)                                | Base system SKU displayed by CLI <b>show system</b><br>R9A29A Aruba 9300 32D 32D2XF FB 6F2AC Bdl<br>R9A30A Aruba 9300 32D 32D2XF BF 6F2AC Bdl                                                                                                                                                           | 1-32 (40G, 100G, 200G, 400G)<br><br>9300-32D can split 2x, 4x and 8x                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Aruba 9300S 32C8D models</b><br>S0F95A (TAA base system)<br>S0F96A (base system) | Base system SKU displayed by CLI <b>show system</b><br><br>S0F81A HPE ANW9300S 32C 8D FB 6Fs AC TAA Bdl<br>S0F83A HPE ANW 9300S 32C 8D BF 6Fs AC TAA Bdl<br>S0F84A HPE ANW 9300S 32C 8D BF 6Fs AC Bdl<br><br>S0F87A HPE ANW 9300S 32C 8D BF 6Fs DC TAA Bdl<br>S0F88A HPE ANW 9300S 32C 8D BF 6Fs DC Bdl | Ports 1-8 and 33-48 can not be split but are capable of using the QSA28 adapter. See <a href="#">QSFP28 to SFP28 adapter support</a> for additional details.<br><br>The 9300S uses split profiles: <b>system interface-profile split &lt;NAME&gt;</b><br>"profile-1" maximizes 100G downstream splits (16 ports: 9-12 & 29-32 can do 2x100G; QDD ports 17-24 can do either 2x or 4x 100G)<br><br>"profile-2" maximizes 25G downstream splits (10 ports: 13,15-17, 19, 21, 23, 25-27)<br><br>Refer to the AOS-CX Fundamentals Guide for Aruba 9300 Switch Series for more information about the <b>system interface-profile</b> command.<br><br>9300S is only able to split 2x and 4x (8x split is only for the 9300-32D) |
| <b>Aruba 10000 models</b>                                                           | Base system SKU displayed by CLI <b>show system</b>                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Part number (PN)     | Description/notes                                                                      | Port info           |
|----------------------|----------------------------------------------------------------------------------------|---------------------|
| R8S96A (base system) | R8P13A Aruba CX 10000-48Y6C FB 6F 2PS Bdl<br>R8P14A Aruba CX 10000-48Y6C BF 6F 2PS Bdl | 49-54 (40G or 100G) |



Aruba 6400 modules with QSFP28 ports do not have Split Mode enabled in AOS-CX as of 10.10 or earlier releases. AOS-Switch products do not allow splitting of QSFP+ ports (5400R, 3810M, 2930M).

Refer to the "Aruba-Corning 400G Cable Reference Guide" on the [Aruba Support Portal](#) for more split optical cables specifically for use with 400G products. 400G split into different lower speeds (200G or 100G) depending on the 400G optic you are using (400G SR8 or eDR4) and the 100G technology you are using (100G SR4, SR2 (S1C93A), or FR1 (R9B63A)) on the far end of the link.

## Optical parameters

This guide provides average transmit and receive power ranges for transceiver modules. Transceivers are manufactured to meet the specifications (usually of the IEEE standards) and ranges represent the values that the part can operate within. The fact that one part can be at the lower end of the range, while another part can be at the upper range means that the part is compliant.

### Transmit power

Transmit power is the power at which the transmitter of an optical transceiver module transmits optical signals in dBm.

### Receive sensitivity

Receive power is the power at which the receiver of an optical transceiver module receives optical signals, in dBm. When the signal received is outside of the range, there is a risk of bit errors and a suboptimal data link.

### Using attenuators (for short test cables)

Transceivers are designed to transmit light pulses at power levels that account for loss in the fiber optic cabling, and meets the receiver input thresholds of the link partner optical transceiver.

If you are using a fiber cable with less light loss than expected (for example, in a test environment and you do not have a 40 km spool of SMF available), use attenuators to reduce the transmit level to be within the receive sensitivity of the other transceiver. You will need to condition both fibers (sends in both directions). If not done, you risk overdriving the Receive end, resulting in either a non-operational link or permanently damaging the transceiver. For example, a 40G ER4 transceiver has the following optical specifications:

- Tx range: -2.7 dB to 4.5 dB
- Rx range: -21.2 dB to -4.5 dB

*Attenuation required = (highest transmit power) - (highest receive sensitivity)*

In the above example, you would need an attenuator of at least 9dB (need to bring a +4.5 Tx down to at least -4.5 dB: Attenuation required = 4.5 - (-4.5) = 9 dB attenuation required.

### Allowable link loss on fiber runs

A related topic to attenuation is how much link loss is allowable for a reliable use of transceivers from end-to-end. For runs longer than 10 km a cable installer can run a test to determine what a fiber run has as the loss value (measured in dB). Long single mode fiber runs naturally have attenuation (loss of light power) over the run. Patch panel connections and fiber fusion points add to loss value. Tx power values are higher than Rx values because Rx represents sensitivity to light pulses. This allows for link loss along the fiber run.

Consider a 100G ER4 transceiver that has the following optical specifications:

- TX range: -2.5 dB to 6.5 dB
- Rx range: -20.5 dB to -3.5 dB

*Allowable link loss = (minimum receive sensitivity) - (minimum transmit power)*

-20.5 - (-2.5) is equal to 18 dB which is the loss that can be tolerated. If the link measurement is less than 18 dB over the entire run, you should expect good results from using the 100G ER4 xcvr. Most xcvr vendors can tolerate a bit more, however the results are not guaranteed nor are they compliant with IEEE standards.

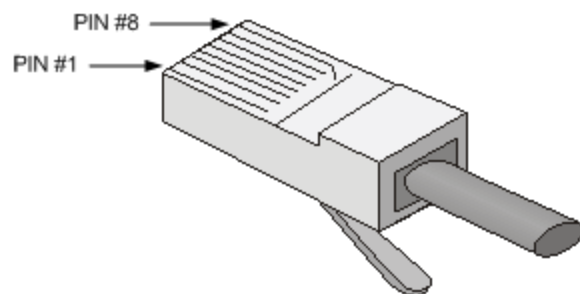
## Copper transceiver modules

Copper transceiver modules transmit signals over Category-5, -5e, -6, and -6a unshielded twisted pair (UTP) or shielded twisted pair (STP). UTP transmission cover shorter distances than fiber transmission and can be used in small-sized networks only. 10G over twisted pair requires the use of Category 6a to achieve the full 100m per the 10GBASE-T standard.

1G copper transceivers are supported in 1G SFP and 10G SFP+ (and most SFP28 and SFP56) ports where listed in the compatibility tables. See the specifics for each switch model. 1G optics may not be supported in uplink ports (usually due to support for higher speed MACsec capabilities). 10G Copper transceivers are supported in 10G/25G and 50G SFP ports.

## Connector

Registered Jack-45 (RJ-45) twisted-pair connectors are used as connectors for copper transceiver modules.



### ***RJ-45 GE connector pin assignment for gigabit connections***

| Pin | Signal | Function              |
|-----|--------|-----------------------|
| 1   | MX_0+  | Data transmit/receive |
| 2   | MX_0-  | Data transmit/receive |
| 3   | MX_1+  | Data transmit/receive |

| Pin | Signal | Function              |
|-----|--------|-----------------------|
| 4   | MX_2+  | Data transmit/receive |
| 5   | MX_2-  | Data transmit/receive |
| 6   | MX_1-  | Data transmit/receive |
| 7   | MX_3+  | Data transmit/receive |
| 8   | MX_3-  | Data transmit/receive |

## Transmission distance

Through unshielded or shielded twisted pair (UTP/STP) cables signals can only be transmitted over a distance of 100 m (328.08 feet). This behavior occurs because signals attenuate during transmission through the UTP cables.

Attenuation refers to the dissipation of the power of a transmitted signal as it travels over a cable.

Attenuation occurs because signal transmission suffers certain resistance from the cable, which weakens the signals as they travel over the cable. When signals are transmitted over a long distance, signal strength decreases significantly, causing the signal-to-noise ratio to drop below the accepted level. This decrease makes it impossible to distinguish between signals and noise, which results in data loss.

Patch panel and punch down blocks also affect attenuation; that is, they can be a source of issues resulting in shorter distances or data loss.

10GBASE-T connections require Category 6a as a minimum for proper 10G speeds up to the 100m distance dictated by the IEEE 802.3ae standard for a fixed 10GBASE-T port. The 10GBASE-T transceiver has a limit of 30m max distance due to limited power available to the transceiver (vs a fixed 10GBASE-T port). Anything less (Cat 6, 5e, 5) will compromise the distance that 10G over copper can achieve.

Shielded Twisted Pair (STP) Cat 6a cable is recommended when using the 10GBASE-T transceiver.

Use of STP prevents EMI events from affecting data traffic carried on the wire - known as Crosstalk or Alien Crosstalk. Large EMI events from electronically noisy environments may be coupled onto unshielded cabling and cause temporary packet errors. Fixed 10G ports have designs to counteract these types of bit error conditions, that the 10GBASE-T transceiver cannot counteract consistently. Using STP Cat6a cables mitigate the errors significantly. All packet loss errors observed in extensive testing are considered recoverable by the host system with the 10GBASE-T transceiver.

## Temperature Rating

Temperature ratings listed in this document are exclusive to the interconnect modules. Each value represents the operational temperature ranges supported by individual transceivers, AOCs, and DACs, all based on manufacturer specifications.



Ratings do not account for the combined thermal behavior of the transceiver when installed in a network switch.

## Identification of 4x4 part numbers

A SKU# (Stock Keeping Unit, also called a Product Number or Part Number) may be fulfilled by one or more vendor parts providing similar functionality. A 4x4 (or "4 by 4") part number is of the form *nnnn-*

nnnn and is printed on the transceiver, DAC, or AOC label. For example, J9151E (10G LR) may have 1990-4727 or 1990-4694 as the associated 4x4 part number representing two different vendors.

4x4 part numbers are referenced in the:

- specification tables, to identify parts that support DOM (Digital Optical Monitoring) capabilities. (Some older vendor parts do not support DOM.)
- compatibility tables, where necessary, to identify supported combinations of switch or module with the identified transceiver, along with the minimum software version required.

In December 2017, Aruba introduced Revision D (and, in 2019, a Rev E 10G LR optic) versions of 100M, 1G, and 10G products. Revision D transceivers and DACs eliminated previous alternative vendors, so that you can be assured that only certified vendor parts are supported on AOS-CX Series Switch products. Earlier Revision A, B, or C product may have alternative vendors that Aruba no longer actively ships, but remain fully supported in specific switches. The specifications for Revision D transceiver products are the same as the specified Revision A, B, and C SKUs. Where support for a Revision A, B, or C transceiver existed on an earlier switch product, Revision D parts are also supported.

Some switch products will specify Revision D (and, in some cases, Rev E 10G LR optic) transceivers for full support, while other products may support earlier (older) revision transceivers – and some with specific 4x4 part numbers.

To cross-reference the Transceiver/DAC product against the switch product to identify the minimum software required for transceiver support, always refer to the Datasheet or QuickSpecs for the switch product to see the current list of supported transceivers. Refer to the compatibility tables within this document.

To use CLI commands to display data for an installed transceiver, see the following examples.

```
switch# show int 1/10/6 transceiver
```

| Port   | Type     | Product Number | Serial Number | Part Number |
|--------|----------|----------------|---------------|-------------|
| 1/10/6 | QSFP+SR4 | JH231A         | XX57nnnnnn    | 1990-5555   |

```
switch# show interface dom
```

| Port  | Type     | Lane | Temp (C) | Voltage (V) | Tx Bias (mA) | Rx Power (dBm) | Tx Power (dBm) |
|-------|----------|------|----------|-------------|--------------|----------------|----------------|
| 1/1/1 | SFP+SR   |      | 47.65    | 3.31        | 8.40         | -10.96         | -2.49          |
| 1/1/2 | SFP+SR   |      | n/a      | n/a         | n/a          | n/a            | n/a            |
| 1/1/3 | SFP+DAC3 |      | 42.10    | 3.24        | n/a          | n/a            | n/a            |
| 1/1/4 | unknown  |      | ??       | ??          | ??           | ??             | ??             |
| 1/1/5 | unknown  |      | ??       | ??          | ??           | ??             | ??             |
| 1/1/6 | unknown  |      | ??       | ??          | ??           | ??             | ??             |
| 1/2/1 | QSFP+SR4 | 1    | 44.46    | 3.30        | 6.12         | -10.96         | -1.95          |
|       |          | 2    | 44.46    | 3.30        | 6.04         | -10.96         | -2.00          |
|       |          | 3    | 44.46    | 3.30        | 6.51         | -10.96         | -2.16          |
|       |          | 4    | 44.46    | 3.30        | 6.19         | -10.96         | -1.94          |
| 1/2/2 | unknown  |      | ??       | ??          | ??           | ??             | ??             |
| 1/2/3 | unknown  |      | ??       | ??          | ??           | ??             | ??             |
| 1/2/4 | SFP+SR0  |      | 47.65    | 3.31        | 8.40         | -10.96         | -2.49          |

```

switch# show interface transceiver f2 detail
Transceiver in F2
  Interface Index      : 162
  Type                 : QSFP+SR4
  Model                : JH231A
  Connector Type       : MPO
  Wavelength           : 850nm
  Transfer Distance    : 100m (50um OM3), 150m (50um OM4)
  Diagnostic Support   : DOM
  Serial Number        : XX57nnnnnn
Status
  Temperature : 33.332C
  Voltage      : 3.3208V

  Tx Bias   Rx Power   Tx Power
  Channel#  (mA)      (mW/dbM)   (mW/dbM)
  -----
  1          6.904    0.5622, -2.501 0.5822, -2.349
  2          6.706    0.5922, -2.275 0.5856, -2.324
  3          6.894    0.6321, -1.992 0.5813, -2.356
  4          6.792    0.5111, -2.915 0.5651, -2.479
Current Alarms:
  Channel 1 :
    Tx bias low alarm
    Rx power low warning
  Channel 2 :
    Tx bias low alarm
    Rx power low warning
Current Errors:
  Channel 1 :
    Rx Loss of Signal
  Channel 2 :
    Rx Loss of Signal
  Channel 3 :
    Rx Loss of Signal
  Channel 4 :
    Rx Loss of Signal

```

## Unsupported transceiver mode

The term transceiver applies collectively to optical transceivers, DAC and AOC cables, and port adapters. The **allow-unsupported-transceiver** (UT-mode) command allows usage of non-Aruba/HPE transceiver products. Allowing the use of unsupported products in Aruba switches can assist in the initial installation or validation of switching products while fully supported products are acquired.

The term "third-party transceiver" applies to transceiver parts not specifically identified on data sheets or in this guide. Transceivers sold by Aruba for use on other switches/controllers not listed within this guide (for example, transceivers specified for Comware Switches or recent acquisitions such as Juniper) or sold by HPE for use on HPE Servers or Storage devices are also considered "third-party". This guide indicates the specific transceiver products and minimum software version required for full support. Older generation transceivers may not be fully supported on newer generations of switch models. For questions, contact your Aruba Account Team who can get clarity from Aruba Product Line management. Using third-party products present these caveats:

- An unsupported transceiver is used by the customer at their own risk.
- Aruba assumes no liability to ensure the proper operation of a product not designed/designated as supported, even from future revisions of AOS-CX firmware.

- No guarantees are implied that a third-party transceiver will continue to work from release to release.
- Third-party transceiver products are not under the control of Aruba, so Aruba has no knowledge of changes in design or consistency and cannot vouch for the quality of the third-party part, nor any assurance that the parts are the same from time to time.

UT-mode is implemented in the following switch series:

- AOS-S 16.02: 5400R, 3810M, 2930M/2930F, 2930, 2920 2540, and 2530 (1G-40G)  
There may be other products that can also run 16.02 switch code, but UT-mode is not extended to those switch series. UT-mode is NOT enabled by default on AOS-S product. You must issue the CLI command for the capability to be allowed.
- AOS-CX 10.05.0001(EOST): all AOS-CX Switch Series (1G- to 10G only)
- AOS-CX 10.09.0002(EOST): 8360, 8325, 8320, and 10000 (1G to 100G) enabled by default
- AOS-CX 10.10.0002: 8400, 6xxxx Switch Series (1G to 100G) enabled by default
- AOS-CX 10.10.1000: 8100 Switch Series (up to 100G) enabled by default
- AOS-CX 10.11.0001(EOST): 9300 32D , 10.14.0005 9300S (40G to 400G) enabled by default
- AOS-CX 10.15.0001: 9300S (40G to 400G) enabled by default




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100Mbps may still be limited on some models to only support Aruba 100FX transceivers

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There is no guarantee that an unsupported transceiver WILL be enabled; however, it can be attempted.

---

The UT-mode command (particularly on an AOS-Switch) may require an acknowledgment of the support risk before use. An example CLI session may look like this:

```
switch(config)# allow-unsupported-transceiver
Warning: The use of unsupported transceivers, DACs, and AOCs is at your own risk
and may void support and warranty. Please see HPE Warranty terms and conditions.

Do you agree and do you want to continue (y/n)?
```

## Supported vs unsupported

Simply because a part is enabled for use, does not mean that it is "supported".

- Supported products are listed and covered by the terms found on the [Product Warranty and Support](#) page.
- Supported products warranty can be extended (beyond the typical warranty) with a Support Contract.
- When it is determined that an issue may involve questionable connectivity using an unsupported transceiver (optics/DACs/AOCs), the Technical Assistance Center (TAC) may ask that you replace the third-party transceiver with a product supported for use with Aruba switches before continuing troubleshooting activities. The support call will be paused until this is done, eliminating the suspicion of the third-party transceiver as a possible issue.
- Even if a product displays a part number as one of the "supported" product part numbers, if the TAC discovers that the part is not a bonafide Aruba or HPE part (that is, a counterfeit or a compatible product), they may elect to halt the support call. Damage to the switch or port would not be covered under warranty.

- The CLI command **show interface transceiver detail** may display unreliable information (for example, DOM). The accuracy of the electronic information in third-party products is unknown to and not verified by Aruba. The information is reported on a best-effort basis. AOS-CX software may or may not use any information provided by a third-party/unsupported transceiver.

This guide details products that are supported by a switch model or module. In some cases, a particular switch model or module may not have the proper hardware or software support to allow a transceiver technology to work at all. This guide denotes that limitation with a comment about "or any type of technology" - even with UT-mode that type of transceiver most likely will not work. For example: J9152A/J9152D (or any type of 10G LRM technology) is not supported in any 2930F model.

Transceiver products (including DACs and AOCs) have identification information within the product - this information is read when the transceiver is inserted into the switch. Aruba switches use this information to validate whether the part is a "supported" product. If not, it is officially "unsupported" and usually shown as such.

Some considerations for third-party products:

- Do they follow the guidelines agreed upon by Multi-Source Agreement (MSA) vendors? MSA specifications dictate many physical characteristics, but not necessarily the electrical designs. For that reason, a transceiver may work in one switch/module, but not in another due to design differences not taken into consideration for fully supported products.
- Many low-cost products do not properly code the MSA required fields for type, distance, media type among other fields, or they may incorrectly identify the part, causing the switch to enable them with settings not appropriate for the type of transceiver inserted.
- Does the part work the way the Aruba switches expect them to? Aruba 'tunes' ports according to the characteristics of selected parts.
- Third-party products may substitute a different vendor part from time to time. The third-party product you buy today may work, but the part you buy a month from now could be a different part. There are no guarantees.

When using 25G, 100G, or higher, consider the Forward Error Correction (FEC) mode used (older 10G and 40G don't). Aruba uses IEEE FEC, which is not compatible with some vendors' pre-standard FEC (known as Consortium FEC). You may need to turn off FEC (on Aruba "no error-correction"), and disable on the far-end for connections to be made. Disabling FEC may introduce bit errors and increase packet retries, so the link may be less than optimal.

Hewlett Packard Enterprise Company consists of different business units (BUs) and product families (often coming from acquisitions). Transceiver products that are designed to work with specific HPE business unit products, may not work properly on Aruba switches. Until the Aruba BU certifies that other HPE division products work on Aruba switches, those products may be identified as third-party and their complete operation and full support is not absolutely certain. Products from other BUs that have been certified and added to the CX code-base are identified in this guide.

## show interface supported-transceivers command

As of CX 10.16.1006 release, users can find and list interconnected modules supported on a specific switch or interface using CLI command **show interface supported-transceivers**. For more information, see Fundamentals guide and search for "show interface" commands.

## Glossary of terms

| Term                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AOC                 | Active Optical Cable. Similar to a DAC, but uses active components similar to short reach optics, and has an applicable fiber cable permanently attached to both ends. AOCs are typically easier to implement since they mimic a short reach transceiver.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| AOS/Aruba-OS        | Aruba Operating System. Usually reserved for Wireless LAN products.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| AOS-CX              | Aruba OS-CX. The CX line of switching product sold by Aruba. First introduced June 2017.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| AOS-S or AOS-Switch | Aruba OS-Switch. Operating system name for earlier generation switches sold by Aruba under the former name of HPE Networking (aka "ProCurve Networking").                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| APC                 | Angled Physical Contact. Ends of the fiber ferule are at an 8° polished angle. These must mate to a matching APC point. APC reduce reflected light loss and are used for demanding applications such as 400G connections. See UPC and the Overview chapter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Cat5e, Cat6a        | Category 5e, Category 6a ethernet twisted pair cable. 1Gigabit speeds require at least Cat5e cable (more twists per foot compared to Cat5 or Cat5a cable). 10G speeds over twisted pair requires at least Cat6a to reach 100m (the max distance supported by Ethernet over twisted pair).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| CLI                 | Command line interface. The text-based interface used when one connects to a switch (console, telnet, or SSH).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| DAC                 | Direct Attach Copper. A copper cable assembly, consisting of pluggable connectors on both ends - these resemble transceivers, but they lack the active electronics of an optical transceiver. The nature of DAC cables is that they present a "wire" from one switch transceiver port to the other transceiver port (switch to switch, or switch to server adapter). DAC cables are more difficult to ensure end-to-end compatibility. Due to nature of the copper cable used in the DAC, both devices must be able to recognize the part and properly tune electrical characteristics. Switches may have to adjust tunings depending on how far one port is from the main switching ASIC versus another port that is closer. Server adapters don't necessarily have this issue with only 1 to 4 ports to deal with. |
| DOM/DDM             | Digital optical monitoring (DOM). Used to monitor some parameters of the transceiver in real time which helps to identify the location of the fiber link failure, simplify maintenance, and improve system reliability. DOM allows you to monitor the Tx (transmit) and Rx (receive) power of the module, temperature, and transceiver supply voltage. DOM status is polled when the <b>show interface dom</b> command is issued. Digital diagnostic monitoring (DDM) is an alternate term for the same feature.                                                                                                                                                                                                                                                                                                     |
| LC                  | Lucent Connector. See Overview chapter - Connector types.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| MMF                 | Multimode Fiber. Usually used for short runs (less than 400m for 10G and higher).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| MPO                 | Multifiber-Push-On/Off connector. Connector types. E.g. MTP is a brand name of a type of MPO connector. Refer to the Overview chapter for additional details.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| MPO12 or MPO16      | An MPO connector with 12 or 16 fibers. Some HPE products may refer to MPO12 as MPO8 since there are only 8 fibers used. See <a href="#">Overview</a> chapter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| nm                  | Nanometer. Used to specify the wavelength used in optical transmissions. A nm is one-billionth of a meter or 1/1000,000,000.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| NRZ                 | Non-Return to Zero. A method of encoding pulses that uses opposite and alternating high and low levels representing a 0 (low) or 1 (high) and there is no return to a zero between encoding pulses. A signal transmitting at ~25Ghz effectively transmits 25G bits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| Term            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | of data (see PAM4).                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| NSP             | HPE Aruba Networking Support Portal. ( <a href="https://networkingsupport.hpe.com">https://networkingsupport.hpe.com</a> ). Formerly known as ASP (Aruba Support Portal).                                                                                                                                                                                                                                                                              |
| PAM4            | Pulse Amplitude Modulation 4 levels. A method of encoding 4 bits of data by using 4 levels of signaling. A signal transmitting at ~25Ghz effectively transmits 50G bits of data since each pulse is now transmitting 2 bits of data in each clock pulse (see NRZ).                                                                                                                                                                                     |
| Q-DD or QSFP-DD | QSFP Double-Density. Double the density/bandwidth of a QSFP56 or 400G. QSFP-DD is backward compatible to accept QSFP56, QSFP28 or QSFP+ pluggables. Depending on the switch port hardware, QSFP-DD.                                                                                                                                                                                                                                                    |
| QSFP+           | Quad Small Formfactor Pluggable (Plus). Term used for 40G type of ports (see QSFP28 and other QSFP). Depending on the switch port hardware, QSFP+ can be split into 4x 10G links using appropriate hardware (parallel optics, Split-DACs or Split-AOCs).                                                                                                                                                                                               |
| QSFP28          | Quad Small Formfactor Pluggable 28 Gigahertz. Used by ports that use a 25G channels x 4 (quad) resulting in a 100Gb connection. QSFP28 ports are usually backward compatible to accept 40G QSFP+ pluggables. Depending on the switch port hardware, QSFP28 can usually be split into 4x 25G or 4x 10G links using appropriate hardware (parallel optics, Split-DACs or Split-AOCs).                                                                    |
| QSFP56          | Quad Small Formfactor Pluggable 56 Gigahertz. Used by ports that use a 25G channels using PAM4 encoding, resulting in 4 channels of 50G or a 200Gb connection. QSFP56 ports are usually backward compatible to accept QSFP28 100G and QSFP+ 40G QSFP+ pluggables. Depending on the switch port hardware, QSFP56 may split into 2x100G, 4x50G, 2x50G, or 4x 25G or 4x 10G links using appropriate hardware (parallel optics, Split-DACs or Split-AOCs). |
| SFP             | Small Formfactor Pluggable. Smaller transceiver port, same physical dimensions for 100Mb, 1G, 10G 25G and 50G parts (optics, DAC cables, AOCs).                                                                                                                                                                                                                                                                                                        |
| SMF             | Singlemode Fiber. Usually used for longer runs.                                                                                                                                                                                                                                                                                                                                                                                                        |
| SN              | Senko Nano connector. Invented by Senko. SN connectors are vertically oriented duplex fiber connectors allowing for side-to-side stacked into QDD 400G pluggables, providing for a "split" optic without using an MPO to split LC cable assembly.                                                                                                                                                                                                      |
| TAA             | Trade Agreement Act. A USA regulation requirement for product to be manufactured/assembled in countries that meet the US Trade Agreement Act of 1979.                                                                                                                                                                                                                                                                                                  |
| TRX             | Alternative abbreviation for Transceiver (shortened version of xcvr).                                                                                                                                                                                                                                                                                                                                                                                  |
| UPC             | Ultra Physical Contact. Ends of the fiber ferule ground to a more precise level than "PC" See APC and the Overview chapter.                                                                                                                                                                                                                                                                                                                            |
| UTM             | UT-mode, or Unsupported Transceiver Mode. See <a href="#">Overview</a> chapter.                                                                                                                                                                                                                                                                                                                                                                        |
| UTP/STP         | Unshielded Twisted Pair / Shielded Twisted Pair. Copper cables to support ethernet speeds from 10 Megabits (10M), 100 Megabits (100M), 1000 Megabit or 1 Gigabit(1G) to 10 Gigabits (10G). Cables made up of pairs of wires that are twisted (to reject electromagnetic interference) - "twisted pairs".                                                                                                                                               |
| xcvr            | Transceiver. A combination of "X" for Transmitter and Receiver.                                                                                                                                                                                                                                                                                                                                                                                        |

## Chapter 2

### QSFP-DD modules

Always refer to the Datasheet or QuickSpecs for the switch product to see the current list of supported transceivers. Datasheets/QuickSpecs do not usually detail specific notes for the transceivers, DACs, or AOCs. Those details are in this guide.

400 Gigabit Ethernet in Aruba systems use QSFP-DD ports. Q-DD ports are available on select models within the CX product family.

Quad Small Form-Factor Pluggable Double-Density products provide up to 400 Gb/s of data bandwidth. QSFP-DD builds on the existing QSFP physical form-factor to provide 50Gb/s bandwidth per channel using 4-level Pulse Amplitude Modulation (PAM4) technology. The Double-Density module and connector design increases the number of high-speed data channels from four to eight for an aggregate bandwidth of 400Gb/s (8x50Gb/s). Aruba uses the abbreviation of Q-DD or QDD interchangeably for QSFP-DD.

See more information about QSFP-DD, PAM4 vs NRZ along with MPO16, MPO12 connector types in the Overview chapter.

Some QDD products can split and connect to lower speed products. See the [Compatible split optical transceivers to lower-speed transceivers](#) section in the Overview chapter.

### QSFP-DD, QSFP56, QSFP28, and QSFP+ compatibility

QSFP-DD ports can accommodate QSFP-DD, QSFP56, QSFP28 and QSFP+ products. QSFP-DD products cannot be used in QSFP56, QSFP28, or QSFP+ ports. Although the products may appear to be the same physical size, QSFP-DD products incorporate an extra row of connectors for the Double-Density capability that QSFP-based products do not include.

#### ***QSFP-DD optical transceiver modules***



## Models, specifications, and compatibility

### Specifications for QSFP-DD optical transceiver modules

| Product name (SKU)                                                         | DOM-Digital Optical Monitoring | Nominal wl (nm)                                                                                                       | Fiber mode and connector type | Fiber Diameter | Modal Bandwidth  | Distance           |
|----------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------|------------------|--------------------|
| Aruba 400G Q-DD MPO16 SR8 100 m MMF xcvr (R9B41A)                          | Yes                            | Eight lanes: 850 8x50G PAM4                                                                                           | MMF MPO16 (APC)               | 50/125         | 2000 (OM3)       | 70 m (229.6 ft)    |
|                                                                            |                                | See " <a href="#">Split to lower-speed</a> " section                                                                  |                               |                | 4700 (OM4 & OM5) | 100 m (328.0 ft)   |
| HPE Aruba Networking 4x100G DR QSFP-DD SN 500 m SMF Transceiver (S3N90A)   | Yes                            | Per SN channel One lane, 1310, 1x 100G PAM4<br><br>Connects to 100G DR (S3N88A) (not compatible to 100G SR4 nor LR4)  | SMF 4xSN (UPC)                | 9/125          | N/a              | 500 m (1640.42 ft) |
| HPE Aruba Networking 400G DR4 QSFP-DD MPO12 500 m SMF Transceiver (S3N93A) | Yes                            | Four lanes, 1310, 4x 100G PAM4                                                                                        | SMF MPO12 (APC)               | 9/125          | N/a              | 500 m (1640.42 ft) |
| Aruba 400G Q-DD MPO12 eDR4 2 km SMF xcvr (R9B42A)                          | Yes                            | Four lanes, 1310, 4x 100G PAM4                                                                                        | SMF MPO12 (APC)               | 9/125          | N/a              | 2 km (1.24 miles)  |
| HPE Aruba Networking 4x100G FR QSFP-DD SN 2 km SMF Transceiver (S3N91A)    | Yes                            | Per SN channel One lane, 1310, 1x 100G PAM4<br><br>Connects to 100G FR1 (R9B63A) (not compatible to 100G SR4 nor LR4) | SMF 4xSN (UPC)                | 9/125          | N/a              | 2 km (1.24 miles)  |

| Product name (SKU)                                                            | DOM-Digital Optical Monitoring | Nominal wl (nm)                                                                                                            | Fiber mode and connector type | Fiber Diameter | Modal Bandwidth | Distance           |
|-------------------------------------------------------------------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------|-----------------|--------------------|
| HPE Aruba Networking 400G FR4 QSFP-DD LC 2 km SMF Transceiver (S3N95A)        | Yes                            | Four lanes 1264.5 to 1277.5<br><br>1284.5 to 1297.5<br><br>1304.5 to 1317.5<br><br>1324.5 to 1337.5<br><br>4x 100G PAM4    | SMF LC (UPC)                  | 9/125          | N/a             | 2 km (1.24 miles)  |
| HPE Aruba Networking 4x100G LR QSFP-DD SN 10 km SMF Transceiver (S3N92A)      | Yes                            | Per SN channel One lane, 1310, 1x 100G PAM4<br><br>Connects to 100G LR (S3N89A) (not compatible to 100G LR4)               | SMF 4xSN (UPC)                | 9/125          | N/a             | 10 km (6.21 miles) |
| HPE Aruba Networking 400G PLR4 QSFP-DD MPO12 10 km SMF Transceiver (S3N94A)   | Yes                            | Four lanes: 1310, 4x 100G PAM4                                                                                             | SMF MPO12 (APC)               | 9/125          | N/a             | 10 km (6.21 miles) |
| HPE Aruba Networking 400G PLR8 QSFP-DD 2xMPO12 10 km SMF Transceiver (S4B35A) | Yes                            | Eight lanes: 1310 8x50G PAM4<br><br>Connects to 50G LR (S0V65A) or 25G LR (JL486A) when split into separate LC connections | SMF 2xMPO12 (APC)             | 9/125          | N/a             | 10 km (6.21 miles) |
| HPE Aruba Networking 400G LR4 QSFP-DD LC                                      | Yes                            | Four lanes 1264.5 to 1277.5                                                                                                | SMF LC (UPC)                  | 9/125          | N/a             | 10 km (6.21 miles) |

| Product name (SKU)                                     | DOM-Digital Optical Monitoring | Nominal wl (nm)                                                                      | Fiber mode and connector type | Fiber Diameter | Modal Bandwidth | Distance          |
|--------------------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------|-------------------------------|----------------|-----------------|-------------------|
| 10 km SMF Transceiver (S3N96A)                         |                                | 1284.5 to 1297.5<br><br>1304.5 to 1317.5<br><br>1324.5 to 1337.5<br><br>4x 100G PAM4 |                               |                |                 |                   |
| HPE ANW 400G ZR QSFP-DD 80 km SMF Transceiver (S4B38A) | Yes                            | One lane: 1547.7 1x50G DP-16QAM                                                      | SMF Duplex LC (UPC)           | 9/125          | N/a             | 80 km (see note*) |

400G SR8 are not supported for use over OM1/OM2 multimode fiber.

The IEEE standard did not specify any requirements for use over these lower quality multimode fiber.

The MPO16 and MPO12 connectors must be APC (Angled Physical Connector) when connecting to 200G, 400G transceivers to achieve the distance stated above. See the Overview chapter regarding APC vs UPC.

\*400G ZR Distance: 80 km is for unamplified point-to-point interface. To achieve 80 km the fiber attenuation needs to be better than 0.25dB/km.

Please refer to the "Aruba-Corning 400G Cable Reference Guide" on the [HPE Networking Support Portal](#) for more split optical cables specifically for use with 400G products. 400G optics can be split into lower speeds (refer to [400G Q-DD optical interoperability with slower speed optics](#) for additional details).

#### Optical and power specifications for QSFP-DD optical transceiver modules

| Product name (SKU)                                                       | Optical parameters (dBm) |               | Required power* | Temperature Ratings    |
|--------------------------------------------------------------------------|--------------------------|---------------|-----------------|------------------------|
|                                                                          | Transmit power           | Receive power |                 |                        |
| Aruba 400G Q-DD MPO16 SR8 100 m MMF xcvr (R9B41A)                        | -6.5 to +4.0             | -8.4 to +4.0  | 10 W            | Commercial (0 to 70°C) |
| HPE Aruba Networking 4x100G DR QSFP-DD SN 500 m SMF Transceiver (S3N90A) | -2.9 to +4.0             | -5.9 to +4.0  | 12 W            |                        |
| HPE Aruba Networking 4x100G FR QSFP-DD SN 2 km SMF Transceiver (S3N91A)  | -3.1 to +4.0             | -7.1 to +4.0  | 12 W            |                        |

| Product name (SKU)                                                            | Optical parameters (dBm) |               | Required power* | Temperature Ratings |
|-------------------------------------------------------------------------------|--------------------------|---------------|-----------------|---------------------|
|                                                                               | Transmit power           | Receive power |                 |                     |
| HPE Aruba Networking 400G FR4 QSFP-DD LC 2 km SMF Transceiver (S3N95A)        | -3.2 to +4.4             | -7.2 to +4.4  | 12 W            |                     |
| HPE Aruba Networking 4x100G LR QSFP-DD SN 10 km SMF Transceiver (S3N92A)      | -1.9 to 4.8              | -8.2 to +4.8  | 12 W            |                     |
| HPE Aruba Networking 400G DR4 QSFP-DD MPO12 500 m SMF Transceiver (S3N93A)    | -2.9 to +4.0             | -5.9 to +4.0  | 12 W            |                     |
| Aruba 400G Q-DD MPO12 eDR4 2 km SMF xcvr (R9B42A)                             | -3.1 to +4.0             | -7.1 to +4.0  | 10 W            |                     |
| HPE Aruba Networking 400G PLR4 QSFP-DD MPO12 10 km SMF Transceiver (S3N94A)   | -1.9 to 4.8              | -8.2 to +4.8  | 12 W            |                     |
| HPE Aruba Networking 400G PLR8 QSFP-DD 2xMPO12 10 km SMF Transceiver (S4B35A) | -4.5 to +4.2             | -10.8 to +4.2 | 13 W            |                     |
| HPE Aruba Networking 400G LR4 QSFP-DD LC 10 km SMF Transceiver (S3N96A)       | -2.7 to +5.1             | -9.0 to 5.1   | 12 W            |                     |
| HPE ANW 400G ZR QSFP-DD 80 km SMF Transceiver (S4B38A)                        | -1.0 to +1.0             | -22.0 to 0.0  | 20 W            |                     |

\*Wattage may impact operating temperature for select switches.

Aruba 9300 switch series limit the use of QDD optics/AOCs if running at low-line AC Voltage (100VAC-125VAC). Use High-line voltage to install more than 9 products in the 9300 32D

The 9300 32D and 9300S Switch Series will shutdown a port that may be exceeding the maximum temperature for a transceiver - this is to prevent damage to the transceiver and other components on the switch. The S4B38A 400G ZR optic will take advantage of this protection mechanism. Take measures to cool the switch environment so that the port can be brought back up. If the situation persists, the port will be kept down, awaiting user-interaction.

#### Compatibility for the QSFP-DD transceiver modules

| QSFP-DD capable product name    | SKU                                       | Minimum software required               | Comments                                                                                                                         |
|---------------------------------|-------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 9300 Switch Series</b> | -32D models<br>R8Z96A-Base<br>■ R9A29A FB | R9B41A (SR8), R9B42A (eDR4); 10.10.1000 | High-line AC voltage is required to support more than 8 products (200-240 VAC). Bench testing the 9300 32D with low line voltage |

| QSFP-DD capable product name     | SKU                                                                                                                                                                                                                                                                                                                                      | Minimum software required                                                                                                                                                                                                               | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | <ul style="list-style-type: none"> <li>R9A30A BF</li> </ul>                                                                                                                                                                                                                                                                              | <p>S3N90A, S3N91A, S3N92A, S3N93A, S3N94A: 10.13.1010</p> <p>S3N95A, S3N96A: 10.14.1000</p> <p>S4B35A (PLR8): 10.15.1000</p> <p>S4B38A (ZR): 10.16.1006 (only on FB model-R9A29A)</p>                                                   | <p>may not be able to properly power up more than 8 products.</p> <p>The S4B35A 400G PLR8 can be split and pairs of fibers can be used to connect to remote 50G LR or 25G LR (all channels need to be the same speed). Use the <b>split 8 25</b> or <b>split 8 50</b> commands and connect an SMF MPO12 to 4xLC fiber cables to the cable plant. The MPO12 connectors should be APC for best performance.</p> <p>S4B38A (400G ZR): is only supported in the upper (odd-numbered) ports on the 9300-32D.</p> |
| <b>Aruba 9300S Switch Series</b> | <p>-32C 8D models displayed by CLI <b>show system</b></p> <p>Base models: S0F95A-TAA Base, S0F96A-Base</p> <ul style="list-style-type: none"> <li>S0F81A FB TAA</li> <li>S0F82A FB</li> <li>S0F83A BF TAA</li> <li>S0F84A BF</li> <li>S0F87A BF DC TAA</li> <li>S0F88A BF DC</li> </ul>                                                  | <p>R9B42A, S3N90A, S3N91A, S3N92A, S3N93A: 10.14.0000</p> <p>S3N95A, S3N96A: 10.15.0005</p> <p>S3N94A: 10.15.1000</p> <p>S4B38A (ZR): 10.15.1005</p> <p>R9B41A (SR8), R4B35A (PLR8): Not supported</p> <p>S3N94A (PLR4): 10.15.1000</p> | <p>QSFP-DD (Q-DD) products cannot be used in QSFP ports (1-16 and 25 - 40) on the 9300S.</p> <p>S4B38A (400G ZR): is only supported in ports 17, 19, 21 &amp; 23, and only on the FB models. Do not use on BF models or in any other port for thermal reasons.</p> <p>9300S does not support 8-way splitting, thus, the 400G SR8 (R9B41A) and PLR8 (S4B35A) are not supported.</p>                                                                                                                          |
| <b>Aruba 10040 32C6D models</b>  | <p>S4R58A displayed by CLI (show system)</p> <ul style="list-style-type: none"> <li>S4R54A – 32C6D FB bundle</li> <li>S4R55A – 32C6D BF bundle</li> </ul> <p>TAA models:</p> <ul style="list-style-type: none"> <li>S4R59A displayed by CLI (show system)</li> <li>S4R56A – 32C6D FB bundle</li> <li>S4R57A – 32C6D BF bundle</li> </ul> | <p>R9B42A, S3N93A, S3N95A, S3N96A, S3N94A:, S4B38A (ZR), R9B41A (SR8): 10.16.10xx</p>                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## 400G Q-DD optical interoperability with slower speed optics

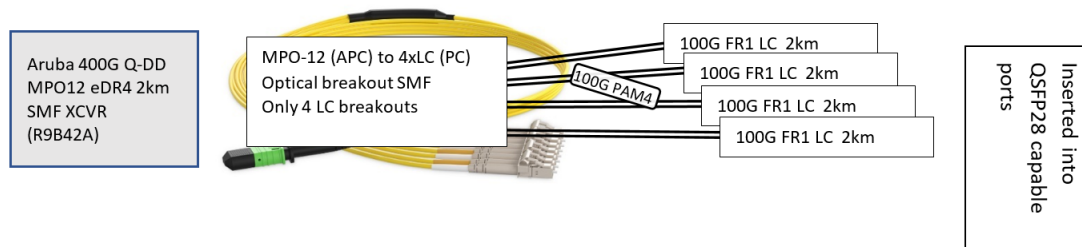
QSFP-DD 400G SR8 is eight channels of 50G PAM4 short reach (MMF) and can be configured into 4 groups of 2x50G, compatible with the 100G SR2 optic (not the same as 100G SR4). Use the CLI command: **split 4 100** on the Q-DD port hosting the R9B41A 400G SR8 optic.

The 10.15.1000 release introduced the ability to split 8x ways on the 9300 32D series. The 9300S series does not have the architecture to split 8x ways, only 2x or 4x ways. The 400G SR8 can be optically split to connect to 8 50G SR over OM4 MMF to up to 100m link lengths using the CLI command **split 8 50**.



QSFP-DD 400G eDR4 is four channels of 100G PAM4 long reach (2km, SMF) split into four pairs of SMF to 100G FR1 PAM4 QSFP28 optics.

Use the CLI command: **split 4 100** on the Q-DD port.



A split 400G eDR4 is not compatible (single channel 100G PAM4) with regular QSFP28 100G LR4 (which are 4-channel 25G NRZ).

## 400G Q-DD to Q-DD, Q-DD to split QSFP56 AOC (active optical cables), and Q-DD to split 8x SFP56 DAC

Always refer to the Datasheet or QuickSpecs for the switch product to see the current list of supported transceivers.

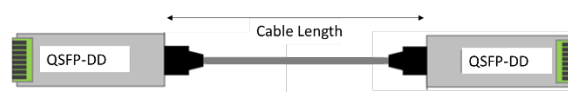


QSFP-DD (Q-DD) end can NOT be used in QSFP28 nor QSFP+ ports

Refer to the section later in this guide “HPE Servers and Systems Support” for use cases of 400G and 200G split cables when used with validated HPE Server and HPE Storage adapters.

| Product name (SKU) | Cable length | Data rate |
|--------------------|--------------|-----------|
|--------------------|--------------|-----------|

|                                                 |  |  |
|-------------------------------------------------|--|--|
| QDD to QDD Active Optical Cables (400G to 400G) |  |  |
|-------------------------------------------------|--|--|

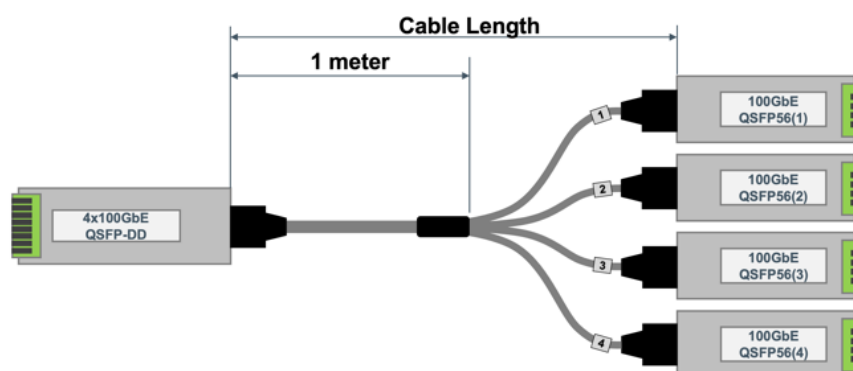


| Product name (SKU)                       | Cable length | Data rate                                                                                         |
|------------------------------------------|--------------|---------------------------------------------------------------------------------------------------|
| Aruba 400G Q-DD to Q-DD 3m AOC (R9B45A)  | 3m           | 400G to 400G Active Optical Cables.<br><br>These cables will only work in a QSFP-DD capable port. |
| Aruba 400G Q-DD to Q-DD 7m AOC (R9B43A)  | 7m           |                                                                                                   |
| Aruba 400G Q-DD to Q-DD 15m AOC (R9B47A) | 15m          |                                                                                                   |
| Aruba 400G Q-DD to Q-DD 30m AOC (R9B46A) | 30m          |                                                                                                   |
| Aruba 400G Q-DD to Q-DD 50m AOC (R9B44A) | 50m          |                                                                                                   |

#### QDD to 4x QSFP56 100G Active Optical Cables

The following cables split 1m from the QSFP DD end.

The 100G split ends only operate in a QSFP56 compatible port (not the same as a 100G QSFP28 port)



Refer to [Splitting of QSFP+ \(40G\) and QSFP28 \(100G\) ports](#) for additional information.

|                                                   |     |                                                                                                                                                      |
|---------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aruba 400G Q-DD to 4xQSFP56 100G 3m AOC (R9B50A)  | 3m  | A split 400G port into 4x 100G speed ports.                                                                                                          |
| Aruba 400G Q-DD to 4xQSFP56 100G 7m AOC (R9B48A)  | 7m  |                                                                                                                                                      |
| Aruba 400G Q-DD to 4xQSFP56 100G 15m AOC (R9B52A) | 15m | Requires a QSFP56 port on the far end. See list of validated QSFP56 adapters in the " <a href="#">Support for HPE Servers and Systems</a> " section. |
| Aruba 400G Q-DD to 4xQSFP56 100G 30m AOC (R9B51A) | 30m |                                                                                                                                                      |
| Aruba 400G Q-DD to 4xQSFP56 100G 50m AOC (R9B49A) | 50m | These cables will not work in a QSFP28 100G port.                                                                                                    |

## Product name (SKU) Cable length

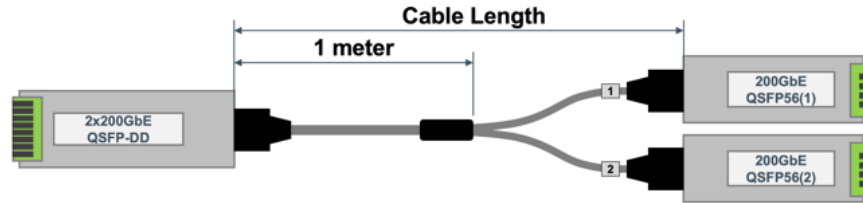
## Data rate

### QDD to 2xQSFP56 200G Active Optical Cables

The following cables split 1m from the Q-DD end.

The Q-DD end configures the Q-DD port to run in 2x 200G mode.

The split ends only operate in a 200G QSFP56 compatible port.



Refer to [Splitting of QSFP+ \(40G\) and QSFP28 \(100G\) ports](#) for additional information.

Aruba 400G Q-DD to 2xQSFP56 200G 3m AOC (R9B55A)

3m

Split 400G port into 2x 200G speed ports.

Requires a QSFP56 port on the far end.

Aruba 400G Q-DD to 2xQSFP56 200G 7m AOC (R9B53A)

7m

These cables will not work in a QSFP28 100G port.

Aruba 400G Q-DD to 2xQSFP56 200G 15m AOC (R9B57A)

15m

Aruba 400G Q-DD to 2xQSFP56 200G 30m AOC (R9B56A)

30m

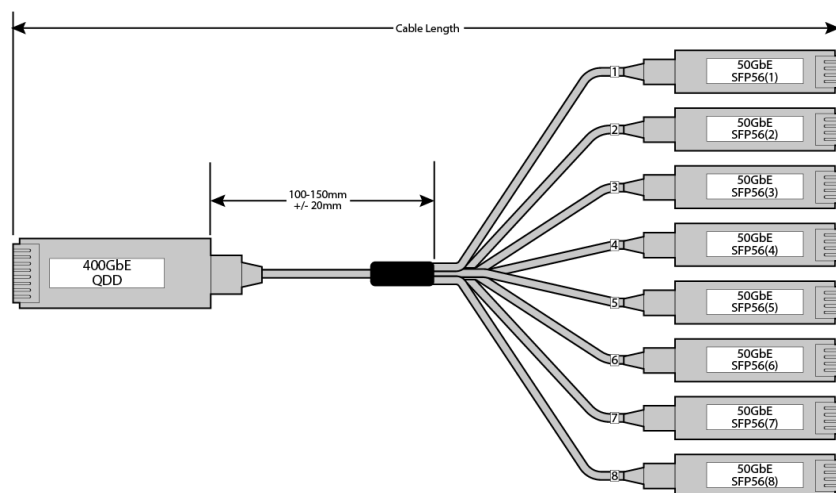
Aruba 400G Q-DD to 2xQSFP56 200G 50m AOC (R9B54A)

50m

### QDD to 8xSFP56 50G DACs

These 8x way DACs can not be used in the 9300S series (9300S does not support splitting 8x ways). Cannot be used as a 4x split cable.

The following cables split approximately 100-150mm after the Q-DD port.



HPE ANW 400G QDD-

1m

Split 400G port into 8x 50G speed ports.

| Product name (SKU)                             | Cable length | Data rate                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8SFP56 1m DAC<br>(S4B41A)                      |              | Requires an SFP56 port on the far end.                                                                                                                                                                                                                                                                                                                                                                                     |
| HPE ANW 400G QDD-<br>8SFP56 2m DAC<br>(S4B42A) | 2m           | These cables will not work in 1G SFP ports. To use in a 8x25G or 8x10G scenario, use the <b>split 8 &lt;speed&gt;</b> (10 or 25, default is set to 50) command to change the split ends link speeds. All 8 split ends must be at the same speed. Split ends are supported in 6100, 6200, 6300, 8100, 8320, 8360, and 8400 Switch Series. The switches will recognize the SFP end automatically with minimum CX 10.15.1005. |

#### Compatibility for the QSFP-DD cables

| QSFP-DD AOC/DAC capable product name (SKU) | Minimum software required                                                                                                                                                                                                                          | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aruba 9300 Switch Series -32D models       | <p>QDD-QDD AOCs:<br/>R9B43A – R9B47A:<br/>10.10.1000</p> <p>QDD-split 4xQSFP56 AOCs: R9B48A-<br/>R9B51A: 10.10.1000</p> <p>QDD to 2x200G AOCs: R9B53A-<br/>R9B57A:<br/>10.10.1000</p> <p>QDD-8x split DACs:<br/>S4B41A, S4B42A:<br/>10.15.1005</p> | <p>Either end can be used in the 9300 32D (Q-DD ports support QSFP56 and Q-DD). QSFP-DD (Q-DD) products can not be used in 100G QSFP28 or in 40G QSFP+ ports.</p> <p>9300 32D requires the CLI command <b>split-profile 2</b> to support the 8-way split cables, and only available on bottom ports in the QDD port groups.</p>                                                                                                                                     |
| Aruba 9300S Switch Series -32C 8D models   | <p>QDD-QDD AOCs:<br/>R9B43A - R9B47A</p> <p>QDD-split 4xQSFP56 AOCs: R9B48A-<br/>R9B51A</p> <p>QDD to 2x200G AOCs: R9B53A-<br/>R9B57A:<br/>10.14.0005</p> <p>QDD-8x split DACs (S4B41A/S4B42A):<br/>Not supported</p>                              | <p>QDD or QSFP56 end can be used in the 9300S Q-DD ports (17-24).</p> <p>QSFP56 end can be used in the 9300S QSFP56 or QDD ports (9-32).</p> <p>All 400G AOCs when used in a BF 9300S model (S0F84A), the max temp is reduced by 10C (See the 9300S datasheet for normal use max temp).</p> <p>QSFP-DD (Q-DD) products cannot be used in 100G QSFP28 or in 40G QSFP+ ports.</p> <p>The 9300S series hardware does not support 8x splitting (only 4x splitting).</p> |

| QSFP-DD AOC/DAC capable product name (SKU) | Minimum software required                       | Comments                              |
|--------------------------------------------|-------------------------------------------------|---------------------------------------|
| Aruba 10040 32C6D models                   | QDD-QDD AOCs:                                   | Supported on all QDD ports 25-30      |
| Base switch:                               | R9B43A - R9B47A – 10.16.10xx                    |                                       |
| ▪ S4R58A displayed by CLI (show system)    |                                                 | Supported only on ports 25-26 & 29-30 |
| ▪ S4R54A – 32C6D FB bundle                 | QDD-split 4xQSFP56 AOCs: R9B48A – 10.16.10xx    |                                       |
| ▪ S4R55A – 32C6D BF bundle                 |                                                 | Supported on all QDD ports 25-30      |
| Base switch TAA:                           | QDD to 2x200G AOCs: R9B53A - R9B57A: 10.16.10xx |                                       |
| ▪ S4R59A displayed by CLI (show system)    |                                                 |                                       |
| ▪ S4R56A – 32C6D FB bundle                 | QDD-8x split DACs (S4B41A/S4B42A):              |                                       |
| ▪ S4R57A – 32C6D BF bundle                 | Not supported                                   |                                       |

## Compatibility for the QSFP-DD cables

| Split Side SFP56 DAC capable product name (SKU) | Minimum software required                                         | Comments                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aruba 6100 Switch Series                        | SFP56 Split side of QDD-8x split DACs: S4B41A, S4B42A: 10.15.1020 | Supported on all SKUs; only in available SFP ports.                                                                                                                                                                                                                                                                                   |
| Aruba 6200 Switch Series                        |                                                                   | Supported on all SKUs; only in available SFP ports.                                                                                                                                                                                                                                                                                   |
| Aruba 6300 Switch Series                        |                                                                   | Supported on all SKUs; only in available SFP56 compatible ports. <ul style="list-style-type: none"> <li>Ports 25-26 on 24p models with 2x SFP56 ports</li> <li>Ports 25-26 on 24p models with 4x SFP56 ports</li> <li>Ports 49-50 on 48p models with 2x SFP56 ports</li> <li>Ports 49-52 on 48p models with 4x SFP56 ports</li> </ul> |
| Aruba 6300L Switch Series                       |                                                                   | Only supported in SFP56 compatible ports. <ul style="list-style-type: none"> <li>Ports 49-50 on 48 port models</li> <li>Ports 25-26 on 24 port models</li> </ul>                                                                                                                                                                      |
| Aruba 6400 Switch Series                        |                                                                   | Supported in all SFP ports of the R0X44A and S0E48A models. Other supported ports: <ul style="list-style-type: none"> <li>Ports 25-28 on 24p models</li> <li>Ports 49-52 on 48p models</li> </ul>                                                                                                                                     |
| Aruba 8100 Switch Series                        |                                                                   | Supported in: <ul style="list-style-type: none"> <li>Ports 1-24 of the R9W94A model</li> <li>Ports 25-28 of the R9W95A model</li> <li>Ports 1-48 of the R9W96A model</li> <li>Ports 41-48 of the R9W97A model</li> </ul>                                                                                                              |
| Aruba 8325 48Y8C models                         |                                                                   | Supported in ports 1-48                                                                                                                                                                                                                                                                                                               |
| Aruba 8325H Switch Series                       |                                                                   | Only supported in ports 1-18 of the following 18p models: <ul style="list-style-type: none"> <li>S2T42A</li> <li>S4B20A</li> <li>S2T46A</li> <li>S4B21A</li> </ul>                                                                                                                                                                    |
| Aruba 8360 32Y4C models                         |                                                                   | Only supported in ports 5-32                                                                                                                                                                                                                                                                                                          |
| Aruba 8360 16Y2C models                         |                                                                   | Supported in ports 1-16                                                                                                                                                                                                                                                                                                               |
| Aruba 8360 48Y6C models                         |                                                                   | Only supported in ports 5-48                                                                                                                                                                                                                                                                                                          |
| Aruba 8400X modules                             |                                                                   | Supported in ports 1-32                                                                                                                                                                                                                                                                                                               |

## 200G Q-DD Optics, DACs, and AOCs

| Product name (SKU)                            | DOM-Digital Optical Monitoring | Nominal wl (nm)                                                                           | Fiber mode & connector type | Fiber Diameter | Modal Bandwidth                      | Distance        |
|-----------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------|-----------------------------|----------------|--------------------------------------|-----------------|
| HPE ANW 200G SR4 MPO12 100m MMF XCVR (S4B43A) | Yes                            | Four lanes: 850 4x50G PAM4<br>This is a QSFP56 module and will not work in a QSFP28 port. | MMF MPO12 (UPC)             | 50/125         | 2000 (OM3)<br><br>4700 (OM4 and OM5) | 70m<br><br>100m |

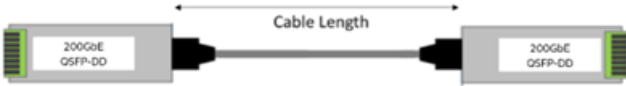
| Product name (SKU)                            | Optical parameters (dBm) |               | Required power* |
|-----------------------------------------------|--------------------------|---------------|-----------------|
|                                               | Transmit power           | Receive power |                 |
| HPE ANW 200G SR4 MPO12 100m MMF XCVR (S4B43A) | -6.5 to 4                | -8.4 to 4     | 10W             |

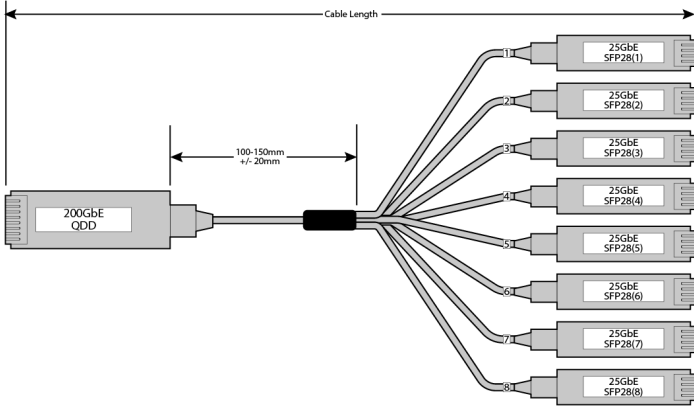
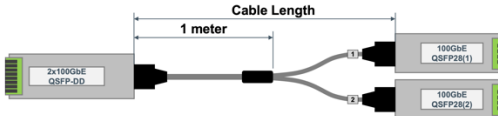


\*Wattage may impact operating temperature for select switches.

Aruba 9300 switch series limit the use of QDD optics/AOCs if running at low-line AC Voltage (100VAC-125VAC). Use High-line voltage to install more than 9 products in the 9300 32D

These 200G Q-DD AOCs automatically configure a Q-DD port to operate in 4-channel QSFP56 mode. Because of the 2xQSFP28 ends, this limits the Q-DD port to 200G (2 channels of 100G each).

| Product name (SKU)                                                           | Cable length | Data rate                                                                            |
|------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------|
| HPE Aruba Networking 200G QSFP56 to QSFP56 1m Direct Attach Cable (S4B36A)   | 1m           |  |
| HPE Aruba Networking 200G QSFP56 to QSFP56 2.5m Direct Attach Cable (S4B37A) | 2.5m         |                                                                                      |

| Product name (SKU)                                                                                                                                                                                                                         | Cable length                                                                         | Data rate                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>QDD 200G Split DACs</b><br><br>These 8x way DACs can not be used in the 9300S series (9300S does not support splitting 8x ways). Cannot be used as a 4x split cable following cables split approximately 100-150mm after the Q-DD port. |    |                                                                                                                                                                                               |
| HPE ANW 200G QDD to 8x SFP28 2m DAC (S4B39A)                                                                                                                                                                                               | 2m                                                                                   | Split a QSFP-DD port into 8x 25G speed ports.<br><br>Requires an SFP28 or 25G capable port on the far end<br><br>These cables will work in supported SFP56/50G, SFP28/25G and SFP+/10G ports. |
| HPE ANW 200G QDD to 8x SFP28 3m DAC (S4B40A)                                                                                                                                                                                               | 3m                                                                                   | Requires interface CLI command, <b>split 8 &lt;speed&gt;</b> , command to be enabled.<br><br>Will not work in 1G SFP ports                                                                    |
| <b>QDD 200G Split AOCs</b><br><br>The following cables split 1m from the QSFP-DD end.                                                                                                                                                      |  |                                                                                                                                                                                               |
| Aruba 200G Q-DD to 2xQSFP28 100G 3m AOC (R9B60A)                                                                                                                                                                                           | 3m                                                                                   | 200G (Q-DD running in 200G mode) to split 2x 100G (QSFP28).                                                                                                                                   |
| Aruba 200G Q-DD to 2xQSFP28 100G 7m AOC (R9B58A)                                                                                                                                                                                           | 7m                                                                                   | 200G Q-DD end only works in QSFP-DD/Q-DD ports.<br><br>QSFP28 end can work in QSFP28, QSFP56, QSFP-DD/Q-DD ports.                                                                             |
| Aruba 200G Q-DD to 2xQSFP28 100G 15m AOC (R9B62A)                                                                                                                                                                                          | 15m                                                                                  |                                                                                                                                                                                               |
| Aruba 200G Q-                                                                                                                                                                                                                              | 30m                                                                                  |                                                                                                                                                                                               |

| Product name (SKU)                                      | Cable length | Data rate |
|---------------------------------------------------------|--------------|-----------|
| DD to 2xQSFP28<br>100G 30m AOC<br>(R9B61A)              |              |           |
| Aruba 200G Q-DD to 2xQSFP28<br>100G 50m AOC<br>(R9B59A) | 50m          |           |

| QSFP56 or QSFP28 capable product name (SKU)  | Minimum software required                                                                                                                       | Comments                                                                                                                                                                      |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aruba 6300 Switch Series                     | Not supported                                                                                                                                   |                                                                                                                                                                               |
| Aruba 6400 Switch Series                     | Not supported                                                                                                                                   |                                                                                                                                                                               |
| Aruba 8100 Switch Series                     | S4B43A, R9B60A, R9B58A, R9B62A, R9B61A, R9B59A:<br>10.12.0000<br><br>S4B39A, S4B40A:<br>Not supported                                           | Only the QSFP28 end is supported                                                                                                                                              |
| Aruba 8325 Switch Series (QSFP28 ports only) | S4B43A, R9B60A, R9B58A, R9B62A, R9B61A, R9B59A:<br>10.10.1000<br><br>S4B39A, S4B40A:<br>Not supported                                           | Only the QSFP28 end is supported.                                                                                                                                             |
| Aruba 8360 Switch Series (QSFP28 ports only) | S4B43A, R9B60A, R9B58A, R9B62A, R9B61A, R9B59A:<br>10.10.1000<br><br>S4B39A, S4B40A:<br>10.15.1020 (only the SFP28 ends, see Comments section.) | Only the QSFP28 end is supported.<br><br>Only the SFP28 ends on the 8x Split DACs are supported in the 8360 models with 25G ports.                                            |
| Aruba 8400 Switch Series                     | Not supported                                                                                                                                   |                                                                                                                                                                               |
| Aruba 9300 Switch Series -32D models         | S4B43A, R9B60A, R9B58A, R9B62A, R9B61A, R9B59A:<br>10.10.1000                                                                                   | Either end can be used in the 9300 32D (Q-DD ports support QSFP56, QSFP28, and Q-DD). QSFP-DD (Q-DD) ends of these AOCs can not be used in 100G QSFP28 or in 40G QSFP+ ports. |

| QSFP56 or QSFP28 capable product name (SKU) | Minimum software required                                                                                                                                                   | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                             | <p>S4B40A (8x25G SplitDACs):<br/>10.15.1020</p> <p>S4B36A, S4B37A:<br/>10.16.1006</p>                                                                                       | <p>To use in a 8x25G or 8x10G scenario, use the <b>split 8 &lt;speed&gt;</b> (10 or 25, default is set to 50) command to change the split ends link speeds. All 8 split ends must be the same speed. Split ends are supported in 6100, 6200, 6300, 8100, 8320, 8360, and 8400 switch series. The switches will recognize the SFP end automatically with minimum CX 10.15.1005.</p> <p>Supported in ports 1-32.</p>                                                                                                                 |
| Aruba 9300S Switch Series -32C 8D models    | <p>S4B43A, R9B60A, R9B58A, R9B62A, R9B61A, R9B59A:<br/>10.14.0005</p> <p>S4B40A (8x25G SplitDACs): Not supported for 8-way splits</p> <p>S4B36A, S4B37A:<br/>10.16.1006</p> | <p>QDD or QSFP56 ends can be used in the 9300S Q-DD ports (17-24).<br/>QSFP56 ends can be used in the 9300S QSFP56 ports (9-16 or 25-32) configured for <b>speed-group 1</b> in groups of 4. QSFP28 ends can be used in any 9300S QSFP28, QSFP56, or QDD port 1-40 configured for <b>speed-group 1</b> in groups of 4 (except the center QDD ports 17-24 which do not require configuration). QSFP-DD (Q-DD) products cannot be used in 100G QSFP28 or in 40G QSFP+ ports.</p> <p>Supported <i>only</i> in middle ports, 9-32.</p> |
| Aruba 10000 Switch Series                   | <p>S4B43A:<br/>10.12.000x</p> <p>S4B39A, S4B40A (8x25G SplitDACs):<br/>10.15.1020</p> <p>R9B60A, R9B58A, R9B62A, R9B61A, R9B59A:<br/>10.16.1006</p>                         | <p>QSFP28 ends will list as "unsupported" until a future CX release.</p> <p>To use in a 8x25G or 8x10G scenario, use the <b>split 8 &lt;speed&gt;</b> (10 or 25, default is set to 50) command to change the split ends link speeds. All 8 split ends must be at the same speed. Split ends are supported in 6100, 6200, 6300, 8100, 8320, 8360, and 8400 Switch Series. The switches will recognize the SFP end automatically with minimum CX 10.15.1005.</p> <p>QSFP28 ends will be shown as "supported".</p>                    |
| Aruba 10040 32C6D models                    | <p>S4B43A, R9B60A, R9B58A, R9B62A, R9B61A, R9B59A:<br/>10.16.10xx</p> <p>S4B39A, S4B40A (8x25G Split DACs): Not supported</p>                                               | <p>In regards to only QSFP ports (not QDD), for split DACs, 200G (QSFP56) side are only supported in even ports. Split (100G QSFP28) sides are supported in both odd/even ports.<br/>All QDD ports also support both ends.</p>                                                                                                                                                                                                                                                                                                     |

## 100G QSFP28 optical transceiver modules that use MPO connectors

QSFP28 modules are designed to operate with 4 channels of 25G (the "Q" stands for Quad) resulting in a combined bandwidth of 100G links. QSFP28 ports are also compatible to support QSFP+ which are 4 channels of 10G bandwidth resulting in 40G links. QSFP28 transceivers, DACs, and AOCs can be broken into 4 separate links of 25G but are determined by the switch hardware behind the QSFP28 port (See [Splitting of QSFP+ \(40G\) and QSFP28 \(100G\) ports](#) for more information). QSFP28 ports support products that are typically NRZ (Non-Return to Zero) technology, resulting in up to 4x 25G streams of data. See [Overview](#) for information regarding MPO connectors and cable requirements.

### *QSFP28 optical transceiver module that use MPO connectors*



## Models, specifications, and compatibility

QSFP28 optical transceiver modules provide a transmission rate of 100 Gbps.

### *Specifications for QSFP28 optical transceiver modules that use MPO connectors*

| Product name (SKU)                                                   | DOM - Digital Optical Monitoring (4x4 part #) | Nominal wl (nm) & encoding type | Fiber mode & connector type      | Fiber diameter (μm) | Modal bandwidth (MHz*km) | Transmission distance               |
|----------------------------------------------------------------------|-----------------------------------------------|---------------------------------|----------------------------------|---------------------|--------------------------|-------------------------------------|
| Aruba 100G QSFP28 MPO SR4 100m 12-fiber MPO MMF Transceiver (JL309A) | Yes<br>1990-4680<br>1990-4678                 | 4 lanes<br>850<br>4x 25G NRZ    | MMF (MPO12 - 8 fibers used) (PC) | 50/125              | 2000 (OM3)<br>4700 (OM4) | 70m (229.66 ft)<br>100m (328.08 ft) |

| Product name (SKU)                             | DOM - Digital Optical Monitoring (4x4 part #) | Nominal wl (nm) & encoding type | Fiber mode & connector type           | Fiber diameter (µm) | Modal bandwidth (MHz*km) | Transmission distance                                   |
|------------------------------------------------|-----------------------------------------------|---------------------------------|---------------------------------------|---------------------|--------------------------|---------------------------------------------------------|
| HPE ANW 100G SR2 QSFP28 100m MMF xcvr (S1C93A) | Yes<br>1990-4871<br>1990-4890                 | 2 lanes<br>850<br>2x 50G PAM4   | MMF (MPO12 – only 4 fibers used) (PC) | 50u                 | OM3<br>OM4<br>OM5        | 70m (229.66 ft)<br>100m (328.08 ft)<br>100m (328.08 ft) |



SR4 and SR2 are not supported for use over MMF OM1 or OM2 fiber. (The IEEE standard does not state a specification.) Use MPO Female connectors (no pins) with MPO transceivers. See [Connector types](#) for more information about MPO connectors.

Refer to [400G Q-DD optical interoperability with slower speed optics](#) in the QSFP-DD chapter for connecting 100G SR4 or SR2 optics to split 400G SR8 optics. 100G SR4 optics can be used by a QSFP28 port that can be "split" into four channels of 25G (available on select switch models/modules on identified ports). See [Splitting of QSFP+ \(40G\) and QSFP28 \(100G\) ports](#) for more information.

The following optical breakout cables can be used with 100G SR4 to split into 4x 25G SR compatible streams. These cables are ordered from the HPE Compute and Server or Storage business units and may not be available to Aruba-only resellers.

Fiber breakout cables (from HPE Storage products):

- (Storage SKU) \*K2Q46A, HPE MPO to 4 x LC 5m Cable (multimode fiber)
- (Storage SKU) \*K2Q47A, HPE MPO to 4 x LC 15m Cable (multimode fiber)

These are PC (physical connect) style MPO connectors. DO NOT use for optics that require APC (angled physical connect) MPO connectors.



Refer to [Breakout optical cables](#) for APC vs PC vs UPC.

#### Optical specifications for QSFP28 optical transceiver modules that use MPO connectors

| Product name (SKU)                                                   | Connector                                  | Optical parameters (dBm) |               | Temperature Ratings    | Required Power |
|----------------------------------------------------------------------|--------------------------------------------|--------------------------|---------------|------------------------|----------------|
|                                                                      |                                            | Transmit power           | Receive power |                        |                |
| Aruba 100G QSFP28 MPO SR4 100m 12-fiber MPO MMF Transceiver (JL309A) | MPO (PC polished, 12-fiber) do NOT use APC | -8.4 to +2.4             | -10.3 to +2.4 | Commercial (0 to 70°C) | 3.5 W          |
| HPE ANW 100G SR2 QSFP28 100m                                         | MPO (PC polished, 12-Fiber – only 4        | -6.5 to +4.0             | -8.4 to +4.0  | Commercial (0 to 70°C) | 4.0 W          |

| Product name (SKU) | Connector               | Optical parameters (dBm) |               | Temperature Ratings | Required Power |
|--------------------|-------------------------|--------------------------|---------------|---------------------|----------------|
|                    |                         | Transmit power           | Receive power |                     |                |
| MMF xcvr (S1C93A)  | used)<br>do NOT use APC |                          |               |                     |                |

**Compatibility for the QSFP28 optical transceiver modules that use MPO connectors**  
(see [Unsupported transceiver mode](#))

| QSFP28 capable product name (SKU)                                                                                                                                                                                                                                                               | Minimum software required                                        | Comments                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aruba 6300 48p Smart Rate 10G PoE with 4x100G QSFP (S0E91A/S0X44A)                                                                                                                                                                                                                              | JL309A (SR4): 10.13.0005<br>S1C93A (SR2): 10.14.1000             | These 6300 models are not capable of Splitting the QSFP ports.<br>S0E91A/S0X44A models require interface group 2 or 3 to configure either 40G or 100G speed operation. |
| <b>Aruba 6400 modules</b><br>Aruba 6400 12p 40G/100G QSFP28 Module (R0X45A) (EOS)                                                                                                                                                                                                               | JL309A (SR4): 10.04.2000<br>S1C93A (SR2): Not supported          | Aruba 6400 modules with QSFP28 ports do not have Split Mode enabled in AOS-CX as of the latest release covered by this edition.                                        |
| Aruba 6400 12p 40G/100G QSFP28 Module v2 (R0X45C)                                                                                                                                                                                                                                               | JL309A (SR4): 10.09.1000<br>S1C93A (SR2): 10.14.1000             |                                                                                                                                                                        |
| HPE ANW 6400 32SFP28 4QSFP28 MACsec v2 Module (S0E48A)                                                                                                                                                                                                                                          | JL309A (SR4): 10.13.1010<br>S1C93A (SR2): 10.14.1000             |                                                                                                                                                                        |
| <b>Aruba 8100 Switch Series</b>                                                                                                                                                                                                                                                                 | JL309A (SR4): 10.12.1000<br>S1C93A (SR2): 10.15.0005, 10.14.1010 | 8100 48port models CANNOT split the QSFP28 port.<br>For the 24p models 100G SR4 can be optically split.                                                                |
| <b>Aruba 8325 32C models</b><br>JL636A displayed by CLI ( <b>show system</b> )<br><ul style="list-style-type: none"> <li>JL626A - Port-to-Power model (FB)</li> <li>JL627A - Power-to-Port model (BF)</li> </ul>                                                                                | JL309A (SR4): 10.03.0030<br>S1C93A (SR2): 10.13.1040             | 100G SR4 can be optically split as of: 10.05.0001                                                                                                                      |
| <b>Aruba 8325 48Y8C models</b><br>JL635A displayed by CLI ( <b>show system</b> )<br><ul style="list-style-type: none"> <li>JL624A - Port-to-Power model (FB)</li> <li>JL625A - Power-to-Port model (BF)</li> </ul>                                                                              | JL309A (SR4): 10.03.0030<br>S1C93A (SR2): 10.13.1040             | 100G SR4 can be optically split as of: 10.05.0001                                                                                                                      |
| <b>Aruba 8325P 32C models</b><br>S4A48A displayed by CLI (show system)<br>S0G12A displayed by CLI (show system) for TAA bundles<br><ul style="list-style-type: none"> <li>S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl</li> <li>S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl</li> </ul> | JL309A (SR4), S1C93A (SR2): 10.15.0005                           | Port 32 cannot split (not enough MACs in design).<br>100G SR4 (JL309A) can be optically split in ports 1-31.                                                           |

| QSFP28 capable product name (SKU)                                                                                                                                                                                                                           | Minimum software required                                                                                                     | Comments                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>▪ S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl</li> <li>▪ S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl</li> </ul>                                                                                            |                                                                                                                               |                                                                                                                                                                    |
| <b>Aruba 8325H models</b><br>TAA/Non-TAA: <ul style="list-style-type: none"> <li>▪ S2T42A/S4B20A - 18Y4C model (FB)</li> <li>▪ S2T46A/S4B21A -18Y4C model (BF)</li> <li>▪ S2T47A/S4B22A -16C model (FB)</li> <li>▪ S2T48A/S4B23A -16C model (FB)</li> </ul> | JL309A (SR4), S1C93A (SR2):<br>10.15.0005                                                                                     | 100G SR4 can be optically split as of 10.06.0001                                                                                                                   |
| <b>Aruba 8360 32Y4C models**</b><br>JL717A/JL717C(v2) displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>▪ JL700A/JL700C(v2) - Port-to-Power model (FB)</li> <li>▪ JL701A/JL701C(v2) - Power-to-Port model (BF)</li> </ul>      | JL309A (SR4):<br>v1 models: 10.05.0001<br>v2 models: 10.09.1000<br><br>S1C93A (SR2): 10.15.0005,<br>10.14.1010, 10.13.1050    | 100G SR4 can be optically split as of: 10.06.0001                                                                                                                  |
| <b>Aruba 8360 16Y2C models</b><br>JL718A/JL718C(v2) displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>▪ JL702A/JL702C(v2) - Port-to-Power model (FB)</li> <li>▪ JL703A/JL703C(v2) - Power-to-Port model (BF)</li> </ul>        | JL309A (SR4):<br>v1 models: 10.05.0005<br>v2 models: 10.09.1000<br><br>S1C93A (SR2): 10.15.0005,<br>10.14.1010, 10.13.1050    | 100G SR4 can be optically split as of: 10.06.0001                                                                                                                  |
| <b>Aruba 8360 48Y6C models**</b><br>JL719C displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>▪ JL704C(v2) - Port-to-Power model (FB)</li> <li>▪ JL705C(v2) - Power-to-Port model (BF)</li> </ul>                               | 48Y6C initially released as v2 models:<br>JL309A (SR4): 10.09.0002<br><br>S1C93A (SR2): 10.15.0005,<br>10.14.1010, 10.13.1050 | 100G SR4 can be optically split as of: 10.09.0002<br>MACsec available on ports 53-54 and via split 10G or 25G on those ports (MACsec not available on ports 49-52) |
| <b>Aruba 8360 48XT4C models</b><br>JL720A/JL720C(v2) displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>▪ JL706A/JL706C(v2) - Port-to-Power model (FB)</li> <li>▪ JL707A/JL707C(v2) - Power-to-Port model (BF)</li> </ul>       | JL309A (SR4):<br>v1 models: 10.05.0001<br>v2 models: 10.09.1000<br><br>S1C93A (SR2):10.15.0005,<br>10.14.1010, 10.13.1050     | Cannot split the SR4 optics into four channels (lack of enough MAC interfaces)                                                                                     |
| <b>Aruba 8360 12C models</b><br>JL721A/JL721C(v2) displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>▪ JL708A/JL708C(v2) - Port-to-Power model (FB)</li> <li>▪ JL709A/JL709C(v2) - Power-to-Port model (BF)</li> </ul>          | JL309A (SR4):<br>v1 models: 10.05.0001<br>v2 models: 10.09.1000<br><br>S1C93A (SR2): 10.15.0005,<br>10.14.1010, 10.13.1050    | 100G SR4 can be optically split as of: 10.06.0001                                                                                                                  |

| QSFP28 capable product name (SKU)                                                                                                                                                                                                                                                                                            | Minimum software required                                                                                                  | Comments                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 8360 24XF2C models</b><br>JL722A/JL722C(v2) displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>▪ JL710A/JL710C(v2) - Port-to-Power model (FB)</li> <li>▪ JL711A/JL711C(v2) - Power-to-Port model (BF)</li> </ul>                                                                        | JL309A (SR4):<br>v1 models: 10.05.0001<br>v2 models: 10.09.1000<br><br>S1C93A (SR2): 10.15.0005,<br>10.14.1010, 10.13.1050 | 100G SR4 can be optically split as of: 10.06.0001                                                                                                                                                                                         |
| <b>Aruba 8400X modules</b><br>6p 40G/100G QSFP28 Advanced Module (JL366A)                                                                                                                                                                                                                                                    | JL309A (SR4): 10.00.0005<br><br>S1C93A (SR2): Not supported                                                                | 10.00.0005 provided 100G product support.<br>10.00.0006 provides additional support for 40G on the JL366A.<br>8400 JL366A QSFP28 module cannot split 100G SR4 into 25G streams (no 25G MAC interfaces).                                   |
| <b>Aruba 9300 Switch Series</b><br>-32D models<br>R8Z96A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ R9A29A FB airflow</li> <li>▪ R9A30A BF airflow</li> </ul>                                                                                                                              | JL309A (SR4): 10.00.0005<br><br>S1C93A (SR2): 10.14.1000                                                                   | 100G SR4 can be optically split                                                                                                                                                                                                           |
| <b>Aruba 9300S Switch Series</b><br>-32C 8D models displayed by CLI <b>show system</b><br>Base models: S0F95A-TAA Base, S0F96A-Base <ul style="list-style-type: none"> <li>▪ S0F81A FB TAA</li> <li>▪ S0F82A FB</li> <li>▪ S0F83A BF TAA</li> <li>▪ S0F84A BF</li> <li>▪ S0F87A BF DC TAA</li> <li>▪ S0F88A BF DC</li> </ul> | JL309A (SR4), S1C93A (SR2):<br>10.14.0001                                                                                  | 9300S requires configuration of port-groups to enable 100G speeds. 100G is enabled using <b>speed-group 1</b> for the selected port (organized in groups of 4). The center QDD ports (17-24) do not need a command, and are auto-sensing. |
| <b>Aruba 10000 48Y6C models</b><br>R8S96A displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>▪ R8P13A - 48Y6C FB bundle</li> <li>▪ R8P14A - 48Y6C BF bundle</li> </ul>                                                                                                                           | JL309A (SR4): 10.10.0002<br><br>S1C93A (SR2): 10.16.1006                                                                   | 100G SR4 can be optically split                                                                                                                                                                                                           |
| <b>Aruba 10040 32C6D models</b> <ul style="list-style-type: none"> <li>▪ S4R54A – 32C6D FB bundle</li> <li>▪ S4R55A – 32C6D BF bundle</li> </ul>                                                                                                                                                                             | JL309A (SR4), S1C93A (SR2):<br>10.16.10xx                                                                                  | In 100G speed mode, these modules can be used in all QSFP and all Q-DD ports. Whereas, in 200G speed mode it can only be used in even QSFP ports and all Q-DD ports                                                                       |

\*\*The 48 and 32 x 25G port models of the 8360 switch also support low-density MACsec ports and enable secured connectivity at 10GbE and 25GbE over unsecured domains. The 48 x 25G port model of the 8360 switch also supports MACsec with 2 x 40G/100G ports.



# 100G QSFP28 optical transceiver modules that use LC connectors



## Models, specifications, and compatibility

QSFP28 optical transceiver modules provide a transmission rate of 100 Gbps and use LC connectors.

The 845972-B21 100G BiD transceiver is a Short Reach 100G product, designed to work over Multi-mode Fiber (MMF) only of OM3 or better quality. It is NOT supported for use over OM1/OM2 quality fiber.

The 845972-B21 100G BiDi transceiver is offered by HPE Server. These parts are ordered using the specified part number (transceiver may not be available to order for Aruba-only partners).

Refer to the [HPE Compute transceiver and cable hardware matrix product availability matrix](#) at hpe.com to verify compatibility with HPE network adapters.

### Specifications for QSFP28 optical transceiver modules that use LC connectors

\*HPE Server or HPE Storage product. May not be available to Aruba resellers.

| Product name (SKU)                                                                                                            | DOM - Digital Optical Monitoring (4x4 part #) | Nominal wl (nm)                                                                                      | Fiber mode   | Fiber diameter (μm)              | Transmission distance                                   |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------------------------------------------------------------------------------------------|--------------|----------------------------------|---------------------------------------------------------|
| *HPE 100Gb QSFP28 BiDirectional xcvr (845972-B21) an HPE Server SKU (not compatible with 100G SR1.2, incompatible FEC modes)) | YES (part # n/a)                              | 2 lanes on each fiber:<br>855 and 908<br>2x PAM4 50G                                                 | MMF LC (UPC) | 50 μ OM3<br>50 μ OM4<br>50 μ OM5 | 70 m (229.6 ft)<br>100 m (328.1 ft)<br>150 m (492.1 ft) |
| HPE ANW 100G SR1.2 QSFP28 LC 100m XCVR (S4B44A)                                                                               | YES (1990-4944 1990-4947)                     | 2 lanes on each fiber: 850/910 nm<br>2x PAM4 50G                                                     | MMF LC (PC)  | 50 μ OM3<br>50 μ OM4<br>50 μ OM5 | 70 m (229.6 ft)<br>100 m (328.1 ft)<br>150 m (492.1 ft) |
| HPE Aruba Networking 100G DR QSFP28 LC 500m SMF Transceiver (S3N88A)                                                          | YES (1990-4926 1990-4959)                     | Single lane on each fiber:<br>1310 1x100G PAM4<br><br>Connects to 1 link from the 400G 4xDR (S3N90A) | SMF LC (UPC) | 9/125                            | 500 m (1640.42 ft)                                      |
| Aruba 100G QSFP28 LC CWDM4 2km SMF Transceiver (R0Z30A)                                                                       | YES (1990-4644, 1990-4643)                    | Four lanes on each fiber:<br>1264.5 to 1277.5<br>1284.5 to 1297.5<br>1304.5 to 1317.5                | SMF LC (UPC) | 9/125                            | 2 km (1.24 miles)                                       |

| Product name (SKU)                                                   | DOM - Digital Optical Monitoring (4x4 part #) | Nominal wl (nm)                                                                                                                                                 | Fiber mode   | Fiber diameter (µm) | Transmission distance            |
|----------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------|----------------------------------|
| 1324.5 to 1337.5                                                     |                                               |                                                                                                                                                                 |              |                     |                                  |
| Aruba 100G QSFP28 LC FR1 2km SMF Transceiver (R9B63A)                | YES (1990-4825 1990-4826)                     | Single lane on each fiber: 1310<br>1x100G PAM4<br>100G LR is not compatible with 100G LR4. 1 lane vs 4 lanes.<br>Connects to 1 link from the 400G 4xFR (S3N91A) | SMF LC (UPC) | 9/125               | 2 km (1.24 miles)                |
| Aruba 100G QSFP28 LC LR4 10km SMF 2-strand Transceiver (JL310A)      | YES (1990-4681)                               | Four lanes on each fiber:<br>1294.53 to 1296.59<br>1299.02 to 1301.09<br>1303.54 to 1305.63<br>1308.09 to 1310.19                                               | SMF LC (UPC) | 9/125               | 10 km (6.21 miles)               |
| HPE Aruba Networking 100G LR QSFP28 LC 10km SMF Transceiver (S3N89A) | YES (1990-4929)                               | Single lane on each fiber: 1310<br>1x100G PAM4<br>100G LR is not compatible with 100G LR4. 1 lane vs 4 lanes.<br>Connects to 1 link from the 400G 4xLR (S3N92A) | SMF LC (UPC) | 9/125               | 10 km (6.21 miles)               |
| Aruba 100G QSFP28 LC ER4L 40km SMF Transceiver (JL743A)              | YES (1254-5112)                               | Four lanes on each fiber:<br>1294.53 to 1296.59<br>1299.02 to 1301.09<br>1303.54 to 1305.63<br>1308.09 to 1310.19                                               | SMF LC (UPC) | 9/125               | 40 km (24.86 miles) Requires FEC |

**Optical specifications for QSFP28 optical transceiver modules that use LC connectors**

\*HPE Server or Storage product. May not be available to Aruba resellers.

(see [Unsupported transceiver mode](#))

| Product name (SKU)                                | Connector | Optical parameters (dBm) per lane |               |                        | Required Power |
|---------------------------------------------------|-----------|-----------------------------------|---------------|------------------------|----------------|
|                                                   |           | Transmit power                    | Receive power | Temperature Rating     |                |
| *HPE 100Gb QSFP28 BiDirectional xcvr (845972-B21) | LC        | -6.0 to 4.0                       | -7.9 to +4.0  | N/A                    | N/A            |
| HPE ANW 100G SR1.2 QSFP28 LC                      | LC        | -6.2 to 4                         | -8.2 to 4     | Commercial (0 to 70°C) | 4.0 W          |

| Product name (SKU)                                                   | Connector | Optical parameters (dBm) per lane |                |                        | Required Power |
|----------------------------------------------------------------------|-----------|-----------------------------------|----------------|------------------------|----------------|
|                                                                      |           | Transmit power                    | Receive power  | Temperature Rating     |                |
| 100m XCVR (S4B44A)                                                   |           |                                   |                |                        |                |
| HPE Aruba Networking 100G DR QSFP28 LC 500m SMF Transceiver (S3N88A) | LC        | -2.9 to +4.0 e                    | -5.9 to +4.0   | Commercial (0 to 70°C) | 4.5 W          |
| Aruba 100G QSFP28 LC CWDM4 2km SMF Transceiver (R0Z30A)              | LC        | -6.5 to 2.5                       | -11.5 to +2.5  | Commercial (0 to 70°C) | 3.5 W          |
| Aruba 100 QSFP28 LC FR1 2km SMF Transceiver (R9B63A)                 | LC        | -3.1 to 4.0                       | -7.1 to +4.0   | Commercial (0 to 70°C) | 4.5 W          |
| Aruba 100G QSFP28 LC LR4 10km SMF 2-strand Transceiver (JL310A)      | LC        | -4.3 to +4.5                      | -10.6 to +4.5  | Commercial (0 to 70°C) | 3.5 W          |
| HPE Aruba Networking 100G LR QSFP28 LC 10km SMF Transceiver (S3N89A) | LC        | -1.9 to +4.8                      | -8.2 to +4.8   | Commercial (0 to 70°C) | 4.5 W          |
| Aruba 100G QSFP28 LC ER4L 40km SMF Transceiver (JL743A)              | LC        | -2.5 to 6.5                       | -20.5 to -3.5* | Commercial (0 to 70°C) | 5.0 W          |



\*Use 10dB attenuator for short SMF cables

#### Compatibility for the QSFP28 optical transceiver modules that use LC connectors

\*HPE Server or Storage product. May not be available to Aruba resellers.

| QSFP28 capable Product name (SKU)                                  | Minimum software required                                                                                                                                                                             | Comments                                                                                               |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Aruba 6300 48p Smart Rate 10G PoE with 4x100G QSFP (S0E91A/S0X44A) | *845972-B21 (100G BiDi), R0Z30A (CWDM4 2km), JL310A (LR4 10 km), JL743A (ER4L 40 km), R9B63A (FR1 2km), S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010<br><br>S4B44A (100G SR1.2 "BiDi"): 10.15.1005 | S0E91A/S0X44A models require "interface group" 2 or 3 to configure either 40G or 100G speed operation. |

#### Aruba 6400 Modules

| QSFP28 capable Product name (SKU)                                                                                                                                                                                  | Minimum software required                                                                                                                                                                                                                                                                                                                                                      | Comments                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12p 40G/100G QSFP28 Module (R0X45A)                                                                                                                                                                                | *845972-B21 (100G BiDi): 10.08.0010<br>R0Z30A (CWDM4 2km): 10.07.0005<br>JL310A (LR4 10 km): 10.04.2000<br>JL743A (ER4L 40 km): Not supported<br>R9B63A (FR1 2km): 10.13.1000<br>S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010<br>S4B44A (100G SR1.2 "BiDi"): 10.15.1005                                                                                                     |                                                                                                                                                                                     |
| 12p 40G/100G QSFP28 Module (R0X45C)                                                                                                                                                                                | *845972-B21 (100G BiDi), R0Z30A (CWDM4 2km),<br>JL310A (LR4 10 km): 10.09.1000<br>JL743A (ER4L 40 km): Not supported<br>R9B63A FR1 2km: 10.13.00xx<br>S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010                                                                                                                                                                          | The minimum software release for the R0X45C module is 10.09.1000.                                                                                                                   |
| HPE ANW 6400 32SFP28 4QSFP28 MACsec v2 Mod (S0E48A)                                                                                                                                                                | *845972-B21 (100G BiDi), R0Z30A (CWDM4 2km),<br>JL310A (LR4 10 km): 10.13.1010<br>JL743A (ER4L 40 km): Not supported<br>R9B63A FR1 2km: 10.13.1010<br>S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010<br>S4B44A (100G SR1.2 "BiDi"): 10.15.1005                                                                                                                                | The minimum software release for the S0E48A module is 10.13.1010                                                                                                                    |
| <b>Aruba 8100 Switch Series</b>                                                                                                                                                                                    | *845972-B21 (100G BiDi): 10.12.0006<br>R0Z30A (CWDM4 2km): 10.12.0006<br>JL310A (LR4 10 km): 10.12.0006<br>JL743A (ER4L 40 km): Not supported<br>R9B63A (FR1 2km): 10.12.0006<br>R9B63A: only allowed in lower 2 ports on BF airflow bundles (FB models can have full complement)<br>S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010<br>S4B44A (100G SR1.2 "BiDi"): 10.15.1005 | Use of R9B63A FR1 derates switch by -5C of stated max operating ambient temp (in addition to the -1C per 1000ft from 5K to 10K ft above sea level) for both airflow configurations. |
| <b>Aruba 8325 32C models</b><br>JL636A displayed by CLI ( <b>show system</b> )<br><ul style="list-style-type: none"> <li>JL626A - Port-to-Power model (FB)</li> <li>JL627A - Power-to-Port model (BF)</li> </ul>   | *845972-B21 (100G BiDi): 10.08.0010<br>R0Z30A (CWDM4 2km): 10.03.0030<br>JL310A (LR4 10 km): 10.03.0030<br>JL743A (ER4L 40 km): 10.04.3000; ports 29-32 only<br>S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010<br>R9B63A FR1 2km: 10.13.1020<br>S4B44A (100G SR1.2 "BiDi"): 10.15.1005                                                                                        | JL743A (100G ER4L) is limited to quantity 4 and only allowed in ports 29-32 (last 4 ports) to limit possible heat issues.                                                           |
| <b>Aruba 8325 48Y8C models</b><br>JL635A displayed by CLI ( <b>show system</b> )<br><ul style="list-style-type: none"> <li>JL624A - Port-to-Power model (FB)</li> <li>JL625A - Power-to-Port model (BF)</li> </ul> | *845972-B21 (100G BiDi): 10.08.0010<br>R0Z30A (CWDM4 2km): 10.03.0030<br>JL310A (LR4 10 km): 10.03.0030<br>JL743A (ER4L 40 km): 10.04.3000; ports 49, 51, 53 and 55 only<br>S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010<br><br>R9B63A FR1 2km: 10.13.1020<br>S4B44A (100G SR1.2 "BiDi"): 10.15.1005                                                                        | JL743A (100G ER4L) is limited to quantity 4 and only allowed in ports 49, 51, 53, and 55 (top row) to limit possible heat issues.                                                   |
| DC PSU bundles:                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                     |

| QSFP28 capable Product name (SKU)                                                                                                                                                                                                                                                                                                                                                                                                                  | Minimum software required                                                                                                                                                                                                                                                                                                                              | Comments                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <p>JL635A displayed by CLI (<b>show system</b>)</p> <ul style="list-style-type: none"> <li>■ JL857A - Port-to-Power model (FB)</li> <li>■ JL858A - Power-to-Port model (BF)</li> </ul>                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                  |
| <p><b>Aruba 8325P 32C models</b><br/>S4A48A displayed by CLI (<b>show system</b>)</p> <p>S0G12A displayed by CLI (<b>show system</b>) for TAA bundles</p> <ul style="list-style-type: none"> <li>■ S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl</li> <li>■ S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl</li> <li>■ S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl</li> <li>■ S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl</li> </ul> | <p>*845972-B21 (100G BiDi), R0Z30A (CWDM4 2 km), JL310A (LR4 10 km), R9B63A FR1 2 km, S3N88A (500m DR), S3N89A (10 km LR): 10.15.0005</p> <p>JL743A (ER4L 40 km):10.15.0005; ports 29-32 only<br/>S4B44A (100G SR1.2 "BiDi"): 10.15.1005</p>                                                                                                           | <p>JL743A (100G ER4L) is limited to quantity 4 and only allowed in ports 29-32 (last 4 ports) to limit possible heat issues.</p> |
| <p><b>Aruba 8325H models</b><br/>TAA/Non-TAA:</p> <ul style="list-style-type: none"> <li>■ S2T42A/S4B20A - 18Y4C model (FB)</li> <li>■ S2T46A/S4B21A -18Y4C model (BF)</li> <li>■ S2T47A/S4B22A -16C model (FB)</li> <li>■ S2T48A/S4B23A -16C model (FB)</li> </ul>                                                                                                                                                                                | <p>*845972-B21 (100G BiDi), R0Z30A (CWDM4 2 km), JL310A (LR4 10 km), JL743A (ER4L 40 km), R9B63A FR1 2 km,S3N88A(500 mDR),S3N89A(10 kmLR): 10.15.1001</p> <p>S4B44A (100G SR1.2 "BiDi"): 10.16.1006</p>                                                                                                                                                |                                                                                                                                  |
| <p><b>Aruba 8360 v1 and v2 models</b> (48Y6C noted below)</p>                                                                                                                                                                                                                                                                                                                                                                                      | <p>*845972-B21 (100G BiDi): 10.08.0010<br/>R0Z30A (CWDM4 2km): 10.07.0005<br/>JL310A (LR4 10 km): 10.06.0001<br/>JL743A (ER4L 40 km): 10.06.0140 and 10.07.0004<br/>v2 models: 10.09.1000 (except 48Y6C noted below)<br/>R9B63A FR1 2km: 10.10.1000<br/>S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010<br/>S4B44A (100G SR1.2 "BiDi"): 10.15.1005</p> | <p>QSFP28 ports on the various models</p>                                                                                        |
| <p><b>Aruba 8360 48Y6C models</b><br/>JL719C displayed by CLI <b>show</b></p>                                                                                                                                                                                                                                                                                                                                                                      | <p>*845972-B21(100G BiDi): 10.09.0002<br/>R0Z30A (CWDM4 2km): 10.09.0002</p>                                                                                                                                                                                                                                                                           | <p>Ports 49-54</p>                                                                                                               |

| QSFP28 capable Product name (SKU)                                                                                                                                                                                                                                                                                | Minimum software required                                                                                                                                                                                                                                                | Comments                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>system</b> <ul style="list-style-type: none"> <li>JL704C(v2) - Port-to-Power model (FB)</li> <li>JL705C(v2) - Power-to-Port model (BF)</li> </ul>                                                                                                                                                             | JL310A (LR4 10 km): 10.09.0002<br>JL743A (ER4L 40 km): 10.09.0002<br>R9B63A FR1 2km: 10.10.1000<br>S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010<br>S4B44A (100G SR1.2 "BiDi"): 10.15.1005                                                                             | Note: MACsec available on ports 53-54                                                                                                                                                                                                                                                                        |
| <b>Aruba 8400X Modules</b><br>6p 40G/100G QSFP28 Advanced Module (JL366A)                                                                                                                                                                                                                                        | *845972-B21 (100G BiDi): 10.08.0010<br>R0Z30A (CWDM4 2km): 10.06.0001<br>JL310A (LR4 10 km): 10.00.0005<br>JL743A (ER4L 40 km): 10.04.3000<br>R9B63A FR1 2km: Not supported<br>S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010<br>S4B44A (100G SR1.2 "BiDi"): 10.15.1005 | 10.00.0005 provides support for 100G products.<br>10.00.0006 provides additional support for 40G on the JL366A.                                                                                                                                                                                              |
| <b>Aruba 9300 Switch Series</b><br>-32D models<br>R8Z96A-Base displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>R9A29A FB airflow</li> <li>R9A30A BF airflow</li> </ul>                                                                                                                 | *845972-B21(100G BiDi): 10.14.0001<br>R0Z30A (CWDM4 2km):10.10.1000<br>JL310A (LR4 10 km):10.10.1000<br>JL743A (ER4L 40 km):10.10.1000<br>R9B63A FR1: 10.10.1000<br>S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010<br>S4B44A (100G SR1.2 "BiDi"): 10.15.1005            |                                                                                                                                                                                                                                                                                                              |
| <b>Aruba 9300S Switch Series</b><br>-32C 8D models displayed by CLI <b>show system</b><br>Base models: S0F95A-TAA Base, S0F96A-Base <ul style="list-style-type: none"> <li>S0F81A FB TAA</li> <li>S0F82A FB</li> <li>S0F83A BF TAA</li> <li>S0F84A BF</li> <li>S0F87A BF DC TAA</li> <li>S0F88A BF DC</li> </ul> | *845972-B21(100G BiDi), R0Z30A (CWDM4 2km), JL310A (LR4 10 km), JL743A (ER4L 40 km), R9B63A FR1 2km, S3N88A, S3N89A: 10.14.0000<br><br>S4B44A (100G SR1.2 "BiDi"): 10.15.1005                                                                                            | 9300S requires configuration of port-groups to enable 100G speeds. Groups of 4 - all ports in the group need to be of the same speed set (100G vs 40G). 100G is enabled using speed-group 1 (default) for the selected port group. The center QDD ports (17-24) do not need a command, and are auto-sensing. |
| <b>Aruba 10000 48Y6C models</b><br>R8S96A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>R8P13A - 48Y6C FB bundle</li> <li>R8P14A - 48Y6C BF bundle</li> </ul>                                                                                                                       | *845972-B21(100G BiDi):10.10.0002<br>R0Z30A(CWDM4 2km): 10.10.0002<br>JL310A (LR4 10 km): 10.10.0002<br>JL743A (ER4L 40 km): 10.13.000x<br>R9B63A FR1 2km: 10.10.1000<br><br>S3N88A (500m DR), S3N89A (10 km LR), S4B44A (SR1.2): 10.16.1006                             | See <a href="#">Unsupported transceiver mode</a> .                                                                                                                                                                                                                                                           |
| <b>Aruba 10040 32C6D models</b> <ul style="list-style-type: none"> <li>S4R54A – 32C6D FB bundle</li> <li>S4R55A – 32C6D BF bundle</li> </ul>                                                                                                                                                                     | *845972-B21(100G BiDi), R0Z30A(CWDM4 2km), JL310A (LR4 10 km), JL743A (ER4L 40 km), R9B63A (FR1 2km), S3N88A (500m DR), S3N89A (10 km LR), S4B44A (SR1.2): 10.16.10xx                                                                                                    | In 100G speed mode, these modules can be used in all QSFP and all Q-DD ports.<br>Whereas, in 200G speed mode it can only be used in even QSFP ports and all Q-DD ports                                                                                                                                       |

# 100G QSFP28 DAC and breakout DAC (copper cables)



## Models, specifications, and compatibility

### Specifications for QSFP28 copper cables

| Product name (SKU)                                                 | Cable length    | Data rate | Description                                                                                         | Temperature Rating     | Required Power |
|--------------------------------------------------------------------|-----------------|-----------|-----------------------------------------------------------------------------------------------------|------------------------|----------------|
| Aruba 100G QSFP28 to QSFP28 1m Direct Attach Copper Cable (R0Z25A) | 1 m (3.28 ft)   | 100 Gbps  | Used for interconnecting 100-Gigabit QSFP28 ports                                                   | Commercial (0 to 70°C) | 0.1 W per end  |
| Aruba 100G QSFP28 to QSFP28 3m Direct Attach Copper Cable (JL307A) | 3 m (9.8 ft)    | 100 Gbps  | Used for interconnecting 100-Gigabit QSFP28 ports                                                   | Commercial (0 to 70°C) | 0.1 W per end  |
| Aruba 100G QSFP28 to QSFP28 5m Direct Attach Copper Cable (R0Z26A) | 5 m (16.4 ft)   | 100 Gbps  | Used for interconnecting 100-Gigabit QSFP28 ports                                                   | Commercial (0 to 70°C) | 0.1 W per end  |
| HPE Aruba Networking 50G QSFP56 to SFP56 0.65m DAC Cable (S1J07A)  | 0.65 m (2.13ft) | 50 Gbps   | Primarily used by 6300 48p SR10 4x100G models to connect to existing 6300M or F models for stacking | N/A                    | N/A            |
| HPE Aruba Networking 50G QSFP56 to SFP56 3m DAC Cable (S1J08A)     | 3 m (9.8 ft)    |           | Not supported for use on any other switch at this time.                                             |                        |                |

The following breakout DAC cable is offered by HPE Servers and Systems and ordered using the specified part number (these cables may not be available to order for Aruba-only partners). Refer to the [HPE Compute transceiver and cable hardware matrix product availability matrix](#) at hpe.com.

AOS-CX releases 10.05 and later support a **split** command configured on 100G QSFP28 ports. Not all QSFP28 ports can be split. See [Splitting of QSFP+ \(40G\) and QSFP28 \(100G\) ports](#) for more information.



10.05 and 10.06 require the configuration to be saved and the switch to be rebooted to enable the split operation on the ports. Starting with the 10.07 release, the need to save and reboot is now removed for the 8320, 8325, and 8360 series. The 8400 still requires a save and reboot.

| Product name (SKU)                                    | Cable length  | Data rate       |
|-------------------------------------------------------|---------------|-----------------|
| *HPE 100Gb QSFP28 to 4x25Gb SFP28 3m DAC (845416-B21) | 3 m (9.84 ft) | 100G to 4 x 25G |

**Compatibility for the QSFP28 DAC and breakout DAC copper cables**  
(see [Unsupported transceiver mode](#))

\* HPE Server or Storage product. May not be available to Aruba resellers.

| QSFP28 DAC capable product name (SKU)                    | Minimum software required                                                                      | Comments                                                                                                                                                                                                      |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 6300 Switch Series</b>                          |                                                                                                |                                                                                                                                                                                                               |
| Aruba 6300M 48G 4SFP56 Swch (JL663A)                     | *845416-B21: 10.06.0120/10.07.0020<br>JL663A and JL762A: 10.06.0120/10.07.0020<br>(SFP28 ends) | The SFP28 ends of 845416-B21 are supported for use in the SFP56 ports of the models specified here (NOT on the other models).                                                                                 |
| Aruba 6300M 48G Pwr2Prt 2F 1PS Bdl (JL762A)              |                                                                                                |                                                                                                                                                                                                               |
| Aruba 6300M 24G SFP+ 2p50 2p25G (R8S92A)                 | *845416-B21: 10.10.1000 only in ports 25-28 (only SFP28 ends)                                  | S0E91A/S0X44A models interface group 2 or 3 to configure either 40G or 100G speed operation, this cable works in either mode.                                                                                 |
| Aruba 6300 48p Smart Rate 10G and 4x100G (S0E91A/S0X44A) | R0Z25A,JL307A, R0Z26A: 10.13.000x<br>S1J07A,S1J08A: 10.13.1020                                 | S1J07A,S1J08A: the SFP56 ends are for connecting to other 6300M or F models (for VSF stacking)                                                                                                                |
| HPE ANW 6300M 16SR5 32G CL8 2L 2Y Sw (S4P41A/TAA S4P45A) | S1J07A, S1J08A: 10.16.1006                                                                     |                                                                                                                                                                                                               |
| HPE ANW 6300M 32SR5 CL8 8P 2L 2Y Sw (S4P42A/TAA S4P46A)  |                                                                                                | Only SFP56 ends are supported in the following ports:<br><ul style="list-style-type: none"> <li>■ S4P41A/TAA S4P43A: 49-50</li> <li>■ S4P42A/TAA S4P46A: 41-42</li> <li>■ S4P44A/TAA S4P48A: 25-26</li> </ul> |
| HPE ANW 6300M 48F 2L 2Y Sw (S4P43A/TAA S4P47A)           |                                                                                                |                                                                                                                                                                                                               |
| HPE ANW 6300M 24F 2L 2Y Sw (S4P44A/TAA S4P48A)           |                                                                                                | (Support is extended to the switch model's respective TAA SKUs.)                                                                                                                                              |
| <b>Aruba 6400 Switch Series</b>                          |                                                                                                |                                                                                                                                                                                                               |
| 12p 40G/100G QSFP28 Module (R0X45A)                      | JL307A: 10.04.2000<br>R0Z25A/R0Z26A: 10.08.0001<br>*845416-B21: Not supported                  | *845416-B21: 6400 does not yet have split port capability.                                                                                                                                                    |
| 12p 40G/100G QSFP28 Module (R0X45C)                      | JL307A, R0Z25A/R0Z26A: 10.09.1000<br>*845416-B21: Not supported                                |                                                                                                                                                                                                               |
| HPE ANW 6400 32SFP28 4QSFP28 MACsec v2 Mod (S0E48A)      | JL307A, R0Z25A/R0Z26A: 10.13.1010<br>*845416-B21: Not supported                                |                                                                                                                                                                                                               |

| QSFP28 DAC capable product name (SKU)                                                                                                                                                                                                                                                                                                                                                                                                      | Minimum software required                                                                                                     | Comments                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 8100 Switch Series</b>                                                                                                                                                                                                                                                                                                                                                                                                            | R0Z25A,JL307A,R0Z26A:10.12.1000<br>*845416-B21: 10.12.1000 (requires <b>split</b> command)                                    | 48 port models cannot split the QSFP ports                                                                                                                                                        |
| <b>Aruba 8325 32C models</b><br>JL636A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ JL626A - Port-to-Power model (FB)</li> <li>■ JL627A - Power-to-Port model (BF)</li> </ul>                                                                                                                                                                                                                              | JL307A: 10.03.0030<br>R0Z25A/R0Z26A: 10.04.2000<br>*845416-B21: 10.05.0001 (requires <b>split</b> command)                    | All 32 QSFP28 ports can be split 10.05.0001: only the QSFP28 end is supported in the switch. SFP28 end is not supported at this time                                                              |
| <b>Aruba 8325 48Y8C models</b><br>JL635A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ JL624A - Port-to-Power model (FB)</li> <li>■ JL625A - Power-to-Port model (BF)</li> </ul>                                                                                                                                                                                                                            | JL307A: 10.03.0030<br>R0Z25A/R0Z26A: 10.04.2000<br>*845416-B21: 10.05.0001 (requires <b>split</b> command)                    | All 8 QSFP28 ports can be split 10.05.0001: only QSFP28 end is supported in the switch. SFP28 end is not supported at this time                                                                   |
| <b>Aruba 8325P 32C models</b><br>S4A48A displayed by CLI ( <b>show system</b> )<br>S0G12A displayed by CLI ( <b>show system</b> ) for TAA bundles <ul style="list-style-type: none"> <li>■ S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl</li> <li>■ S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl</li> <li>■ S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl</li> <li>■ S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl</li> </ul> | *845416-B21,<br>R0Z25A,JL307A,R0Z26A: 10.15.0005<br><br>*845416-B21 (requires the <b>split</b> command)                       | Port 32 can support the split *845416-B21 cable (MAC interfaces reserved for the two SFP+ ports 33 & 34).<br><br>Ports 1-31 can support the split cable.                                          |
| <b>Aruba 8325H models</b><br>TAA/Non-TAA: <ul style="list-style-type: none"> <li>■ S2T42A/S4B20A - 18Y4C model (FB)</li> <li>■ S2T46A/S4B21A -18Y4C model (BF)</li> <li>■ S2T47A/S4B22A -16C model (FB)</li> <li>■ S2T48A/S4B23A -16C model (FB)</li> </ul>                                                                                                                                                                                | JL307A, R0Z25A/R0Z26A: 10.15.1001<br><br>*845416-B21: 10.05.0001 (requires the <b>split</b> command)                          | 8325H 16C models cannot split port 16.                                                                                                                                                            |
| <b>Aruba 8360 32Y4C models</b><br>JL717A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ JL700A/ JL700C(v2) Port-to-Power model</li> <li>■ JL701A/ JL701C(v2) Power-to-Port model</li> </ul>                                                                                                                                                                                                                  | JL307A, R0Z25A/R0Z26A: 10.06.0001<br>*845416-B21: 10.06.0001 (Requires <b>split</b> command)<br>v2 models require: 10.09.1000 | 33-36 (all QSFP28 ports can be split)<br>*845416-B21: 10.06.0001<br>Only the QSFP28 end is supported in the switch. SFP28 end is not supported at this time.<br><br>*845416-B21: 10.13.1010 added |

| QSFP28 DAC capable product name (SKU)                                                                                                                                                                                   | Minimum software required                                                                                                     | Comments                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                         |                                                                                                                               | support of 25G ends                                                                                                                                                                                                                          |
| <b>8360 16Y2C models</b><br>JL718A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL702A/JL702C(v2) Port-to-Power model</li> <li>JL703A/JL703C(v2) Power-to-Port model</li> </ul>           | JL307A, R0Z25A/R0Z26A: 10.06.0001<br>*845416-B21: 10.06.0001 (requires <b>split</b> command)<br>v2 models require: 10.09.1000 | 17-18 (all QSFP28 ports can be split)<br>*845416-B21: 10.06.0001<br>Only the QSFP28 end is supported in the switch. SFP28 end is not supported at this time.<br><br>*845416-B21: 10.13.1010 added support of 25G ends                        |
| <b>Aruba 8360 48Y6C models</b><br>JL719C(v2) displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL704C(v2) - Port-to-Power model (FB)</li> <li>JL705C(v2) - Power-to-Port model (BF)</li> </ul> | (introduced as a v2 model) JL307A, R0Z25A/R0Z26A: 10.09.0002<br>*845416-B21: 10.09.0002 (requires <b>split</b> command)       | Ports 49-54<br><br>*845416-B21: 10.06.0001<br>Only the QSFP28 end is supported in the switch. SFP28 end is not supported at this time.<br><br>*845416-B21: 10.13.1010 added support of 25G ends<br><br>Note: MACsec available on ports 53-54 |
| <b>8360 48XT4C models</b><br>JL720A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL706A/JL706C(v2) Port-to-Power model</li> <li>JL707A/JL707C(v2) Power-to-Port model</li> </ul>          | JL307A, R0Z25A/R0Z26A: 10.06.0001<br>*845416-B21: Not supported<br>v2 models require: 10.09.1000                              | Hardware does not support splitting of any of the QSFP28 ports. There are not enough MACs to support split QSFP28 ports.                                                                                                                     |
| <b>Aruba 8360-12C models</b><br>JL721A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL708A/JL708C(v2) Port-to-Power model</li> <li>JL709A/JL709C(v2) Power-to-Port model</li> </ul>       | JL307A, R0Z25A/R0Z26A: 10.06.0001<br>*845416-B21: 10.06.0001 (requires <b>split</b> command)<br>v2 models require: 10.09.1000 | 1-12 (all QSFP28 ports can be split)<br>There are no SFP28 ports on this model                                                                                                                                                               |
| <b>8360 24XF2C models</b><br>JL722A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL710A/JL710C(v2) Port-to-Power model</li> <li>JL711A/JL711C(v2) Power-to-Port model</li> </ul>          | JL307A, R0Z25A/R0Z26A: 10.06.0001<br>*845416-B21: 10.06.0001 (requires <b>split</b> command)<br>v2 models require: 10.09.1000 | 25-26 (all QSFP28 ports can be split)<br>There are no SFP28 ports on this model (24 ports of 1G/10G SFP and 2 ports of QSFP28)                                                                                                               |
| <b>Aruba 8400X Modules</b><br>6p 40G/100G QSFP28 Advanced Module (JL366A)                                                                                                                                               | JL307A: 10.00.0005<br>R0Z25A/R0Z26A: 10.06.0001<br>*845416-B21: Not supported nor any                                         | *845416-B21: 8400<br>JL366A 6p QSFP28 module cannot support splitting 100G                                                                                                                                                                   |

| QSFP28 DAC capable product name (SKU)                                                                                                                                                                                                                                                                                     | Minimum software required                                       | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                           | type of 100G split cable                                        | ports into 4x25G speed (no 25G MAC available on the JL366A module)                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Aruba 9300 Switch Series</b><br>-32D models<br>R8Z96A-Base displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ R9A29A FB airflow</li> <li>▪ R9A30A BF airflow</li> </ul>                                                                                                                      | JL307A, R0Z25A/R0Z26A: 10.13.0001<br>*845416-B21: Not supported | *845416-B21 may work in UT-mode<br>See <a href="#">Unsupported transceiver mode</a>                                                                                                                                                                                                                                                                                                                                                            |
| <b>Aruba 9300S Switch Series</b><br>-32C 8D models displayed by CLI <b>show system</b><br>Base models: S0F95A-TAA Base, S0F96A-Base <ul style="list-style-type: none"> <li>▪ S0F81A FB TAA</li> <li>▪ S0F82A FB</li> <li>▪ S0F83A BF TAA</li> <li>▪ S0F84A BF</li> <li>▪ S0F87A BF DC TAA</li> <li>▪ S0F88A BF</li> </ul> | JL307A, R0Z25A/R0Z26A, *845416-B21: 10.14.0005                  | The split cable (from HPE Server: *845416-B21) can only be used in ports 9-13; 15-17; 19; 21; 23; 25-27; 29-32.<br><br>The 9300S requires configuration of port-groups to enable 100G speeds. Groups of 4 - all ports in the group need to be of the same speed set (100G vs 40G). 100G is enabled using speed-group 1 (default) for the selected port group.<br><br>The center QDD ports (17-24) do not need a command, and are auto-sensing. |
| <b>Aruba 10000 48Y6C models</b><br>R8S96A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ R8P13A - 48Y6C FB bundle</li> <li>▪ R8P14A - 48Y6C BF bundle</li> </ul>                                                                                                                            | JL307A, R0Z25A/R0Z26A: 10.10.0002<br>*845416-B21: 10.12.1000    |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Aruba 10040 32C6D models</b> <ul style="list-style-type: none"> <li>▪ S4R54A – 32C6D FB bundle</li> <li>▪ S4R55A – 32C6D BF bundle</li> </ul>                                                                                                                                                                          | JL307A, R0Z25A/R0Z26A, *845416-B21: 10.16.10xx                  | In 100G speed mode, these modules can be used in all QSFP and all Q-DD ports. Whereas, in 200G speed mode it can only be used in even QSFP ports and all Q-DD ports                                                                                                                                                                                                                                                                            |



\* HPE Server or Storage product. May not be available to Aruba resellers.

## 100G QSFP28 AOC and breakout AOC (active optical cables)



## Models, specifications, and compatibility

| Product name (SKU)                           | Cable length    | Data rate | Temperature Rating |
|----------------------------------------------|-----------------|-----------|--------------------|
| Aruba 100G QSFP28 to QSFP28 2m AOC (JL856A)  | 2 m (6.6 ft)    | 100 Gbps  | 0-70°C             |
| Aruba 100G QSFP28 to QSFP28 7m AOC (R0Z27A)  | 7 m (22.96 ft)  | 100 Gbps  |                    |
| Aruba 100G QSFP28 to QSFP28 15m AOC (R0Z28A) | 15 m (49.21ft)  | 100 Gbps  |                    |
| Aruba 100G QSFP28 to QSFP28 30m AOC (R0Z29A) | 30 m (98.42 ft) | 100 Gbps  |                    |

The following 100G breakout AOC cables are offered by HPE Servers and Systems and ordered using the specified part number (these cables may not be available to order for Aruba-only partners). Refer to the [HPE Compute transceiver and cable hardware matrix product availability matrix](#) at hpe.com.



For the AOS-CX 10.05 and 10.06 releases, the configuration requires a save and reboot of the switch or module. Starting with the 10.07 release, the need to save and reboot is now removed for the 8320, 8325, and 8360 series. The 8400 still requires a save and reboot. See the *Monitoring Guide* for details on the `split` command.

| Product name (SKU)                             | Cable length   | Data rate  | Temperature Rating |
|------------------------------------------------|----------------|------------|--------------------|
| *HPE QSFP28 to 4x25G SFP28 7m AOC (845420-B21) | 7 m (22.96 ft) | 4 x 25Gbps |                    |

| Product name (SKU)                              | Cable length   | Data rate  | Temperature Rating |
|-------------------------------------------------|----------------|------------|--------------------|
|                                                 |                |            | 0-70°C             |
| *HPE QSFP28 to 4x25G SFP28 15m AOC (845424-B21) | 15 m (49.21ft) | 4 x 25Gbps |                    |

**Compatibility for the QSFP28 100G active optical cables**  
(see [Unsupported transceiver mode](#))

\* HPE Server or Storage product. May not be available to Aruba resellers.

| QSFP28 AOC capable product name (SKU)                                                                                                                                                                                                                                                                                                                                                                       | Minimum software required                                                                                                                                                                                                                                                                                                                                                           | Comments                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 6300 (select models)</b> <ul style="list-style-type: none"> <li>■ JL658A - Aruba 6300M 24SFP+ 4SFP56 Swch</li> <li>■ JL663A - Aruba 6300M 48G 4SFP56 Swch</li> <li>■ JL762A - Aruba 6300M 48G Pwr2Prt 2F 1PS Bd</li> <li>■ R8S92A - Aruba 6300M 24G SFP+ 2p50 2p25G</li> <li>■ S0E91A HPE ANW 6300M 48SRX CL8 PoE 4p100G Sw</li> <li>■ S0X44A HPE ANW 6300M 48SRX CL8 PoE 4p100G TAA Sw</li> </ul> | JL856A, R0Z27A, R0Z28A, R0Z29A: Not supported (no 100G ports in these 6300M models)<br><br>*845420-B21, *845424-B21(Split ends): 10.08.0001<br><br>JL856A, R0Z27A, R0Z28A, R0Z29A: Not supported (no 100G ports)<br><br>*845420-B21, *845424-B21: 10.10.1000 (Only in ports 25-28)<br><br>JL856A, R0Z27A, R0Z28A, R0Z29A: 10.13.0005<br><br>*845420-B21, *845424-B21: Not supported | Support for the 25G ends of the split AOC from HPE Compute parts<br><br><br><br><br><br><br><br><br><br>Support for the 25G ends of the split AOC from HPE Compute parts<br><br><br><br><br><br><br><br><br><br>S0E91A / S0X44A models require interface group 2 or 3 to configure either 40G or 100G speed operation.<br><br>S0E91A and S0X44A models cannot split the QSFP28 port, nor connect via a QSA28 adapter for the 25G ends. |
| <b>Aruba 6400 (select modules)</b> <ul style="list-style-type: none"> <li>■ Aruba 6400 Module: 12p 40G/100G QSFP28 Module (R0X45A/R0X45C)</li> <li>■ HPE ANW 6400 32Y4C MACsec v2 Module (S0E48A)</li> </ul>                                                                                                                                                                                                | Not supported<br><br>R0Z27A,R0Z28A,R0Z29A: 10.13.1010<br>JL856A, *845420-B21, *845424-B21: Not supported on S0E48A                                                                                                                                                                                                                                                                  | No split port support on R0X45A/R0X45C<br><br><br>No split port support on S0E48A                                                                                                                                                                                                                                                                                                                                                      |
| <b>Aruba 8100 Switch Series</b>                                                                                                                                                                                                                                                                                                                                                                             | R0Z27A,R0Z28A,R0Z29A, *845420-B21, *845424-B21: 10.13.1000                                                                                                                                                                                                                                                                                                                          | *845420-B21, *845424-B21: QSFP end cannot be used in 48p models (48XF4C or 40XT8XF4C models).<br><br>The QSFP end (split) can be used on QSFP ports for 24p models,                                                                                                                                                                                                                                                                    |

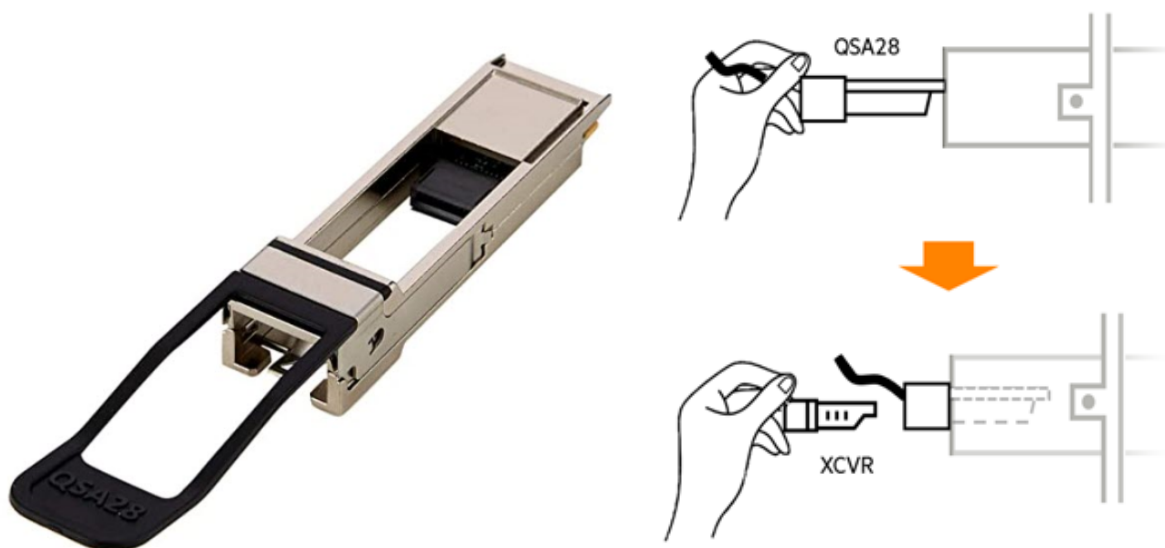
| QSFP28 AOC capable product name (SKU)                                                                                                                                                                                                                                                                                                                                                                                                      | Minimum software required                                                                                                          | Comments                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                    | (24XF4C or 24XT4XF4C). 25G ends are not supported to use in the 10G SFP ports.                                                                                                                                                                                                                                      |
| <b>Aruba 8325 32C models</b><br>JL636A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ JL626A - Port-to-Power model (FB)</li> <li>■ JL627A - Power-to-Port model (BF)</li> </ul>                                                                                                                                                                                                                              | JL856A: 10.08.0001<br>R0Z27A, R0Z28A, R0Z29A: 10.06.0001<br>*845420-B21, 845424-B21: 10.06.0001<br>(Requires <b>split</b> command) | 845420-B21, 845424-B21: only QSFP28 supported for use in this 8325 model                                                                                                                                                                                                                                            |
| <b>Aruba 8325 48Y8C models</b><br>JL635A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ JL624A - Port-to-Power model (FB)</li> <li>■ JL625A - Power-to-Port model (BF)</li> </ul>                                                                                                                                                                                                                            | JL856A: 10.08.0001<br>R0Z27A, R0Z28A, R0Z29A: 10.06.0001<br>*845420-B21, 845424-B21: 10.06.0001<br>(Requires <b>split</b> command) | 845420-B21, 845424-B21: either QSFP28 or SFP28 ends are supported for use<br>The 8325 requires configuration of <b>interface groups</b> (groups of 12 ports) to enable the use of 1G or 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed).<br>See the Hardware Guides for details. |
| <b>Aruba 8325P 32C models</b><br>S4A48A displayed by CLI ( <b>show system</b> )<br>S0G12A displayed by CLI ( <b>show system</b> ) for TAA bundles <ul style="list-style-type: none"> <li>■ S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl</li> <li>■ S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl</li> <li>■ S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl</li> <li>■ S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl</li> </ul> | JL856A, R0Z27A, R0Z28A, R0Z29A,<br>*845420-B21, 845424-B21: 10.15.0005<br>(Requires <b>split</b> command)                          | *845420-B21, 845424-B21: can not be used in port 32 (extra MACs reserved for the two SFP+).<br>All other ports 1-31 can support split products.                                                                                                                                                                     |
| <b>Aruba 8325H models</b><br>TAA/Non-TAA: <ul style="list-style-type: none"> <li>■ S2T42A/S4B20A - 18Y4C model (FB)</li> <li>■ S2T46A/S4B21A -18Y4C model (BF)</li> <li>■ S2T47A/S4B22A -16C</li> </ul>                                                                                                                                                                                                                                    | JL856A, R0Z27A, R0Z28A, R0Z29A,<br>*845420-B21, 845424-B21: 10.15.1001<br>(Requires <b>split</b> command)                          | *845420-B21, 845424-B21: can not be used in port 16 on the 16C models (extra MACs reserved for the two SFP+).<br>All other ports 1-15 can support split products.                                                                                                                                                   |

| QSFP28 AOC capable product name (SKU)                                                                                                                                                                                                                             | Minimum software required                                                                                                           | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| model (FB)<br>■ S2T48A/S4B23A -16C<br>model (FB)                                                                                                                                                                                                                  |                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Aruba 8360 Switch Series</b>                                                                                                                                                                                                                                   | JL856A: 10.08.0001<br>R0Z27A, R0Z28A, R0Z29A: 10.07.0005<br>*845420-B21, 845424-B21: 10.07.0005<br>(Requires <b>split</b> command)  | *845420-B21, *845424-B21:<br>QSFP28 end of split cables not supported on 8360 48XT4C models (v1 or v2) no support for splitting ports; not enough MACs available.<br><br>Both ends of the split DACs are supported/recognized for use on other models, in appropriate ports                                                                                                                                                                                  |
| <b>Aruba 8360 48Y6C models</b>                                                                                                                                                                                                                                    | JL856A, R0Z27A, R0Z28A, R0Z29A:<br>10.09.0002<br>*845420-B21, 845424-B21: 10.09.0002                                                | *845420-B21, *845424-B21:<br>both ends are recognized in this 8360 model.                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Aruba 8400X modules</b><br>6p 40G/100G QSFP28 Advanced Module (JL366A)                                                                                                                                                                                         | JL856A: Not supported<br>R0Z27A, R0Z28A, R0Z29A: 10.06.0001<br><br>JL366A module: *845420-B21, 845424-B21: QSFP28 end not supported | JL687A module: *845420-B21, *845424-B21<br><br>Only the SFP28 ends are supported for use with 10.06.0001                                                                                                                                                                                                                                                                                                                                                     |
| 32p 1/10/25G SFP/SFP+/SFP28 Module (JL687A)                                                                                                                                                                                                                       | JL687A module: *845420-B21, 845424-B21: Only the 25G ends of these 4x25G AOC are supported with 10.16.1006                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Aruba 9300 Switch Series</b><br>-32D models<br>R8Z96A-Base displayed by CLI <b>show system</b><br>■ R9A29A FB airflow<br>■ R9A30A BF airflow                                                                                                                   | JL856A, R0Z27A, R0Z28A, R0Z29A:<br>10.11.1000<br>*845420-B21, 845424-B21: not supported                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Aruba 9300S Switch Series</b><br>-32C 8D models displayed by CLI <b>show system</b><br>Base models: DF95A-TAA Base, S0F96A-Base<br>■ S0F81A FB TAA<br>■ S0F82A FB<br>■ S0F83A BF TAA<br>■ S0F84A BF<br>■ S0F85A FB DC TAA<br>■ S0F87A BF DC TAA<br>■ S0F88A BF | JL856A, R0Z27A, R0Z28A, R0Z29A,<br>*845420-B21, *845424-B21: 10.14.0001                                                             | The two split cables (from HPE Server: *845420-B21, *845424-B21) can only be used in ports 9-13; 15-17; 19; 21; 23; 25-27; 29-32.<br><br>9300S requires configuration of port-groups to enable 100G speeds. Groups of 4 - all ports in the group need to be of the same speed set (100G vs 40G). 100G is enabled using speed-group 1 (default) for the selected port group.<br><br>The center QDD ports (17-24) do not need a command, and are auto-sensing. |

| QSFP28 AOC capable product name (SKU)                                                                                                                                                               | Minimum software required                                                                                                                                                               | Comments                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 10000 48Y6C models</b><br>R8S96A displayed by CLI<br><b>(show system)</b> <ul style="list-style-type: none"> <li>▪ R8P13A - 48Y6C FB bundle</li> <li>▪ R8P14A - 48Y6C BF bundle</li> </ul> | JL856A, R0Z27A, R0Z28A, R0Z29A:<br>10.10.0002<br>*845420-B21, *845424-B21:<br>10.09.0010 (Both ends are supported -<br>used as a <b>Split</b> cable and requires the split<br>command.) |                                                                                                                                                                                    |
| <b>Aruba 10040 32C6D models</b> <ul style="list-style-type: none"> <li>▪ S4R54A - 32C6D FB bundle</li> <li>▪ S4R55A - 32C6D BF bundle</li> </ul>                                                    | JL856A, R0Z27A, R0Z28A, R0Z29A,<br>*845420-B21, *845424-B21: 10.16.10xx                                                                                                                 | In 100G speed mode, these<br>modules can be used in all QSFP<br>and all Q-DD ports.<br>Whereas, in 200G speed mode it<br>can only be used in even QSFP<br>ports and all Q-DD ports |

## QSFP28 to SFP28 adapter support

**Figure 1** QSFP28 to SFP28 adapter



## Models, specifications, and compatibility

The following QSA28 to SFP28 adapter is offered by HPE Servers and Systems and ordered using the specified part number (this product may not be available to order by Aruba-only partners).

\*HPE QSFP28 to SFP28 Adapter  
(845970-B21)

When used in a QSFP28 port (or a port set for 100G mode) allows for use of 25G or 10G optics  
When used in a QSFP+ port (or a port set for 40G mode) allows for use of 10G optics



The 845970-B21 is not the same as the 655874-B21 which is a 40G-only adapter (cannot work in QSFP28 ports). AOCs, DACs and 10GBASE-T transceivers are NOT supported through the QSA28 adapter; 3rd party transceivers - may work, but remain listed as unsupported.



The 845970-B21 is not supported to enable 50G SFP56 products. The part was not designed nor tested to enable 50G products.

Using the QSA28 adapter in a supported port does not require the **split** CLI command as this product presents a single interface to the port. Other non-HPE QSA28 adapters are not recognized (the internal EEPROM has this part number presented to the switch). Whether or not a particular transceiver is supported for use depends on the port type:

- QSFP-DD and QSFP28 ports (40G,100G,200-400G): 10G SR, 10G LR, 10G ER; 25G SR, 25G eSR, 25G LR (no support for 25G ER, 10GBASE-T DACs or AOCs unless specified)
- QSFP+ (40G-only) ports: 10G SR, 10G LR, 10G ER; (no support for 10GBASE-T nor DACs or AOC)

### Compatibility for the QSA28 adapter

\* HPE Server product - may not be available to Aruba resellers

| QSFP28 Adapter capable product (SKU shown by <i>show system command</i> )                                                                                                                                                                  | Minimum software required: Limited to port information                                                                                    | Comments                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 6300 Switch Series</b> <ul style="list-style-type: none"> <li>■ 48p SRX 4x100G (S0E91A, S0X44A)</li> </ul>                                                                                                                        | 10.13.000x                                                                                                                                | Use of 10G or 25G optic will automatically be detected. No configuration of the port is needed.<br>No DAC or AOC support; 10GBASE-T xcvr is not supported.<br>UT-mode optics may work (unsupported).<br>The 6300 4x100G models support use of the 25G AOCs through the QSA28. |
| <b>Aruba 6400 Modules</b> <ul style="list-style-type: none"> <li>■ 12p 40G/100G QSFP28 Module (R0X45A/R0X45C)</li> <li>■ HPE ANW 6400 32SFP28 4QSFP28 MACsec v2 Module (S0E48A)</li> </ul>                                                 | 10.15.0005 <ul style="list-style-type: none"> <li>■ 1-12</li> <li>■ 33-36</li> </ul>                                                      | Use of 10G or 25G optic will automatically be detected. No configuration of the port is needed.<br>No DAC or AOC support; 10GBASE-T xcvr is not supported.<br>UT-mode optics may work (unsupported).                                                                          |
| <b>Aruba 8100 Switch Series</b> <ul style="list-style-type: none"> <li>■ 24XF4C (R9W94A: R9W86A/87A)</li> <li>■ 24XT4XF4C (R9W95A: R9W88A/89A)</li> <li>■ 48XF4C (R9W96A: R9W90A/91A)</li> <li>■ 40XT8XF4C (R9W97A: R9W92A/93A)</li> </ul> | Minimum software: 10.12.0001 <ul style="list-style-type: none"> <li>■ 25-28</li> <li>■ 29-32</li> <li>■ 49-52</li> <li>■ 49-52</li> </ul> | Use of 10G or 25G optic will automatically be detected. No configuration of the port is needed.<br>No DAC or AOC support; 10GBASE-T xcvr is not supported.<br>UT-mode optics may work (unsupported).                                                                          |
| <b>Aruba 8320 Switch Series</b> <ul style="list-style-type: none"> <li>■ 48p SFP and 6p QSFP+: JL479A</li> <li>■ 32p QSFP+: JL597A</li> <li>■ 48p 10GBT &amp; 6p QSFP+: JL581A</li> </ul>                                                  | Minimum software: 10.07.0004 <ul style="list-style-type: none"> <li>■ 49-54</li> <li>■ 1-32</li> <li>■ 49-54</li> </ul>                   | Only 10G optics supported<br>No DAC or AOC support; 10GBASE-T xcvr is not supported.<br>UT-mode optics may work (unsupported).                                                                                                                                                |

| QSFP28 Adapter capable product (SKU shown by <i>show system command</i> )                                                                                                                                                                                                                                                                                                                                                          | Minimum software required: Limited to port information                                                                                                                                                                                                 | Comments                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 8325 Switch Series</b> <ul style="list-style-type: none"> <li>48Y8C models: JL635A (bundles: JL624A/JL625A)</li> <li>32C models: JL636A (bundles: JL626A/JL627A)</li> </ul>                                                                                                                                                                                                                                               | Minimum software: 10.07.0010 <ul style="list-style-type: none"> <li>49-56</li> <li>1-32</li> </ul>                                                                                                                                                     | Use of 10G or 25G optic will automatically be detected.<br><br>8325 use of 10G LR must be J9151E or later (use of J9151D or earlier should be avoided).<br><br>No DAC or AOC support; 10GBASE-T xcvr is not supported. UT-mode optics may work (unsupported).                            |
| <b>Aruba 8325P 32C models</b><br>S4A48A displayed by CLI ( <b>show system</b> )<br>S0G12A displayed by CLI ( <b>show system</b> ) for TAA bundles <ul style="list-style-type: none"> <li>S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl</li> <li>S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl</li> <li>S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl</li> <li>S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl</li> </ul> | All QSFP28 ports: 10.15.0005                                                                                                                                                                                                                           | No DAC or AOC support; 10GBASE-T xcvr is not supported. UT-mode optics may work (unsupported).                                                                                                                                                                                           |
| <b>Aruba 8325H models</b><br>TAA/Non-TAA: <ul style="list-style-type: none"> <li>S2T42A/S4B20A - 18Y4C model (FB)</li> <li>S2T46A/S4B21A -18Y4C model (BF)</li> <li>S2T47A/S4B22A -16C model (FB)</li> <li>S2T48A/S4B23A -16C model (FB)</li> </ul>                                                                                                                                                                                | All QSFP28 ports: 10.15.1001                                                                                                                                                                                                                           | No DAC or AOC support; 10GBASE-T xcvr is not supported. UT-mode optics may work (unsupported).                                                                                                                                                                                           |
| <b>Aruba 8360 Switch Series</b><br>(note v1 vs v2 Min Software required) <ul style="list-style-type: none"> <li>32Y4C models: JL717A/JL717C(v2)</li> <li>16Y2C models: JL718A/JL718C(v2)</li> <li>48XT4C models: JL720A/JL720C(v2)</li> <li>12C models: JL721A/JL721C(v2)</li> <li>24XF2C models: JL722A/JL722C(v2)</li> <li>48Y6C models: JL719C(v2)</li> </ul>                                                                   | Minimum software as noted below:<br>v1:10.07.0004 v2:10.09.1000 <ul style="list-style-type: none"> <li>34-35</li> <li>17</li> <li>50-51</li> <li>7-12</li> <li>25</li> <li>49-50, 52-53 (10.09.0002)</li> </ul> (JL719C only introduced as a v2 model) | The QSA28 is not supported for use in ports not listed (hardware or ASIC limitations). Use of 10G or 25G optic will automatically be detected. No configuration of the port is needed.<br>No DAC or AOC support; 10GBASE-T xcvr is not supported. UT-mode optics may work (unsupported). |
| <b>Aruba 8400 Modules</b> <ul style="list-style-type: none"> <li>Aruba 8400X 8p 40G QSFP+ Adv Module (JL365A)</li> </ul>                                                                                                                                                                                                                                                                                                           | Not supported                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                          |

| QSFP28 Adapter capable product (SKU shown by <i>show system</i> command)                                                                                                                                                                                                                                         | Minimum software required: Limited to port information                                              | Comments                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Aruba 8400X 6p 40G/100G QSFP28 Adv Module (JL366A)</li> </ul>                                                                                                                                                                                                             |                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Aruba 9300 Switch Series</b><br>-32D models R8Z96A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>R9A29A FB airflow</li> <li>R9A30A BF airflow</li> </ul>                                                                                                                         | 10.14.1000 QSA28 allowed in all ports                                                               | No DAC or AOC support; 10GBASE-T xcvr is not supported. UT-mode optics may work (unsupported).                                                                                                                                                                                                                                                                       |
| <b>Aruba 9300S Switch Series</b><br>-32C 8D models displayed by CLI <b>show system</b><br>Base models: S0F95A-TAA Base, S0F96A-Base <ul style="list-style-type: none"> <li>S0F81A FB TAA</li> <li>S0F82A FB</li> <li>S0F83A BF TAA</li> <li>S0F84A BF</li> <li>S0F87A BF DC TAA</li> <li>S0F88A BF DC</li> </ul> | 10.14.100x QSA28 allowed in all ports                                                               | Ports 1-8 & 33-40 These ports cannot split, but do allow the use of the QSA28 adapter.<br><br>9300S requires configuration of port-groups to enable 25G speeds.<br><br>25G thru a QSA28 is enabled using <b>speed-group 1</b> for the selected port (organized in groups of 4).<br><br>10G thru a QSA28 is enabled using <b>speed-group 2</b> for the selected port. |
| <b>Aruba 10000 Switch Series</b> <ul style="list-style-type: none"> <li>R8P13A - 48Y6C FB bundle</li> <li>R8P14A - 48Y6C BF bundle</li> </ul>                                                                                                                                                                    | Minimum software: 10.09.0001 <ul style="list-style-type: none"> <li>49-54</li> <li>49-54</li> </ul> | Use of 10G or 25G optic will automatically be detected. No DAC or AOC support; 10GBASE-T xcvr is not supported. UT-mode optics may work (unsupported).                                                                                                                                                                                                               |
| <b>Aruba 10040 32C6D models</b> <ul style="list-style-type: none"> <li>S4R54A – 32C6D FB bundle</li> <li>S4R55A – 32C6D BF bundle</li> </ul>                                                                                                                                                                     | Minimum software: 10.16.10xx<br>Is supported only on even QSFP ports and all Q-DD ports             | QSA adapter can support different speeds on QSFP ports depending on the selection of <b>interface-group &lt;GROUP&gt; speed &lt;SPEED&gt;</b> configured for an interface group. See Fundamentals Guide for more details.                                                                                                                                            |

## 40G QSFP+ optical transceiver modules that use MPO connectors



### Models, specifications, and compatibility

QSFP+ optical transceiver modules provide a transmission rate of 40 Gbps and use multifiber push on (MPO) connectors.



40G SR4 and eSR4 are not supported for use over MMF OM1 or OM2 quality fiber. (The IEEE standard does not state a specification). Use MPO female connectors for use with the MPO transceivers. See [Overview](#) for information regarding MPO connectors and cable requirements.

#### *Specifications for QSFP+ optical transceiver modules that use MPO connectors*

| Product name (SKU)                              | DOM - Digital Optical Monitoring (4x4 part #) | Nominal wl (nm) & encoding type | Fiber mode | Fiber diameter (µm) | Modal bandwidth (MHz*km) | Transmission distance                |
|-------------------------------------------------|-----------------------------------------------|---------------------------------|------------|---------------------|--------------------------|--------------------------------------|
| HPE X142 40G QSFP+ MPO SR4 Transceiver (JH231A) | YES (1990-4554 1990-4557 1990-4737)           | 4 lanes, 850 4x10G NRZ          | MMF        | 50/125              | 2000 (OM3) 4700 (OM4)    | 100 m (328.08 ft) 150 m (492.12 ft)  |
| HPE X142 40G QSFP+ MPO eSR4 300M xcvr (JH233A)  | YES (1990-4555)                               | 4 lanes, 850 4x10G NRZ          | MMF        | 50/125              | 2000 (OM3) 4700 (OM4)    | 300 m (984.25 ft) 400 m (1312.34 ft) |

40G SR4/eSR4 optics can be used by a QSFP28/QSFP+ port that can be "split" into four channels of 10G (available on select switch models/modules on identified ports). See *Split capabilities of specific models* in the [Breakout optical cables](#) section.

40G SR4/eSR4 are not supported for use over MMF OM1/OM2 quality fiber.

The IEEE standard did not specify any requirements for use over these types.

The following optical breakout cables can be used with 40G SR4/eSR4 to split into 4x 10G SR compatible streams. These cables are ordered from the HPE Compute and Server or Storage business units and may not be available to Aruba-only resellers.

Fiber breakout cables (from HPE Server products):

- (Storage SKU) K2Q46A, HPE MPO to 4 x LC 5m Cable
- (Storage SKU) K2Q47A, HPE MPO to 4 x LC 15m Cable

These are physical connect (PC) style MPO connectors. Do not use for optics that require angled physical connect (APC) MPO connectors. Refer to the [Glossary of terms](#) for definitions of APC, PC, and UPC connectors.

AOS-CX release 10.05 and later supports a **split** command configured on 100G QSFP28 or 40G QSFP+ ports. See [Splitting of QSFP+ \(40G\) and QSFP28 \(100G\) ports](#).

**Optical specifications for QSFP+ optical transceiver modules that use MPO connectors**

| Product name (SKU)                              | Connector                   | Optical parameters (dBm) |               |                        |                |
|-------------------------------------------------|-----------------------------|--------------------------|---------------|------------------------|----------------|
|                                                 |                             | Transmit power           | Receive power | Temperature Ratings    | Required Power |
| HPE X142 40G QSFP+ MPO SR4 Transceiver (JH231A) | MPO (PC polished, 12-fiber) | -7.6 to 0                | -9.5 to +2.4  | Commercial (0 to 70°C) | 1.5 W          |
| HPE X142 40G QSFP+ MPO eSR4 300M xcvr (JH233A)  | MPO (PC polished, 12-fiber) | -7.6 to 0                | -9.9 to +2.4  | Commercial (0 to 70°C) | 1.5 W          |

**Compatibility for the QSFP+ optical transceiver modules that use MPO connectors**  
(see [Unsupported transceiver mode](#))

| QSFP+ (40G) capable Product name (SKU)                     | Minimum software required | Comments                                                                                                                                         |
|------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Aruba 3810M/2930M 1QSFP+ 40GbE Module (JL078A)             | All                       | No optical split capability on AOS-Switch series: 3810M, 2930M, 5400R                                                                            |
| Aruba 3810M 24G 1-slot Switch 2QSFP+ 40GbE Module (JL079A) | All                       |                                                                                                                                                  |
| Aruba 20p PoE+ / 1p 40GbE QSFP+ v3 z12 Module (J9992A)     | KB.15.17                  |                                                                                                                                                  |
| Aruba 2p 40GbE QSFP+ v3 z12 Module (J9996A)                | KB.15.17                  |                                                                                                                                                  |
| Aruba 6300 with QSFP ports (S0E91A, S0X44A)                | 10.13.000x                | S0E91A/S0X44A models require interface group 2 or 3 to configure either 40G or 100G speed operation.<br>No support for splitting of QSFP optics. |
| Aruba 6400 12p 40G/100G QSFP28 Module R0X45A               | 10.04.2000                | No support for splitting of SR4 optics.<br>Aruba 6400 modules with QSFP28 ports do not                                                           |

| QSFP+ (40G) capable Product name (SKU)                                                                                                                                                                                                                                                                                                                                                                                                        | Minimum software required  | Comments                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Module R0X45C                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10.09.1000                 | have split mode enabled in AOS-CX as of the latest release covered by this guide edition.                                                                                                                    |
| HPE ANW 6400 32SFP28 4QSFP28 MACsec v2 Mod (S0E48A)                                                                                                                                                                                                                                                                                                                                                                                           | 10.13.1010                 |                                                                                                                                                                                                              |
| Aruba 8100: All models                                                                                                                                                                                                                                                                                                                                                                                                                        | JH231A/JH233A: 10.12.1000  | 8100 48 port models cannot split a 40G SR4 optic. (not enough MACs in the system)                                                                                                                            |
| Aruba 8320 48p SFP/SFP+ & 6p 40G QSFP+ Switch (JL479A)                                                                                                                                                                                                                                                                                                                                                                                        | JH231A/JH233A: 10.00.0006  | 40G SR4/eSR4 can be optically split as of: 10.05.0001                                                                                                                                                        |
| Aruba 8320 32p 40G QSFP+ Switch (JL579A)                                                                                                                                                                                                                                                                                                                                                                                                      | JH231A/JH233A: 10.00.0012  | JL579A limits splitting to only ports 5-28<br>See <a href="#">Split capabilities of specific models</a> .                                                                                                    |
| Aruba 8320 48p G /6p 40G QSFP+ Switch (JL581A)                                                                                                                                                                                                                                                                                                                                                                                                | JH231A/JH233A: 10.00.0012  |                                                                                                                                                                                                              |
| Aruba 8325 32C models JL636A displayed by CLI<br><b>show system</b><br><ul style="list-style-type: none"> <li>▪ JL626A - Port-to-Power model (FB)</li> <li>▪ JL627A - Power-to-Port model (BF)</li> </ul>                                                                                                                                                                                                                                     | JH231A/JH233A: 10.03.0030  | 40G SR4/eSR4 can be optically split: 10.05.0001<br>See <a href="#">Split capabilities of specific models</a> .                                                                                               |
| Aruba 8325 48Y8C models JL635A displayed by CLI<br><b>show system</b><br><ul style="list-style-type: none"> <li>▪ JL624A - Port-to-Power model (FB)</li> <li>▪ JL625A - Power-to-Port model (BF)</li> </ul>                                                                                                                                                                                                                                   | JH231A/JH233A: 10.03.0030  | 40G SR4/eSR4 can be optically split: 10.05.0001<br>See <a href="#">Split capabilities of specific models</a> .                                                                                               |
| <b>Aruba 8325P 32C models</b><br>S4A48A displayed by CLI ( <b>show system</b> )<br>S0G12A displayed by CLI ( <b>show system</b> ) for TAA bundles<br><ul style="list-style-type: none"> <li>▪ S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl</li> <li>▪ S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl</li> <li>▪ S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl</li> <li>▪ S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl</li> </ul> | JH231A, JH233A: 10.15.1001 | 8325P models, port 32 cannot be split (extra MACs reserved for the two SFP+). All other ports 1-31 can support split products.<br>See <a href="#">Split capabilities of specific models</a> .                |
| <b>Aruba 8325H models</b><br>TAA/Non-TAA:<br><ul style="list-style-type: none"> <li>▪ S2T42A/S4B20A - 18Y4C model (FB)</li> <li>▪ S2T46A/S4B21A -18Y4C model (BF)</li> <li>▪ S2T47A/S4B22A -16C model (FB)</li> <li>▪ S2T48A/S4B23A -16C model (FB)</li> </ul>                                                                                                                                                                                | JH231A, JH233A: 10.15.1001 | 40G SR4/eSR4 can be optically split as of 10.15.1001.<br>MACs reserved for the two SFP+ ports 17 and 18.<br>Ports 1-15 can support splitting.<br>See <a href="#">Split capabilities of specific models</a> . |

| QSFP+ (40G) capable Product name (SKU)                                                                                                                                                                        | Minimum software required  | Comments                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8360 32Y4C models<br>JL717A/JL717C(v2) displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL700A/JL701C(v2) Port-to-Power model</li> <li>JL701A/JL701C Power-to-Port model</li> </ul> | JH231A, JH233A: 10.06.0001 | 40G SR4/eSR4 can be optically split as of: 10.06.0001<br>See <a href="#">Split capabilities of specific models</a> .                                                                                         |
| 8360 16Y2C models<br>JL718A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL702A/JL702C(v2) Port-to-Power model</li> <li>JL703A/JL703C(v2) Power-to-Port model</li> </ul>        | JH231A, JH233A: 10.06.0001 | 40G SR4/eSR4 can be optically split as of: 10.06.0001<br>See <a href="#">Split capabilities of specific models</a> .                                                                                         |
| 8360 48XT4C model<br>JL720A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL706A/JL706C(v2) Port-to-Power model</li> <li>JL707A/JL707C(v2) Power-to-Port model</li> </ul>        | JH231A, JH233A: 10.06.0001 | 8360 48XT4C does not support split ports                                                                                                                                                                     |
| 8360 12C models<br>JL721A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL708A/JL708C(v2) Port-to-Power model</li> <li>JL709A/JL709C(v2) Power-to-Port model</li> </ul>          | JH231A, JH233A: 10.06.0001 | 40G SR4/eSR4 can be optically split as of: 10.06.0001<br>See <a href="#">Split capabilities of specific models</a> .                                                                                         |
| 8360 24XF2C models<br>JL722A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL710A/JL710C(v2) Port-to-Power model</li> <li>JL711A/JL711C(v2) Power-to-Port model</li> </ul>       | JH231A, JH233A: 10.06.0001 | 40G SR4/eSR4 can be optically split as of: 10.06.0001<br>See <a href="#">Split capabilities of specific models</a> .                                                                                         |
| 8360 48Y6C models<br>JL719C displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL704C(v2) Port-to-Power model (FB)</li> <li>JL705C(v2) Power-to-Port model (BF)</li> </ul>            | JH231A, JH233A: 10.09.0002 | 40G SR4/eSR4 can be optically split<br>See <a href="#">Split capabilities of specific models</a> .<br>MACsec available on ports 53-54 and via split 10G on these ports (MACsec not available on ports 49-52) |
| Aruba 8400X Modules: 8p 40G QSFP+ Advanced Module (JL365A)                                                                                                                                                    | JH231A, JH233A: 10.00.0006 | 40G SR4/eSR4 can be optically split: 10.05.0001                                                                                                                                                              |

| QSFP+ (40G) capable Product name (SKU)                                                                                                                                                                                                                                                                                       | Minimum software required  | Comments                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aruba 8400X Modules: 6p 40G/100G QSFP28 Advanced Module (JL366A)                                                                                                                                                                                                                                                             | JH231A, JH233A: 10.00.0006 | 10.00.0005 supports 100G products. 10.00.0006 provides additional support for 40G on the JL366A. JL366A module: 40G SR4/eSR4 can be optically split: 10.05.0001<br>See <a href="#">Split capabilities of specific models</a> .                                                                                                 |
| <b>Aruba 9300 Switch Series</b><br>-32D models R8Z96A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ R9A29A FB airflow</li> <li>▪ R9A30A BF airflow</li> </ul>                                                                                                                                 | JH231A, JH233A: 10.11.1000 | 9300 32D model: 40G SR4/eSR4 can be optically split.<br>See <a href="#">Split capabilities of specific models</a> .                                                                                                                                                                                                            |
| <b>Aruba 9300S Switch Series</b><br>-32C 8D models displayed by CLI <b>show system</b><br>Base models: S0F95A-TAA Base, S0F96A-Base <ul style="list-style-type: none"> <li>▪ S0F81A FB TAA</li> <li>▪ S0F82A FB</li> <li>▪ S0F83A BF TAA</li> <li>▪ S0F84A BF</li> <li>▪ S0F87A BF DC TAA</li> <li>▪ S0F88A BF DC</li> </ul> | JH231A, JH233A: 10.14.0005 | 9300S requires configuration of port-groups to enable 40G speeds. 40G is enabled using <b>speed-group 2</b> for the selected port (in groups of 4). The center QDD ports (17-24) do not need a command, and are auto-sensing.<br><br>40G SR4/eSR4 can only be optically split when the switch is configured for split profile. |
| Aruba 10000 48Y6C models R8S96A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ R8P13A - 48Y6C FB bundle</li> <li>▪ R8P14A - 48Y6C BF bundle</li> </ul>                                                                                                                                         | JH231A, JH233A: 10.10.0002 | 40G SR4/eSR4 can be optically split                                                                                                                                                                                                                                                                                            |
| <b>Aruba 10040 32C6D models</b> <ul style="list-style-type: none"> <li>▪ S4R54A – 32C6D FB bundle</li> <li>▪ S4R55A – 32C6D BF bundle</li> </ul>                                                                                                                                                                             | JH231A, JH233A: 10.16.10xx | Supported in all QSFP and Q-DD ports<br>In order to use 40G modules in QSFP ports, 40G speed mode needs to be configured on respective interface group of QSFP ports<br>Cannot support split in QSFP ports. Splitting of 40G to 4x 10G is only supported on Q-DD ports 25,26, 29, 30, allowing 4-way split in split profile-1  |

# 40G QSFP+ optical transceiver modules that use LC connectors



## Models, specifications, and compatibility

QSFP+ optical transceiver modules provide a transmission rate of 40 Gbps and use LC connectors.

### Specifications for QSFP+ transceiver modules that use LC connectors

| QSFP+ (40G) capable Product name (SKU)                | DOM - Digital Optical Monitoring (4x4) | Nominal wl (nm) & encoding type                                                                                        | Fiber mode | Fiber diameter (μm) | Modal bandwidth (MHz*km) | Transmission distance                                                                                                                                                                           |
|-------------------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------|---------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aruba 40G QSFP+ LC BiDi 150m MMF xcvr (JL308A)        | YES (1990-4679)                        | Dual 20Gb/s: <ul style="list-style-type: none"> <li>850</li> <li>900</li> </ul>                                        | MMF        | 50/125              | 2000 (OM3)<br>4700 (OM4) | 100m (328.08 ft)<br>150m (492.12 ft)<br>Not supported on OM1/OM2.                                                                                                                               |
| HPE X142 40G QSFP+ LC LR4 SM Transceiver (JH232A)     | YES (1990-4556)                        | Four lanes: <ul style="list-style-type: none"> <li>1271</li> <li>1291</li> <li>1311</li> <li>1331</li> </ul> 4x10G NRZ | SMF        | 9/125               | N/A                      | 10 km (6.21 miles)                                                                                                                                                                              |
| Aruba 40G QSFP+ LC ER4 40 km SMF Transceiver (Q9G82A) | YES (1990-4734)                        | Four lanes: <ul style="list-style-type: none"> <li>1271</li> <li>1291</li> <li>1311</li> <li>1331</li> </ul> 4x10G NRZ | SMF        | 9/125               | N/A                      | 30 km (18.6 miles) over SMF for No-FEC<br><br>40 km (24.86 miles) requires FEC (Forward Error Correction) on both ends of the engineered link using this optic to achieve this maximum distance |

**Optical specifications for QSFP+ transceiver modules that use LC connectors**

| Product name (SKU)                                    | Optical parameters (dBm) |                                                             |                        |                |
|-------------------------------------------------------|--------------------------|-------------------------------------------------------------|------------------------|----------------|
|                                                       | Transmit power           | Receive power                                               | Temperature Ratings    | Required Power |
| Aruba 40G QSFP+ LC BiDi 150m MMF Transceiver (JL308A) | -4 to +5                 | -6 to +5                                                    | Commercial (0 to 70°C) | 3.5 W          |
| HPE X142 40G QSFP+ LC LR4 SM Transceiver (JH232A)     | -7 to +2.3 per lane      | -13.7 to +2.3 per lane                                      | Commercial (0 to 70°C) | 3.5 W          |
| Aruba 40G QSFP+ LC ER4 40 km SMF xcvr (Q9G82A)        | -2.7 to 4.5 dBm          | -21.2 to -4.5 dBm (Use 9dB attenuator for short SMF cables) | Commercial (0 to 70°C) | 3.5 W          |

**Compatibility for the QSFP+ optical transceiver modules that use LC connectors**  
(see [Unsupported transceiver mode](#))

| QSFP+ capable product name (SKU)                       | Minimum software required                                                      | Comments                                                                                                                 |
|--------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Aruba 3810M/2930M 1QSFP+ 40GbE Module (JL078A)         | JH232A: All<br>JL308A: KB.16.04.0008 or WC.16.04.0008<br>Q9G82A: Not supported |                                                                                                                          |
| Aruba 3810M 2QSFP+ 40GbE Module (JL079A)               | JH232A: All<br>JL308A: KB.16.04.0008<br>Q9G82A: Not supported                  | The JL079A 2p 40G module is not supported in the 2930M series nor on the 3810M 16SFP+ 2-slot switch (JL075A).            |
| Aruba 20p PoE+ / 1p 40GbE QSFP+ v3 zl2 Module (J9992A) | JH232A: KB.15.17<br>JL308A: KB.16.04.0008<br>Q9G82A: Not supported             |                                                                                                                          |
| Aruba 2p 40GbE QSFP+ v3 zl2 Module (J9996A)            | JH232A: KB.15.17<br>JL308A: KB.16.04.0008<br>Q9G82A: Not supported             |                                                                                                                          |
| Aruba 6300 with QSFP28 ports (S0E91A/S0X44A)           | JH232A, JL308A, Q9G82A: 10.13.1000                                             | S0E91A/S0X44A models requires the <b>system interface-group</b> command to configure either 40G or 100G speed operation. |
| Aruba 6400 12p 40G/100G QSFP28 Module (R0X45A/R0X45C)  | JH232A/JL308A/Q9G82A: 10.04.2000                                               | The minimum software release for the R0X45C is 10.09.1000.                                                               |
| <b>Aruba 8100 Switch Series</b><br>All models          | JH232A/JL308A/Q9G82A: 10.12.0001                                               |                                                                                                                          |
| Aruba 8320 48p SFP/SFP+ & 6p 40G QSFP+ Switch (JL479A) | JH232A: 10.00.0006<br>JL308A: 10.00.0006<br>Q9G82A: 10.00.0018                 |                                                                                                                          |

| QSFP+ capable product name (SKU)                                                                                                                                                                                                                                                                                                                                                                                                           | Minimum software required                                      | Comments                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Aruba 8320 32p 40G QSFP+ Switch (JL579A)                                                                                                                                                                                                                                                                                                                                                                                                   | JH232A: 10.00.0012<br>JL308A: 10.00.0012<br>Q9G82A: 10.00.0018 |                                                                                                                 |
| Aruba 8320 48p G /6p 40G Q SFP+ Switch (JL581A)                                                                                                                                                                                                                                                                                                                                                                                            | JH232A: 10.00.0012<br>JL308A: 10.00.0012<br>Q9G82A: 10.00.0018 |                                                                                                                 |
| <b>Aruba 8325 32C models</b><br>JL636A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ JL626A - Port-to-Power model (FB)</li> <li>▪ JL627A - Power-to-Port model (BF)</li> </ul>                                                                                                                                                                                                                              | JH232A, JL308A, Q9G82A: 10.03.0030                             |                                                                                                                 |
| <b>Aruba 8325 48Y8C models</b><br>JL635A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ JL624A - Port-to-Power model (FB)</li> <li>▪ JL625A - Power-to-Port model (BF)</li> </ul>                                                                                                                                                                                                                            | JH232A, JL308A, Q9G82A: 10.03.0030                             |                                                                                                                 |
| <b>Aruba 8325P 32C models</b><br>S4A48A displayed by CLI ( <b>show system</b> )<br>S0G12A displayed by CLI ( <b>show system</b> ) for TAA bundles <ul style="list-style-type: none"> <li>▪ S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl</li> <li>▪ S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl</li> <li>▪ S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl</li> <li>▪ S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl</li> </ul> | JH232A, JL308A, Q9G82A: 10.15.0001                             |                                                                                                                 |
| <b>Aruba 8325H models</b><br>TAA/Non-TAA: <ul style="list-style-type: none"> <li>▪ S2T42A/S4B20A - 18Y4C model (FB)</li> <li>▪ S2T46A/S4B21A -18Y4C model (BF)</li> <li>▪ S2T47A/S4B22A -16C model (FB)</li> <li>▪ S2T48A/S4B23A -16C model (FB)</li> </ul>                                                                                                                                                                                | JH232A, JL308A, Q9G82A: 10.15.1001                             |                                                                                                                 |
| <b>Aruba 8360 Switch Series</b><br>All models (except 48Y6C)                                                                                                                                                                                                                                                                                                                                                                               | JH232A, JL308A, Q9G82A: 10.06.0001                             |                                                                                                                 |
| Aruba 8360 48Y6C models: JL719C                                                                                                                                                                                                                                                                                                                                                                                                            | JH232A, JL308A, Q9G82A: 10.09.0002                             |                                                                                                                 |
| <b>Aruba 8400X Modules</b><br>8p 40G QSFP+ Advanced Module (JL365A)                                                                                                                                                                                                                                                                                                                                                                        | JH232A: All<br>JL308A: All<br>Q9G82A: 10.00.0018               |                                                                                                                 |
| 6p 40G/100G QSFP28 Advanced Module (JL366A)                                                                                                                                                                                                                                                                                                                                                                                                | JH232A: 10.00.0006<br>JL308A: 10.00.0006<br>Q9G82A: 10.00.0018 | 10.00.0005 provides support for 100G products.<br>10.00.0006 provides additional support for 40G on the JL366A. |

| QSFP+ capable product name (SKU)                                                                                                                                                                                                                                                                                             | Minimum software required                                                      | Comments                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 9300 Switch Series</b><br>-32D models R8Z96A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ R9A29A FB airflow</li> <li>▪ R9A30A BF airflow</li> </ul>                                                                                                                                 | JH232A, JL308A, Q9G82A:<br>10.11.1000                                          |                                                                                                                                                                                                                                     |
| <b>Aruba 9300S Switch Series</b><br>-32C 8D models displayed by CLI <b>show system</b><br>Base models: S0F95A-TAA Base, S0F96A-Base <ul style="list-style-type: none"> <li>▪ S0F81A FB TAA</li> <li>▪ S0F82A FB</li> <li>▪ S0F83A BF TAA</li> <li>▪ S0F84A BF</li> <li>▪ S0F87A BF DC TAA</li> <li>▪ S0F88A BF DC</li> </ul> | JH232A, JL308A, Q9G82A:<br>10.14.0005                                          | 9300S requires configuration of port-groups to enable 40G speeds.<br>40G is enabled <b>using speed-group 2</b> for the selected port (in groups of 4).<br>The center QDD ports (17-24) do not need a command, and are auto-sensing. |
| <b>Aruba 10000 48Y6C models</b><br>R8S96A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ R8P13A - 48Y6C FB bundle</li> <li>▪ R8P14A - 48Y6C BF bundle</li> </ul>                                                                                                                               | JH232A(LR4): 10.10.0002<br>JL308A(BiDi): 10.09.0010<br>Q8G82A(ER4): 10.10.0002 |                                                                                                                                                                                                                                     |
| <b>Aruba 10040 32C6D models</b> <ul style="list-style-type: none"> <li>▪ S4R54A – 32C6D FB bundle</li> <li>▪ S4R55A – 32C6D BF bundle</li> </ul>                                                                                                                                                                             | JH232A, JL308A, Q9G82A:<br>10.16.10xx                                          | Supported in all QSFP and Q-DD ports<br>In order to use 40G modules in QSFP ports, 40G speed mode needs to be configured on respective interface group of QSFP ports                                                                |

## 40G QSFP+ DAC and breakout DAC (copper cables)



Direct Attach over Copper (DAC) cables have a minimum bend radius of typically 10x the diameter of the cable (approximately 2.75" [70mm] bend radius). Handle DAC cables carefully to ensure that you do not crimp or bend the cable; otherwise, you risk damaging the cable.

## Models, specifications, and compatibility

| Product name (SKU)                                | Cable length   | Data rate | Temperature Ratings    | Required Power |
|---------------------------------------------------|----------------|-----------|------------------------|----------------|
| HPE X242 40G QSFP+ to QSFP+ 1m DAC Cable (JH234A) | 1 m (3.28 ft)  | 40 Gbps   | Commercial (0 to 70°C) | 0.1 W per end  |
| HPE X242 40G QSFP+ to QSFP+ 3m DAC Cable (JH235A) | 3 m (9.84 ft)  |           |                        |                |
| HPE X242 40G QSFP+ to QSFP+ 5m DAC Cable (JH236A) | 5 m (16.40 ft) |           |                        |                |

The following DAC breakout cable is offered by HPE Servers and Systems and ordered using the specified part number (these cables may not be available to order for Aruba-only partners). Refer to the [HPE Compute transceiver and cable hardware matrix product availability matrix](#) at hpe.com.

AOS-CX releases 10.05 and later support a **split** command configured on 100G QSFP28 ports.



As of the AOS-CX 10.05 and 10.06 releases, the configuration requires a save and reboot of the switch or module. As of the 10.07 release, the need to save and reboot is now removed for the 8320, 8325, and 8360 series. The 8400 still requires a save and reboot. See the *Monitoring Guide* for details on the **split** command.

See [Splitting of QSFP+ \(40G\) and QSFP28 \(100G\) ports](#) for more information.

| Product name (SKU)                                    | Cable length | Data rate      |
|-------------------------------------------------------|--------------|----------------|
| *HPE BLc 40G QSFP+ 4x10G SFP+ 3m DAC Cbl (721064-B21) | 3m (9.84ft)  | 40G to 4 x 10G |

#### Compatibility for the QSFP+ DAC and breakout DAC copper cables

(see [Unsupported transceiver mode](#))

\* HPE Server product - may not be available to Aruba resellers

| QSFP+ (40G) DAC capable product name (SKU)                   | Minimum software required                                      | Comments                                                                                              |
|--------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Aruba 3810M/2930M 1QSFP+ 40GbE modules</b> (JL078A)       | JH234A, JH235A, JH236A: All<br>*721064-B21: Not supported      |                                                                                                       |
| <b>Aruba 3810M 2QSFP+ 40GbE modules</b> (JL079A)             | JH234A, JH235A, JH236A: All<br>*721064-B21: Not supported      | The JL079A module is not supported in the 2930M series nor on the 3810M 16SFP+ 2-slot Switch (JL075A) |
| <b>Aruba 20p PoE+/1p 40GbE QSFP+ v3 zl2 modules</b> (J9992A) | JH234A, JH235A, JH236A: KB 15.17<br>*721064-B21: Not supported |                                                                                                       |
| <b>Aruba 2p 40GbE QSFP+ v3 zl2 modules</b> (J9996A)          | JH234A, JH235A, JH236A: KB 15.17<br>*721064-B21: Not supported |                                                                                                       |

| QSFP+ (40G) DAC capable product name (SKU)                                                                                                                                                                                                                                                                                                                                          | Minimum software required                                                                                                                                           | Comments                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 6300 Switch Series</b> <ul style="list-style-type: none"> <li>▪ JL658A Aruba 6300M 24SFP+ 4SFP56 Switch</li> <li>▪ JL663A Aruba 6300M 48G 4SFP56 Switch</li> <li>▪ JL762A Aruba 6300M 48G Pwr2Prt 2F 1PS Bundle</li> <li>▪ R8S92A Aruba 6300M 24G 2SFP56 2p25G Switch</li> </ul> <p>Aruba 6300 with QSFP28 ports (S0E91A/S0X44A)</p> <p>S4P41A, S4P42A, S4P43A, S4P44A</p> | <p>*721064-B21: 10.10.1000</p> <p>JH234A, JH235A, JH236A: 10.13.1000</p> <p>*721064-B21: Not supported</p> <p>*721064-B21: 10.16.1006</p>                           | <p>721064-B21: SFP+ ends only of the split cable from HPE Compute parts</p> <p>S0E91A/S0X44A models require interface group 2 or 3 to configure either 40G or 100G speed operation.</p> <p>721064-B21: only SFP+ ends are supported in the respective SFP ports of S4P41A-S4P48A SKUs</p>                                                                                                                              |
| <b>Aruba 6400 12p 40G/100G QSFP28 modules</b><br>(R0X45A/R0X45C)                                                                                                                                                                                                                                                                                                                    | <p>JH234A, JH235A, JH236A: 10.04.2000</p> <p>*721064-B21: Not supported</p>                                                                                         | <p>The minimum software release for the R0X45C is 10.09.1000.</p> <p>721064-B21 not supported on either R0X45A/R0X45C</p>                                                                                                                                                                                                                                                                                              |
| <b>Aruba 8100 Switch Series</b>                                                                                                                                                                                                                                                                                                                                                     | <p>JH234A, JH235A, JH236A: 10.12.0006</p> <p>*721064-B21: Not supported</p>                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ models</b><br>(JL479A)                                                                                                                                                                                                                                                                                                              | <p>JH234A, JH235A, JH236A: 10.00.0012</p> <p>*721064-B21: Refer to the comments column for 8- or 9-digit serial number versions (Requires <b>split</b> command)</p> | <p>721064-B21: This HPE Compute SKU has two vendors: 9-digit serial numbers were first supported by 10.05.0001 BUT only for s/n starting with "1xxxxx"; 8-digit s/n support was added in 10.06.0140 &amp; 10.07.0021. 9-digit serial number starting with "2xxxx" are supported by 10.10.1060 code (nothing available to 10.06 or 10.07). 10.08 release added support for the 10G ends of the 721064-B21 split DAC</p> |
| <b>Aruba 8320 32p 40G QSFP+ models</b><br>(JL579A)                                                                                                                                                                                                                                                                                                                                  | <p>JH234A, JH235A, JH236A: 10.00.0012</p> <p>*721064-B21: Refer to the comments column for 8- or 9-digit serial number versions (Requires <b>split</b> command)</p> | <p>8320 JL579A only allows splitting of ports 5-28 (center 24 ports)</p> <p>721064-B21: This HPE Compute SKU has two vendors: 9-digit serial numbers were first supported by 10.05.0001 BUT only for s/n starting</p>                                                                                                                                                                                                  |

| QSFP+ (40G) DAC capable product name (SKU)                                                                                                                                                                    | Minimum software required                                                                                                                                        | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                               |                                                                                                                                                                  | with "1xxxxx"; 8-digit s/n support was added in 10.06.0140 & 10.07.0021. 9-digit serial number starting with "2xxxx" are supported by 10.10.1060 code (nothing available to 10.06 or 10.07). Only the QSFP end is supported. The 10G ends are NOT supported thru the use of the QSA28 used in any QSFP+ port on this model.                                                                                                                                                                                     |
| <b>Aruba 8320 48p 10GBT 6p 40G QSFP+ models</b><br>(JL581A)                                                                                                                                                   | JH234A, JH235A, JH236A:<br>10.03.0030<br>*721064-B21: : Refer to the comments column for 8- or 9-digit serial number versions<br>(Requires <b>split</b> command) | 721064-B21: This HPE Compute SKU has two vendors: 9-digit serial numbers were first supported by 10.05.0001 BUT only for s/n starting with "1xxxxx"; 8-digit s/n support was added in 10.06.0140 & 10.07.0021. 9-digit serial number starting with "2xxxx" are supported by 10.10.1060 code (nothing available to 10.06 or 10.07). 10.08 release added support for the 10G ends of the 721064-B21 split DAC                                                                                                     |
| <b>Aruba 8325 32C models</b><br>JL636A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ JL626A - Port-to-Power model (FB)</li> <li>■ JL627A - Power-to-Port model (BF)</li> </ul> | JH234A, JH235A, JH236A:<br>10.00.0012<br>*721064-B21: Refer to the comments column for 8- or 9-digit serial number versions<br>(Requires <b>split</b> command)   | 8325 JL636A allows splitting of all 32 ports. 721064-B21: This HPE Compute SKU has two vendors: 9-digit serial numbers were first supported by 10.05.0001 BUT only for s/n starting with "1xxxxx"; 8-digit s/n support was added in 10.06.0140 & 10.07.0021. 9-digit serial number starting with "2xxxx" are supported by 10.10.1060 code (nothing available to 10.06 or 10.07). Only the QSFP end is supported. The 10G ends are NOT supported thru the use of the QSA28 used in any QSFP+ port on this model. |
| <b>Aruba 8325 48Y8C models</b><br>JL635A displayed by CLI <b>show system</b>                                                                                                                                  | JH234A, JH235A, JH236A:<br>10.03.0030                                                                                                                            | 8325 JL635A allows splitting of all 8 ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| QSFP+ (40G) DAC capable product name (SKU)                                                                                                                                                                                                                                                                                                                                                                                                 | Minimum software required                                                                                                                                   | Comments                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>▪ JL624A - Port-to-Power model (FB)</li> <li>▪ JL625A - Power-to-Port model (BF)</li> </ul>                                                                                                                                                                                                                                                                                                         | *721064-B21: Refer to the comments column for 8- or 9-digit serial number versions (Requires <b>split</b> command)                                          | 721064-B21: This HPE Compute SKU has two vendors: 9-digit serial numbers were first supported by 10.05.0001 BUT only for s/n starting with "1xxxxx"; 8-digit s/n support was added in 10.06.0140 & 10.07.0021. 9-digit serial number starting with "2xxxxx" are supported by 10.10.1060 code (nothing available to 10.06 or 10.07). 10.08 release added support for the 10G ends of the 721064-B21 split DAC |
| <b>Aruba 8325P 32C models</b><br>S4A48A displayed by CLI ( <b>show system</b> )<br>S0G12A displayed by CLI ( <b>show system</b> ) for TAA bundles <ul style="list-style-type: none"> <li>▪ S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl</li> <li>▪ S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl</li> <li>▪ S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl</li> <li>▪ S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl</li> </ul> | JH234A, JH235A, JH236A,<br>*721064-B21: 10.15.0001                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Aruba 8325H models</b><br>TAA/Non-TAA: <ul style="list-style-type: none"> <li>▪ S2T42A/S4B20A - 18Y4C model (FB)</li> <li>▪ S2T46A/S4B21A -18Y4C model (BF)</li> <li>▪ S2T47A/S4B22A -16C model (FB)</li> <li>▪ S2T48A/S4B23A -16C model (FB)</li> </ul>                                                                                                                                                                                | JH234A, JH235A, JH236A,<br>*721064-B21: 10.15.1001                                                                                                          | 8325H models also support the SFP ends of *721064-B21 40G split DAC in the extra SFP+ on both 18Y4C (ports 23,24) and 16C (ports 17,18) models.                                                                                                                                                                                                                                                              |
| <b>Aruba 8360 32Y4C models</b><br>JL717A/JL717C(v2) displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ JL700A/JL700C(v2) Port-to-Power model</li> <li>▪ JL701A/JL701C(v2) Power-to-Port model</li> </ul>                                                                                                                                                                                                         | JH234A, JH235A, JH236A:<br>10.06.0001<br>*721064-B21: Refer to the comments column for 8- or 9-digit serial number versions (Requires <b>split</b> command) | 721064-B21: This HPE Compute SKU has two vendors: 9-digit serial numbers were first supported by 10.05.0001 BUT only for s/n starting with "1xxxxx"; 8-digit s/n support was added in 10.06.0140 & 10.07.0021. 9-digit serial number starting with "2xxxxx" are supported by 10.10.1060 code (nothing available to 10.06 or 10.07). 10.08 release added support for the 10G ends of the 721064-B21 split DAC |

| QSFP+ (40G) DAC capable product name (SKU)                                                                                                                                                                                      | Minimum software required                                                                                                                                   | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 8360 16Y2C models</b><br>JL718A/JL718C(v2) displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL702A/JL702C(v2) Port-to-Power model</li> <li>JL703A/JL703C(v2) Power-to-Port model</li> </ul>  | JH234A, JH235A, JH236A:<br>10.06.0001<br>*721064-B21: Refer to the comments column for 8- or 9-digit serial number versions (Requires <b>split</b> command) | 721064-B21: This HPE Compute SKU has two vendors: 9-digit serial numbers were first supported by 10.05.0001 BUT only for s/n starting with "1xxxxx"; 8-digit s/n support was added in 10.06.0140 & 10.07.0021. 9-digit serial number starting with "2xxxx" are supported by 10.10.1060 code (nothing available to 10.06 or 10.07). 10.08 release added support for the 10G ends of the 721064-B21 split DAC                                                      |
| <b>Aruba 8360 48Y6C models</b><br>JL719C displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL704C(v2) Port-to-Power model (FB)</li> <li>JL705C(v2) Power-to-Port model (BF)</li> </ul>                 | JH234A, JH235A, JH236A:<br>10.09.0002<br>*721064-B21: 10.09.0002 (Requires <b>split</b> command)                                                            | MACsec available on ports 53-54.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Aruba 8360 48XT4C models</b><br>JL720A/JL720C(v2) displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL706A/JL706C(v2) Port-to-Power model</li> <li>JL707A/JL707C(v2) Power-to-Port model</li> </ul> | JH234A, JH235A, JH236A:<br>10.06.0001<br>*721064-B21: Can NEVER be supported                                                                                | 8360 48XT4C model QSFP28 ports <b>do not</b> support split-mode (hardware is not capable)                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Aruba 8360 12C models</b><br>JL721A/JL721C(v2) displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL708A/JL708C(v2) Port-to-Power model</li> <li>JL709A/JL709C(v2) Power-to-Port model</li> </ul>    | JH234A, JH235A, JH236A:<br>10.06.0001<br>*721064-B21: Refer to the comments column for 8- or 9-digit serial number versions (Requires <b>split</b> command) | 721064-B21: This HPE Compute SKU has two vendors: 9-digit serial numbers were first supported by 10.05.0001 BUT only for s/n starting with "1xxxxx"; 8-digit s/n support was added in 10.06.0140 & 10.07.0021. 9-digit serial number starting with "2xxxx" are supported by 10.10.1060 code (nothing available to 10.06 or 10.07). Only the QSFP end is supported The 10G ends are NOT supported thru the use of the QSA28 used in any QSFP+ port on this model. |
| <b>Aruba 8360 24XF2C models</b><br>JL722A/JL722C(v2) displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>JL710A/JL710C(v2) Port-to-Power model</li> <li>JL711A/JL711C(v2) Power-to-Port model</li> </ul> | JH234A, JH235A, JH236A:<br>10.06.0001<br>*721064-B21: Refer to the comments column for 8- or 9-digit serial number versions (Requires <b>split</b> command) | 721064-B21: This HPE Compute SKU has two vendors: 9-digit serial numbers were first supported by 10.05.0001 BUT only for s/n starting                                                                                                                                                                                                                                                                                                                            |

| QSFP+ (40G) DAC capable product name (SKU)                                                                                                                                                                                                                                                                                   | Minimum software required                                           | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                              |                                                                     | with "1xxxxx"; 8-digit s/n support was added in 10.06.0140 & 10.07.0021. 9-digit serial number starting with "2xxxx" are supported by 10.10.1060 code (nothing available to 10.06 or 10.07). Only the QSFP end is supported. The 10G ends are NOT supported thru the use of the QSA28 used in any QSFP+ port on this model.                                                                                                                     |
| <b>Aruba 8400X modules</b>                                                                                                                                                                                                                                                                                                   |                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 8p 40G QSFP+ Adv Module (JL365A)                                                                                                                                                                                                                                                                                             | JH234A, JH235A, JH236A:<br>10.00.0002<br>*721064-B21: Not supported | 8400 JL365A 8p QSFP+ module allows splitting of all 8 ports                                                                                                                                                                                                                                                                                                                                                                                     |
| 6p 40G/100G QSFP28 Adv Module (JL366A)                                                                                                                                                                                                                                                                                       | JH234A, JH235A, JH236A:<br>10.00.0006<br>*721064-B21: Not supported | JL366A 6p QSFP28 module no support for breakout 40G DACs                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Aruba 9300 Switch Series</b><br>-32D models<br>R8Z96A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ R9A29A FB airflow</li> <li>▪ R9A30A BF airflow</li> </ul>                                                                                                                              | JH234A, JH235A, JH236A,<br>*721064-B21: 10.10.1000                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Aruba 9300S Switch Series</b><br>-32C 8D models displayed by CLI <b>show system</b><br>Base models: S0F95A-TAA Base, S0F96A-Base <ul style="list-style-type: none"> <li>▪ S0F81A FB TAA</li> <li>▪ S0F82A FB</li> <li>▪ S0F83A BF TAA</li> <li>▪ S0F84A BF</li> <li>▪ S0F87A BF DC TAA</li> <li>▪ S0F88A BF DC</li> </ul> | JH234A, JH235A, JH236A,<br>*721064-B21: 10.14.0005                  | 9300S requires configuration of port-groups to enable 40G speeds.<br><br>40G is enabled using <b>speed-group 2</b> for the selected port (in groups of 4) ports 1-16, 25-40.<br><br>The center QDD ports (17-24) do not need a command, and are auto-sensing.<br><br>The HPE Server split DAC, *721064-B21, requires a <b>split profile 2</b> configuration to be able to use in ports 13, 15-17, 19, 21, 23, 25-27 as 40G => 4x10G split port. |
| <b>Aruba 10000 48Y6C models</b><br>R8S96A displayed by CLI <b>show system</b>                                                                                                                                                                                                                                                | JH234A, JH235A, JH236A:<br>10.10.0002                               | 721064-B21: The 10G ends are NOT supported                                                                                                                                                                                                                                                                                                                                                                                                      |

| QSFP+ (40G) DAC capable product name (SKU)                                                                                                   | Minimum software required                                        | Comments                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>R8P13A - 48Y6C FB bundle</li> <li>R8P14A - 48Y6C BF bundle</li> </ul>                                 | *721064-B21: 10.10.0002                                          | through the use of the QSA28 used in any QSFP+ port on this model.                                                            |
| <b>Aruba 10040 32C6D models</b> <ul style="list-style-type: none"> <li>S4R54A - 32C6D FB bundle</li> <li>S4R55A - 32C6D BF bundle</li> </ul> | JH234A, JH235A, JH236A:<br>10.16.10xx<br>*721064-B21: 10.16.10xx | Supported in all QSFP and Q-DD ports. Requires Speed mode 40G to be configured.<br>Split ends are supported in ports 39 & 40. |

## 40G QSFP+ AOC and breakout AOC (active optical cables)



## Models, specifications, and compatibility

### Specifications for QSFP+ 40G active optical cables

| Product name (SKU)                        | Cable length    | Data rate | Temperature Ratings    | Required Power |
|-------------------------------------------|-----------------|-----------|------------------------|----------------|
| Aruba 40G QSFP+ to QSFP+ 7m AOC (R0Z22A)  | 7 m (22.96 ft)  | 40 Gbps   | Commercial (0 to 70°C) | 0.1 W per end  |
| Aruba 40G QSFP+ to QSFP+ 15m AOC (R0Z23A) | 15 m (49.2 ft)  |           |                        |                |
| Aruba 40G QSFP+ to QSFP+ 30m AOC (R0Z24A) | 30 m (98.42 ft) |           |                        |                |

The following 40G breakout AOC cable is offered by HPE Servers and Systems and ordered using the specified part number (these cables may not be available to order for Aruba-only partners). Refer to the [HPE Compute transceiver and cable hardware matrix product availability matrix](#) at hpe.com.

AOS-CX release 10.05 and later supports a **split** command configured on 100G QSFP28 ports.



As of the AOS-CX 10.05 and 10.06 releases, the configuration requires a save and reboot of the switch or module. need to save and reboot is now removed for the 8320, 8325, and 8360 series as of the 10.07 release. The 8400 still requires a save and reboot. See the *Monitoring Guide* for details on the **split** command.

### Specifications for HPE QSFP+ breakout 40G active optical cables (from HPE Server products)

| Product name (SKU)                                    | Cable length   | Data rate |
|-------------------------------------------------------|----------------|-----------|
| *HPE BLc QSFP+ to 4x10G SFP+ AOC 15m Opt (721076-B21) | 15m (49.21 ft) | 4 x 10G   |

### Compatibility for QSFP+ 40G active optical cables

\* HPE Server product - may not be available to Aruba resellers

| QSFP+ (40G) AOC capable product name (SKU)                                 | Minimum software required                                                                      | Comments                                                                                                         |
|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 6300 Switch Series</b>                                            |                                                                                                |                                                                                                                  |
| ▪ JL658A Aruba 6300M 24SFP+ 4SFP56 Switch                                  | *721076-B21: 10.08.0001                                                                        | 721076-B21: SFP+ ends only of the split cable from HPE Compute parts                                             |
| ▪ JL663A Aruba 6300M 48G 4SFP56 Switch                                     | *721076-B21: 10.10.1000                                                                        |                                                                                                                  |
| ▪ JL762A Aruba 6300M 48G Pwr2Prt 2F 1PS Bundle                             |                                                                                                |                                                                                                                  |
| ▪ R8S92A Aruba 6300M 24G 2SFP56 2p25G Switch                               | R0Z22A,R0Z23A,R0Z24A:10.13.1000<br>*721076-B21: not supported                                  |                                                                                                                  |
| ▪ S0E91A HPE ANW 6300M 48SRX CL8 PoE 4p100G Switch                         |                                                                                                |                                                                                                                  |
| ▪ SOX44A HPE ANW 6300M 48SRX CL8 4p100G TAA Switch                         | *721076-B21: 10.16.1006                                                                        | 721064-B21: only SFP+ ends are supported in respective SFP for S4P41A - S4P48A SKUs                              |
| ▪ S4P41A, S4P42A, S4P43A, S4P44A                                           |                                                                                                |                                                                                                                  |
| <b>Aruba 8100 Switch Series</b>                                            |                                                                                                |                                                                                                                  |
|                                                                            | R0Z22A,R0Z23A,R0Z24A:10.12.1001<br>*721076-B21:10.12.1001                                      |                                                                                                                  |
| <b>Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ models</b><br>(JL479A)     | R0Z22A,R0Z23A,R0Z24A: Not supported<br>*721076-B21: 10.06.0001 (Requires <b>split</b> command) | 721076-B21: 10G ends are not supported through the use of the QSA28 adapter in any QSFP port                     |
| <b>Aruba 8320 32p 40G QSFP+ models</b><br>(JL579A)                         | R0Z22A,R0Z23A,R0Z24A: Not supported<br>*721076-B21: 10.06.0001 (Requires <b>split</b> command) | 8320 JL579A only allows splitting of ports 5-28 (center 24 ports).<br>721076-B21: Only the QSFP end is supported |
| <b>Aruba 8320 48p 10GBT 6p 40G QSFP+ models</b><br>(JL581A)                | R0Z22A,R0Z23A,R0Z24A: Not supported<br>*721076-B21: 10.06.0001 (Requires <b>split</b> command) | 721076-B21: 10G ends are NOT supported thru the use of the QSA28 adapter in any QSFP port                        |
| <b>Aruba 8325 32C models</b><br>JL636A displayed by CLI <b>show system</b> | R0Z22A, R0Z23A, R0Z24A: 10.03.0040<br>*721076-B21: 10.06.0001 (Requires                        | 721076-B21: Only the QSFP end is supported.                                                                      |

| QSFP+ (40G) AOC capable product name (SKU)                                                                                                                                                                                                                                                                                                                                                                                                 | Minimum software required                                                                     | Comments                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>▪ JL626A - Port-to-Power model (FB)</li> <li>▪ JL627A - Power-to-Port model (BF)</li> </ul>                                                                                                                                                                                                                                                                                                         | <b>split</b> command)                                                                         | 10G ends are NOT supported thru the use of the QSA28 adapter in any QSFP port                                                                                                                                                                                                                                                                                   |
| <b>Aruba 8325 48Y8C models</b><br>JL635A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ JL624A -Port-to-Powermodel(FB)</li> <li>▪ JL625A - Power-to-Port model (BF)</li> </ul>                                                                                                                                                                                                                               | R0Z22A, R0Z23A, R0Z24A: 10.03.0040<br>*721076-B21: 10.06.0001 (Requires <b>split</b> command) | 721076-B21: Both QSFP+ and SFP+ ends are supported<br>The 8325 requires configuration of <b>interface groups</b> (groups of 12 ports) to enable the use of 1G or 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed). See the Hardware Guides for details.                                                                       |
| <b>Aruba 8325P 32C models</b><br>S4A48A displayed by CLI ( <b>show system</b> )<br>S0G12A displayed by CLI ( <b>show system</b> ) for TAA bundles <ul style="list-style-type: none"> <li>▪ S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl</li> <li>▪ S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl</li> <li>▪ S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl</li> <li>▪ S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl</li> </ul> | R0Z22A, R0Z23A, R0Z24A: 10.15.0001<br>*721076-B21: 10.15.0001 (Requires <b>split</b> command) |                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Aruba 8325H models</b><br>TAA/Non-TAA: <ul style="list-style-type: none"> <li>▪ n S2T42A/S4B20A - 18Y4C model (FB)</li> <li>▪ n S2T46A/S4B21A -18Y4C model (uBF)</li> <li>▪ n S2T47A/S4B22A -16C model (FB)</li> <li>▪ n S2T48A/S4B23A -16C model (FB)</li> </ul>                                                                                                                                                                       | R0Z22A, R0Z23A, R0Z24A: 10.15.1001<br>*721076-B21: 10.15.1001 (Requires <b>split</b> command) | 8325H 16C models cannot split port 16 (not enough MACs in design).<br>*721076-B21: only allowed in ports 1-15 of the 16C models SFP ends of<br>*721076-B21 allowed in ports 23-24 18Y4C models and 17-18 16C models.                                                                                                                                            |
| <b>Aruba 8360 32Y4C models</b><br>JL717A/JL717C(v2) displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ JL700A/JL700C(v2) Port-to-Power model</li> <li>▪ JL701A/JL701C(v2) Power-to-Port model</li> </ul>                                                                                                                                                                                                         | R0Z22A, R0Z23A, R0Z24A: 10.07.0005<br>*721076-B21: 10.07.0005 (Requires <b>split</b> command) | 721076-B21: Both QSFP+ and 10G SFP+ ends are supported (on the models with SFP28 ports).<br>The 8360 32Y4C model requires configuration of <b>interface groups</b> only for ports 1-4 (as group number 1) to enable the use of 1G or 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed). All other ports can individually auto- |

| QSFP+ (40G) AOC capable product name (SKU)                                                                                                                                                                                          | Minimum software required                                                                                                           | Comments                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 8360 16Y2C models</b><br>JL718A/JL718C(v2) displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ JL702APoC(v2) -to-Power model</li> <li>■ JL703A/JL703C(v2) Power-to-Port model</li> </ul>          | R0Z22A, R0Z23A, R0Z24A: 10.07.0005<br>*721076-B21: 10.07.0005 (Requires <b>split</b> command)                                       | detect the speed of the inserted transceiver.<br>Not applicable to the 24XF (1G/10G) model<br>See the Hardware Guides for details. |
| <b>Aruba 8360 48XT4C models</b><br>JL720A/JL720C(v2) displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ JL706A/JL706C(v2) Port-to-Power model</li> <li>■ JL707A/JL707C(v2) Power-to-Port model</li> </ul> | R0Z22A, R0Z23A, R0Z24A: 10.07.0005<br>*721076-B21: Not supported (No <b>split</b> support on the QSFP28 ports on the 48XT4C models) |                                                                                                                                    |
| <b>Aruba 8360 12C models</b><br>JL721A/JL721C(v2) displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ JL708A/JL708C(v2) Port-to-Power model</li> <li>■ JL709A/JL709C(v2) Power-to-Port model</li> </ul>    | R0Z22A, R0Z23A, R0Z24A: 10.07.0005<br>*721076-B21: 10.07.0005 (Requires <b>split</b> command)                                       |                                                                                                                                    |
| <b>Aruba 8360 24XF2C models</b><br>JL722A/JL722C(v2) displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ JL710A/JL710C(v2) Port-to-Power model</li> <li>■ JL711A/JL711C(v2) Power-to-Port model</li> </ul> | R0Z22A, R0Z23A, R0Z24A: 10.07.0005<br>*721076-B21: 10.07.0005 (only the QSFP end is supported in ports 25 and 26)                   |                                                                                                                                    |
| <b>Aruba 8360 48Y6C models</b><br>JL719C displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>■ JL704C(v2) Port-to-Power model (FB)</li> <li>■ JL705C(v2) Power-to-Port model (BF)</li> </ul>             | R0Z22A, R0Z23A, R0Z24A: 10.09.0002<br>*721076-B21: 10.09.0002 (Requires <b>split</b> command)                                       | MACsec available on ports 53-54.                                                                                                   |
| <b>Aruba 8400X modules</b><br>Aruba 8400X 32p SFP/SFP+ 10G MACsec Module (JL363A)                                                                                                                                                   | *721076-B21: (10G SFP+ ends) 10.06.0001<br>R0Z22A, R0Z23A, R0Z24A: 10.12.0001                                                       | 721076-B21: 10G SFP+ end supported by 10.06.0001                                                                                   |
| Aruba 8400X 8p 40G QSFP+ Adv Module (JL365A)                                                                                                                                                                                        | *721076-B21: 10.06.0001 (Requires <b>split</b> command)<br>R0Z22A, R0Z23A, R0Z24A: 10.12.0001                                       | 721076-B21: QSFP+ end supported in this module                                                                                     |
| Aruba 8400X 6p 40G/100G QSFP28 AdvModule (JL366A)                                                                                                                                                                                   | *721076-B21: 10.05.0001 (Requires <b>split</b> command)                                                                             | 721076-B21: QSFP+ end supported in this module                                                                                     |
| Aruba 8400X 32p 25G SFP28 Module (JL687A)                                                                                                                                                                                           | *721076-B21: (10G SFP+ ends) 10.06.0001                                                                                             | 721076-B21: 10G SFP+ end supported by 10.06.0001                                                                                   |

| QSFP+ (40G) AOC capable product name (SKU)                                                                                                                                                                                                                                                                                   | Minimum software required                                                                                                                 | Comments                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                              |                                                                                                                                           | JL687A 32p 25G module requires configuration of <b>interface groups</b> (groups of four ports) to enable use of 1G or 10G transceivers or DACs in the SFP28 ports (Interface Groups default to 25G speed). See the Hardware Guides for details.                                             |
| <b>Aruba 9300 Switch Series</b><br>-32D models<br>R8Z96A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ R9A29A FB airflow</li> <li>▪ R9A30A BF airflow</li> </ul>                                                                                                                              | R0Z22A, R0Z23A, R0Z24A: 10.10.1000<br>*721076-B21: not supported                                                                          |                                                                                                                                                                                                                                                                                             |
| <b>Aruba 9300S Switch Series</b><br>-32C 8D models displayed by CLI <b>show system</b><br>Base models: S0F95A-TAA Base, S0F96A-Base <ul style="list-style-type: none"> <li>▪ S0F81A FB TAA</li> <li>▪ S0F82A FB</li> <li>▪ S0F83A BF TAA</li> <li>▪ S0F84A BF</li> <li>▪ S0F87A BF DC TAA</li> <li>▪ S0F88A BF DC</li> </ul> | R0Z22A, R0Z23A, R0Z24A: 10.14.0005<br><br><br><br><br><br><br><br><br><br>*721076-B21: 10.13.1000 (only supported in ports 1-8 and 33-40) | 9300S requires configuration of port-groups to enable 40G speeds.<br><br><br>40G is enabled using <b>speed-group 2</b> for the selected port (in groups of 4).<br><br>Only supported in ports 1-8 & 33-40.<br><br>The center QDD ports (17-24) do not need a command, and are auto-sensing. |
| <b>Aruba 10000 48Y6C models</b><br>R8S96A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>▪ R8P13A - 48Y6C FB bundle</li> <li>▪ R8P14A - 48Y6C BF bundle</li> </ul>                                                                                                                               | R0Z22A, R0Z23A, R0Z24A: 10.10.0002<br>*721076-B21: 10.10.0002 (Requires <b>split</b> command)                                             | 721076-B21: The 10G ends are NOT supported thru the use of the QSA28 used in any QSFP+ port on this model.                                                                                                                                                                                  |
| <b>Aruba 10040 32C6D models</b> <ul style="list-style-type: none"> <li>▪ S4R54A – 32C6D FB bundle</li> <li>▪ S4R55A – 32C6D BF bundle</li> </ul>                                                                                                                                                                             | R0Z22A, R0Z23A, R0Z24A: 10.16.10xx<br>*721076-B21: 10.16.10xx                                                                             | Supported in all QSFP and Q-DD ports. Requires Speed mode 40G to be configured.<br>Split ends are supported in ports 39 & 40.                                                                                                                                                               |

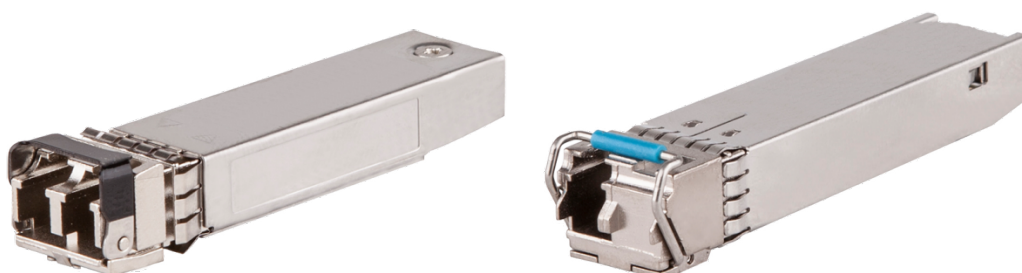
## 40G QSFP+ to SFP+ Adapter

See [QSFP28 to SFP28 adapter support](#) for 40G support within QSFP28 or QSFP+ ports.

## SFP56 optical transceiver modules

Always refer to the Datasheet or QuickSpecs for the switch product to see the current list of supported transceivers.

50G technology, implemented through an SFP56 port, is available on select models within the CX product family. Although 50G SFP transceivers (and 50G DACs) are the same physical size as a 1G, 10G, or 25G technology, the 50G products only work at the 50G speed and only in ports that are 50G-capable; usually marked as SFP56. There are a small number of exceptions such as the tri-speed transceivers which are specifically identified as multispeed.



## Models, specifications, and compatibility

SFP56 optical transceiver modules are a single-lane, serial 4-level Pulse Amplitude Modulation (PAM4) technology providing a transmission rate of 50 Gbps and use LC connectors. Note that 50G SFP56 technology can not be split into two 25G flows - it is a single-lane, single-wavelength technology.

### *Specifications for SFP56 optical transceiver module*

| Product name (SKU)                                             | DOM-Digital Optical Monitoring | Nominal wl (nm) & encoding type | Fiber mode | Fiber diameter | Modal bandwidth (MHz*km) | Transmission distance |
|----------------------------------------------------------------|--------------------------------|---------------------------------|------------|----------------|--------------------------|-----------------------|
| Aruba 50G SFP56 LC SR 100m MMF xcvr (R0M48A) Tri-speed capable | Yes 1990-4803                  | Single lane, 850 1x 50G PAM4    | MMF        | 50/125         | OM3                      | 70m (229.66 ft)       |
|                                                                |                                |                                 |            |                | OM4 and OM5              | 100m (328.08 ft)      |

| Product name (SKU)                                       | DOM-Digital Optical Monitoring | Nominal wl (nm) & encoding type     | Fiber mode       | Fiber diameter | Modal bandwidth (MHz*km) | Transmission distance                    |
|----------------------------------------------------------|--------------------------------|-------------------------------------|------------------|----------------|--------------------------|------------------------------------------|
| HPE ANW 50G eSR 300m MMF xcvr (S0V64A) Tri-speed capable | Yes<br>1990-4901<br>1990-4900  | Single lane, 850<br>1x 50G<br>PAM4  | MMF (duplex LC)  | 50/125         | OM3<br><br>OM4 and OM5   | 200m (656.16 ft)<br><br>300m (984.25 ft) |
| HPE ANW 50G LR 10km SMF xcvr (S0V65A) Tri-speed capable  | Yes<br>1990-4857<br>1990-4859  | Single lane, 1310<br>1x 50G<br>PAM4 | SMF (duplex LC)  | 9/125          | N/A                      | 10 km (6.21 miles)                       |
| HPE ANW 50G BR10-D 1330/1270 xcvr (S1C92A)               | Yes<br>1990-4870<br>1990-4866  | TX: 1330<br>RX: 1270<br>1x50G PAM4  | SMF (simplex LC) | 9/125          | N/A                      | 10 km (6.21 miles)                       |
| HPE ANW 50G BR10-U 1270/1330 xcvr (S1C94A)               | Yes<br>1990-4869<br>1990-4865  | TX: 1270<br>RX: 1330<br>1x50G PAM4  | SMF (simplex LC) | 9/125          | N/A                      | 10 km (6.21 miles)                       |
| HPE ANW 50G ER 40 km SMF xcvr (S0V66A)                   | Yes<br>1990-4902<br>1990-4888  | Single lane, 1310 1x50G<br>PAM4     | SMF (duplex LC)  | 9/125          | N/A                      | 40 km (24.86 miles)                      |



50G SR transceivers are not supported for use over MMF OM1/OM2 quality fiber. The IEEE standard did not specify any requirements for use over these types of multimode fiber.

## Tri-speed capable 50G

AOS-CX release 10.12.0001 added the **interface speed** command. This command allows 50G SR, eSR and LR transceivers to be able to connect to remote 10G or 25G SR or LR transceivers. Distances may be limited to the 50G SR, eSR and LR capabilities.

50G transceivers can only be inserted into ports capable of 50G speeds (SFP56) or ports configured for 50G capability (e.g. 8360v2, 6300, 6400 R0X44C/S0348A module).



Despite the tri-speed capability, 50G transceivers cannot be used in a 10G or 25G only port. They identify as a 50G part, so inserting into a port not capable of 50G will result in an incompatible transceiver error message.

The 50G SR, eSR and LR transceivers do not auto-detect the remote speed. The speed must be set on the interface hosting the 50G transceiver product (SR, eSR or LR) end and it will connect to a 10G or 25G SR or LR link.



The distance that the 50G transceivers can reach are limited by the 50G xcvr (see specifications above). A 10G SR over OM4 can reach 400m, but a 50G SR or eSR can only reach the distances (70m - 300m) depending on the MMF type.

Refer to the Fundamentals Guide for the **speed** command.

#### **Optical specifications for SFP56 optical transceiver modules**

| Product name (SKU)                                                               | Connector              | Optical parameters (dBm) |                                                            |                           |
|----------------------------------------------------------------------------------|------------------------|--------------------------|------------------------------------------------------------|---------------------------|
|                                                                                  |                        | Transmit power           | Receive power                                              | Temperature Ratings       |
| Aruba 50G SFP56 LC SR 100m MMF xcvr (ROM48A)<br>Tri-speed capable(10G, 25G, 50G) | Duplex LC (PC or UPC)  | -6 to +4                 | -8.4 to +4.0                                               | Commercial (0 to 70°C)    |
| HPE ANW 50G eSR 300m MMF xcvr (S0V64A)<br>Tri-speed capable (10G,25G,50G)        | Duplex LC (PC or UPC)  | -6.5 to +4.0             | -8.4 to +4.0                                               | Commercial (0 to 70°C)    |
| HPE ANW 50G LR 10km SMF xcvr (S0V65A)<br>Tri-speed capable (10G,25G,50G)         | Duplex LC (PC or UPC)  | -7.0 to +2.0             | -13.3 to +2.0                                              | Industrial (-40 to +85°C) |
| HPE ANW 50G BR10-D 1330/1270 xcvr (S1C92A)                                       | Simplex LC (PC or UPC) | -4.5 to +4.2             | -10.8 to +4.2                                              | Industrial (-40 to +85°C) |
| HPE ANW 50G BR10-U 1270/1330 xcvr (S1C94A)                                       | Simplex LC (PC or UPC) | -4.5 to +4.2             | -10.8 to +4.2                                              | Industrial (-40 to +85°C) |
| HPE ANW 50G ER 40 km SMF xcvr (S0V66A)                                           | Duplex LC (PC or UPC)  | 0.4 to +6.6              | -17.6 to -3.4 (use a 10dB attenuator for short SMF cables) | Industrial (-40 to +85°C) |

### Compatibility for the SFP56 transceiver module

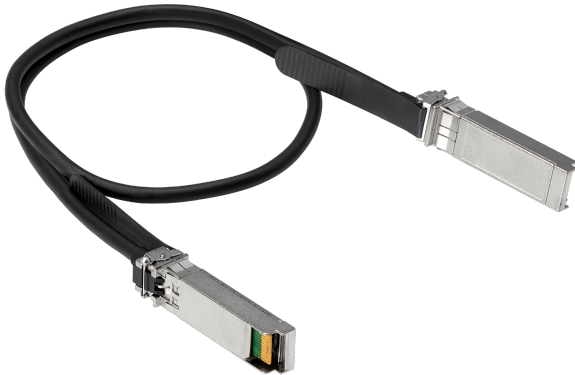
| SFP56 (50G)<br>capable<br>product name | Switch SKU #s                                                                             | Minimum<br>Software<br>required                                                       | Comments                                                                                                                                                                                                                                                                                              |
|----------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 6300<br/>Switch Series</b>    | All Models M/F except those<br>mentioned below                                            | R0M48A:<br>10.09.1010<br><br>S0V64A, S0V65A,<br>S1C92A, S1C94A,<br>S0V66A: 10.13.1000 | Tri-speed capability on 50G SR, eSR,<br>LR Optics (BiDi are single speed).                                                                                                                                                                                                                            |
|                                        | JL762A (6300M BF airflow)                                                                 | R0M48A:<br>10.09.1010<br><br>S0V64A, S0V65A,<br>S1C92A, S1C94A,<br>S0V66A: 10.13.1000 |                                                                                                                                                                                                                                                                                                       |
|                                        | R8S89A, R8S90A, R8S91A,<br>R8S92A                                                         | R0M48A:<br>10.10.1010<br><br>S0V64A, S0V65A,<br>S1C92A, S1C94A,<br>S0V66A: 10.13.1000 | 6300M R8S91A: ports 51-52 do not<br>support 50G nor 25G (only 10G and<br>1G).<br><br>6300 R8S89A, R8S90A, R8S91A,<br>R8S92A models require <b>interface<br/>group &lt;speed&gt;</b> to enable different<br>speed products.<br><br>6300M R8S92A: ports 27-28 do not<br>support 50G (only 10G and 25G). |
|                                        | 6300M TAA Models:<br>S0F99A, S0G00A, S0G01A,<br>S0G02A, S0G03A, S0G04A,<br>S0G05A, S0G06A | R0M48A, S0V64A,<br>S0V65A, S0V66A,<br>S1C92A, S1C94A:<br>10.14.0001                   |                                                                                                                                                                                                                                                                                                       |
|                                        | 6300F TAA Models:<br>S0G95A, S0G96A, S0G97A,<br>S0G98A                                    |                                                                                       |                                                                                                                                                                                                                                                                                                       |
|                                        | S0E91A, S0X44A (100G<br>models):                                                          | 50G not supported                                                                     |                                                                                                                                                                                                                                                                                                       |
|                                        | S4P41A, S4P42A, S4P43A,<br>S4P44A                                                         | R0M48A, S0V64A,<br>S0V65A, S0V66A,<br>S1C92A, S1C94A:<br>10.16.1006                   | Supported ports<br>S4P41A/S4P43A: 49-50<br>S4P42A: 41-42<br>S4P44A: 25-26<br>Support extended to respective TAA<br>SKUs                                                                                                                                                                               |
| <b>Aruba 6300L<br/>Switch Series</b>   | S3L75A, S3L76A, S3L77A                                                                    | R0M48A, S0V64A,<br>S0V65A, S0V66A,<br>S1C92A, S1C94A:<br>10.14.0001                   | Supported in SFP56 ports:<br>S3L75A: Ports 25-26<br>S3L76A: Ports 49-50<br>S3L77A: Ports 49-50                                                                                                                                                                                                        |
| <b>Aruba 6400<br/>modules</b>          | R0X39B(*EOS), R0X40B<br>(*EOS), R0X41A(*EOS),<br>R0X42A(*EOS), R0X43A<br>(*EOS),          | R0M48A:<br>10.09.1000<br><br>S0V64A, S0V65A,                                          | R0X43A/R0X43C: 50G optics are not<br>supported in 10G SFP+ ports.                                                                                                                                                                                                                                     |

| SFP56 (50G) capable product name | Switch SKU #s                                                                    | Minimum Software required                                                                                                                                    | Comments                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | R0X39C, R0X40C, R0X41C, R0X42C, R0X43C                                           | S1C92A, S1C94A, S0V66A: 10.13.1000<br><br>Only supported in SFP56 ports                                                                                      | R0X44C enables 50G on the ports but requires configuration of interface groups. 50G capability (DACs or optics) is only allowed on the lower ports (even numbers) of the group and disables the use of any other connection in the upper ports (odd numbers).                                                                                                       |
|                                  | R0X44A does not support 50G products                                             | R0M48A: 10.09.1000                                                                                                                                           | R0X44C port groups are as follows:<br>Group 1 = 1-12<br>Groups 2 through 7 = (13-16; 17-20; 21-24; 25- 28; 29-32; 33-36);<br>Group 8 = 37-48.                                                                                                                                                                                                                       |
|                                  | R0X44C (50G only supported in configured bottom ports of interface port groups)  | S0V64A, S0V65A, S1C92A, S1C94A, S0V66A: 10.13.1000<br><br>Only supported in configured bottom SFP28 ports.                                                   |                                                                                                                                                                                                                                                                                                                                                                     |
|                                  | S1T83A                                                                           | R0M48A, S0V64A, S0V65A, S1C92A, S1C94A, S0V66A: 10.13.1010                                                                                                   | S1T83A module SFP56 ports are auto-sensing for the supported interconnects.<br><br>S0E48A port groups are as follows:<br>Group 1 = 1-8<br>Group 2 = 9-16<br>Group 3 = 17-24<br>Group 4 = 25-32                                                                                                                                                                      |
|                                  | S0E48A (50G only supported in configured bottom ports of interface port groups)  | R0M48A, S0V64A, S0V65A, S1C92A, S1C94A, S0V66A: 10.13.1060, 10.14.1020, 10.15.0005<br><br>Only supported in configured bottom ports of interface port groups | S0E48A: Configure port groups for 50G speed: Default is 10G/25G.<br><br>S0E48A port groups are as follows:<br>Group 1 = 1-8<br>Group 2 = 9-16<br>Group 3 = 17-24<br>Group 4 = 25-32<br><br>When a port group is configured for 50G (bottom ports), the upper ports in that group are disabled and cannot use any other product, regardless of inserted 50G product. |
| <b>Aruba 8100 Switch Series</b>  | 50G not supported                                                                |                                                                                                                                                              | The 8100 does not have any ports that can support 50G speeds                                                                                                                                                                                                                                                                                                        |
| <b>Aruba 8325 Switch Series</b>  | 50G not supported                                                                |                                                                                                                                                              | The 8325 (32C, 48Y6C), 8325P, and 8325H do not have any ports that can support 50G speeds.                                                                                                                                                                                                                                                                          |
| <b>Aruba 8360 32Y4C models</b>   | JL717C(v2) displayed by CLI <b>show system</b><br>JL700C(v2) Port-to-Power model | R0M48A: 10.09.1000<br><br>S0V64A, S0V65A,                                                                                                                    | 8360 v1 models (ending in "A") do not support the use of 50G transceivers.                                                                                                                                                                                                                                                                                          |

| SFP56 (50G)<br>capable<br>product name                         | Switch SKU #s                                                                                                                     | Minimum<br>Software<br>required                                                                                                | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                | JL701C(v2) Power-to-Port<br>model                                                                                                 | S1C92A,<br>S1C94A, S0V66A:<br>10.13.1000<br><br>Only supported on<br>even # ports 6-32                                         | The 8360 32Y4C model requires<br>configuration of <b>interface groups</b><br>(groups of four ports) to select a<br>speed of 50G.<br><br>When selected, the upper two ports<br>in a group are disabled and both<br>bottom ports only support the 50G<br>speed.<br><br>Ports 1-4 on the 8360 32Y4C model<br>do not support 50G speed due to the<br>MACsec capability limiting these<br>ports to a maximum speed of 25G.<br><br>See the Hardware Guides for details. |
| <b>Aruba 8360<br/>16Y2C models</b>                             | JL718C(v2) displayed by CLI<br><b>show system</b><br>JL702C(v2) Port-to-Power<br>model<br>JL703C(v2) Power-to-Port<br>model       | 10.09.1000<br><br>S0V64A, S0V65A,<br>S1C92A,<br>S1C94A, S0V66A:<br>10.13.1000<br><br>Only supported on<br>even # ports<br>2-16 | 8360 v1 models (ending in "A") do<br>not support the use of 50G<br>transceivers.<br><br>The 8360 16Y2C model requires<br>configuration of <b>interface groups</b><br>(groups of four ports) to select a<br>speed of 50G. When selected, the<br>upper two ports in a group are<br>disabled and both bottom ports only<br>support the 50G speed.<br><br>See the Hardware Guides for details.                                                                        |
| <b>Aruba 8360<br/>48Y6C models</b>                             | JL719C displayed by CLI<br><b>show system</b><br>JL704C(v2) Port-to-Power<br>model (FB)<br>JL705C(v2) Power-to-Port<br>model (BF) | 10.09.1000<br><br>S0V64A, S0V65A,<br>S1C92A, S1C94A,<br>S0V66A: 10.13.1000<br><br>Only supported on<br>even # ports<br>6-48    | The 8360 48Y6C model requires<br>configuration of <b>interface groups</b><br>(groups of four ports) to select a 50G<br>speed.<br><br>When selected, the upper two ports<br>in a group are disabled and both<br>bottom ports only support the 50G<br>speed.<br><br>Ports 1-4 on the 8360 48Y6C model<br>do not support 50G speeds due to<br>the MACsec capability limiting these<br>ports to a maximum speed of 25G.<br><br>See the Hardware Guides for details.   |
| <b>Aruba 9300<br/>Switch Series</b><br>9300 32D<br>9300S 32C8D | Not supported                                                                                                                     |                                                                                                                                | 50G products (xcvrs, DACs and<br>AOCs) are not supported for use<br>through a QSA28 adapter.                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Aruba 10000<br/>Switch Series</b>                           | 50G not supported                                                                                                                 |                                                                                                                                | The 10000 does not have any ports<br>that can support 50G speeds.                                                                                                                                                                                                                                                                                                                                                                                                 |

## SFP56 direct attach over copper (DAC) cables

Always refer to the Datasheet or QuickSpecs for the switch product to see the current list of supported transceivers.



Direct Attach over Copper (DAC) cables have a minimum bend radius of typically 4x the diameter of the cable (approximately a 1" bend radius). Handle DAC cables carefully to ensure that you do not crimp or bend the cable beyond a 1" radius; otherwise, you risk damaging the cable.

### Models, specifications, and compatibility

| Product name (SKU)                                | Cable length    | Data rate | Temperature Ratings    |
|---------------------------------------------------|-----------------|-----------|------------------------|
| Aruba 50G SFP56 to SFP56 0.65m DAC Cable (R0M46A) | 0.65m (2.13 ft) | 50Gbps    | Commercial (0 to 70°C) |
| Aruba 50G SFP56 to SFP56 3m DAC Cable (R0M47A)    | 3m (9.84 ft)    |           |                        |

| SFP56 (50G)<br>DAC capable<br>product name | Switch SKU #s                                                                 | Minimum<br>software<br>required  | Comments                                                                                  |
|--------------------------------------------|-------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------|
| HPE ANW 5420<br>Switch Series              |                                                                               |                                  | No 50G capability in the 5420 at this time                                                |
| Aruba 6300<br>Switch Series                | All models M and F and JL762A (6300M BF airflow) except those mentioned below | R0M46A,<br>R0M47A:<br>10.04.0001 | Used for stacking or switch-to-switch interconnectivity (non-stack). Only in SFP56 ports. |
| =                                          |                                                                               |                                  |                                                                                           |
|                                            | R8S89A, R8S90A, R8S91A R8S92A                                                 | R0M46A,<br>R0M47A:               | Used for stacking or switch-to-switch interconnectivity (non-stack). Only in              |

| SFP56 (50G)<br>DAC capable<br>product name | Switch SKU #s                                                                                          | Minimum<br>software<br>required                                              | Comments                                                                                                                                                                                                                                                      |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                            |                                                                                                        | 10.10.0002                                                                   | SFP56 ports.<br><br>6300 R8S89A, R8S90A, R8S91A, R8S92A models require <b>interface group &lt;speed&gt;</b> to enable different speed products.                                                                                                               |
|                                            | 6300M TAA Models:<br>S0F99A, S0G00A, S0G01A,<br>S0G02A (BF airflow), S0G03A,<br>S0G04A, S0G05A, S0G06A | R0M46A,<br>R0M47A:<br>10.14.0001                                             | Used for stacking or switch-to-switch interconnectivity (non-stack). Only in SFP56 ports.                                                                                                                                                                     |
|                                            | 6300F TAA Models:<br>S0G95A, S0G96A, S0G97A,<br>S0G98A                                                 |                                                                              |                                                                                                                                                                                                                                                               |
|                                            | S0E91A, S0X44A (100G models)<br>50G not supported                                                      |                                                                              |                                                                                                                                                                                                                                                               |
|                                            | S4P41A, S4P42A, S4P43A, S4P44A                                                                         | R0M48A,<br>S0V64A,<br>S0V65A,<br>S0V66A,<br>S1C92A,<br>S1C94A:<br>10.16.1006 | Supported ports:<br>S4P41A/S4P43A: 49-50<br>S4P42A: 41-42<br>S4P44A: 25-26<br>Support extended to respective TAA SKUs                                                                                                                                         |
| <b>Aruba 6300L<br/>Switch Series</b>       | S3L75A, S3L76A, S3L77A                                                                                 | R0M46A,<br>R0M47A:<br>10.14.0001                                             | Supported in SFP56 ports:<br>S3L75A: Ports 25-26<br>S3L76A: Ports 49-50<br>S3L77A: Ports 49-50                                                                                                                                                                |
| <b>Aruba 6400<br/>Switch Series</b>        | All modules with SFP56 ports                                                                           | R0M46A,<br>R0M47A:<br>10.09.0002                                             | R0X43A/R0X43C: 50G optics are not supported in 10G SFP+ ports.                                                                                                                                                                                                |
|                                            | R0X44A(*EOS) does not support 50G products                                                             | R0M46A,<br>R0M47A:<br>10.09.0002                                             | R0X44C enables 50G on the ports but requires configuration of interface groups. 50G capability (DACs or optics) is only allowed on the lower ports (even numbers) of the group and disables the use of any other connection in the upper ports (odd numbers). |
|                                            | R0X44C (50G only supported in configured bottom ports of interface port groups)                        | Only supported in configured bottom ports of interface port groups           | R0X44C port groups are as follows:<br>Group 1 = 1-12<br>Groups 2 - 7 = (13-16; 17-20; 21-24; 25-28; 29-32; 33-36)<br>Group 8 = 37-48.                                                                                                                         |

| SFP56 (50G)<br>DAC capable<br>product name | Switch SKU #s                                                                                                                                                                                        | Minimum<br>software<br>required                                                                                                     | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                            |                                                                                                                                                                                                      |                                                                                                                                     | When a port group is configured for 50G (bottom ports), the upper ports in that group are disabled and cannot use any other product, regardless of inserted 50G product.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                            | S1T83A                                                                                                                                                                                               | R0M46A,<br>R0M47A:<br>10.13.1000                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                            | S0E48A (50G only supported in configured bottom ports of interface groups)                                                                                                                           | R0M46A,<br>R0M47A:<br>10.13.1060,<br>10.14.1020,<br>10.15.0005<br><br>Only supported in configured bottom ports of interface groups | S0E48A: Configure port groups for 50G speed: Default is 10G/25G.<br><br>S0E48A port groups are as follows:<br>Group 1 = 1-8<br>Group 2 = 9-16<br>Group 3 = 17-24<br>Group 4 = 25-32<br><br>When a port group is configured for 50G (bottom ports), the upper ports in that group are disabled and cannot use any other product, regardless of inserted 50G product.                                                                                                                                                                                                                                                                               |
| <b>Aruba 8100 Switch Series</b>            | 50G not supported                                                                                                                                                                                    |                                                                                                                                     | The 8100 does not have any ports that can support 50G speeds.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Aruba 8325 Switch Series</b>            | 50G not supported                                                                                                                                                                                    |                                                                                                                                     | The 8325 (32C, 48Y6C), 8325P, and 8325H do not have any ports that can support 50G speeds.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Aruba 8360 Switch Series</b>            | Aruba 8360 48Y6C models JL719C displayed by CLI (show system) <ul style="list-style-type: none"> <li>JL704C(v2) - Port-to-Power model (FB)</li> <li>JL705C(v2) - Power-to-Port model (BF)</li> </ul> | R0M46A,<br>R0M47A:<br>10.09.0002                                                                                                    | 8360 v1 models (ending in "A") do not support the use of 50G transceivers.<br><br>8360 32Y4C and 48Y6C ports 2 and 4 do not support the use of 50G speeds because of the MACsec capability for ports 1-4 at 10G/25G speeds.<br><br>8360 16Y2C does not have MACsec capability.<br><br>To enable 50G capability, configure <b>interface groups</b> only for applicable ports (in groups of four ports) to enable the use of 50G transceivers / DACs in the <i>lower</i> SFP28 ports. (Interface Groups default to 1G, 10G or 25G speeds.)<br><br>When configured for 50G, only the bottom ports in each group are enabled, and the upper ports are |

| SFP56 (50G)<br>DAC capable<br>product name             | Switch SKU #s                                                                                                                                                                                          | Minimum<br>software<br>required | Comments                                                                               |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------------------------------------------------|
|                                                        | <p>Aruba 8360 32Y4C models JL717C (v2) displayed by CLI (show system)</p> <ul style="list-style-type: none"> <li>▪ JL700C(v2) Port-to-Power model</li> <li>▪ JL701C(v2) Power-to-Port model</li> </ul> |                                 | disabled for any use. (The 50G bandwidth reconfigures two ports).                      |
|                                                        | <p>Aruba 8360 16Y2C models JL718C (v2) displayed by CLI (show system)</p> <ul style="list-style-type: none"> <li>▪ JL702C(v2) Port-to-Power model</li> <li>▪ JL703C(v2) Power-to-Port model</li> </ul> |                                 |                                                                                        |
| <b>Aruba 9300 Switch Series</b><br>32D or 32C8D models | Not supported                                                                                                                                                                                          |                                 | 50G products (xcvrs, DACs and AOCs) are not supported for use through a QSA28 adapter. |
| <b>Aruba 10000 Switch Series</b>                       | 50G not supported                                                                                                                                                                                      |                                 | The 10000 does not have any ports that can support 50G speeds.                         |

#### SFP28 optical transceiver modules

SFP28 ports are 25G speed ports and similar in size to a 10G SFP+ or 1G SFP port. They have supporting circuitry to enable 25G speed transceiver, DAC, and AOC components.

Although 10G and 1G transceiver products may 'fit' into an SFP28 port, the particular switch model or module may be limited in supporting lower speeds.

See [Types of transceiver modules and network cables](#) for information regarding the type of connectors used by SFP28 port products.

25G as a standard does not specify any distance over MMF OM1 or OM2 fiber. There is no guarantee for distance. Always refer to the Datasheet or QuickSpecs for the switch product to see the current list of supported transceivers.



#### Models, specifications, and compatibility

SFP28 optical transceiver modules provide a transmission rate of 25 Gbps and use LC connectors. 25G BiDi transceivers always require paired sets: a -U must pair to a -D on the opposite end of the BiDi link, using a single fiber strand and a simplex LC connector.

**Specifications for SFP28 optical transceiver modules**

| <b>Product name (SKU)</b>                                               | <b>DOM-digital optical monitoring (4x4 part number)</b> | <b>Nominal wl (nm) &amp; encoding type</b> | <b>Fiber mode</b> | <b>Fiber diameter</b> | <b>Modal bandwidth (MHz*km)</b> | <b>Transmission distance</b> |
|-------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------|-------------------|-----------------------|---------------------------------|------------------------------|
| Aruba 25G SFP28 LC SR 100m MMF xcvr (JL484A)                            | Yes (partial)                                           | Single lane, 850 1x25G NRZ                 | MMF (duplex LC)   | 50/125                | 2000 (OM3)                      | 70m (229.66 ft)              |
| HPE ANW 25G SR SFP28 LC 100m MMF C-xcvr (S2P33A)                        |                                                         |                                            |                   |                       | 4700 (OM4)                      | 100m (328.08 ft)             |
| Aruba 25G SFP28 LC eSR 400m MMF xcvr (JL485A)                           | Yes (partial)                                           | Single lane, 850 1x25G NRZ                 | MMF (duplex LC)   | 50/125                | 2000 (OM3)                      | 200m (656.16 ft)             |
| HPE Aruba Networking 25G eSR SFP28 LC 400m MMF TAA Transceiver (S5U10A) |                                                         |                                            |                   |                       | 4700 (OM4)                      | 400m (1,312.34 ft)           |
| Aruba 25G SFP28 LC LR 10km SMF Transceiver (JL486A)                     | Yes (partial)                                           | Single lane, 1310 1x25G NRZ                | SMF (duplex LC)   | 9/125                 | N/A                             | 10 km (6.21 miles)           |
| HPE ANW 25G LR SFP28 LC 10km SMF C-xcvr (S2P34A)                        |                                                         |                                            |                   |                       |                                 |                              |
| HPE ANW 25G SFP LC LR 10km SMF TAA xcvr (S2N63A)                        |                                                         |                                            |                   |                       |                                 |                              |
| HPE ANW 25G BR10-D 1330/1270 xcvr (S1C96A)                              | Yes 1990-4868 1990-4864                                 | TX: 1330 RX: 1270 1x25G NRZ                | SMF (simplex LC)  | 9/125                 | N/A                             | 10 km (6.21 miles)           |
| HPE ANW 25G BR10-U 1270/1330 xcvr (S1C98A)                              | Yes 1990-4867 1990-4863                                 | TX: 1270 RX: 1330 1x25G NRZ                | SMF (simplex LC)  | 9/125                 | N/A                             | 10 km (6.21 miles)           |
| HPE ANW 25G ER 40 km SMF xcvr (SOV69A)                                  | Yes 1990-4856 1990-4858                                 | Single lane, 1550 1x25G NRZ                | SMF (duplex LC)   | 9/125                 | N/A                             | 40 km (24.86 miles)          |

| Product name (SKU)                                            | DOM-digital optical monitoring (4x4 part number) | Nominal wl (nm) & encoding type   | Fiber mode       | Fiber diameter | Modal bandwidth (MHz*km) | Transmission distance |
|---------------------------------------------------------------|--------------------------------------------------|-----------------------------------|------------------|----------------|--------------------------|-----------------------|
| Aruba 25G SFP28 LC BiDi 40km-D 1310/1270 Transceiver (S0V70A) | Yes<br>1990-4939<br>1990-4949                    | Tx: 1330<br>Rx: 1270<br>1x25G NRZ | SMF (simplex LC) | 9/125          | N/A                      | 40 km (24.85 miles)   |
| Aruba 25G SFP28 LC BiDi 40km-U 1270/1310 Transceiver (S0V71A) | Yes<br>1990-4940<br>1990-4950                    | Tx: 1270<br>Rx: 1330<br>1x25G NRZ | SMF (simplex LC) | 9/125          | N/A                      | 40 km (24.85 miles)   |



25G SR/eSR are not supported for use over MMF OM1/OM2 quality fiber.

The IEEE standard did not specify any requirements for use over these types of multimode fiber.

| Product name (SKU)                               | Connector             | Optical parameters (dBm) |               |                        |
|--------------------------------------------------|-----------------------|--------------------------|---------------|------------------------|
|                                                  |                       | Transmit power           | Receive power | Temp Ratings           |
| Aruba 25G SFP28 LC SR 100m MMF xcvr (JL484A)     | Duplex LC (PC or UPC) | -8.4 to +2.4             | -10.3 to +2.4 | Commercial (0 to 70°C) |
| HPE ANW 25G SR SFP28 LC 100m MMF C-xcvr (S2P33A) |                       |                          |               |                        |
| Aruba 25G SFP28 LC eSR 400m MMF xcvr (JL485A)    | Duplex LC (PC or UPC) | -8.4 to +2.4             | -10.3 to +2.4 | Commercial (0 to 70°C) |
| Aruba 25G SFP28 LC LR 10km SMF xcvr (JL486A)     | Duplex LC (PC or UPC) | -7.0 to +2.0             | -13.3 to +2.0 | Commercial (0 to 70°C) |
| HPE ANW 25G LR SFP28 LC 10km SMF C-xcvr (S2P34A) |                       |                          |               |                        |
| HPE ANW 25G SFP LC LR 10km SMF TAA xcvr (S2N63A) |                       |                          |               |                        |

| Product name (SKU)                                            | Connector              | Optical parameters (dBm) |                                                            |                           |
|---------------------------------------------------------------|------------------------|--------------------------|------------------------------------------------------------|---------------------------|
|                                                               |                        | Transmit power           | Receive power                                              | Temp Ratings              |
| HPE ANW 25G BR10-D 1330/1270 xcvr (S1C96A)                    | Simplex LC (PC or UPC) | -7.0 to +2.0             | -13.3 to +2.0                                              | Industrial (-40 to +85°C) |
| HPE ANW 25G BR10-U 1270/1330 xcvr (S1C98A)                    | Simplex LC (PC or UPC) | -7.0 to +2.0             | -13.3 to +2.0                                              | Industrial (-40 to +85°C) |
| Aruba 25G SFP28 LC BiDi 40km-D 1310/1270 Transceiver (S0V70A) | Simplex LC (PC or UPC) | -3 to 6                  | -13.3 to +2.0                                              | Industrial (-40 to +85°C) |
| Aruba 25G SFP28 LC BiDi 40km-U 1270/1310 Transceiver (S0V71A) | Simplex LC (PC or UPC) | -3 to 6                  | -13.3 to +2.0                                              | Industrial (-40 to +85°C) |
| HPE ANW 25G ER 40 km SMF xcvr (S0V69A)                        | Duplex LC (PC or UPC)  | -3.0 to +6.0             | -21.0 to -4.0 (use a 10dB attenuator for short SMF cables) | Industrial (-40 to +85°C) |

#### Compatibility for the SFP28 transceiver modules

| SFP28 (25G) capable product name | Switch SKU #s          | Minimum software required                                                                                                            | Comments                                                                                                             |
|----------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>5420 Switch Series</b>        | S0U63A<br>S0U73A (TAA) | JL484A (SR), JL485A (eSR), JL486A (LR), S2P33A, S2P34A (25G C-Class), S1C96A/S1C98A (10km BiDi), S0V69A (ER): 10.15.0001             |                                                                                                                      |
|                                  | S0U64A<br>S0U74A (TAA) | S0V70A, S0V71A (40km BiDi): 10.16.1006                                                                                               |                                                                                                                      |
|                                  | S0U68A<br>S0U78A (TAA) | S5U19A (eSR TAA): 10.16.1006                                                                                                         |                                                                                                                      |
|                                  |                        |                                                                                                                                      |                                                                                                                      |
| <b>Aruba 6300L Switch Series</b> | S3L75A, S3L76A, S3L77A | JL484A (SR), S2P33A (SR C-class), JL485A (eSR), JL486A (LR), S2P34A (LR C-class), S1C96A/S1C98A (10km BiDi), S0V69A (ER): 10.14.0001 | Supported in SFP56 and SFP28 ports:<br>S3L75A: ports 25-28<br>S3L76A: ports 49-52<br>S3L77A: ports 49-50 (not 51-52) |
|                                  |                        | S2N63A (LR TAA): 10.14.1000                                                                                                          |                                                                                                                      |
|                                  |                        | S0V70A, S0V71A (40km BiDi): 10.16.1006                                                                                               |                                                                                                                      |

| SFP28 (25G)<br>capable<br>product name | Switch SKU #s                                      | Minimum software<br>required                             | Comments                                                  |
|----------------------------------------|----------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------|
| <b>Aruba 6300<br/>Switch Series</b>    | All models M and F except<br>those mentioned below | S5U19A (eSR TAA): 10.16.1006                             |                                                           |
|                                        |                                                    | JL484A (SR),<br>JL485A (eSR),<br>JL486A (LR): 10.04.0001 |                                                           |
|                                        |                                                    | S0V69A(25G ER):<br>10.13.1000                            |                                                           |
|                                        |                                                    | S2P33A, S2P34A (25G C-<br>Class): 10.13.1010             |                                                           |
|                                        |                                                    | S1C96A, S1C98A (25G 10 km<br>BiDi):<br>10.13.1010        |                                                           |
|                                        |                                                    | S2N63A (25G LR TAA):<br>Not supported                    |                                                           |
|                                        |                                                    | S0V70A, S0V71A (40km BiDi):<br>10.16.1006                |                                                           |
|                                        |                                                    | S5U19A (eSR TAA): 10.16.1006                             |                                                           |
|                                        | JL762A (FB airflow model)                          | JL484A (SR),<br>JL485A (eSR),<br>JL486A (LR): 10.04.3000 |                                                           |
|                                        |                                                    | S0V69A(25G ER):<br>10.13.1000                            |                                                           |
|                                        |                                                    | S2P33A, S2P34A (25G C-<br>Class): 10.13.1010             |                                                           |
|                                        |                                                    | S1C96A/S1C98A (25G 10km<br>BiDi):<br>10.13.1010          |                                                           |
|                                        |                                                    | S2N63A (25G LR TAA):<br>Not supported                    |                                                           |
|                                        |                                                    | S0V70A, S0V71A (40km BiDi):<br>10.16.1006                |                                                           |
|                                        |                                                    | S5U19A (eSR TAA): 10.16.1006                             |                                                           |
|                                        | R8S89A                                             | JL484A (SR),<br>JL485A (eSR),<br>JL486A (LR): 10.10.0002 | S2N63A 25G LR TAA<br>only enabled on<br>R8S92A 6300 model |
|                                        | R8S90A                                             |                                                          |                                                           |
|                                        | R8S91A                                             | S0V69A(25G ER):<br>10.13.1000                            | R8S89A, R8S90A and<br>R8S92A require                      |

| SFP28 (25G)<br>capable<br>product name | Switch SKU #s                                                                                                                                                        | Minimum software<br>required                                                                                                                                                                                                                      | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        | R8S92A                                                                                                                                                               | <p>S2P33A, S2P34A (25G C-Class): 10.13.1010</p> <p>S1C96A/S1C98A (25G 10 km BiDi):<br/>10.13.1010</p> <p>S2N63A (25G LR TAA):<br/>10.13.1000<br/>See comments</p> <p>S0V70A, S0V71A (40km BiDi):<br/>10.16.1006</p>                               | <p><b>interface-group 2 speed 10</b> applicable to the last 2 ports to use 10G (the ports default to 25G use-case). This is different than other 6300 models that auto-detect the inserted transceiver.</p> <p>This may affect Zero-Touch-Provisioning (ZTP) due to a non-factory config. (ZTP is OK on these models if 25G optics are used, 25G is the default). R8S91A last 2 ports are 10G (LRM capable) and can use 10G optics without issue for ZTP (10G is the default for ports 51 &amp; 52).</p> |
|                                        | S4P41A, S4P42A, S4P43A, S4P44A                                                                                                                                       | JL486A (LR), S1C96A/S1C98A (25G 10 km BiDi), S0V69A (25G ER), S2P33A, S2P34A (25G C-Class), S2N63A (25G LR TAA), S0V70A, S0V71A (40km BiDi), S5U19A (eSR TAA): 10.16.1006                                                                         | <p>Supported ports</p> <p>S4P41A/S4P43A: 49-52</p> <p>S4P42A: 41-44 S4P44A: 25-28 Support extended to respective TAA SKUs</p>                                                                                                                                                                                                                                                                                                                                                                            |
|                                        | <p>6300M TAA Models:<br/>S0F99A, S0G00A, S0G01A, S0G02A (BF airflow), S0G03A, S0G04A, S0G05A, S0G06A</p> <p>6300F TAA Models:<br/>S0G95A, S0G96A, S0G97A, S0G98A</p> | <p>JL484A (SR),<br/>JL485A (eSR),<br/>JL486A (LR):<br/>10.13.000x</p> <p>S0V69A(25G ER):<br/>10.13.1000</p> <p>S2P33A, S2P34A (25G C-Class):<br/>10.13.1010</p> <p>S1C96A/S1C98A (25G 10 km BiDi):<br/>10.13.1000</p> <p>S2N63A (25G LR TAA):</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| SFP28 (25G)<br>capable<br>product name |                                                                      | Switch SKU #s                                                                                                                                                                                                                                                                                         | Minimum software<br>required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Comments |
|----------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|                                        |                                                                      |                                                                                                                                                                                                                                                                                                       | 10.13.1000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |
|                                        |                                                                      |                                                                                                                                                                                                                                                                                                       | S5U19A (eSR TAA): 10.16.1006                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |
|                                        | S0E91A, S0X44A (4x100G models)                                       | (Only through a QSA28)<br><br>JL484A (SR) JL485A (eSR)<br>JL486A (LR), S1C96A/S1C98A (25G 10 km BiDi), S0V69A (25G ER), S2P33A, S2P34A (25G C-Class):<br>10.13.1010<br><br>S2N63A (25G LR TAA):<br>Not supported<br><br>S0V70A, S0V71A (40km BiDi):<br>10.16.1006<br><br>S5U19A (eSR TAA): 10.16.1006 | QSFP28 ports can support these optical products through a QSA28                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |
| Aruba 6400 Modules                     | R0X39B(*EOS), R0X40B(*EOS), R0X41A(*EOS), R0X42A(*EOS), R0X43A(*EOS) | JL484A (SR)<br>JL485A (eSR)<br>JL486A (LR):<br>10.04.1000<br>Only supported in modules with SFP56 or SFP28 ports (not the SFP+ on R0X43A/R0X43C modules)<br><br>S1C96A/S1C98A (25G BiDi), S0V69A (25G ER):<br>10.13.1000<br>S2N63A (25G LR TAA):<br>10.16.1006<br><br>S5U19A (eSR TAA): 10.16.1006    | R0X39A/R0X40A (revision A) are no longer supported for use in the 6400 series.<br><br>R0X43A/R0X43C: 25G optics are not supported in 10G SFP+ ports.<br><br>R0X44A/R0X44C auto-detects the inserted type of transceiver. It does not require any interface groups like the 8325.<br><br>S0E48A 25G module defaults to use 25G products.<br><br>Interface groups must be enabled to change to 10G capability (DACs or Optics). When set, only 10G optics can be used in the selected port group.<br><br>S0E48A port groups are as follows: |          |

**SFP28 (25G)  
capable  
product name**

**Switch SKU #s**

**Minimum software  
required**

**Comments**

Group 1 = 1-8  
Group 2 = 9-16  
Group 3 = 17-24  
Group 4 = 25-32

| SFP28 (25G)<br>capable<br>product name | Switch SKU #s                                     | Minimum software<br>required                                                                                                                                                                                                                                                             | Comments |
|----------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|                                        | R0X44A (*EOS)                                     | JL484A (SR)<br>JL485A (eSR)<br>JL486A (LR):10.04.2000<br>S2P33A, S2P34A (25G C-<br>Class):<br>10.13.1010<br>Suported in all SFP28 ports<br><br>S1C96A/S1C98A (25G BiDi),<br>S0V69A (25G ER): 10.13.1000<br><br>S2N63A (25G LR TAA): not<br>supported<br><br>S5U19A (eSR TAA): 10.16.1006 |          |
|                                        | R0X39C, R0X40C, R0X41C,<br>R0X42C, R0X43C, R0X44C | JL484A (SR)<br>JL485A (eSR)<br>JL486A (LR):10.09.1000<br>S2P33A, S2P34A (25G C-<br>Class): 10.13.1010<br><br>S1C96A/S1C98A (25G BiDi),<br>S0V69A (25G ER): 10.13.1000<br><br>S2N63A (25G LR TAA): not<br>supported<br><br>S5U19A (eSR TAA): 10.16.1006                                   |          |
|                                        | S1T83A/S0E48A                                     | JL484A (SR)<br>JL485A (eSR)<br>JL486A (LR)<br>S1C96A/S1C98A, S0V69A:<br>10.13.1000<br>S2P33A, S2P34A (25G C-<br>Class): 10.13.1010<br><br>S2N63A (25G LR TAA): not<br>supported<br><br>S5U19A (eSR TAA): 10.16.1006                                                                      |          |
|                                        | All modules above:                                | JL484A (SR)<br>S2P33A (SR C-class) JL485A<br>(eSR)<br>JL486A (LR)<br>S2P34A (LR C-class)<br>S2P33A, S2P34A (25G C-<br>Class): 10.13.1010                                                                                                                                                 |          |
|                                        | R0X44A(*EOS), R0X44C                              | S2N63A (25G LR TAA): not<br>supported                                                                                                                                                                                                                                                    |          |

| SFP28 (25G)<br>capable<br>product name            | Switch SKU #s                                                                                                                                                                                                                                                                      | Minimum software<br>required                                                                                                                                                                                                                                                                          | Comments                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                   |                                                                                                                                                                                                                                                                                    | Through a QSA28 adapter:<br>JL484A (SR), JL485A (eSR),<br>JL486A (LR), S2P33A, S2P34A<br>(25G C-Class),<br>S1C96A/S1C98A (25G BiDi),<br>S0V69A (25G ER): 10.15.0005<br><br>S2N63A (25G LR TAA): not<br>supported<br><br>S0V70A/S0V71A (40km BiDi):<br>10.16.1006<br><br>S5U19A (eSR TAA): 10.16.1006  |                                                                                                                                                                                                                                                                                                                                          |
| <b>Aruba 8100<br/>Switch Series</b><br>All models | QSFP28 ports can support<br>these through a QSA28                                                                                                                                                                                                                                  | JL484A (SR), JL485A (eSR),<br>JL486A (LR): 10.12.000X<br><br>S1C96A/S1C98A(25G 10 km<br>BiDi), S0V69A(25G ER):<br>10.13.1000<br><br>S2P33A,S2P34A (25G C-Class):<br>10.13.1010<br><br>S0V70A/S0V71A (40km BiDi):<br>10.16.1006<br><br>S2N63A (LR TAA): 10.16.1006<br><br>S5U19A (eSR TAA): 10.16.1006 | 25G transceivers on the<br>8100 only in the<br>QSFP28 ports using a<br>QSA28 adapter.<br><br>25G BiDi when used<br>through a QSA28 will<br>display as<br>unsupported.<br><br>C-Class 25G supported<br>through QSA28 with<br>release 10.13.1010.<br><br>40km BiDi , eSR and LR<br>supported through a<br>QSA28 with release<br>10.16.1000 |
| Aruba 8325 32C<br>models                          | JL636A displayed by CLI <b>show<br/>system</b><br><ul style="list-style-type: none"> <li>JL626A - Port-to-Power<br/>model (FB)</li> <li>JL627A - Power-to-Port<br/>model (BF)</li> </ul>                                                                                           | JL484A (SR), JL485A (eSR),<br>JL486A (LR), S1C96A/S1C98A<br>(25G 10 km BiDi), S0V69A(25G<br>ER), S2P33A, S2P34A (25G C-<br>Class), S0V70A/S0V71A (40km<br>BiDi), S2N63A (LR TAA),<br>S5U19A (eSR TAA): 10.13.1000                                                                                     | 25G transceivers on the<br>8325 32C only in the<br>QSFP28 ports using a<br>QSA28 adapter.                                                                                                                                                                                                                                                |
| Aruba 8325<br>48Y8C models                        | JL635A displayed by CLI ( <b>show<br/>system</b> )<br><ul style="list-style-type: none"> <li>JL624A - Port-to-Power<br/>model (FB)</li> <li>JL625A - Power-to-Port<br/>model (BF)</li> </ul> QSFP28 ports can support<br>these optical products through<br>a <a href="#">QSA28</a> | JL484A (SR), JL485A (eSR),<br>JL486A (LR): 10.02.0001<br><br>S1C96A/S1C98A<br>(25G 10 km BiDi),<br>S0V69A(25G ER):<br>10.13.1000<br><br>S2P33A, S2P34A (25G C-<br>Class): 10.13.1010<br><br>S0V70A/S0V71A (40km BiDi):                                                                                | The 8325 requires<br>configuration of<br><b>interface groups</b><br>(groups of 12 ports) to<br>enable the use of 1G or<br>10G transceivers/DACs<br>in the SFP28 ports<br>(interface groups<br>default to 25G speed).<br><br>25G BiDi when used<br>through a QSA28 will<br>display as<br>unsupported.                                     |

| SFP28 (25G)<br>capable<br>product name | Switch SKU #s                                                                                                                                                                                                                                                                                                                                                                                                                                     | Minimum software<br>required                                                                                                                                                                                                                                                                       | Comments                                                                                                                                                                                                                                                                                                    |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10.16.1006<br><br>S5U19A (eSR TAA): 10.16.1006                                                                                                                                                                                                                                                     | C-Class 25G supported<br>through QSA28 with<br>release 10.13.1010<br><br>See the Hardware<br>Guides for details.                                                                                                                                                                                            |
| Aruba 8325P 32C<br>models              | S4A48A displayed by CLI ( <b>show<br/>system</b> )<br>S0G12A displayed by CLI ( <b>show<br/>system</b> ) for TAA bundles <ul style="list-style-type: none"> <li>▪ S4A49A/S0G07A(TAA) -<br/>8325P 32C FB 6Fs DC PSU<br/>Bdl</li> <li>▪ S4A50A/S0G08A(TAA) -<br/>8325P 32C BF 6Fs DC PSU<br/>Bdl</li> <li>▪ S4A51A/S0G09A(TAA) -<br/>8325P 32C FB 6Fs AC PSU<br/>Bdl</li> <li>▪ S4A52A/S0G10A(TAA) -<br/>8325P 32C BF 6Fs AC PSU<br/>Bdl</li> </ul> | Through the use of a QSA28<br>adapter:<br>JL484A (SR), JL485A (eSR),<br>JL486A (LR), S1C96A/S1C98A<br>(25G 10 km BiDi), S0V69A(25G<br>ER), S2P33A, S2P34A (25G C-<br>Class): 10.15.0005<br>S0V70A/S0V71A (40km BiDi):<br>10.16.1006<br>S5U19A (eSR TAA), S2N63A<br>(LR TAA): 10.16.1006            |                                                                                                                                                                                                                                                                                                             |
| Aruba 8325H                            | TAA/Non-TAA: <ul style="list-style-type: none"> <li>▪ S2T42A/S4B20A - 18Y4C<br/>model (FB)</li> <li>▪ S2T46A/S4B21A -18Y4C<br/>model (BF)</li> <li>▪ S2T47A/S4B22A -16C model<br/>(FB)</li> <li>▪ S2T48A/S4B23A -16C model<br/>(FB)</li> </ul>                                                                                                                                                                                                    | JL484A (SR), JL485A (eSR),<br>JL486A (LR), S1C96A/S1C98A<br>(25G 10 km BiDi), S0V69A<br>(25G ER), S2P33A, S2P34A<br>(25G C-Class): 10.15.1001<br><br>S5U19A (eSR TAA): 10.16.1006<br>S0V70A/S0V71A (40km BiDi),<br>S2N63A (LR TAA): 10.16.1006                                                     | The 16C models and<br>QSFP28 ports on the<br>18Y4C enable these<br>25G transceivers<br>through a QSA28<br>adapter.                                                                                                                                                                                          |
| Aruba 8360<br>32Y4C models             | JL717A/JL717C(v2) displayed by<br>CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>▪ JL700A/JL700C(v2) Port-to-<br/>Power model</li> <li>▪ JL701A/JL701C(v2) Power-to-<br/>Port model</li> </ul> <p>QSFP28 ports can support<br/>these optical<br/>products through a <a href="#">QSA28</a></p>                                                                                                                                  | Supported in all SFP28 ports<br>JL484A (SR), JL485A (eSR),<br>JL486A (LR): 10.09.0002<br><br>S1C96A/S1C98A (25G BiDi),<br>S0V69A (25G ER), S2N63A<br>(25G LR TAA): 10.13.1000<br><br>S2P33A, S2P34A (25G C-<br>Class): 10.13.1010<br><br>S0V70A/S0V71A (40km BiDi),<br>S2N63A (LR TAA): 10.16.1006 | The 8360 32Y4C model<br>requires configuration<br>of interface groups only<br>for ports 1-4 (as group<br>number 1) to enable<br>the use of 10G<br>transceivers / DACs in<br>the SFP28 ports<br>(interface groups<br>default to 25G speed).<br><br>Ports 1-4 on the 8360<br>32Y4C model do not<br>support 1G |

| SFP28 (25G)<br>capable<br>product name | Switch SKU #s                                                                                                                                                                                                                                                                    | Minimum software<br>required                                                                                                                                                                                                                                                                                    | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        |                                                                                                                                                                                                                                                                                  | S5U19A (eSR TAA): 10.16.1006                                                                                                                                                                                                                                                                                    | transceivers.<br><br>All other ports can individually auto-detect the speed of the inserted transceiver.<br><br>Not applicable to the 24XF (1G/10G ports) model - 25G BiDi enabled through a QSA28 in the QSFP28 ports.<br><br>10G LRR TAA only enabled on 8360/48Y6C (JL719C-JL704C/JL705C).<br><br>25G BiDi when used through a QSA28 will display as unsupported.<br><br>C-Class 25G supported through QSA28 with release 10.13.1010<br><br>See the Hardware Guides for details. |
| Aruba 8360<br>16Y2C models             | JL718A/JL718C(v2) displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>JL702A/JL702C(v2) Port-to-Power model</li> <li>JL703A/JL703C(v2) Power-to-Port model</li> </ul> QSFP28 ports can support these optical products through a <a href="#">QSA28</a> | Supported in all SFP28 ports JL484A (SR), JL485A (eSR), JL486A (LR): 10.06.0001<br><br>S5U19A (eSR TAA): 10.16.1006<br>S1C96A/S1C98A (25G BiDi), S0V69A (25G ER), S2N63A (25G LR TAA): 10.13.1000<br><br>S2P33A, S2P34A (25G C-Class): 10.13.1010<br><br>S0V70A/S0V71A (40km BiDi), S2N63A (LR TAA): 10.16.1006 | C-Class 25G supported through QSA28 with release 10.13.1010                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Aruba 8360<br>48Y6C models             | JL719C displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>JL704C(v2) Port-to-Power model (FB)</li> <li>JL705C(v2) Power-to-Port model (BF)</li> </ul>                                                                                                | Supported in all SFP28 ports JL484A (SR), JL485A (eSR), JL486A (LR): 10.09.0002<br><br>S1C96A/S1C98A (25G BiDi), S0V69A (25G ER), S2N63A (25G LR TAA): 10.13.1000                                                                                                                                               | MACsec available on ports 1-4 10G or 25G speeds<br><br>25G BiDi when used through a QSA28 will display as                                                                                                                                                                                                                                                                                                                                                                           |

| SFP28 (25G)<br>capable<br>product name | Switch SKU #s                                                                                                                                                                                                                                                                      | Minimum software<br>required                                                                                                                                                                                                                                                                                 | Comments                                                                                                                            |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|                                        | QSFP28 ports can support these optical products through a <a href="#">QSA28</a>                                                                                                                                                                                                    | S2P33A, S2P34A (25G C-Class): 10.13.1010<br><br>S0V70A/S0V71A (40km BiDi), S5U19A (eSR TAA), S2N63A (LR TAA): 10.16.1006                                                                                                                                                                                     | unsupported.<br><br>C-Class 25G supported through QSA28 with release 10.13.1010                                                     |
| Aruba 8360 48XT4C models               | JL720A/JL720C(v2) displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>■ JL706A/JL706C(v2) - Port-to-Power model (FB)</li> <li>■ JL707A/JL707C(v2) - Power-to-Port model (BF)</li> </ul>                                                                 | Supported only in ports 50-51 ports with a QSA28:<br>JL484A (SR), JL485A (eSR), JL486A (LR): 10.09.0002<br>S2P33A, S2P34A (25G CClass): 10.13.1010<br>S1C96A/S1C98A (25G BiDi), S0V69A (25G ER), S2N63A (25G LR TAA): 10.15.0005<br>S0V70A/S0V71A (40km BiDi), S5U19A (eSR TAA), S2N63A (LR TAA): 10.16.1006 | The 8360 48XT4C model only supports the use of a QSA28 in ports 50 and 51.<br>See <a href="#">QSFP28 to SFP28 adapter support</a> . |
| Aruba 8360 12C models                  | JL721A/JL721C(v2) displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>■ JL708A/JL708C(v2) - Port-to-Power model (FB)</li> <li>■ JL709A/JL709C(v2) - Power-to-Port model (BF)</li> </ul> QSFP28 ports can support these optical products through a QSA28 | Supported only in ports 7-12 ports<br>JL484A (SR), JL485A (eSR), JL486A (LR): 10.09.0002<br>S2P33A, S2P34A (25G CClass): 10.13.1010<br>S1C96A/S1C98A (25G BiDi), S0V69A (25G ER), S2N63A (25G LR TAA): 10.15.0005<br>S0V70A/S0V71A (40km BiDi): 10.16.1006<br>S5U19A (eSR TAA): 10.16.1006                   | The 8360 12C model only supports the use of a QSA28 in ports 7 through 12<br>See <a href="#">QSFP28 to SFP28 adapter support</a> .  |
| Aruba 8360 24XF2C models               | JL722A/JL722C(v2) displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>■ JL710A/JL710C(v2) - Port-to-Power model (FB)</li> <li>■ JL711A/JL711C(v2) - Power-to-Port model (BF)</li> </ul> QSFP28 ports can support these optical products through a QSA28 | Supported only in ports 25 ports<br>JL484A (SR), JL485A (eSR), JL486A (LR): 10.09.0002<br>S2P33A, S2P34A (25G CClass): 10.13.1010<br>S1C96A/S1C98A (25G BiDi), S0V69A (25G ER), S2N63A (25G LR TAA): 10.15.0005<br>S0V70A/S0V71A (40km BiDi): 10.16.1006<br>S5U19A (eSR TAA): 10.16.1006                     |                                                                                                                                     |

| SFP28 (25G)<br>capable<br>product name | Switch SKU #s                                                                                                                                                                                                                                                                                      | Minimum software<br>required                                                                                                                                                                                                                                                             | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aruba 8400X<br>Modules                 | JL687A                                                                                                                                                                                                                                                                                             | JL484A (SR), JL485A (eSR),<br>JL486A (LR): 10.04.2000<br><br>S1C96A/S1C98A, S0V69A,<br>S0V70A/S0V71A: Not<br>supported<br><br>S2P33A, S2P34A (25G C-<br>Class): 10.13.1010<br><br>S5U19A (eSR TAA): 10.16.1006                                                                           | JL687A 32p 25G module<br>requires configuration<br>of interface groups<br>(groups of four ports)<br>to enable use of 1G or<br>10G transceivers or<br>DACs in the SFP28 ports<br>(Interface Groups<br>default to 25G speed).<br><br>See the <i>Hardware<br/>Guides</i> for details.                                                                                                                                                                                                                                                     |
| 9300 Series                            | Not supported                                                                                                                                                                                                                                                                                      | Requires QSA28: JL484A (SR),<br>JL485A (eSR), JL486A (LR):<br>10.14.1000<br><br>S5U19A (eSR TAA): 10.16.1006<br><br>S1C96A/S1C98A (25G BiDi),<br>S0V69A (25G ER), S2N63A<br>(25G LR TAA), S2P33A, S2P34A<br>(25G C-Class): Not supported<br><br>S0V70A/S0V71A (40km BiDi):<br>10.16.1006 | QSA28 support on the<br>9300-32D model added<br>with release<br>10.14.1000.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Aruba 9300S<br/>Switch Series</b>   | -32C 8D models displayed by<br>CLI ( <b>show system</b> )<br>Base models: S0F95A-TAA Base,<br>S0F96A-Base <ul style="list-style-type: none"> <li>■ S0F81A FB TAA</li> <li>■ S0F82A FB</li> <li>■ S0F83A BF TAA</li> <li>■ S0F84A BF</li> <li>■ S0F87A BF DC TAA</li> <li>■ S0F88A BF DC</li> </ul> | Requires QSA28:<br>JL484A (SR), JL485A (eSR),<br>JL486A(LR), S0V69A (25G ER):<br>10.14.0001<br><br>S1C96A/S1C98A (25G 10 km<br>BiDi), S2P33A, S2P34A (25G C-<br>Class): Not supported<br><br>S0V70A/S0V71A (40km BiDi):<br>10.16.1006<br><br>S5U19A (eSR TAA): 10.16.1006                | Ports 1-8 and 33-48 can<br>not be split, but are<br>capable of using the<br>QSA28 adapter. QSA28<br>can be used in all ports<br>(1-40).<br><br>25G xcvs: The 9300S<br>uses split profiles with<br>the <b>system interface-<br/>profile split &lt;NAME&gt;</b><br>command.<br>Use <b>profile-2</b> to enable<br>25G downstream splits<br>(10 ports: 13,15-17, 19,<br>21, 23, 25-27) .<br>See the AOS-CX<br>Fundamentals Guide<br>for 9300 switches for<br>more information<br>about the <b>system<br/>interface-profile</b><br>command. |
| Aruba 10000<br>48Y6C models            | R8S96A displayed by CLI ( <b>show<br/>system</b> ) <ul style="list-style-type: none"> <li>■ R8P13A - 48Y6C FB bundle</li> </ul>                                                                                                                                                                    | JL484A(SR), JL485A(eSR):<br>10.10.0002<br>JL486A(LR):                                                                                                                                                                                                                                    | The 10000 series<br>requires configuration<br>of interface groups<br>(groups of 4 ports)                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| SFP28 (25G)<br>capable<br>product name | Switch SKU #s                                                                                                | Minimum software<br>required                                                                                                                                                                                                | Comments                                                                                                                                                      |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        | <ul style="list-style-type: none"> <li>R8P14A - 48Y6C BF bundle</li> </ul>                                   | 10.10.0002<br><br>S1C96A/S1C98A(25G 10 km BiDi), S0V69A(25G ER):<br>Not supported<br><br>S2P33A, S2P34A (25G C-Class):<br>Not supported<br><br>S0V70A/S0V71A (40km BiDi):<br>10.16.1006<br><br>S5U19A (eSR TAA): 10.16.1006 | to enable the use of 1G or 10G transceivers / DACs in the SFP28 ports (set speed back to 25G for default).<br><br>See the <i>Hardware Guides</i> for details. |
| <b>Aruba 10040 32C6D models</b>        | <ul style="list-style-type: none"> <li>S4R54A – 32C6D FB bundle</li> <li>S4R55A – 32C6D BF bundle</li> </ul> | JL484A(SR), JL485A(eSR), JL486A(LR), S1C96A/S1C98A (25G 10 km BiDi), S0V69A(25G ER), S2P33A, S2P34A (25G C-Class), S0V70A/S0V71A (40km BiDi), S5U19A (eSR TAA):<br>10.16.10xx                                               | Supported in even QSFP ports and all Q-DD ports using QSA28 adapter                                                                                           |

## 25G SFP28 Direct Attach over Copper (DAC) cables

Always refer to the Datasheet or QuickSpecs for the Switch product to see the current list of supported transceivers.



Direct Attach over Copper (DAC) cables have a minimum bend radius of typically 4x the diameter of the cable (approximately a 1" bend radius). Handle DAC cables carefully to ensure that you do not crimp or bend the cable beyond a 1" radius; otherwise, you risk damaging the cable.

## Models, specifications, and compatibility

### Specifications for SFP28 DACs

| Product name (SKU)                                | Cable length    | Data rate | Temperature Ratings |
|---------------------------------------------------|-----------------|-----------|---------------------|
| Aruba 25G SFP28 to SFP28 0.65m DAC Cable (JL487A) | 0.65m (2.13 ft) | 25 Gbps   |                     |

| Product name (SKU)                             | Cable length  | Data rate | Temperature Ratings    |
|------------------------------------------------|---------------|-----------|------------------------|
| Aruba 25G SFP28 to SFP28 3m DAC Cable (JL488A) | 3m (9.8ft)    |           | Commercial (0 to 70°C) |
| Aruba 25G SFP28 to SFP28 5m DAC Cable (JL489A) | 5m (16.40 ft) |           |                        |

The following DAC cables are offered by HPE Servers and Systems and ordered using the specified part number (these cables may not be available to order for Aruba-only partners). Refer to the [HPE Compute transceiver and cable hardware matrix product availability matrix](#) at hpe.com.

**Specifications for HPE SFP28 DACs (from HPE Server Products)**

| Product name (SKU)                           | Cable length  | Data rate |
|----------------------------------------------|---------------|-----------|
| *HPE 25Gb SFP28 to SFP28 3m DAC (844477-B21) | 3m (9.84 ft)  | 25 Gbps   |
| *HPE 25Gb SFP28 to SFP28 5m DAC (844480-B21) | 5m (16.40 ft) |           |

**Compatibility for the SFP28 DACs**

\* HPE Server product. May not be available to Aruba resellers

| SFP28 (25G)<br>DAC capable<br>product<br>name | Switch SKU #                                                        | Minimum<br>software<br>required                                                          | Comments                                                                                                                                                                                                                          |
|-----------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>5420 Switch Series</b>                     | S0U64A/S0U74A (TAA)                                                 | JL487A, JL488A, JL489A, *844477-B21 and *844480 B21: 10.15.0005                          |                                                                                                                                                                                                                                   |
| <b>Aruba 6300L Switch Series</b>              | S3L75A, S3L76A, S3L77A                                              | JL487A, JL488A, JL489A: 10.14.0001<br>*844477-B21,<br>*844480 B21: Not supported         | Supported in SFP56 & SFP28 ports:<br>S3L75A: ports 25-28<br>S3L76A: ports 49-52<br>S3L77A: ports 49-50 (not 51-52)                                                                                                                |
| <b>Aruba 6300 Switch Series</b>               | All models M/F and JL762A (BF airflow) except those mentioned below | JL487A, JL488A, JL489A: 10.04.0001<br>*844477-B21 and *844480 B21: 10.08.0001 (see note) | 844477-B21 and 844480-B21: only supported on uplink ports on these 6300 models: JL658A, JL663A, and JL762A.<br><br>Intermittent issues seen with HPE Servers NICs. See details in <a href="#">HPE Servers and Systems Support</a> |
|                                               | R8S89A, R8S90A, R8S91A, R8S92A                                      | JL487A, JL488A, JL489A: 10.10.0002<br>*844477-B21 and *844480 B21: 10.10.0002 (see note) | 6300 R8S89A, R8S90A, R8S91A, R8S92A models require <b>interface group &lt;speed&gt;</b> to enable different speed products.                                                                                                       |

| <b>SFP28 (25G)<br/>DAC capable<br/>product<br/>name</b> | <b>Switch SKU #</b>                                                                                    | <b>Minimum<br/>software<br/>required</b>                                                                                           | <b>Comments</b>                                                                                                                                                                                                           |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                         | 6300M TAA Models:<br>S0F99A, S0G00A, S0G01A, S0G02A<br>(BF airflow), S0G03A, S0G04A,<br>S0G05A, S0G06A | JL487A, JL488A,<br>JL489A:<br>10.14.0001<br>*844477-B21 and<br>*844480-B21:<br>10.14.0001<br>(see note)                            | *844477-B21 and *844480-B21:<br>only supported on uplink ports<br>on the following 6300 TAA<br>models:<br>S0G00A, S0G02A, S0G03A                                                                                          |
|                                                         | 6300F TAA Models:<br>S0G95A, S0G96A, S0G97A, S0G98A                                                    |                                                                                                                                    |                                                                                                                                                                                                                           |
|                                                         | S0E91A, S0X44A (100G models)                                                                           | 25G DACs not<br>supported                                                                                                          | DACs are not allowed through<br>QSA28 adapters.                                                                                                                                                                           |
|                                                         | S4P41A, S4P42A, S4P43A, S4P44A                                                                         | JL487A, JL488A,<br>JL489A, *844477-<br>B21, *844480-<br>B21: 10.16.1006                                                            | Supported ports<br>S4P41A/S4P43A: 49-52<br>S4P42A: 41-44<br>S4P44A: 25-28<br><br>Support extended to respective<br>TAA SKUs                                                                                               |
| <b>Aruba 6400<br/>modules with<br/>SFP56 ports</b>      | R0X39B(*EOS), R0X40B(*EOS),<br>R0X41A(*EOS), R0X42A(*EOS),<br>R0X43A(*EOS)                             | JL487A, JL488A,<br>JL489A:<br>10.04.1000<br>Only supported in<br>SFP56 ports<br>*844477-B21 and<br>*844480-B21:<br>10.08.0001      | R0X39A/R0X40A (revision A) are<br>no longer supported for use in<br>the 6400 series.<br><br>R0X44A/R0X44C auto-detects<br>the inserted type of transceiver;<br>it does NOT require any<br>interface groups like the 8325. |
|                                                         | R0X39C, R0X40C, R0X41C, R0X42C,<br>R0X43C                                                              | Only supported in<br>SFP56 ports:<br>JL487A, JL488A,<br>JL489A:<br>10.09.1000<br><br>*844477-B21 and<br>*844480-B21:<br>10.10.0001 | R0X43A/R0X43C: 25G DACs are<br>not supported in 10G SFP+<br>ports.<br><br>Intermittent issues seen with<br>HPE Servers NICs. See details in<br><a href="#">HPE Servers and Systems<br/>Support</a>                        |
|                                                         | R0X44A(*EOS)                                                                                           | JL487A, JL488A,<br>JL489A:<br>10.04.1000<br>Only supported in<br>SFP56 ports<br>*844477-B21 and<br>*844480-B21:<br>10.08.0001      |                                                                                                                                                                                                                           |
|                                                         | R0X44C                                                                                                 | JL487A, JL488A,<br>JL489A,<br>*844477-B21 and<br>*844480-<br>B21: 10.09.1000                                                       |                                                                                                                                                                                                                           |
|                                                         |                                                                                                        |                                                                                                                                    |                                                                                                                                                                                                                           |

| SFP28 (25G)<br>DAC capable<br>product<br>name | Switch SKU #                                                                                                                                                                                                                           | Minimum<br>software<br>required                                                                                    | Comments                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                               | S1T83A                                                                                                                                                                                                                                 | JL487A, JL488A,<br>JL489A,<br>*844477-B21 and<br>*844480-B21:<br>10.13.1000                                        |                                                                                                                                                                                                                                                                                                                                                                                              |
| Aruba 8325 32C<br>models                      | All models of the 8325 32C                                                                                                                                                                                                             |                                                                                                                    | 25G DACs are not enabled<br>through a QSA28 adapter. 25G<br>DACs not possible on the 8325<br>32C models.                                                                                                                                                                                                                                                                                     |
| Aruba 8325<br>48Y8C models                    | JL635A displayed by CLI ( <b>show<br/>system</b> ) <ul style="list-style-type: none"> <li>JL624A - Port-to-Power model<br/>(FB)</li> <li>JL625A - Power-to-Port model<br/>(BF)</li> </ul>                                              | JL487A, JL488A,<br>JL489A:<br>10.03.0030<br>*844477-B21 and<br>*844480-B21:<br>10.04.1000                          | The 8325 requires configuration<br>of interface groups (groups of<br>12 ports) to enable the use of<br>1G or 10G transceivers/DACs.<br><br>In the SFP28 ports interface<br>groups default to 25G speed).<br>See the Hardware Guides for<br>details.<br><br>844477-B21 and 844480-B21:<br>verified against HPE<br>interconnects listed in <a href="#">HPE<br/>Servers and Systems Support</a> |
| Aruba 8325P<br>32C models                     | All models of the 8325P 32C                                                                                                                                                                                                            |                                                                                                                    | 25G DACs are not enabled<br>through a QSA28 adapter. 25G<br>DACs not possible on the 8325P<br>32C models.                                                                                                                                                                                                                                                                                    |
| Aruba 8325H                                   | TAA/Non-TAA: <ul style="list-style-type: none"> <li>S2T42A/S4B20A - 18Y4C model<br/>(FB)</li> <li>S2T46A/S4B21A -18Y4C model<br/>(BF)</li> <li>S2T47A/S4B22A -16C model<br/>(FB)</li> <li>S2T48A/S4B23A -16C model<br/>(FB)</li> </ul> | Only enabled on<br>the 18Y4C models<br><br>JL487A, JL488A,<br>JL489A, *844477-<br>B21, *844480-<br>B21: 10.15.1001 | 25G DACs are not enabled<br>through a QSA28 adapter. 25G<br>DACs are not possible on the<br>QSFP28 ports of the 18Y4C or<br>16C models.                                                                                                                                                                                                                                                      |
| 8360 32Y4C<br>models                          | JL717A/JL717C(v2) displayed by CLI<br>( <b>show system</b> ) <ul style="list-style-type: none"> <li>JL700A/JL700C(v2) Port-to-<br/>Power model</li> <li>JL701A/JL701C(v2) Power-to-<br/>Port model</li> </ul>                          | JL487A, JL488A,<br>JL489A:<br>10.06.0001<br>*844477-B21 and<br>*844480-B21:<br>10.06.0001                          | The 8360 32Y4C model requires<br>configuration of interface group<br>only for ports 1-4 (as group<br>number one) to enable the use<br>of 10G transceivers/DACs in the<br>SFP28 ports (interface groups<br>default to 25G speeds).<br><br>Ports 1-4 on the 8360 32Y4C<br>model do not support 1G                                                                                              |

| SFP28 (25G)<br>DAC capable<br>product<br>name | Switch SKU #                                                                                                                                                                                     | Minimum<br>software<br>required                                                                                        | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                               |                                                                                                                                                                                                  |                                                                                                                        | transceivers. All other ports can individually auto-detect the speed of the inserted transceiver.<br><br>Not applicable to the 24XF (1G/10G) model.<br><br>See the Hardware Guides for details.<br>Intermittent issues seen with HPE Server NICs. See details in <a href="#">HPE Servers and Systems Support</a> .                                                                                                                                                                                                                                             |
| 8360 16Y2C models                             | JL718A/JL718C(v2) displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>JL702A/JL702C(v2) Port-to-Power model</li> <li>JL703A/JL703C(v2) Power-to-Port model</li> </ul> | JL487A, JL488A, JL489A:<br>10.06.0001<br>*844477-B21 and<br>*844480-B21:<br>10.06.0001                                 | Intermittent issues seen with HPE Server NICs. See details in <a href="#">HPE Servers and Systems Support</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 8360 48Y6C models                             | JL719C displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>JL704C(v2) Port-to-Power model (FB)</li> <li>JL705C(v2) Power-to-Port model (BF)</li> </ul>                | JL487A, JL488A, JL489A:<br>10.09.0002<br>Supported in all SFP28 ports<br>*844477-B21 and<br>*844480-B21:<br>10.09.0002 | MACsec available on ports 1-4 10G or 25G speeds.<br><br>The 8360 48Y6C model requires configuration of <b>interface groups</b> only for ports 1-4 (as group number 1) to enable the use of 10G transceivers/DACs in the SFP28 ports (Interface Groups default to 25G speed).<br><br>Ports 1-4 on the 8360 48Y6C model do not support 1G transceivers. All other ports can individually autodetect the speed of the insertedtransceiver.<br><br>Intermittent issues seen with HPE Server NICs. See details in <a href="#">HPE Servers and Systems Support</a> . |
| Aruba 8400X Modules                           | JL687A                                                                                                                                                                                           | JL487A: Not Supported<br>JL488A, JL489A:<br>10.04.2000<br>*844477-B21,<br>*844480-B21:<br>10.06.0001                   | JL487A 0.65m DAC not supported.<br><br>The JL687A module requires configuration of <b>interface groups</b> (groups of four ports) to enable the use of 1G or 10G transceivers/DACs in the SFP28ports (Interface Groups default to 25G speed).                                                                                                                                                                                                                                                                                                                  |

| SFP28 (25G)<br>DAC capable<br>product<br>name | Switch SKU #                                                                                                                                                    | Minimum<br>software<br>required                                 | Comments                                                                                                                                                                                                                                 |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                               |                                                                                                                                                                 |                                                                 | See the Hardware Guides for details.                                                                                                                                                                                                     |
| Aruba 9300<br>Switch Series                   | Not supported                                                                                                                                                   |                                                                 | SFP28 DACs and AOCs are not supported for use through a QSA28 adapter.                                                                                                                                                                   |
| Aruba 9300S<br>Switch Series                  | Not supported                                                                                                                                                   |                                                                 | 9300S supports the QSA28 adapter, but 25G DACs are not supported thru the QSA28                                                                                                                                                          |
| Aruba 10000<br>48Y6C models                   | R8S96A displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>■ R8P13A - 48Y6C FB bundle</li> <li>■ R8P14A - 48Y6C BF bundle</li> </ul> | JL487A, JL488A, JL489A, *844477-B21 and *844480-B21: 10.10.0002 | The 10000 series requires configuration of interface groups (groups of 4 ports) to enable the use of 1G or 10G transceivers/DACs in the SFP28 ports (set speed back to 25G for the default).<br><br>See the Hardware Guides for details. |

## 25G SFP28 AOC (Active Optical Cable)



## Models, specifications, and compatibility

### Specifications for SFP28 25G active optical cables

| Product name (SKU)                        | Cable length    | Data rate | Temperature Ratings    |
|-------------------------------------------|-----------------|-----------|------------------------|
| Aruba 25G SFP28 to SFP28 3m AOC (R0M44A)  | 3 m (9.84 ft)   | 25 Gbps   | Commercial (0 to 70°C) |
| Aruba 25G SFP28 to SFP28 7m AOC (R0M45A)  | 7 m (22.96 ft)  |           |                        |
| Aruba 25G SFP28 to SFP28 15m AOC (R0Z21A) | 15 m (49.21 ft) |           |                        |

The following Active Optical Cable (AOC) products are offered by HPE Servers and Systems and ordered using the specified part number (these cables may not be available to order for Aruba-only partners). Refer to the [HPE Compute transceiver and cable hardware matrix product availability matrix](#) at hpe.com.

### Specifications for HPE SFP28 split AOCs (from HPE server products)

\* HPE Server or Storage product. May not be available to Aruba resellers

| Product name (SKU)                                               | Cable length   | Data rate                     |
|------------------------------------------------------------------|----------------|-------------------------------|
| *HPE QSFP28 to 4x25G SFP28 7m AOC (845420-B21) 25G ends support  | 7 m (22.9 ft)  | 100G port split to 4x 25 Gbps |
| *HPE QSFP28 to 4x25G SFP28 15m AOC (845424-B21) 25G ends support | 15 m (49.2 ft) |                               |

### Specifications for HPE SFP28 AOCs (from HPE Storage Products)

\* HPE Server or Storage product. May not be available to Aruba resellers

| Product name (SKU)                                                                                                                                                                                     | Cable length                | Data rate |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------|
| *HPE 25GbE SFP28 to SFP28 3m Smart AOC(Q9S67A)<br>*HPE 25GbE SFP28 to SFP28 5m Smart AOC(Q9S68A)<br>*HPE 25GbE SFP28 to SFP28 10m Smart AOC(Q9S69A)<br>*HPE 25GbE SFP28 to SFP28 15m Smart AOC(Q9S70A) | See length in descriptions. | 25 Gbps   |

### Compatibility for the SFP28 25G active optical cables

\* HPE Server or Storage product. May not be available to Aruba resellers

| SFP28 (25G) AOC capable product name | Switch SKU #        | Minimum software required                                                     | Comments                            |
|--------------------------------------|---------------------|-------------------------------------------------------------------------------|-------------------------------------|
| <b>5420 Switch Series</b>            | S0U64A/S0U74A (TAA) | R0M44A, R0M45A, R0Z21A: 10.15.0005<br>*845420-B21, *845424-B21: Not supported |                                     |
| <b>Aruba 6300L</b>                   | S3L75A, S3L76A,     | R0M44A, R0M45A,                                                               | Supported in SFP56 and SFP28 ports: |

| SFP28 (25G)<br>AOC capable<br>product name | Switch SKU #                                                                                                                                                                     | Minimum software<br>required                                                                                                                          | Comments                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switch Series                              | S3L77A                                                                                                                                                                           | R0Z21A: 10.14.0001<br><br>*845420-B21, *845424-B21:<br>Not supported (both ends)<br>(HPE Server part)                                                 | S3L75A: ports 25-28<br>S3L76A: ports 49-52<br>S3L77A: ports 49-50 (not 51-52)                                                                                                                                                                                                                                                                                        |
| Aruba 6300<br>Switch Series                | Only supported in models listed below.                                                                                                                                           |                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                      |
|                                            | R8S89A, R8S90A, R8S91A, R8S92A<br><br>See comments for these 6300 models                                                                                                         | R0M44A, R0M45A, R0Z21A,<br>*845420-B21, *845424-B21:<br>10.13.0000                                                                                    | *845420-B21, *845424-B21:<br>25G ends only<br><br>6300 R8S89A, R8S90A, R8S91A, R8S92A models require the <b>interface group &lt;speed&gt;</b> command to enable different speed products.                                                                                                                                                                            |
|                                            | S0E91A, S0X44A (100G models)                                                                                                                                                     | R0M44A, R0M45A, R0Z21A: 10.13.100x<br>*845420-B21, *845424-B21:<br>Not supported                                                                      | S0E91 and S0X44A models:<br>Only supported through a QSA28 adapter                                                                                                                                                                                                                                                                                                   |
|                                            | S4P41A, S4P42A, S4P43A, S4P44A                                                                                                                                                   |                                                                                                                                                       | Supported ports:<br>S4P41A/S4P43A: 49-52<br>S4P42A: 41-44<br>S4P44A: 25-28<br>Support extended to respective TAA SKUs                                                                                                                                                                                                                                                |
| Aruba 8325 32C models                      | All models of the 8325 32C                                                                                                                                                       | 25G AOCs not supported                                                                                                                                | 25G AOCs are not enabled through a QSA28 adapter. 25G DACs not possible on the 8325 32C models.                                                                                                                                                                                                                                                                      |
| Aruba 8325 48Y8C models                    | JL635A displayed by CLI ( <b>show system</b> )<br><ul style="list-style-type: none"> <li>JL624A - Port-to-Power model (FB)</li> <li>JL625A - Power-to-Port model (BF)</li> </ul> | R0M44A, R0M45A, R0Z21A: 10.03.0040<br><br>*845420-B21 (7 m split), *845424-B21 (15 m split):<br>10.10.0002 (HPE Server part)<br><br>*Q9S67A, *Q9S68A, | The 8325 requires configuration of <b>interface groups</b> (groups of 12 ports) to enable the use of 1G or 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed). 845420-B21, 845424-B21 split ends are supported in 6300 select SKUs JL658A (uplink ports only), JL663A, JL762A for 10.08.0001<br>See the Hardware Guides for details. |

| SFP28 (25G)<br>AOC capable<br>product name | Switch SKU #                                                                                                                                                                                                                      | Minimum software<br>required                                                                                                                                                                                                  | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                            |                                                                                                                                                                                                                                   | *Q9S69A, *Q9S70A:<br>10.12.000x<br>(HPE Storage part)                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Aruba 8325P<br>32C models                  | All models of the<br>8325P 32C                                                                                                                                                                                                    | 25G AOCs not supported                                                                                                                                                                                                        | 25G DACs are not enabled through a<br>QSA28 adapter. 25G DACs not possible<br>on the 8325P 32C models.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Aruba 8325H                                | TAA/Non-TAA:<br><ul style="list-style-type: none"> <li>▪ S2T42A / S4B20A<br/>- 18Y4C model<br/>(FB)</li> <li>▪ S2T46A / S4B21A<br/>- 18Y4C model<br/>(BF)</li> </ul>                                                              | R0M44A, R0M45A,<br>R0Z21A: 10.15.1001<br><br>*845420-B21 (7 m split),<br>*845424-B21 (15 m split)<br>(HPE Server part):<br>10.15.1001<br><br>*Q9S67A, *Q9S68A,<br>*Q9S69A, *Q9S70A<br>(HPE Storage part):<br>10.15.1001       | 18Y4C models R0M44A, R0M45A,<br>R0Z21A: Only enabled on ports 1-18<br>(25G ports)<br><br>*845420-B21 (7 m split),<br>*845424-B21 (15 m split) (HPE Server<br>part):<br>SFP28 ends enabled on ports 1-18 (25G<br>ports)<br><br>QSFP28 is enabled on ports 19-22<br><br>*Q9S67A, *Q9S68A, *Q9S69A, *Q9S70A<br>(HPE Storage part): SFP28 ends enabled<br>on ports 1-18 (25G ports)                                                                                                                                                                                                                                                          |
|                                            | <ul style="list-style-type: none"> <li>▪ S2T47A / S4B22A<br/>- 16C model (FB)</li> <li>▪ S2T48A / S4B23A<br/>- 16C model (FB)</li> </ul>                                                                                          | *845420-B21 (7 m split),<br>*845424-B21 (15 m<br>split): 10.15.1001                                                                                                                                                           | *845420-B21 and *845424-B21 are only<br>supported on ports 1-15.<br><br>8325H 16C models cannot support split<br>mode on port 16.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 8360 32Y4C<br>models                       | JL717A/JL717C(v2)<br>displayed by CLI<br>( <b>show system</b> )<br><ul style="list-style-type: none"> <li>▪ JL700A/JL700C<br/>(v2) Port-to-<br/>Power model</li> <li>▪ JL701A/JL701C<br/>(v2) Power-to-<br/>Port model</li> </ul> | R0M44A, R0M45A,<br>R0Z21A: 10.06.0001<br><br>*845420-B21 (7 m split),<br>*845424-B21 (15 m<br>split):<br>10.10.0002<br>(HPE Server part)<br><br>*Q9S67A, *Q9S68A,<br>*Q9S69A, *Q9S70A: Not<br>supported (HPE Storage<br>part) | The 8360 32Y4C model requires<br>configuration of <b>interface groups</b> only<br>for ports 1-4 (as group number 1) to<br>enable the use of 10G transceivers /<br>DACs in the SFP28 ports (Interface<br>Groups default to 25G speed). Ports 1-4<br>on the 8360 32Y4C model do not<br>support 1G transceivers. All other ports<br>can individually auto-detect the speed of<br>the inserted transceiver. Not applicable<br>to the 24XF (1G/10G) model.<br>845420-B21, 845424-B21 split ends are<br>supported in 6300 select SKUs JL658A<br>(uplink ports only), JL663A, JL762A for<br>10.08.0001.<br>See the Hardware Guides for details. |
| 8360 16Y2C<br>models                       | JL718A/JL718C(v2)<br>displayed by CLI<br>( <b>show system</b> )<br><ul style="list-style-type: none"> <li>▪ JL702A/JL702C<br/>(v2) Port-to-<br/>Power model</li> </ul>                                                            | R0M44A, R0M45A,<br>R0Z21A: 10.06.0001<br>*845420-B21(7 m split),<br>*845424-B21(15 m split):<br><br>10.10.0002<br>(HPE Server part)                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| SFP28 (25G)<br>AOC capable<br>product name | Switch SKU #                                                                                                                                                                      | Minimum software<br>required                                                                                                                                                                  | Comments                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                            | <ul style="list-style-type: none"> <li>JL703A/JL703C (v2) Power-to-Port model</li> </ul>                                                                                          | *Q9S67A, *Q9S68A, *Q9S69A, *Q9S70A: Not supported (HPE Storage part)                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 8360 48Y6C models                          | JL719C displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>JL704C(v2) Port-to-Power model (FB)</li> <li>JL705C(v2) Power-to-Port model (BF)</li> </ul> | R0M44A, R0M45A, R0Z21A: 10.09.0002<br>*845420-B21 (7 m split), *845424-B21 (15 m split): 10.10.0002 (HPE Server part)<br>*Q9S67A, *Q9S68A, *Q9S69A, *Q9S70A: Not supported (HPE Storage part) | MACsec available on ports 1-4 10G or 25G speeds.<br>The 8360 48Y6C model requires configuration of <b>interface groups</b> only for ports 1-4 (as group number 1) to enable the use of 10G transceivers /DACs in the SFP28 ports (Interface Groups default to 25G speed). Ports 1-4 on the 8360 48Y6C model do not support 1G transceivers. All other ports can individually autodetect the speed of the inserted transceiver. |
| Aruba 8400X Modules                        | JL687A                                                                                                                                                                            | R0M44A, R0M45A, R0Z21A, *845420-B21 (7 m split), *845424-B21 (15 m split): 10.10.0002 (HPE Server part)<br>*Q9S67A, *Q9S68A, *Q9S69A, *Q9S70A: Not supported (HPE Storage part)               | The JL687A module requires configuration of <b>interface groups</b> (groups of four ports) to enable the use of 1G or 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed).<br>845420-B21, 845424-B21 supported in 6300 select SKUs JL658A (uplink ports only), JL663A, JL762A for 10.08.0001<br>See the Hardware Guides for details.                                                            |
| <b>Aruba 9300 Switch Series</b>            | Not supported                                                                                                                                                                     |                                                                                                                                                                                               | SFP28 DACs and AOCs are not supported for use through a QSA28 adapter.                                                                                                                                                                                                                                                                                                                                                         |
| <b>9300S Switch Series</b>                 | Not supported                                                                                                                                                                     |                                                                                                                                                                                               | 9300S supports the QSA28 adapter, but 25G AOCs are not supported through the QSA28.                                                                                                                                                                                                                                                                                                                                            |
| <b>Aruba 10000 48Y6C models</b>            | R8S96A displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>R8P13A - 48Y6C FB bundle</li> <li>R8P14A - 48Y6C BF bundle</li> </ul>                       | R0M44A, R0M45A, R0Z21A: 10.10.0002<br>*845420-B21(7m Split), *845424-B21(15m Split): 10.10.0002 (HPE Server part)<br>*Q9S67A, *Q9S68A, *Q9S69A, *Q9S70A: Not supported (HPE Storage part)     | The 10000 series requires configuration of interface groups (groups of 4 ports) to enable the use of 1G or 10G transceivers/DACs in the SFP28 ports (set speed back to 25G for the default).<br>See the Hardware Guides for details.                                                                                                                                                                                           |

### SFP+ optical transceiver modules

In December 2017, Aruba introduced Revision D versions of 100M, 1G, and 10G transceivers. Revision D products are structured to be specific alternate vendors as sources for the SKU#. Earlier Revision A, B, or C product may have alternate vendors that we no longer actively ship, but remain as fully supported in earlier and current products.

Some switch products will be specifying Revision D or Revision E (as is the case for the 8325 requiring J9151E or later) transceivers for full support, while other products may support earlier (older) revision transceivers – and some with specific 4x4 part numbers (see [Identification of 4x4 part numbers](#) for information).

Refer to the Datasheet or QuickSpecs for the switch product for the current list of supported transceivers.



- Although a 10G SFP+ transceiver module is the same physical dimensions of a 1G SFP transceiver, a 10G transceiver will NOT operate in a 1G-only SFP port.
- Many, although not all, 10G SFP+ ports have support to use a 1G SFP transceiver (or even a 100Mbps FX SFP transceiver).  
See the QuickSpec for the Switch product and verify if the 1G or 100Mbps SFP transceiver is supported in the 10G SFP+ port.

### Models, specifications, and compatibility

SFP+ optical transceiver modules provide a transmission rate of 10.31 Gbps and use LC connectors. 10G BiDi transceivers always require paired sets: a -U must pair to a -D on the opposite end of the BiDi link, using a single fiber strand and a simplex LC connector.

The specifications for Revision D and E transceiver products are the same as the specified Revision A, B, C SKUs. Where support for a Revision A, B, or C transceiver existed, Revision D or E parts are also supported. Not all earlier revisions can be re-used on newer products: Check the tables below and compare the 4x4 number of the part to the list of supported 4x4 numbers. See [Identification of 4x4 part numbers](#) for more information.

### Specifications for SFP+ optical transceiver modules

\*End of Sale (EOS) series listed for compatibility info only

| Product Name (SKU)                                    | DOM - digital optical monitoring (4x4 part #)               | Nominal wl (nm) & encoding type | Fiber mode      | Fiber diameter (µm) | Bandwidth (MHz*km)                           | Transmission distance                                                           |
|-------------------------------------------------------|-------------------------------------------------------------|---------------------------------|-----------------|---------------------|----------------------------------------------|---------------------------------------------------------------------------------|
| HPE X132 10G SFP+ LC SR xcvr (J9150A)*EOS             | Yes                                                         | Single lane, 850 1x10G NRZ      | MMF (duplex LC) | 50/125              | 4700 (OM4)<br>2000 (OM3)<br>500 (OM2)<br>400 | 400 m (1312.34 ft)<br>300 m (984.25 ft)<br>82 m (269.03 ft)<br>66 m (216.54 ft) |
| Aruba 10G SFP+ LC SR 300m MMF xcvr (J9150D)           | J9150A/J9150D: (1990-4391, 1990-4635, 1990-4634, 1990-4175) |                                 |                 |                     |                                              |                                                                                 |
| HPE ANW 10G SR SFP+ LC 400m OM4 C-class xcvr (S2P30A) | S2P30A: (1990-4918, 1990-4916)                              |                                 |                 |                     |                                              |                                                                                 |
| Aruba 10G I-Tmp SFP+ LC SR 300m MMF xcvr (JL782A)     | JL782A: (1990-4767, 1990-4770)                              |                                 |                 | 62.5/125            | 200 (OM1)<br>160                             | 33 m (108.27 ft)<br>26 m (85.30 ft)                                             |
| Aruba 10G SFP+ LC SR 300m MMF TAA xcvr (JL748A)       | JL748A: (1990-4175, 1990-4776)                              |                                 |                 |                     |                                              |                                                                                 |
| HPE X132 10G SFP+ LC LRM xcvr (J9152A)*EOS            | Yes (1990-4485 1990-4801)<br>See note below regarding MCP.  | Single lane, 1310 1x10G NRZ     | MMF (duplex LC) | 50/125              | 1500<br>500 (OM2)<br>400                     | 220m (721.78 ft)<br>220m (721.78 ft)<br>100m (328.08 ft)                        |
| Aruba 10G SFP+ LC LRM 220m MMF xcvr (J9152D)          |                                                             |                                 | SMF (duplex LC) | 9/125               | N/A                                          | 300m (987.25 ft)                                                                |
| HPE X132 10G SFP+ LC LR xcvr (J9151A)*EOS             | Yes<br>J9151A/J9151D: 1990-4657 1990-4694 1990-4727         | Single lane, 1310 1x10G NRZ     | SMF (duplex LC) | 9/125               | N/A                                          | 10km (6.21 miles)                                                               |
| Aruba 10G SFP+ LC LR 10km SMF xcvr                    | J9151E: (1990-4694,                                         |                                 |                 |                     |                                              |                                                                                 |

| Product Name (SKU)                                | DOM - digital optical monitoring (4x4 part #) | Nominal wl (nm) & encoding type | Fiber mode       | Fiber diameter (µm) | Bandwidth (MHz*km) | Transmission distance                                                                                            |
|---------------------------------------------------|-----------------------------------------------|---------------------------------|------------------|---------------------|--------------------|------------------------------------------------------------------------------------------------------------------|
| (J9151D*EOS and J9151E)                           | 1990-4727)                                    |                                 |                  |                     |                    |                                                                                                                  |
| HPE ANW 10G LR SFP+ LC 10km SMF C-xcvr (S2P31A)   | S2P31A: (1990-4919)                           |                                 |                  |                     |                    |                                                                                                                  |
| Aruba 10G SFP+ LC LR 10km SMF TAA xcvr (JL749A)   | JL749A: (1990-4751, 1990-4752)                |                                 |                  |                     |                    |                                                                                                                  |
| Aruba 10G I-Tmp SFP+ LC LR 10km SMF xcvr (JL783A) | JL783A: (1990-4768, 1990-4769)                |                                 |                  |                     |                    |                                                                                                                  |
| Aruba 10G LC BiDi 40km-D 1330/1270 xcvr (R9X54A)  | Yes (1990-4843)                               | TX:1330<br>RX:1270<br>1x10G NRZ | SMF (simplex LC) | 9/125               | N/A                | 40km (24.86 miles)                                                                                               |
| Aruba 10G LC BiDi 40km-U 1270/1330 xcvr (R9X55A)  | Yes (1990-4842)                               | TX:1270<br>RX:1330<br>1x10G NRZ | SMF (simplex LC) | 9/125               | N/A                | 40km (24.86 miles)                                                                                               |
| HPE X132 10G SFP+ LC ER xcvr (J9153A)*EOS         | Yes (1990-4365, 1990-4656)                    | Single lane, 1550<br>1x10G NRZ  | SMF (duplex LC)  | 9/125               | N/A                | 40km (24.86 miles) on engineered link (less than 11.1dBm loss over the entire link). 30km on standard SMF links. |
| Aruba 10G SFP+ LC ER 40km SMF xcvr (J9153D)       |                                               |                                 |                  |                     |                    |                                                                                                                  |
| HPE ANW 10G ER SFP+ LC 40km SMF C-xcvr (S2P32A)   |                                               |                                 |                  |                     |                    |                                                                                                                  |



MCP note: J9152D 10G LRM (long reach multimode) with 4x4 numbers 1990-4485 or 1990-4801 are tuned so that they do not require a Mode Conditioning Patch (MCP) cable. Older J9152A with 4x4 numbers other than 1990-4485 or 1990-4801 may require an MCP when you use OM1 or OM2 fiber cables. Never use mode conditioning patch cables for OM3 or OM4 fiber types. For more information about mode conditioning patch cables, see related sections in the IEEE 802.3 standard.



10G LRM transceivers require an Electronic Dispersion Compensation (EDC) behind the SFP+ port to support 10G LRM technology. Switches with note "(or any type of 10G LRM technology)" cannot support any type of 10G LRM transceiver (even under Unsupported Transceiver mode).

Aruba high-temperature industrial transceivers (I-Tmp) will work in Aruba switches other than the 4100i, but they may be listed as unsupported in **show interface brief** outputs.

#### **Optical specifications for SFP+ optical transceiver modules**

\*End of Sale (EOS) series listed for compatibility info only

| Product name (SKU)                                     | Connector              | Optical parameters (dBm) |                                                        |                          |
|--------------------------------------------------------|------------------------|--------------------------|--------------------------------------------------------|--------------------------|
|                                                        |                        | Transmit power           | Receive power                                          | Temperature Ratings      |
| HPE X132 10G SFP+ LC SR Transceiver (J9150A)*EOS       | Duplex LC (PC or UPC)  | -7.3 to -1               | -9.9 to +0.5                                           | Industrial (-40 to +85°) |
| Aruba 10G SFP+ LC SR 300m MMF xcvr (J9150D)            |                        |                          |                                                        |                          |
| HPE ANW 10G SR SFP+ LC 400m OM4 C-xcvr (S2P30A)        |                        |                          |                                                        |                          |
| Aruba 10G SFP+ LC SR 300m MMF TAA xcvr (JL748A)        |                        |                          |                                                        |                          |
| Aruba 10G I-Tmp SFP+ LC SR 300m MMF xcvr (JL782A)      |                        |                          |                                                        |                          |
| HPE X132 10G SFP+ LC LRM xcvr (J9152A)*EOS             | Duplex LC (PC or UPC)  | -6.5 to +0.5             | -6.5 to +1.5                                           | Commercial (0 to 70°C)   |
| Aruba 10G SFP+ LC LRM 220m MMF xcvr (J9152D)           |                        |                          |                                                        |                          |
| HPE X132 10G SFP+ LC LR xcvr (J9151A)*EOS              | Duplex LC (PC or UPC)  | -8.2 to +0.5             | -14.4 to +0.5                                          | Commercial (0 to 70°C)   |
| Aruba 10G SFP+ LC LR 10km SMF xcvr (J9151D*EOS/J9151E) |                        |                          |                                                        |                          |
| HPE ANW 10G LR SFP+ LC 10km SMF C-xcvr(S2P31A)         |                        |                          |                                                        |                          |
| Aruba 10G SFP+ LC LR 10km SMF TAA xcvr (JL749A)        |                        |                          |                                                        |                          |
| Aruba 10G I-Tmp SFP+ LC LR 10km SMF xcvr (JL783A)      |                        |                          |                                                        |                          |
| Aruba 10G LC BiDi 40km-D 1330/1270 xcvr (R9X54A)       | Simplex LC (PC or UPC) | 0 to +5                  | -19 to -7 (use a 12dB attenuator for short SMF cables) | Industrial (-40 to +85°) |
| Aruba 10G LC BiDi 40km-U 1270/1330 xcvr (R9X55A)       |                        |                          |                                                        |                          |

| Product name (SKU)                              | Connector             | Optical parameters (dBm) |                                                         |                        |
|-------------------------------------------------|-----------------------|--------------------------|---------------------------------------------------------|------------------------|
|                                                 |                       | Transmit power           | Receive power                                           | Temperature Ratings    |
| HPE X132 10G SFP+ LC ER xcvr (J9153A)*EOS       | Duplex LC (PC or UPC) | -4.7 to +4               | -15.8 to -1 (use a 5dB attenuator for short SMF cables) | Commercial (0 to 70°C) |
| Aruba 10G SFP+ LC ER 40km SMF xcvr (J9153D)     |                       |                          |                                                         |                        |
| HPE ANW 10G ER SFP+ LC 40km SMF C-xcvr (S2P32A) |                       |                          |                                                         |                        |

#### Compatibility for the SFP+ optical transceiver module

\*End of Sale (EOS) series listed for compatibility info only

| SFP+ (10G) capable product name    |                                                                        |                                                                                                                                                                                                                                                                |                                                                                                                                |  |
|------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--|
|                                    | Switch/Module SKU #'s                                                  | Minimum software required                                                                                                                                                                                                                                      | Comments                                                                                                                       |  |
| <b>2530 Switch Series*</b> (EOS)   | J9853A, J9854A, J9855A, J9856A                                         | J9150A/J9150D, J9151A/J9151D/J9151E, and J9153A/J9153D only: All releases                                                                                                                                                                                      | Unlisted models do not have SFP+ ports                                                                                         |  |
| <b>2540 Switch Series*</b> (EOS)   | JL354A, JL355A, JL356A, JL357A                                         | J9150A/J9150D and J9151A/J9151D, J9153A/J9153D only: All releases<br><br>J9152A/J9152D (LRM) is not supported in any 2540 model                                                                                                                                | J9152A/J9152D (or any type of 10G LRM technology) is not supported in any 2540 model even under UT-mode                        |  |
| <b>2910al Switch Series*</b> (EOS) | J9008A                                                                 | J9150A/J9150D and J9151A/J9151D only: All releases<br><br>J9153A/J9153D: W.15.07.0002                                                                                                                                                                          | Unlisted models do not have SFP+ ports                                                                                         |  |
| <b>2920 Switch Series*</b> (EOS)   | J9726A, J9727A, J9728A, J9729A, J9836A                                 | J9150A/J9150D and J9151A/J9151D, J9153A/J9153D only: All releases                                                                                                                                                                                              | For use in an installed J9731A Aruba 2920 2-port 10GbE SFP+ Module                                                             |  |
| <b>2930F Switch Series</b>         | JL253A, JL254A, JL255A, JL256A, JL258A, JL263A, JL264A, JL558A, JL559A | J9150A/J9150D and J9151A/J9151D/J9151E, J9153A/J9153D: All versions<br><br>JL748A/JL749A (TAA xcvs): 16.08.0021 and 16.10.0007<br><br>S2P30A, S2P31A, S2P32A(C-Class): 16.11.0018<br><br>J9152A/J9152D (or any type of 10G LRM technology) is not supported in | Unlisted models do not have SFP+ ports. J9152A/J9152D (or any type of 10G LRM technology) is not supported in any 2930F model. |  |

| SFP+ (10G)<br>capable<br>product<br>name | Switch/Module SKU<br>#'s                       | Minimum software required                                                                                                                                                                       | Comments                                                                                                                    |
|------------------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|                                          |                                                | any 2930F model                                                                                                                                                                                 |                                                                                                                             |
| <b>2930M Switch Series</b>               | JL319A, JL320A, JL321A, JL322A, JL323A, JL324A | J9150A/J9150D and J9151A/J9151D/J9151E, J9153A/J9153D: All versions<br><br>JL748A/JL749A (TAA xcvrs): 16.08.0021 and 16.10.0007<br><br>S2P30A, S2P31A, S2P32A(C-Class): 16.11.0018              | For use in an installed JL083A Aruba 3810M/2930M 4SFP+ MACsec Module                                                        |
|                                          | R0M67A, R0M68A                                 | J9150A/J9150D, J9151A/J9151D/J9151E, J9152A/J9152D, J9153A/J9153D: WC.16.05.xxxx<br><br>JL748A/JL749A (TAA xcvrs): 16.08.0021 and 16.10.0007<br><br>S2P30A, S2P31A, S2P32A(C-Class): 16.11.0018 |                                                                                                                             |
|                                          |                                                |                                                                                                                                                                                                 |                                                                                                                             |
|                                          |                                                |                                                                                                                                                                                                 |                                                                                                                             |
| <b>3500yl Switch Series*(EOS)</b>        | J8692A, J8693A, J9310A, J9311A                 | J9150A/J9150D, J9151A/J9151D/J9151E, J9152A/J9152D: K.14.50<br><br>J9153A/J9153D: K.15.02.0004                                                                                                  | For use in an installed J9312A 10GbE 2-port SFP+/2-port CX4 yl Module.                                                      |
| <b>3800 Switch Series*(EOS)</b>          | J9575A, J9576A, J9573A, J9574A, J9584A         | J9150A/J9150D and J9151A/J9151D/J9151E, J9153A/J9153D: All versions                                                                                                                             | Unlisted models do not have SFP+ ports.                                                                                     |
| <b>3810M Switch Series* (EOS)</b>        | JL071A, JL072A, JL073A, JL074A, JL075A, JL076A | J9150A/J9150D, J9151A/J9151D/J9151E, J9152A/J9152D, J9153A/J9153D: All versions<br><br>JL748A/JL749A (TAA xcvrs): 16.08.0021 and 16.10.0007<br><br>S2P30A, S2P31A, S2P32A(C-Class): 16.11.0018  | For use in an installed JL083A Aruba 3810M/2930M 4SFP+ MACsec Module                                                        |
| <b>4100i Switch Series</b>               | JL817A, JL818A                                 | Commercial Temp xcvrs<br><br>J9150D (SR), J9151D (LR) (): 10.08<br><br>J9153D (ER): 10.08.0001<br>No Aruba 10G ER industrial temp xcvr available                                                | Temp warnings will trigger at lower temperatures (~50C) if Commercial Temp vs Industrial Temp transceivers (~70C) are used. |

| SFP+ (10G)<br>capable<br>product<br>name | Switch/Module SKU<br>#'s | Minimum software required                                                                                                                                                                               | Comments                                                                                                                                                                                                           |
|------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          |                          | S2P30A, S2P31A, S2P32A(C-Class):<br>10.13.1000                                                                                                                                                          | Commercial temp transceivers listed are enabled by 10.08.0001 but will be marked as "unsupported" because of non-compliant temp rating.                                                                            |
|                                          |                          | J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series (even under UT-mode)                                                                                                  |                                                                                                                                                                                                                    |
|                                          |                          | Industrial Temp xcvs                                                                                                                                                                                    | All Third Party transceivers are treated as Commercial Temp, regardless of capability.                                                                                                                             |
|                                          |                          | JL782A (SR), JL783A (LR): 10.08.0001                                                                                                                                                                    |                                                                                                                                                                                                                    |
| <b>5400zl Switch Series*</b> (EOS)       | J9309A                   | J9150A/J9150D and<br>J9151A/J9151D/J9151E: K.14.39<br><br>J9153A/J9153D: K.15.02.0004                                                                                                                   | The J9309A 4-port SFP+ module supports only 10G transceivers.<br>10G ER (J9153A/D) transceivers are limited to a maximum of two transceivers per J9309A or J9538A modules when used in a 5400zl or 8200zl chassis. |
|                                          | J9538A, J9548A, J9536A   | J9150A/J9150D and<br>J9151A/J9151D/J9151E,<br>J9153A/J9153D: K.15.02.0004                                                                                                                               |                                                                                                                                                                                                                    |
| <b>5400R Switch Series</b>               | J9538A, J9548A, J9536A   | J9150A/J9150D,<br>J9151A/J9151D/J9151E,<br>J9152A/J9152D, J9153A/J9153D: All versions                                                                                                                   |                                                                                                                                                                                                                    |
|                                          |                          | JL748A/JL749A (TAA xcvs):<br>16.08.0021 and 16.10.0007                                                                                                                                                  |                                                                                                                                                                                                                    |
|                                          |                          | S2P30A, S2P31A, S2P32A(C-Class):<br>16.11.0018                                                                                                                                                          |                                                                                                                                                                                                                    |
|                                          |                          | R9X54A/R9X55A (40km BiDi): Not supported                                                                                                                                                                |                                                                                                                                                                                                                    |
|                                          | J9990A, J9993A           | J9150A/J9150D,<br>J9151A/J9151D/J9151E,<br>J9152A/J9152D, J9153A/J9153D:<br>KB.15.17<br><br>JL748A/JL749A (TAA xcvs):16.08.0021<br>and 16.10.0007<br><br>S2P30A, S2P31A, S2P32A(C-Class):<br>16.11.0018 |                                                                                                                                                                                                                    |

| SFP+ (10G)<br>capable<br>product<br>name | Switch/Module SKU<br>#'s                                                          | Minimum software required                                                                                                                                                                     | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          |                                                                                   | R9X54A/R9X55A (40km BiDi): Not supported                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>5420 Switch Series</b>                | S0U63A<br>S0U73A (TAA)<br><br>S0U64A<br>S0U74 (TAA)<br><br>S0U68A<br>S0U78A (TAA) | J9150D, J9151E, J9152D(LRM), S2P30A, S2P31A, S2P32A (C-Class), R9X54A/R9X55A (40km BiDi), JL748A (TAA), JL749A (TAA), J9153A/J9153D: 10.15.0001                                               | Older revisions may exhibit issues. Replace with latest 10G xcvrs.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>6100 Switch Series</b> *(EOS)         | All models                                                                        | J9150D, J9151E: 10.06.0001<br><br>JL748A/JL749A (TAA transceivers): 10.06.0130 /10.07.0010<br><br>S2P30A, S2P31A (C-Class): 10.13.1000<br><br>J9153D (ER) is not supported on the 6100 series | Only the listed 4x4 parts are fully supported<br>J9150A/J9150D<br><ul style="list-style-type: none"> <li>1990-4391</li> <li>1990-4175</li> <li>1990-4635</li> <li>1990-4634</li> </ul> J9151A/J9151D<br><ul style="list-style-type: none"> <li>1990-4657</li> <li>1990-4727</li> <li>1990-4694</li> </ul> J9151E<br><ul style="list-style-type: none"> <li>1990-4727</li> <li>1990-4694</li> </ul> J9152A/J9152D (or any type of 10G LRM technology) is not supported on the 6100 Series |
| <b>6120 Blade Switch Series</b> *(EOS)   | 516733-B21 (6120XG)                                                               | J9150D, J9151E: 10.06.0001<br><br>J9152D (LRM) and J9153D (ER) are not supported on the 6120 series                                                                                           | 498358-B21 (6120G/XG) has 1GB SFP and 10G XFP or CX4 ports and does not support these SFP+ transceivers.                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>6200yl Switch Series</b> *(EOS)       | J8992A                                                                            | J9150A/J9150D, J9151A/J9151D/J9151E, J9152A/J9152D: K.14.50<br><br>J9153A/J9153D: K.15.02.0004                                                                                                | J8992A fixed SFP ports are 1GB and do not support these SFP+ transceivers. For use in an installed J9312A 10GbE 2-port SFP+/2-port CX4 yl Module.                                                                                                                                                                                                                                                                                                                                        |
| <b>6200F Switch Series</b>               | 6200F models except 12p models R8Q72A/R8V13A (TAA)                                | J9151A/J9151D/J9151E, J9153A/J9153D: 10.04.1000<br><br>JL748A/JL749A (TAA xcvrs):                                                                                                             | Only the listed 4x4 parts are fully supported:<br><br>J9150A/J9150D<br><ul style="list-style-type: none"> <li>1990-4391</li> </ul>                                                                                                                                                                                                                                                                                                                                                       |

| SFP+ (10G)<br>capable<br>product<br>name | Switch/Module SKU<br>#'s                           | Minimum software required                                                                                                                                   | Comments                                                                                                             |
|------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
|                                          |                                                    | 10.06.0130/10.07.0010                                                                                                                                       | <ul style="list-style-type: none"> <li>1990-4175</li> <li>1990-4635</li> <li>1990-4634</li> </ul>                    |
|                                          |                                                    | S2P30A, S2P31A, S2P32A(C-Class):<br>10.13.1000                                                                                                              | JL748A (TAA SR)                                                                                                      |
|                                          |                                                    | R9X54A/R9X55A (40km BiDi): Not<br>supported                                                                                                                 | <ul style="list-style-type: none"> <li>1990-4175</li> <li>1990-4776</li> </ul>                                       |
|                                          |                                                    |                                                                                                                                                             | J9151A/J9151D                                                                                                        |
|                                          |                                                    |                                                                                                                                                             | <ul style="list-style-type: none"> <li>1990-4657</li> <li>1990-4727</li> <li>1990-4694</li> </ul>                    |
|                                          |                                                    |                                                                                                                                                             | J9151E                                                                                                               |
|                                          |                                                    |                                                                                                                                                             | <ul style="list-style-type: none"> <li>1990-4727</li> <li>1990-4694</li> </ul>                                       |
|                                          | 6200F 12p models<br>R8Q72A/R8V13A(TAA)             | J9150A/J9150D and<br>J9151A/J9151D/J9151E, JL748A/JL749A<br>(TAA xcvsrs), J9153A/J9153D:<br>10.11.1005                                                      | JL749A (TAA LR)                                                                                                      |
|                                          |                                                    |                                                                                                                                                             | <ul style="list-style-type: none"> <li>1990-4751</li> <li>1990-4752</li> </ul>                                       |
|                                          |                                                    |                                                                                                                                                             | J9152A/J9152D (or any type<br>of 10G LRM technology) is<br>not supported on the<br>6200F revision A and B<br>Series  |
| <b>6200F Switch<br/>Series (Rev B)</b>   | JL724B through JL728B,<br>S0M81A through<br>S0M90A | J9150A/J9150D and<br>J9151A/J9151D/J9151E, JL748A/JL749A<br>(TAA xcvsrs), R9X54A/R9X55A (40km<br>BiDi), J9153A/J9153D: 10.13.0001                           |                                                                                                                      |
|                                          |                                                    | S2P30A, S2P31A, S2P32A (C-Class):<br>10.13.1010                                                                                                             |                                                                                                                      |
| <b>6200M Switch<br/>Series</b>           | All 6200M models                                   | J9150A/J9150D and<br>J9151A/J9151D/J9151E, J9152D (LRM),<br>JL748A/JL749A (TAA xcvsrs),<br>J9153A/J9153D:<br>10.11.1005<br>(support for 10G LRM on uplinks) | 6200M models support<br>all of the above 10G<br>products in addition to:<br>J9152D 10G LRM                           |
|                                          |                                                    | R9X54A/R9X55A (40km BiDi):<br>10.12.1000                                                                                                                    | <ul style="list-style-type: none"> <li>1990-4485</li> <li>1990-4801</li> </ul>                                       |
|                                          |                                                    | S2P30A, S2P31A, S2P32A (C-Class):<br>10.13.1010                                                                                                             |                                                                                                                      |
| <b>6300 Switch<br/>Series</b>            | All models (M and F)<br>except JL762A              | J9150A/J9150D and<br>J9151A/J9151D/J9151E,<br>J9153A/J9153D: 10.04.1000                                                                                     | J9150A/J9150D                                                                                                        |
|                                          |                                                    | JL748A/JL749A (TAA xcvsrs):<br>10.06.0130 / 10.07.0005                                                                                                      | <ul style="list-style-type: none"> <li>1990-4391</li> <li>1990-4175</li> <li>1990-4635</li> <li>1990-4634</li> </ul> |

| SFP+ (10G)<br>capable<br>product<br>name | Switch/Module SKU<br>#'s             | Minimum software required                                                                                                                                              | Comments                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          |                                      | S2P30A, S2P31A, S2P32A (C-Class):<br>10.13.1000                                                                                                                        | JL748A (TAA SR)<br><ul style="list-style-type: none"> <li>1990-4175</li> <li>1990-4776</li> </ul>                                                                                                                                                                                                                                                 |
|                                          |                                      | R9X54A/R9X55A (40km BiDi):<br>Unsupported, works in UT-mode                                                                                                            | J9151A/J9151D<br><ul style="list-style-type: none"> <li>1990-4657</li> <li>1990-4727</li> <li>1990-4694</li> </ul>                                                                                                                                                                                                                                |
|                                          |                                      | JL762A                                                                                                                                                                 | J9151E<br><ul style="list-style-type: none"> <li>1990-4727</li> <li>1990-4694</li> </ul>                                                                                                                                                                                                                                                          |
|                                          |                                      | JL748A/JL749A (TAA xcvs):<br>10.06.0130 / 10.07.0005                                                                                                                   | J9153A/J9153D:<br><ul style="list-style-type: none"> <li>1990-4365</li> <li>1990-4656</li> </ul>                                                                                                                                                                                                                                                  |
|                                          |                                      | S2P30A, S2P31A, S2P32A (C-Class):<br>10.13.1000                                                                                                                        | JL749A (TAA LR)<br><ul style="list-style-type: none"> <li>1990-4751</li> <li>1990-4752</li> </ul>                                                                                                                                                                                                                                                 |
|                                          | 6300 Switch<br>Series<br>(continued) | R8S89A, R8S90A,<br>R8S91A, R8S92A                                                                                                                                      | J9152D (LRM)<br><ul style="list-style-type: none"> <li>1990-4485</li> <li>1990-4801</li> </ul>                                                                                                                                                                                                                                                    |
|                                          |                                      | S2P30A, S2P31A, S2P32A (C-Class):<br>10.13.1000                                                                                                                        | 6300M models (R8S91A<br>supports LRM in ports 51 &<br>52) and (R8S92A supports<br>LRM in ports 1-24) and only<br>J9152D (earlier J9152A are<br>not supported).                                                                                                                                                                                    |
|                                          |                                      | J9152D are only supported in select<br>ports on 6300M models R8S91A and<br>R8S92A. (Other models in this series<br>do NOT support LRM technology,<br>even in UT-mode). |                                                                                                                                                                                                                                                                                                                                                   |
|                                          |                                      | R9X54A/R9X55A (40km BiDi):<br>unsupported, works in UT-mode                                                                                                            | Other 6300M models not<br>noted above do not<br>support J9152A/J9152D (or<br>any type of 10G LRM<br>technology) even in UT-<br>mode.                                                                                                                                                                                                              |
|                                          |                                      |                                                                                                                                                                        | R8S89A, R8S90A and<br>R8S92A require <b>interface-<br/>group 2 speed 10</b><br>applicable to the last 2<br>ports to use 10G (the ports<br>default to 25G use-case).<br>This is different than other<br>6300 models that auto-<br>detect the inserted<br>transceiver.<br>This may affect Zero-<br>Touch-Provisioning (ZTP)<br>due to a non-factory |
|                                          |                                      |                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                   |
|                                          |                                      |                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                   |

**SFP+ (10G)  
capable  
product  
name**

**Switch/Module SKU  
#'s**

**Minimum software required**

**Comments**

|                                |                                                                                                                                                                            |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                     |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                |                                                                                                                                                                            |                                                                                                                                                                                                                                                        | config. ZTP is OK on these models if 25G optics are used. R8S91A last 2 ports are 10G (LRM capable) and can use 10G optics without issue for ZTP.                                                                                                   |
|                                | 6300M TAA Models:<br>S0F99A, S0G00A,<br>S0G01A, S0G02A (BF<br>airflow), S0G03A,<br>S0G04A, S0G05A,<br>S0G06A<br><br>6300F TAA Models:<br>S0G95A, S0G96A,<br>S0G97A, S0G98A | J9150A/J9150D, J9151A/J9151D,<br>J9153A/J9153D, J9151E, JL748A/JL749A<br>(TAA xcvs), S2P30A, S2P31A, S2P32A<br>(C-Class): 10.14.0001<br><br>J9152D (LRM):<br>Not supported in 6300 TAA models<br><br>No support for LRM technology, even<br>in UT-mode |                                                                                                                                                                                                                                                     |
|                                | S0E91A/S0X44A                                                                                                                                                              | J9150A/J9150D, J9151A/J9151D,<br>J9151E, J9153A/J9153D,<br>JL748A/JL749A (TAA xcvs), S2P30A,<br>S2P31A, S2P32A C-Class): 10.13.1000                                                                                                                    |                                                                                                                                                                                                                                                     |
|                                | S4P41A, S4P42A,<br>S4P43A, S4P44A                                                                                                                                          | J9150A/J9150D, J9151A/J9151D,<br>J9152D, J9153A/J9153D, J9151E,<br>JL748A/JL749A (TAA xcvs), S2P30A,<br>S2P31A, S2P32A (C-Class): 10.16.1006                                                                                                           | S4P41A/S4P43A: 49-52<br>S4P42A: 33-40 and 41-44<br>S4P44A: 25-28<br><br>Support is extended to<br>respective TAA SKUs.<br><br>J9152D (LRM) module is<br>only supported in ports 33-<br>40 of S4P42A/S4P46A<br>SKUs. Not supported on<br>other SKUs. |
| <b>6300L Switch<br/>Series</b> | S3L75A, S3L76A,<br>S3L77A                                                                                                                                                  | J9150A/J9150D and<br>J9151A/J9151D/J9151E, J9153D,<br>JL748A/JL749A (TAA xcvs), S2P30A,<br>S2P31A, S2P32A (C -Class): 10.14.0001<br><br>J9152D: 10.14.0001(only S3L77A<br>6300L model)<br><br>R9X54A/R9X55A (40km BiDi): Not<br>supported              | S3L75A: Ports 25-28<br>S3L76A: Ports 49-52<br>S3L77A: Ports 49-50 (not<br>51-52)<br><br>S3L77A: Ports 51-52 add<br>support for J9152D (10G<br>LRM)<br>■ 1990-4485<br>■ 1990-4801                                                                    |
| <b>6400 modules</b>            | R0X39B(*EOS), R0X40B<br>(*EOS), R0X41A(*EOS),<br>R0X42A(*EOS), R0X43A                                                                                                      | J9150A/J9150D and<br>J9151A/J9151D/J9151E, J9153D:<br>10.04.1000                                                                                                                                                                                       | R0X38A/R0X39A/R0X40A<br>(revision A) are no longer<br>supported for use in the                                                                                                                                                                      |

**SFP+ (10G)  
capable  
product  
name**

**Switch/Module SKU  
#'s**

**Minimum software required**

**Comments**

|  |                                        |                                                                                       |                                                                                                                          |
|--|----------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
|  | (*EOS)                                 | JL748A/JL749A (TAA xcvs): 10.06.0140 and 10.07.0005                                   | 6400 modules.                                                                                                            |
|  |                                        | S2P30A, S2P31A, S2P32A (C-Class): 10.13.1010                                          | J9150A/J9150D                                                                                                            |
|  |                                        | J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series.    | <ul style="list-style-type: none"> <li>1990-4391</li> <li>1990-4175</li> <li>1990-4635</li> <li>1990-4634</li> </ul>     |
|  |                                        |                                                                                       | JL748A                                                                                                                   |
|  | R0X39C, R0X40C, R0X41C, R0X42C, R0X43C | J9150A/J9150D and J9151A/J9151D/J9151E, J9153D: 10.09.1000                            | <ul style="list-style-type: none"> <li>1990-4175</li> <li>1990-4776</li> </ul>                                           |
|  |                                        | JL748A/JL749A (TAA xcvs):                                                             | J9151A/J9151D                                                                                                            |
|  |                                        | S2P30A, S2P31A, S2P32A (C-Class): 10.13.1010                                          | <ul style="list-style-type: none"> <li>1990-4657</li> <li>1990-4727</li> <li>1990-4694</li> </ul>                        |
|  |                                        |                                                                                       | J9151E                                                                                                                   |
|  | R0X44A (48p 25G v1)                    | J9150A/J9150D and J9151A/J9151D/J9151E, J9153A/J9153D: 10.04.2000                     | <ul style="list-style-type: none"> <li>1990-4727</li> <li>1990-4694</li> </ul>                                           |
|  |                                        | JL748A/JL749A (TAA xcvs): 10.06.0140 and 10.07.0005                                   | J9153A/J9153D                                                                                                            |
|  |                                        | J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series     | <ul style="list-style-type: none"> <li>1990-4365</li> <li>1990-4656</li> </ul>                                           |
|  |                                        | S2P30A, S2P31A, S2P32A (C-Class): 10.13.1010                                          | JL749A                                                                                                                   |
|  | R0X44C (48p 25G v2)                    | J9150A/J9150D and J9151A/J9151D/J9151E, J9153D, JL748A, JL749A (TAA xcvs): 10.09.1000 | <ul style="list-style-type: none"> <li>1990-4751</li> <li>1990-4752</li> </ul>                                           |
|  |                                        | S2P30A, S2P31A, S2P32A (C-Class): 10.13.1010                                          | J9152A/J9152D (or any type of 10G LRM technology) is not supported in any of the 6400 modules.                           |
|  |                                        | R9X54A/R9X55A (10G 40km BiDi): 10.11.0001                                             | R0X44A auto-detects the inserted type of transceiver; it does NOT require any interface groups like the 8325.            |
|  |                                        | J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series     | R9X54A/R9X55A (10G 40km BiDi) only supported for use on the R0X44C module, not in any other SFP56 port on other modules. |
|  | S1T83A                                 | J9150A/J9150D and J9151A/J9151D/J9151E, J9153D,                                       | Interface groups must be enabled to change to 10G                                                                        |

| <b>SFP+ (10G)<br/>capable<br/>product<br/>name</b> | <b>Switch/Module SKU<br/>#'s</b> | <b>Minimum software required</b>                                                                                                                                                                                                                                                                                                                                | <b>Comments</b>                                                                                                                                                                                                         |
|----------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                    | S0E48A (32p 25G 4p 100G)         | JL748A, JL749A (TAA xcvsrs): 10.13.1000<br><br>R9X54A/R9X55A (10G 40km BiDi): 10.13.1000<br><br>S2P30A, S2P31A, S2P32A (C-Class): 10.13.1010<br><br>J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series                                                                                                                           | or 1G capability (DACs or Optics). When set, only 10G optics can be used in the selected port group.<br><br>S0E48A port groups are as follows:<br>Group 1 = 1-8<br>Group 2 = 9-16<br>Group 3 = 17-24<br>Group 4 = 25-32 |
| <b>6600 Switch Series*</b>                         | J9264A, J9265A                   | J9150A and J9151A: K.14.03<br><br>J9153A: K.15.02.0004                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                         |
|                                                    | J9452A                           | J9150A and J9151A: K.14.24<br><br>J9153A: K.15.02.0004                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                         |
| <b>8100 Switch Series</b>                          | All models                       | J9150D, J9151E, (SR/LR) JL748A, JL749A (TAA xcvsrs): 10.12.000x<br><br>J9153E (ER): Not supported<br><br>S2P30A, S2P31A (C-Class): 10.13.1010<br><br>S2P32A (C-Class ER): Not supported<br><br>J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series<br><br>QSFP28 ports can support 10G SR and LR optical products through a QSA28 | J9152A/J9152D (or any type of 10G LRM technology) is not supported on this series (even under UT-mode)                                                                                                                  |
| <b>8200zl Switch Series*EOS</b>                    | J9309A                           | J9150A/ J9150D and J9151A/9151D: K.14.03<br><br>J9153A/J9153D: K.15.02.0004                                                                                                                                                                                                                                                                                     | The J9309A four port SFP+ module only supports 10G transceivers.                                                                                                                                                        |
|                                                    | J9538A, J9548A, J9536A           | J9150A/ J9150D, J9151A/9151D, J9153A/J9153D: K.15.02.0004                                                                                                                                                                                                                                                                                                       | 10G ER (J9153A/D) transceivers are limited to a maximum of two transceivers per J9309A or J9538A modules when used in a 5400zl or 8200zl chassis.                                                                       |
| <b>8320 Switch Series</b>                          | JL479A, JL579A, JL581A           | J9150A/J9150D and J9151A/J9151D/J9151E,                                                                                                                                                                                                                                                                                                                         | Only the listed 4x4 parts are fully supported.                                                                                                                                                                          |

| SFP+ (10G)<br>capable<br>product<br>name | Switch/Module SKU<br>#'s                                                                                                                                               | Minimum software required                                                                                                                                                                                                                                                                                                 | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          |                                                                                                                                                                        | J9153A/J9153D:<br>10.03.0001<br><br>JL748A/JL749A (TAA xcvs): 10.06.0140<br>and 10.07.0005<br><br>S2P30A, S2P31A, S2P32A(C-Class):<br>10.13.1010<br><br>J9152A/J9152D (or any type of 10G<br>LRM technology) is not supported in<br>this series<br><br>QSFP28 ports can support these<br>optical products through a QSA28 | J9150A/J9150D<br>■ 1990-4391<br>■ 1990-4175<br>■ 1990-4635<br>■ 1990-4634<br><br>JL748A<br>■ 1990-4175<br>■ 1990-4776<br><br>J9151A/J9151D<br>■ 1990-4657<br>■ 1990-4727<br>■ 1990-4694<br><br>J9151E<br>■ 1990-4727<br>■ 1990-4694<br><br>J9153A/J9153D<br>■ 1990-4365<br>■ 1990-4656<br><br>JL749A<br>■ 1990-4751<br>■ 1990-4752<br><br>J9152A/J9152D (or any type<br>of 10G LRM technology) is<br>not supported on the 8320<br>Series. |
| <b>8325 Switch<br/>Series</b>            | Aruba 8325 32C<br>models JL636A<br>displayed by CLI ( <b>show<br/>system</b> )<br>■ JL626A - Port-to-<br>Power model (FB)<br>■ JL627A - Power-to-<br>Port model (BF)   | J9150A/J9150D,<br>J9151A/J9151D/J9151E,<br>J9153A/J9153D: 10.07.0010<br><br>JL748A/JL749A (TAA xcvs): 10.07.0010<br><br>J9152A/J9152D (or any type of 10G<br>LRM technology) is not supported in<br>this series<br><br>S2P30A, S2P31A, S2P32A (C-Class):<br>10.07.0010                                                    | QSFP28 ports support<br>these optical products<br>through a QSA28 adapter.                                                                                                                                                                                                                                                                                                                                                                |
|                                          | Aruba 8325 48Y8C<br>models JL635A<br>displayed by CLI ( <b>show<br/>system</b> )<br>■ JL624A - Port-to-<br>Power model (FB)<br>■ JL625A - Power-to-<br>Port model (BF) | J9150A/J9150D,<br>J9151A/J9151D/J9151E,<br>J9153A/J9153D: 10.03.0030<br><br>JL748A/JL749A (TAA xcvs): 10.06.0140<br>and 10.07.0005<br><br>J9152A/J9152D (or any type of 10G<br>LRM technology) is not supported in<br>this series                                                                                         | QSFP28 ports support<br>these optical products<br>through a QSA28 adapter.<br><br>Only the listed 4x4 parts<br>are fully supported.<br>J9150A/J9150D<br>■ 1990-4391<br>■ 1990-4175                                                                                                                                                                                                                                                        |

| SFP+ (10G)<br>capable<br>product<br>name | Switch/Module SKU<br>#'s                                                                                                                             | Minimum software required                                                                    | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          |                                                                                                                                                      | S2P30A, S2P31A, S2P32A (C-Class):<br>10.13.1010                                              | <ul style="list-style-type: none"> <li>■ 1990-4635</li> <li>■ 1990-4634</li> </ul> JL748A 4x4: <ul style="list-style-type: none"> <li>■ 1990-4175</li> <li>■ 1990-4776</li> </ul> 8325 is only compatible with J9151E or later. Do not attempt to use J9151D or earlier (unless your 4x4 is one of the following):<br>J9151E <ul style="list-style-type: none"> <li>■ 1990-4727</li> <li>■ 1990-4694</li> </ul> J9153A/J9153D <ul style="list-style-type: none"> <li>■ 1990-4365</li> <li>■ 1990-4656</li> </ul> JL749A 4x4: <ul style="list-style-type: none"> <li>■ 1990-4751</li> <li>■ 1990-4752</li> </ul><br>J9152A/J9152D (or any type of 10G LRM technology) is not supported in the 8325 switches even under UT-mode.<br><br>The 8325 requires configuration of <b>interface groups</b> (groups of 12 ports) to enable the use of 1G or 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed).<br><br>See the <a href="#">Hardware Guides</a> for details. |
|                                          | Aruba 8325P models<br>32C models<br>S4A48A displayed by CLI ( <b>show system</b> )<br>S0G12A displayed by CLI ( <b>show system</b> ) for TAA bundles | J9150A/J9150D,<br>J9151A/J9151D/J9151E,<br>J9153A/J9153D: 10.03.0030                         | QSFP28 ports support these optical products through a QSA28 adapter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                          | ■ S4A49A/S0G07A                                                                                                                                      | JL748A/JL749A (TAA xcvs): 10.06.0140 and 10.07.0005<br><br>J9152A/J9152D (or any type of 10G | Products that are not listed are not supported.<br><br>Transceivers may be                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

**SFP+ (10G)  
capable  
product  
name**

**Switch/Module SKU  
#'s**

**Minimum software required**

**Comments**

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|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               | (TAA) - 8325P 32C<br>FB 6Fs DC PSU Bdl<br>■ S4A50A/S0G08A<br>(TAA) - 8325P 32C<br>BF 6Fs DC PSU Bdl<br>■ S4A51A/S0G09A<br>(TAA) - 8325P 32C<br>FB 6Fs AC PSU Bdl<br>■ S4A52A/S0G10A<br>(TAA) - 8325P 32C<br>BF 6Fs AC PSU Bdl                                                                                                              | LRM technology) is not supported in<br>this series<br><br>S2P30A, S2P31A, S2P32A (C-Class):<br>10.13.1010                                                                                                                                                                                                                                                                                                                             | enabled using UT-mode,<br>however a QSA28 must be<br>used.                                                                                                                                                                                                                                                                      |
|                               | Aruba 8325H models<br>TAA/Non-TAA:<br>■ S2T42A/S4B20A -<br>18Y4C model (FB)<br>■ S2T46A/S4B21A -<br>18Y4C model (BF)<br>■ S2T47A/S4B22A -<br>16C model (FB)<br>■ S2T48A/S4B23A -<br>16C model (FB)                                                                                                                                         | J9150A/J9150D,<br>J9151A/J9151D/J9151E,<br>J9153A/J9153D: 10.15.1001<br><br>JL748A/JL749A (TAA xcvs): 10.06.0140<br>and 10.15.1001<br><br>R9X54A, R9X55A (10G 40 km BiDi):<br>10.15.1001<br><br>J9152A/J9152D (or any type of 10G<br>LRM technology) is not supported in<br>this series<br><br>S2P30A, S2P31A, S2P32A (C-Class):<br>10.15.1001                                                                                        | QSFP28 ports support<br>these optical products<br>through a QSA28 adapter.                                                                                                                                                                                                                                                      |
| <b>8360 Switch<br/>Series</b> | 8360 32Y4C<br>models<br>JL717A/JL717C(v2)<br>displayed by CLI<br><b>(show system)</b><br>■ JL700A/JL700C(v2)<br>Port-to-Power<br>model<br>■ JL701A/JL701C(v2)<br>Power-to-Port<br>model<br>8360 16Y2C models<br>JL718A/JL718C(v2)<br>displayed by CLI <b>(show<br/>           system)</b><br>■ JL702A/JL702C(v2)<br>Port-to-Power<br>model | J9150A/J9150D,<br>J9151A/J9151D/J9151E,<br>J9153A/J9153D: 10.06.0001<br><br>JL748A/JL749A (TAA xcvs):<br>10.06.0140 and 10.07.0005<br><br>S2P30A, S2P31A, S2P32A (C-Class):<br>10.13.1010<br><br>R9X54A/R9X55A(40km BiDi):<br>10.15.1000 only supported through a<br>QSA28; if used in the 25G ports, CLI<br>will show as unsupported.<br><br>J9152A/J9152D (or any type of 10G<br>LRM technology) is not supported in<br>this series | QSFP28 ports support<br>these optical products<br>through a QSA28 adapter.<br><br>Only the listed 4x4 parts<br>are fully supported<br>J9150A/J9150D<br>■ 1990-4391<br>■ 1990-4175<br>■ 1990-4635<br>■ 1990-4634<br>JL748A<br>■ 1990-4175<br>■ 1990-4776<br>J9151A/J9151D<br>■ 1990-4657<br>■ 1990-4727<br>■ 1990-4694<br>J9151E |

**SFP+ (10G)  
capable  
product  
name**

**Switch/Module SKU  
#'s**

**Minimum software required**

**Comments**

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|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          | <ul style="list-style-type: none"> <li>■ JL703A/JL703C(v2)<br/>Power-to-Port<br/>model<br/>8360 24XF2C models<br/>JL722A displayed by<br/>CLI (<b>show system</b>)</li> <li>■ JL710A/JL710C(v2)<br/>Port-to-Power<br/>model</li> <li>■ JL711A/JL711C(v2)<br/>Power-to-Port<br/>model</li> </ul> |                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>■ 1990-4727</li> <li>■ 1990-4694</li> </ul> <p>J9153A/J9153D</p> <ul style="list-style-type: none"> <li>■ 1990-4365</li> <li>■ 1990-4656</li> </ul> <p>JL749A</p> <ul style="list-style-type: none"> <li>■ 1990-4751</li> <li>■ 1990-4752</li> </ul> <p>J9152A/J9152D (or any type of 10G LRM technology) is not supported on this series.</p> <p>The 8360 32Y4C model requires configuration of <b>interface groups</b> only for ports 1-4 (as group number 1) to enable the use of 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed).</p> <p>All other ports can individually auto-detect the speed of the inserted xcvr. Not applicable to the 24XF (1G/10G) model.</p> <p>See the <a href="#">Hardware Guides</a> for details.</p> |
|                          | <p>8360 48Y6C models<br/>JL719C displayed by<br/>CLI (<b>show system</b>)</p> <ul style="list-style-type: none"> <li>■ JL704C(v2) - Port-to-Power model (FB)</li> <li>■ JL705C(v2) - Power-to-Port model (BF)</li> </ul>                                                                        | <p>J9150A/J9150D,<br/>J9151A/J9151D/J9151E,<br/>J9153A/J9153D: 10.09.0002</p> <p>S2P30A, S2P31A, S2P32A (C-Class):<br/>10.13.1010</p> <p>R9X54A/R9X55A(40km BiDi):<br/>10.15.1000 only supported through a QSA28; if used in the 25G ports, CLI will show as unsupported.</p> <p>J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series.</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>8400X<br/>modules</b> | JL363A                                                                                                                                                                                                                                                                                          | J9150A/J9150D and<br>J9151A/J9151D/J9151E,<br>J9152A/J9152D, J9153A/J9153D:                                                                                                                                                                                                                                                                                             | Only the listed 4x4 parts are fully supported.<br>J9150A/J9150D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

| SFP+ (10G)<br>capable<br>product<br>name | Switch/Module SKU<br>#'s                                                                                                                         | Minimum software required                                                                                                                                                                                                                                                                                                  | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          |                                                                                                                                                  | 10.00.0001<br><br>10G LRM technology is supported<br>only on the JL363A module<br><br>JL748A/JL749A (TAA xcvrs):<br>10.06.0140 and 10.07.0005<br><br>JL748A/JL749A (TAA xcvrs): 10.07.0005<br><br>S2P30A, S2P31A, S2P32A (C-Class):<br>10.13.1010                                                                          | <ul style="list-style-type: none"> <li>■ 1990-4391</li> <li>■ 1990-4175</li> <li>■ 1990-4635</li> <li>■ 1990-4634</li> </ul> JL748A<br><ul style="list-style-type: none"> <li>■ 1990-4175</li> <li>■ 1990-4776</li> </ul> J9151E<br><ul style="list-style-type: none"> <li>■ 1990-4727</li> <li>■ 1990-4694</li> </ul> JL749A<br><ul style="list-style-type: none"> <li>■ 1990-4751</li> <li>■ 1990-4752</li> </ul> JL363A module supports<br>J9152A/J9152D<br><ul style="list-style-type: none"> <li>■ 1990-4485</li> <li>■ 1990-4801</li> </ul> |
|                                          | JL687A                                                                                                                                           | J9150A/J9150D and<br>J9151A/J9151D/J9151E,<br>J9153A/J9153D: 10.04.2000<br><br>JL748A/JL749A (TAA xcvrs): 10.06.0140<br>and 10.07.0005<br><br>S2P30A, S2P31A, S2P32A (C-Class):<br>10.13.1010<br><br>J9152A/J9152D (or any type of 10G<br>LRM technology) is not supported in<br>the JL687A module                         | JL687A module does NOT<br>support J9152A/J9152D (or<br>any type of 10G LRM<br>technology).<br>The JL687A module<br>requires configuration of<br><b>interface groups</b> (groups<br>of four ports) to enable the<br>use of 1G or 10G<br>transceivers / DACs in the<br>SFP28 ports (Interface<br>Groups default to 25G<br>speed).<br>See the <a href="#">Hardware Guides</a><br>for details.                                                                                                                                                        |
| <b>9300 Switch<br/>Series</b>            | R8Z96A displayed by<br>CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ R9A29A FB airflow</li> <li>■ R9A30A BF airflow</li> </ul> | For use through a QSA28 adapter:<br>J9150A/J9150D,<br>J9151A/J9151D/J9151E, J9153D:<br>10.14.1000<br><br>S2P30A, S2P31A, S2P32A (C-Class):<br>10.15.1000<br><br>R9X54A/R9X55A (BiDi), JL782A/JL783A<br>(TAA) : 10.16.1006<br><br>In ports 33-34: J9150A/J9150D,<br>J9151A/J9151D, J9153A/J9153D,<br>JL563B/JL563C (10GBT), | 10G DACs are not<br>supported for use through<br>a QSA28 adapter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| SFP+ (10G)<br>capable<br>product<br>name | Switch/Module SKU<br>#'s                                                                                                                                                                                                                                                            | Minimum software required                                                                                                                                                                                                                                                                                                                                                                                                 | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          |                                                                                                                                                                                                                                                                                     | R9X54A/R9X55A (BiDi), JL782A/JL783A (TAA), S2P30A, S2P31A, S2P32A (C-Class): 10.16.1006                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                          |                                                                                                                                                                                                                                                                                     | J9152A/J9152D (or any type of 10G LRM technology) is not supported in the 9300 32D                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>9300S Switch Series</b>               | -32C 8D models displayed by CLI (show system) Base models: S0F95A-TAA Base, S0F96A-Base <ul style="list-style-type: none"> <li>■ S0F81A FB TAA</li> <li>■ S0F82A FB</li> <li>■ S0F83A BF TAA</li> <li>■ S0F84A BF</li> <li>■ S0F87A BF DC TAA</li> <li>■ S0F88A BF DC</li> </ul>    | For use through a QSA28 adapter: J9150A/J9150D, J9151A/J9151D/J9151E, J9153D: 10.14.0001<br><br>S2P30A, S2P31A, S2P32A (C-Class): 10.15.1000<br><br>J9152A/J9152D (or any type of 10G LRM technology) is not supported in the 9300S                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 10000 48Y6C models                       | R8S96A displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>■ R8P13A - 48Y6C FB bundle</li> <li>■ R8P14A - 48Y6C BF bundle</li> </ul> <b>TAA models:</b><br>S4K80A displayed by CLI (show system)<br>S0F97A - 48Y6C FB bundle<br>S0F98A - 48Y6C BF bundle | All 10000 models: J9150D, J9153D, J9151E, JL748A (TAA): 10.10.0002<br><br>J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series<br><br>S2P30A, S2P31A, S2P32A (C-Class): Not supported<br><br>J9150D can also be used through a QSA28 adapter<br><br>Other 10G xcvs are not supported through a QSA28.<br><br>J9152A/J9152D (or any type of 10G LRM technology) is not supported in the 10000 | Only the listed 4x4 parts are fully supported J9150A/J9150D <ul style="list-style-type: none"> <li>■ 1990-4391</li> <li>■ 1990-4175</li> <li>■ 1990-4635</li> <li>■ 1990-4634</li> </ul> J9151D is not supported: J9151E: <ul style="list-style-type: none"> <li>■ 1990-4727</li> <li>■ 1990-4694</li> </ul> The 10000 series requires configuration of interface groups (groups of 4 ports) to enable the use of 1G or 10G transceivers/DACs in the SFP28 ports (set speed to 25G for the default). See the <a href="#">Hardware Guides</a> for details. |
| 10040 32C6D models                       | S4R58A displayed by CLI (show system) <ul style="list-style-type: none"> <li>■ S4R54A – 32C6D FB bundle</li> <li>■ S4R55A – 32C6D BF bundle</li> </ul> <b>TAA models:</b>                                                                                                           | J9150D(SR)/JL748A (TAA), J9151E (LR) /JL749A (TAA), J9153D (ER), S2P30A, S2P31A, S2P32A (C-Class): 10.16.10xx<br><br>J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series.                                                                                                                                                                                                                   | The products listed are supported through a QSA28.<br><br>They are also supported for use in the low-speed ports, 39-40.                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**SFP+ (10G)  
capable  
product  
name**

**Switch/Module SKU  
#'s**

**Minimum software required**

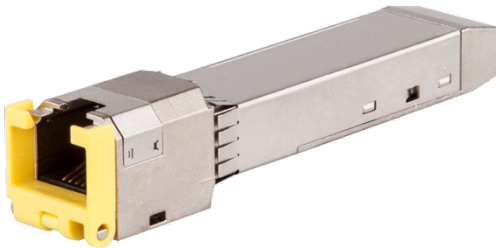
**Comments**

- S4R59A displayed by  
CLI (show system)
- S4R56A – 32C6D FB  
bundle
  - S4R57A – 32C6D BF  
bundle



\*J9152D 10G LRM with part numbers 1990-4485 and 1990-4801 are tuned so that it does not require the use of a mode conditioning patch (MCP) cable. Using an MCP with a J9152D will reduce the light levels and may trigger an "Rx power low" alarm. Older J9152A with part numbers other than 1990-4485 or 1990-4801 may require an MCP when you use OM1 or OM2 fiber cables. Never use mode-conditioning patch cables for OM3 or OM4 fiber types. For more information about mode conditioning patch cables, see related parts in the IEEE 802.3 standard.

## SFP+ copper transceiver modules



## Models, specifications, and compatibility



The 10GBASE-T Transceiver (JL563A(EOS)/JL563B(EOS)/JL563C) are not supported for use through a QSA28 adapter (see [QSFP28 to SFP28 adapter support](#))



JL563A(EOS)/JL563B(EOS)/JL563C only operates at 10G speed (does not auto-negotiate to 1G).

### Specifications for SFP+ copper transceiver modules

| Product name (SKU)                                               | Transmission distance | Data rate | Cable type  | Connector type | Temperature Ratings    |
|------------------------------------------------------------------|-----------------------|-----------|-------------|----------------|------------------------|
| Aruba 10GBASE-T SFP+ RJ45 30m Cat6A xcvr JL563A(EOS)/JL563B(EOS) | 30 m (98.43 ft)       | 10G       | STP Cat6A** | RJ-45          | Extended (0 to +85 °C) |
| HPE ANW 10GBASE-T SFP+ RJ45 30m XCVR (JL563C)                    |                       |           |             |                |                        |

\*\*See [Transmission distance](#)

### Compatibility for SFP+ copper transceiver modules

| SFP+ (10G)<br>copper<br>capable<br>product<br>name | SKU                                                                                                       | Minimum software<br>required                                                                 | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 4100i<br/>Switch Series</b>               | JL817A, JL818A                                                                                            | Not supported                                                                                | Not supported                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>5420 Switch<br/>Series</b>                      | S0U63A<br>S0U73A (TAA)<br><br>S0U64A<br>S0U74A (TAA)<br><br>S0U68A<br>S0U78A (TAA)                        | JL563A(EOS)/JL563B<br>(EOS)/JL563C: 10.15.0001                                               | JL563A(EOS)/JL563B(EOS)/JL563C<br>does not support flow control and<br>only operates at 10G speed (does<br>not auto-negotiate to 1G).                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Aruba 6100<br/>Switch Series</b>                | All models                                                                                                | Not supported                                                                                | Not supported                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Aruba 6200<br/>Switch Series</b>                | All models M and F                                                                                        | JL563A(EOS)/JL563B<br>(EOS)/JL563C: 10.04.1000                                               | JL563A(EOS)/JL563B(EOS)/JL563C<br>does not support flow control and<br>only operates at 10G speed (does<br>not auto-negotiate to 1G)                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Aruba 6300<br/>Switch Series</b>                | All models M and F                                                                                        | JL563A(EOS)/JL563B<br>(EOS)/JL563C: 10.04.0001                                               | JL563A(EOS)/JL563B(EOS)/JL563C can<br>be used in all SFP+ or SFP56 ports;<br>no quantity limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                    | R8S89A, R8S90A, R8S91A,<br>R8S92A                                                                         | JL563A(EOS)/JL563B<br>(EOS)/JL563C: 10.10.0002                                               | JL563A(EOS)/JL563B(EOS)/JL563C<br>does not support flow control and<br>only operates at 10G speed (does<br>not auto-negotiate to 1G).                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                    | 6300M TAA Models:<br>S0F99A, S0G00A, S0G01A,<br>S0G02A (BF airflow),<br>S0G03A, S0G04A, S0G05A,<br>S0G06A | JL563A(EOS)/JL563B<br>(EOS)/JL563C: 10.14.1000                                               | R8S89A, R8S90A, and R8S92A require<br><b>interface-group 2 speed 10</b><br>applicable to the last 2 ports to use<br>10G (the ports default to 25G use-<br>case). This is different than other<br>6300 models that auto-detect the<br>inserted transceiver. This may affect<br>Zero-Touch-Provisioning (ZTP) due to<br>a non-factory config. (ZTP is OK on<br>these models if 25G optics are used,<br>25G is the default). R8S91A last 2<br>ports are 10G (LRM capable) and can<br>use 10G optics without issue for ZTP<br>(10G is the default for ports 51 & 52). |
|                                                    | 6300F TAA Models:<br>S0G95A, S0G96A, S0G97A,<br>S0G98A                                                    |                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                    | S0E91A/S0X44A (100G<br>models)                                                                            | JL563A(EOS)/JL563B<br>(EOS)/JL563C is not<br>supported for use<br>through a QSA28<br>adapter |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                    | S4P41A, S4P42A, S4P43A,<br>S4P44A                                                                         | JL563A(EOS)/JL563B<br>(EOS)/JL563C:<br>10.16.1006                                            | S4P41A/S4P43A: 49-52<br>S4P42A: 33-40 & 41-44<br>S4P44A: 25-28<br>Support is extended to respective                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| SFP+ (10G)<br>copper<br>capable<br>product<br>name | SKU                                                                                                                              | Minimum software<br>required                                                                         | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                    |                                                                                                                                  |                                                                                                      | TAA SKUs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Aruba 6300L<br/>Switch Series</b>               | S3L75A, S3L76A, S3L77A                                                                                                           | JL563A(EOS)/JL563B<br>(EOS)/JL563C: 10.14.0001                                                       | <p>S3L75A, S3L76A require the <b>interface-group 2 speed 10</b> command applicable to the last 2 ports to use 10G (the ports default to 25G usecase). This is different than other 6300 models that auto-detect the inserted transceiver. This may affect Zero-Touch-Provisioning (ZTP) due to a non-factory config. (ZTP is OK on these models if 25G optics are used, 25G is the default).</p> <p>S3L77A last 2 ports are 10G (LRM capable) and can use 10G optics without issue for ZTP (10G is the default for ports 51 &amp; 52).</p> |
| <b>Aruba 6400<br/>Modules</b>                      | R0X39B(*EOS), R0X40B<br>(*EOS), R0X41A(*EOS),<br>R0X42A(*EOS), R0X43A<br>(*EOS)<br><br>R0X39C, R0X40C, R0X41C,<br>R0X42C, R0X43C | JL563A(EOS)/JL563B<br>(EOS)/JL563C: 10.04.1000<br><br>JL563A(EOS)/JL563B<br>(EOS)/JL563C: 10.09.1000 | <p>R0X39A/R0X40A (revision A) are no longer supported for use in the 6400 series JL563A(EOS)/JL563B (EOS)/JL563C can be used in all SFP+, SFP28, or SFP56 ports; no quantity limit.</p> <p>JL563A(EOS)/JL563B(EOS)/JL563C does not support flow control and only operates at 10G speed (does not auto-negotiate to 1G).</p>                                                                                                                                                                                                                |
|                                                    | R0X44A                                                                                                                           | JL563A(EOS)/JL563B<br>(EOS)/JL563C: 10.04.2000                                                       | R0X44A auto-detects the inserted type of transceiver; it does not require any interface groups.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                    | R0X44C                                                                                                                           | JL563A(EOS)/JL563B<br>(EOS)/JL563C: 10.09.1000                                                       | R0X44C requires interface groups to select speed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                    | S1T83A/S0E48A                                                                                                                    | JL563A(EOS)/JL563B<br>(EOS)/JL563C: 10.13.1000                                                       | <p>S0E48A 25G module defaults to use 25G products.</p> <p>Interface groups must be enabled to change to 10G or 1G capability (DACs or Optics). When set, only 10G optics can be used in the selected port group.</p> <p>S0E48A port groups are as follows:<br/> Group 1 = 1-8<br/> Group 2 = 9-16<br/> Group 3 = 17-24<br/> Group 4 = 25-32</p>                                                                                                                                                                                            |

**SFP+ (10G)  
copper  
capable  
product  
name**

**SKU**

**Minimum software  
required**

**Comments**

|                                                     |                                                                                                                                                                                   |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>8100 Switch Series</b>                           | All models                                                                                                                                                                        | JL563A(EOS)/JL563B(EOS)/JL563C: 10.12.000x                                                                                        | JL563A(EOS)/JL563B(EOS)/JL563C is not supported for use through a QSA28 adapter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ models | JL479A                                                                                                                                                                            | JL563A(EOS)/JL563B(EOS)/JL563C: 10.01.0011                                                                                        | <p>JL563A(EOS)/JL563B(EOS)/JL563C does not support flow control and only operates at 10G speed (does not auto-negotiate to 1G).</p> <p>It is only supported in ports 1–12. Use in any other port generates an incompatible interface error (meaning the port does not support the use of this transceiver); move to a supported port. A maximum of 12 JL563A(EOS)/JL563B(EOS)/JL563C transceivers can be used in a switch.</p> <p>JL563A(EOS)/JL563B(EOS)/JL563C is not supported for use through a QSA28 adapter.</p>                                                                                                                                                                                                                                                                                                                        |
| Aruba 8325 32C models                               | All models                                                                                                                                                                        | JL563A, JL563B, JL563C: Not supported                                                                                             | 10GBASE-T transeivers are not supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Aruba 8325 48Y8C models                             | JL635A displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>■ JL624A - Port-to-Power model (FB)</li> <li>■ JL625A - Power-to-Port model (BF)</li> </ul> | JL563A(EOS)/JL563B(EOS)/JL563C: 10.03.0030<br><br>JL563A(EOS)/JL563B(EOS)/JL563C is not supported for use through a QSA28 adapter | <p>JL563A(EOS)/JL563B(EOS)/JL563C does not support flow control and only operates at 10G speed (does not auto-negotiate to 1G).</p> <p>A maximum of 12 JL563A(EOS)/JL563B(EOS)/JL563C transceivers can be used in a switch. It is only supported in the top two rows, ports 1 - 17. It is disallowed in ports 3, 6, 9, 12, and 15. Use in any other port generates an incompatible interface error (meaning the port does not support the use of this transceiver); move the transceiver to a supported port.</p> <p>The 8325 requires configuration of interface groups (groups of 12 ports) to enable the use of 1G or 10G transceivers/DACs in the SFP28 ports (Interface groups default to 25G speed). Open ports can use other optics (1G/10G or 25G depending on the Interface group setting). See the Hardware Guides for details.</p> |
| <b>8325P Switch Series</b>                          | All models                                                                                                                                                                        | JL563A, JL563B, JL563C: Not supported                                                                                             | 10GBASE-T transeivers are not supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| SFP+ (10G)<br>copper<br>capable<br>product<br>name | SKU                                                                                                                                                                                                                                          | Minimum software<br>required                                                                                       | Comments                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>8325H Switch Series</b>                         | TAA/Non-TAA:<br><ul style="list-style-type: none"> <li>■ S2T42A/S4B20A - 18Y4C model (FB)</li> <li>■ S2T46A/S4B21A - 18Y4C model (BF)</li> <li>■ S2T47A/S4B22A - 16C model (FB)</li> <li>■ S2T48A/S4B23A - 16C model (FB)</li> </ul>         | JL563A(EOS)/JL563B (EOS)/JL563C: 10.06.0001<br><br>18Y4C models: Ports 1-18 & 23-24<br><br>16C models: Ports 23-24 | The 8325H 18p models do not require interface groups; all 18 ports are auto-sensing for 1G, 10G, 25G products (optics, DACs and AOCs)<br><br>JL563A(EOS)/JL563B(EOS)/JL563C does not support flow control and only operates at 10G speed (does not auto-negotiate to 1G).                                                                                                                    |
|                                                    |                                                                                                                                                                                                                                              |                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Aruba 8360 Switch Series</b>                    | 8360 32Y4C models<br>JL717A/JL717C (v2)<br>displayed by CLI ( <b>show system</b> )<br><ul style="list-style-type: none"> <li>■ JL700A/JL700C (v2)<br/>Port-to-Power model</li> <li>■ JL701A/JL701C (v2)<br/>Power-to-Port model</li> </ul>   | JL563A(EOS)/JL563B (EOS)/JL563C: 10.06.0001                                                                        | JL563A(EOS)/JL563B(EOS)/JL563C does not support flow control and only operates at 10G speed (does not auto-negotiate to 1G).<br>JL563A(EOS)/JL563B(EOS)/JL563C transceivers can be used in all SFP28 ports in the 8360 switch (unlike the 8320 & 8325).                                                                                                                                      |
|                                                    | 8360 16Y2C models<br>JL718A/JL718C (v2)<br>displayed by CLI ( <b>show system</b> )<br><ul style="list-style-type: none"> <li>■ JL702A/JL702C (v2)<br/>Port-to-Power model</li> <li>■ JL703A/JL703C(v2) 3A<br/>Power-to-Port model</li> </ul> | JL563A(EOS)/JL563B (EOS)/JL563C: 10.06.0001                                                                        | The 8360 32Y4C and 48Y6C models require configuration of "interface groups" only for ports 1-4 (as group #1) to enable the use of 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed).<br><br>All other ports can individually auto-detect the speed of the inserted xcvr. Not applicable to the 24XF (1G/10G) model.<br>See the Hardware Guides for details. |
|                                                    | 8360 24XF2C models<br>JL722A/JL722C(v2)<br>displayed by CLI ( <b>show system</b> )<br><ul style="list-style-type: none"> <li>■ JL710A/JL710C(v2)<br/>Port-to-Power model</li> <li>■ JL711A/JL711Power-to-Port model</li> </ul>               | JL563A(EOS)/JL563B (EOS)/JL563C: 10.06.0001                                                                        | In QSFP+ ports JL563A(EOS)/JL563B (EOS)/JL563C is not supported for use through a QSA28 adapter.                                                                                                                                                                                                                                                                                             |
|                                                    | 8360 48Y6C models<br>JL719C displayed by CLI ( <b>show system</b> )<br><ul style="list-style-type: none"> <li>■ JL704C(v2) Port-to-Power model (FB)</li> <li>■ JL705C(v2) Power-to-Port model (BF)</li> </ul>                                | JL563A(EOS)/JL563B (EOS)/JL563C: 10.09.0002                                                                        |                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                    |                                                                                                                                                                                                                                              |                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Aruba 8400X</b>                                 | JL363A                                                                                                                                                                                                                                       | JL563A(EOS)/JL563B                                                                                                 | JL563A(EOS)/JL563B(EOS)/JL563C                                                                                                                                                                                                                                                                                                                                                               |

| SFP+ (10G)<br>copper<br>capable<br>product<br>name | SKU                                                                                                                                                                                                                                                                                      | Minimum software<br>required                                                                              | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>modules</b>                                     | JL687A                                                                                                                                                                                                                                                                                   | (EOS)/JL563C: 10.00.0018<br><br>JL563A(EOS)/JL563B<br>(EOS)/JL563C: 10.04.2000                            | <p>does not support 1G operation; only 10G. It is only supported in ports 1 - 12.</p> <p>A maximum of 12 JL563A (EOS)/JL563B(EOS)/JL563C transceivers can be used in the JL563A module.</p> <p>The JL687A 32p 25G module can support the use of the JL563A (EOS)/JL563B(EOS)/JL563C transceiver in all 32 ports.</p> <p>The JL687A module requires configuration of <b>interface groups</b> (groups of 4 ports) to enable the use of 1G or 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed).</p> <p>See the Hardware Guides for details.</p> |
| <b>Aruba 9300/9300S Switch Series</b>              | Not supported                                                                                                                                                                                                                                                                            |                                                                                                           | JL563A(EOS)/JL563B(EOS)/JL563C and DACs are not supported for use through a QSA28 adapter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Aruba 10000 48Y6C models</b>                    | R8S96A displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>■ R8P13A - 48Y6C FB bundle</li> <li>■ R8P14A - 48Y6C BF bundle</li> </ul>                                                                                                                          | All 10000 models: JL563A is locked out of being used in this series<br><br>JL563B(EOC)/JL563C: 10.10.0002 | <p>The JL563A (10GBase-T, A-Revision) transceiver is locked out of use in this series (even with UT-mode). JL563B(EOS)/JL563C is supported in all SFP ports.</p> <p>The 10000 Switch Series requires configuration of <b>interface groups</b> (groups of 4 ports) to enable the use of 1G or 10G transceivers/DACs in the SFP28 ports.</p> <p>(Interface Groups default to 25G.)</p>                                                                                                                                                                                           |
| <b>10040 32C6D models</b>                          | S4R58A displayed by CLI (show system) <ul style="list-style-type: none"> <li>■ S4R54A – 32C6D FB bundle</li> <li>■ S4R55A – 32C6D BF bundle</li> </ul> <b>TAA models:</b><br>S4R59A displayed by CLI (show system) <ul style="list-style-type: none"> <li>■ S4R56A – 32C6D FB</li> </ul> | JL563B (*EOS)/JL563C<br>10.16.10xx                                                                        | <p>JL563B/C are NOT supported for use through a QSA28.</p> <p>They are only supported for use in the low-speed ports, 39-40</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**SFP+ (10G)  
copper  
capable  
product  
name**

**SKU**

**Minimum software  
required**

**Comments**

bundle

- S4R57A – 32C6D BF

bundle

## SFP+ DAC cables



Direct Attach over Copper (DAC) cables have a minimum bend radius of typically 4x the diameter of the cable (approximately a 1" bend radius). Handle DAC cables carefully to ensure that you do not crimp or bend the cable beyond a 1" radius; otherwise, you risk damaging the cable.

Aruba and other HPE DAC cables are passive devices. If your deployment calls for Active DACs, these are not compatible. If an Active DAC is required, an alternative is to use a 10G SR transceiver at both ends with the appropriate fiber cable between them.

Where support for a Revision A, B, or C transceiver existed, Revision D or E parts are also supported. Not all earlier revisions can be re-used on newer product: Check the tables below and compare the 4x4 number of the part to the list of supported 4x4 numbers. See [Identification of 4x4 part numbers](#) for more information.

## Models, specifications, and compatibility

The specifications for Revision D transceiver products are the same as the specified Revision A, B, and C SKUs.

### Specifications for SFP+ DACs

\*Indicates product that is End of Sale.

| Product name (SKU)                                                                               | Cable length   | Data rate |
|--------------------------------------------------------------------------------------------------|----------------|-----------|
| HPE X242 10G SFP+ to SFP+ 1m DAC Cable (J9281B)*<br>Aruba 10G SFP+ to SFP+ 1m DAC Cable (J9281D) | 1 m (3.28 ft)  | 10 Gbps   |
| HPE X242 10G SFP+ to SFP+ 3m DAC Cable (J9283B)*<br>Aruba 10G SFP+ to SFP+ 3m DAC Cable (J9283D) | 3 m (9.84 ft)  |           |
| HPE X242 10G SFP+ to SFP+ 7m DAC Cable (J9285B)*<br>Aruba 10G SFP+ to SFP+ 7m DAC Cable (J9285D) | 7 m (22.97 ft) |           |



\* 7m 10G DACs are supported on select switches (both CX and AOS-Switch). 10G 7m DACs require a PHY behind the SFP+ port to support >5m DAC technology. Switches with a note "or any type of 7m DAC is not supported" cannot support any type of 10G 7m DAC (even under Unsupported Transceiver mode). 5m DACs may work with Allow-Unsupported-Transceiver enabled.

The following DAC cables are offered by HPE Servers and Systems and ordered using the specified part number (these cables may not be available to order for Aruba-only partners). Refer to the [HPE Compute transceiver and cable hardware matrix product availability matrix](#) at hpe.com.

## Specifications for HPE SFP+ DACs (from HPE Server Products)

| Product name (SKU)                               | Cable length  | Data rate |
|--------------------------------------------------|---------------|-----------|
| *HPE BLc 10G SFP+ SFP+ 3m DAC Cable (487655-B21) | 3m (9.84 ft)  | 10 Gbps   |
| *HPE BLc 10G SFP+ SFP+ 5m DAC Cable (537963-B21) | 5m (16.40 ft) |           |

## (AOS-Switch) Compatibility for the SFP+ DACs

\* HPE Server product - may not be available to Aruba resellers

| SFP+ (10G) DAC capable product name | Switch/Module SKU                                                      | Minimum software required                                                                                                    | Comments                                                                                                                                            |
|-------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2530 Switch Series</b> (*EOS)    | J9853A, J9854A, J9855A, J9856A                                         | J9281A/J9281B, J9283A/J9283B: All                                                                                            | Unlisted models do not have SFP+ ports.                                                                                                             |
| <b>2540 Switch Series</b> (*EOS)    | JL354A, JL355A, JL356A, JL357A                                         | All (J9281B/J9281D and J9283B/J9283D only.<br><br>(See comments for exception)                                               | J9285B/J9285D or any type of 7m DAC is not supported in any of these series. For more information, see <a href="#">Unsupported transceiver mode</a> |
| <b>2910al Switch Series</b> (*EOS)  | J9145A, J9146A, J9147A, J9148A                                         | J9281A/J9281B, J9283A/J9283B: W.14.28                                                                                        | For use in the J9008A 2-port 10GbE SFP+ al module.                                                                                                  |
| <b>2920 Switch Series</b> (*EOS)    | J9726A, J9727A, J9728A, J9729A, J9836A                                 | J9281A/J9281B, J9283A/J9283B: All                                                                                            | The SFP ports on the models listed do not support these 10G SFP+ cables. For use in an installed J9731A Aruba 2920 2-port 10GbE SFP+ .              |
| <b>2930F Switch Series</b>          | JL253A, JL254A, JL255A, JL256A, JL258A, JL263A, JL264A, JL558A, JL559A | J9281B/J9281D and J9283B/J9283D only: All<br><br>(See comments for exception)<br><br>*487655-B21, *537963-B21: Not supported | Unlisted models do not have 10G SFP+ports.<br><br>J9285B/J9285D or any type of 7m DAC is not supported in any of these series.                      |
| <b>2930M Switch Series</b>          | JL319A, JL320A, JL321A, JL322A, JL323A, JL324A                         | J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: All<br><br>*487655-B21, *537963-B21: Not supported                              | For use in an installed JL083A Aruba 3810M/2930M 4SFP+ MACsec Module J9285B/J9285D (7m DAC) is supported in all 2930M models.                       |
| <b>3500yl Switch Series</b> (*EOS)  | J8692A, J8693A, J9310A, J9311A                                         | J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: K.14.50                                                                         | For use in an installed J9312A 10GbE 2-port SFP+/2-port CX4 yl Module.                                                                              |
| <b>3800 Switch Series</b> (*EOS)    | J9575A, J9576A, J9573A, J9574A, J9584A                                 | J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: All                                                                             | Unlisted models not do not have SFP+ ports.                                                                                                         |
| <b>3810M Switch Series</b>          | JL071A, JL072A,                                                        | J9281B/J9281D,                                                                                                               | For use in an installed JL083A                                                                                                                      |

| <b>SFP+ (10G) DAC capable product name</b> | <b>Switch/Module SKU</b> | <b>Minimum software required</b>                                                 | <b>Comments</b>                                                                                                                                    |
|--------------------------------------------|--------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| (*EOS)                                     | JL073A, JL074A, JL076A   | J9283B/J9283D, J9285B/J9285D: All<br><br>*487655-B21, *537963-B21: Not supported | Aruba 3810M/2930M 4SFP+ MACsec Module.                                                                                                             |
|                                            | JL075A                   | J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: All                                 | For use in the JL075A SFP+ ports or used in an installed JL083A Aruba 3810M/2930M 4SFP+ MACsec Module.                                             |
| <b>5400zl Switch Series</b> (*EOS)         | J9309A                   | J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: K.14.39                             | The J9309A 4-port SFP+ module only supports 10G transceivers.                                                                                      |
|                                            | J9538A, J9548A, J9536A   | J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: K.15.02.0004                        |                                                                                                                                                    |
| <b>5400R Switch Series</b>                 | J9538A, J9548A, J9536A   | J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: All                                 |                                                                                                                                                    |
|                                            | J9990A, J9993A           | J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: KB.15.17                            |                                                                                                                                                    |
| <b>6120 Blade Switch Series</b> (*EOS)     | 516733-B21               | J9281B, J9283B, J9285B: All                                                      |                                                                                                                                                    |
| <b>6200yl Switch Series</b> (*EOS)         | J8992A                   | J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: K.14.50                             | J8992A fixed SFP ports are 1GB and do not support these SFP+ copper cables. For use in an installed J9312A 10GbE 2-port SFP+/2-port CX4 yl Module. |
| <b>6600 Switch Series</b> (*EOS)           | J9264A, J9265A, J9452A   | J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: K.14.32                             |                                                                                                                                                    |
| <b>8200zl Switch Series</b> (*EOS)         | J9309A                   | J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: K.14.39                             | The J9309A 4-port SFP+ module only supports 10G transceivers.                                                                                      |
|                                            | J9538A, J9548A, J9536A   | J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: K.15.02.0004                        |                                                                                                                                                    |

**(AOS-CX) Compatibility for the SFP+ DACs (and specifics for HPE Server cables)**

\* HPE Server product - may not be available to Aruba resellers

| <b>SFP+ (10G) DAC capable product name</b> | <b>Switch/Module SKU</b>                                                           | <b>Minimum software required</b>                                                                                                  | <b>Comments</b>                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 4100i Switch Series</b>           | JL817A, JL818A                                                                     | J9281D, J9283D: Not supported (may be enabled via UT-mode)<br><br>*487655-B21 and *537963-B21: Not supported                      | J9285D (7 m) Not Supported nor any type of 7m DAC. High Temp warnings will trigger at lower temperatures (~50C) if Commercial Temp vs Industrial Temp transceivers (~70C) are used. All Third Party transceivers are treated as Commercial Temp, regardless of capability. No Industrial Temp 10G DACs available                                                                                                                   |
| <b>Aruba 5420 Switch Series</b>            | S0U63A<br>S0U73A (TAA)<br><br>S0U64A<br>S0U74A (TAA)<br><br>S0U68A<br>S0U78A (TAA) | J9281B/J9281D, J9283B/J9283D, J9285B/J9285D, *487655-B21, *537963-B21: 10.15.0005                                                 | J9285B/J9285D 7m cables are supported for use on the 5420 series.                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Aruba 6100 Switch Series</b>            | All models                                                                         | J9281B/J9281D, J9283B/J9283D: 10.11.1000<br><br>(See comments for exception)<br><br>*487655-B21 and *537963-B21: Not supported    | Only the listed 4x4 parts are fully supported:<br>J9281B/J9281D<br><ul style="list-style-type: none"> <li>8121-1151</li> <li>8121-1300</li> <li>8121-1797</li> </ul> J9283B/J9283D<br><ul style="list-style-type: none"> <li>8121-1152</li> <li>8121-1298</li> <li>8121-1798</li> </ul> J9285B/J9285D or any type of 7m DAC technology is not supported in any of these series. See <a href="#">Unsupported Transceiver Mode</a> . |
| <b>Aruba 6200 Switch Series</b>            | All models with 10Gb SFP+ ports, except models noted below                         | J9281B/J9281D and J9283B/J9283D: 10.04.1000<br><br>(See comments for exception)<br><br>*487655-B21 and *537963-B21: Not supported | Only the listed 4x4 parts are fully supported:<br>J9281B/J9281D<br><ul style="list-style-type: none"> <li>8121-1151</li> <li>8121-1300</li> <li>8121-1797</li> </ul> J9283B/J9283D<br><ul style="list-style-type: none"> <li>8121-1152</li> <li>8121-1298</li> <li>8121-1798</li> </ul> J9285B/J9285D or any type of                                                                                                               |

| SFP+ (10G) DAC capable product name | Switch/Module SKU                                                          | Minimum software required                                                                                                                                                              | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     |                                                                            |                                                                                                                                                                                        | 7m DAC are not supported on early 6200 series models.<br>The R8**** SKUs support the 10G 7m DAC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                     | All 6200 models with SKU# R8Q68A through R8Q71A, and R8Q08A through R8Q13A | J9281B/J9281D, J9283B/J9283D and J9285B/J9385D: 10.11.0001                                                                                                                             | Only the listed 4x4 parts listed above are fully supported:<br>J9281B/J9281D: See list above<br>J9283B/J9283D: See list above<br>J9285B/J9285D:<br><ul style="list-style-type: none"> <li>8121-1305</li> <li>8121-1154</li> <li>8121-1155</li> <li>8121-1305</li> <li>8121-1724</li> <li>8121-1803</li> <li>8121-1899</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Aruba 6300 Switch Series</b>     | All models M and F (except for S0E91A and S0X44A)                          | J9281B/J9281D and J9283B/J9283D: 10.04.0001<br><br>(See comments for exception)<br><br>*487655-B21 and *537963-B21: 10.08.0001 for 6300 select SKUs JL658A (all ports), JL663A, JL762A | Only the listed 4x4 parts are fully supported<br>J9281B/J9281D <ul style="list-style-type: none"> <li>8121-1151</li> <li>8121-1300</li> <li>8121-1797</li> </ul> J9283B/J9283D <ul style="list-style-type: none"> <li>8121-1152</li> <li>8121-1298</li> <li>8121-1798</li> </ul> J9285B/J9285D or any type of 7m DAC is not supported in any 6300 model.<br><br>R8S89A, R8S90A and R8S92A require <b>interface-group 2 speed 10</b> applicable to the last 2 ports to use 10G (the ports default to 25G use-case). This is different than other 6300 models that auto-detect the inserted transceiver. This may affect Zero-Touch-Provisioning (ZTP) due to a non-factory config. ZTP is OK on these models if 25G optics are used, 25G is the default. R8S91A last 2 ports are 10G (capable) and can use 10G optics without issue for ZTP |

| SFP+ (10G) DAC capable product name | Switch/Module SKU                                                                                                                              | Minimum software required                                                                                                         | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | R8S89A, R8S90A, R8S91A, R8S92A                                                                                                                 | J9281B/J9281D and J9283B/J9283D, *487655-B21 and *537963-B21: 10.10.0002                                                          | (10G is the default for ports 51 & 52).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                     | S0E91A/S0X44A                                                                                                                                  | DACs are not supported for use through a QSA28 adapter                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                     | S4P41A, S4P42A, S4P43A, S4P44A                                                                                                                 | J9281B/J9281D and J9283B/J9283D: 10.16.1006<br>*487655-B21 and *537963-B21: 10.16.1006                                            | S4P41A/S4P43A: 49-52<br>4P42A: 33-40 & 41-44<br>4P44A: 25-28<br>Support is extended to respective TAA SKUs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>6300M/F Series TAA models:</b>   | 6300M TAA Models:<br>S0F99A, S0G00A, S0G01A, S0G02A, S0G03A, S0G04A, S0G05A, S0G06A<br><br>6300F TAA Models:<br>S0G95A, S0G96A, S0G97A, S0G98A | J9281B/J9281D, J9283B/J9283D, *487655-B2, *537963-B21: 10.14.0001                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Aruba 6300L Switch Series</b>    | S3L75A, S3L76A, S3L77A                                                                                                                         | J9281B/J9281D and J9283B/J9283D: 10.14.0001<br><br>(See comments for exception)<br><br>*487655-B21 and *537963-B21: Not supported | Only the listed 4x4 parts are fully supported.<br>J9281B/J9281D<br><ul style="list-style-type: none"> <li>■ 8121-1151</li> <li>■ 8121-1300</li> <li>■ 8121-1797</li> </ul> J9283B/J9283D<br><ul style="list-style-type: none"> <li>■ 8121-1152</li> <li>■ 8121-1298</li> <li>■ 8121-1798</li> </ul><br>J9285B/J9285D or any type of 7 m DAC is not supported any 6300L model.<br><br>S3L75A and S3L76A require the <b>interface-group 2 speed 10</b> command on the last 2 ports to use 10G (the ports default to 25G usecase). This is different than other 6300 models that auto-detect the inserted transceiver. This may affect Zero-Touch-Provisioning (ZTP) due to a non-factory config. (ZTP is OK on these models if 25G optics |

| SFP+ (10G) DAC capable product name | Switch/Module SKU                                                                | Minimum software required                                                                                                                 | Comments                                                                                                                                                                                                                                                                                |
|-------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     |                                                                                  |                                                                                                                                           | are used, 25G is the default).                                                                                                                                                                                                                                                          |
|                                     |                                                                                  |                                                                                                                                           | S3L77A last 2 ports are 10G (LRM capable) and can use 10G optics without issue for ZTP (10G is the default for ports 51 and 52).                                                                                                                                                        |
| <b>Aruba 6400 modules</b>           | R0X39B(*EOS),<br>R0X40B(*EOS),<br>R0X41A(*EOS),<br>R0X42A(*EOS),<br>R0X43A(*EOS) | J9281B/J9281D and<br>J9283B/J9283D: 10.04.1000<br><br>(See comments for exception)<br><br>*487655-B21 and *537963-B21: 10.08.0001         | R0X39A/R0X40A (revision A) are no longer supported for use in the 6400 series.<br>Only the following 4x4 part numbers are supported:<br>J9281B/J9281D <ul style="list-style-type: none"> <li>8121-1151</li> <li>8121-1300</li> <li>8121-1797</li> </ul>                                 |
|                                     | R0X39C, R0X40C<br>R0X41C, R0X42C,<br>R0X43C                                      | 10.09.1000<br>*487655-B21 and *537963-B21: 10.09.0001                                                                                     | J9283B/J9283D <ul style="list-style-type: none"> <li>8121-1152</li> <li>8121-1298</li> <li>8121-1798</li> </ul>                                                                                                                                                                         |
|                                     | R0X44A(*EOS)                                                                     | J9281B/J9281D and<br>J9283B/J9283D only:<br>10.04.2000<br><br>(See comments for exception)<br><br>*487655-B21 and *537963-B21: 10.08.0001 | J9285B/J9285D or any type of 7m DAC is not supported in any 6400 modules.<br>R0X44A/R0X44C auto-detects the inserted type of transceiver.<br>It does not require any interface groups like the 8325.                                                                                    |
|                                     | R0X44C                                                                           | J9281B/J9281D and<br>J9283B/J9283D only:<br>10.09.1000<br><br>*487655-B21 and *537963-B21: 10.09.0001                                     |                                                                                                                                                                                                                                                                                         |
|                                     | S1T83A/S0E48A                                                                    | J9281B/J9281D and<br>J9283B/J9283D only:<br>10.13.1000<br><br>*487655-B21 and *537963-B21: 10.13.0001                                     |                                                                                                                                                                                                                                                                                         |
|                                     |                                                                                  |                                                                                                                                           |                                                                                                                                                                                                                                                                                         |
| <b>Aruba 8100 Switch Series</b>     | All models                                                                       | J9281D, J9283D, *487655-B21, *537963-B21: 10.12.000x                                                                                      | Only the following 4x4 part numbers are supported:<br>J9281B/J9281D: <ul style="list-style-type: none"> <li>8121-1151</li> <li>8121-1300</li> <li>8121-1797</li> </ul> J9283B/J9283D: <ul style="list-style-type: none"> <li>8121-1152</li> <li>8121-1298</li> <li>8121-1798</li> </ul> |

| SFP+ (10G) DAC capable product name                 | Switch/Module SKU                                                                                                                                                                | Minimum software required                                                                                                             | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                     |                                                                                                                                                                                  |                                                                                                                                       | <p>J9285B/J9285D or any type of 7m DAC is not supported in the 8100 models.</p> <p>*487655-B21, *537963-B21: See <a href="#">HPE servers and systems support</a> for HPE Interconnect support.</p>                                                                                                                                                                                                                                                                                                                                                            |
| Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ models | JL479A                                                                                                                                                                           | <p>J9281B/J9281D and J9283B/J9283D: 10.00.0006</p> <p>(See comments for exception)</p> <p>*487655-B21, *537963-B21: 10.04.1000</p>    | <p>Only the following 4x4 part numbers are supported:</p> <p>J9281B/J9281D</p> <ul style="list-style-type: none"> <li>8121-1151</li> <li>8121-1300</li> <li>8121-1797</li> </ul> <p>J9283B/J9283D:</p> <ul style="list-style-type: none"> <li>8121-1152</li> <li>8121-1298</li> <li>8121-1798</li> </ul> <p>J9285B/J9285D or any type of 7m DAC is not supported in the 8320 models.</p> <p>487655-B21 and 537963-B21: See <a href="#">HPE servers and systems support</a> for HPE Interconnect support.</p> <p>10G DACs are not supported through QSA28.</p> |
| Aruba 8325 32C models                               | All models                                                                                                                                                                       | Not supported                                                                                                                         | 10G DACs are not supported through QSA28.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Aruba 8325 48Y8C models                             | <p>JL635A displayed by CLI <b>show system</b></p> <ul style="list-style-type: none"> <li>JL624A - Port-to-Power model (FB)</li> <li>JL625A - Power-to-Port model (BF)</li> </ul> | <p>J9281B/J9281D and J9283B/J9283D: 10.02.0001</p> <p>(See comments for exception)</p> <p>*487655-B21 and *537963-B21: 10.04.1000</p> | <p>Only the following 4x4 part numbers are supported:</p> <p>J9281D:</p> <ul style="list-style-type: none"> <li>8121-1151</li> <li>8121-1300</li> <li>8121-1797</li> </ul> <p>J9283D:</p> <ul style="list-style-type: none"> <li>8121-1152</li> <li>8121-1298</li> <li>8121-1798</li> </ul> <p>J9285B/J9285D or any type of 7m DAC is not supported in the 8325 models.</p> <p>487655-B21 and 537963-</p>                                                                                                                                                     |

| SFP+ (10G) DAC capable product name | Switch/Module SKU                                                                                                                                                                                                                                                                                                                                                                                                       | Minimum software required                                                                                                                                     | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                               | <p>B21: See <a href="#">HPE servers and systems support</a> for HPE Interconnect support.</p> <p>The 8325 requires configuration of <b>interface groups</b> (in groups of 12 ports) to enable use of 1G or 10G transceivers or DACs in the SFP28 ports (Interface Groups default to 25G speed). See the <a href="#">Hardware Guides</a> for details.</p> <p>10G DACs are not supported through QSA28.</p>                                                                                                 |
| Aruba 8325P 32C models              | All models                                                                                                                                                                                                                                                                                                                                                                                                              | Not supported                                                                                                                                                 | 10G DACs are not supported through QSA28.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Aruba 8325H models</b>           | TAA/Non-TAA: <ul style="list-style-type: none"> <li>■ S2T42A/S4B20A - 18Y4C model (FB)</li> <li>■ S2T46A/S4B21A - 18Y4C model (BF)</li> <li>■ S2T47A/S4B22A - 16C model (FB)</li> <li>■ S2T48A/S4B23A - 16C model (FB)</li> </ul>                                                                                                                                                                                       | J9281B/J9281D and J9283B/J9283D, *487655-B21, *537963- B21: 10.15.1001<br><br>(See comments for exception)                                                    | J9285B/J9285D or any type of 7m DAC is not supported in the 8325 models.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Aruba 8360 Switch Series</b>     | 8360 32Y4C models JL717A/JL717C(v2) displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ JL700A/JL700C(v2) Port-to-Power model</li> <li>■ JL701A/JL701C(v2) Power-to-Port model</li> </ul><br>8360 16Y2C models JL718A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ JL702A/JL702C(v2) Port-to-Power model</li> <li>■ JL703A/JL703C(v2) Power-to-Port</li> </ul> | J9281B/J9281D and J9283B/J9283D, *487655-B21, *537963- B21: 10.06.0001<br><br>See comments for exception.<br><br><br>10G DACs are not supported through QSA28 | Only the following 4x4 part numbers are supported:<br>J9281B/J9281D: <ul style="list-style-type: none"> <li>■ 8121-1151</li> <li>■ 8121-1300</li> <li>■ 8121-1797</li> </ul> J9283B/J9283D: <ul style="list-style-type: none"> <li>■ 8121-1152</li> <li>■ 8121-1298</li> <li>■ 8121-1798</li> </ul><br>J9285B/J9285D or any type of 7m DAC is not supported in the 8360 models. 487655-B21 and 537963-B21: See <a href="#">Support for HPE Servers and Systems products</a> for HPE Interconnect support. |

| SFP+ (10G) DAC capable product name | Switch/Module SKU                                                                                                                                                                                                                             | Minimum software required                                                                                                   | Comments                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | model<br><br>8360 24XF2C models<br>JL722A/JL722C(v2)<br>displayed by CLI<br><b>show system</b> <ul style="list-style-type: none"> <li>JL710A/JL710C(v2)<br/>Port-to-Power model</li> <li>JL711A/JL711C(v2)<br/>Power-to-Port model</li> </ul> |                                                                                                                             | <p>The 8360 32Y4C and 48Y6C models require configuration of <b>interface groups</b> only for ports 1-4 (as group number 1) to enable the use of 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed).</p> <p>All other ports can individually auto-detect the speed of the inserted transceiver. Not applicable to the 24XF (1G/10G) model. See the <a href="#">Hardware Guides</a> for details.</p> |
|                                     | 8360 48Y6C models<br>JL719C displayed by CLI<br><b>show system</b> <ul style="list-style-type: none"> <li>JL704C(v2) Port-to-Power model (FB)</li> <li>JL705C(v2) Power-to-Port model (BF)</li> </ul>                                         | J9281B/J9281D,<br>J9283B/J9283D,<br>*487655-B21, *537963-B21:<br>10.09.0002<br><br>10G DACs are not supported through QSA28 |                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Aruba 8400X modules                 | JL363A                                                                                                                                                                                                                                        | J9281D, J9283D, J9285D:<br>10.00.0003<br>*487655-B21 and *537963-B21: 10.06.0001                                            | Only the following 4x4 part numbers are supported:<br>J9281B/J9281D: <ul style="list-style-type: none"> <li>8121-1151</li> <li>8121-1300</li> <li>8121-1797</li> </ul> J9283B/J9283D: <ul style="list-style-type: none"> <li>8121-1152</li> <li>8121-1298</li> <li>8121-1798</li> </ul> J9285B/J9285D: <ul style="list-style-type: none"> <li>8121-1154</li> <li>8121-1305</li> <li>8121-1724</li> </ul>                           |
|                                     | JL687A                                                                                                                                                                                                                                        | J9281D, J9283D, J9285D,<br>*487655-B21 and *537963-B21: 10.06.0001<br><br>(See comments for exception)                      | JL687A 32p 25G module requires configuration of <b>interface groups</b> (groups of four ports) to enable use of 1G or 10G transceivers or DACs in the SFP28 ports (Interface Groups default to 25G speed). See the <a href="#">Hardware Guides</a> for details.                                                                                                                                                                    |
| Aruba 9300 and 9300S Switch Series  | Both 9300-32D and 9300S                                                                                                                                                                                                                       | Only in low-speed SFP+ ports:<br>J9281D, J9283D: 10.16.1006<br>J9285D, *487655-B21 and                                      | DACs are not supported for use through a QSA28 adapter.                                                                                                                                                                                                                                                                                                                                                                            |

| SFP+ (10G) DAC capable product name | Switch/Module SKU                                                                                                                                                                                                                                                                                                                              | Minimum software required                                                | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| *537963-B21: not supported          |                                                                                                                                                                                                                                                                                                                                                |                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Aruba 10000 Switch Series</b>    | R8S96A displayed by CLI <b>show system</b> <ul style="list-style-type: none"> <li>■ R8P13A - 48Y6C FB bundle</li> <li>■ R8P14A - 48Y6C BF bundle</li> </ul>                                                                                                                                                                                    | J9281D and J9283D: 10.10.0002<br>*487655-B21 and *537963-B21: 10.10.0002 | <p>Only the following 4x4 part numbers are supported:</p> <p>J9281D:</p> <ul style="list-style-type: none"> <li>■ 8121-1151</li> <li>■ 8121-1300</li> <li>■ 8121-1797</li> </ul> <p>J9283D:</p> <ul style="list-style-type: none"> <li>■ 8121-1152</li> <li>■ 8121-1298</li> <li>■ 8121-1798</li> </ul> <p>J9285D or any type of 7m DAC is not supported in the 10000 models.</p> <p>487655-B21 and 537963-B21: See <a href="#">Support for HPE Servers and Systems products</a> for HPE Interconnect support.</p> <p>The 10000 series requires configuration of interface groups (groups of 4 ports) to enable the use of 1G or 10G transceivers/DACs in the SFP28 ports (set speed to 25g for the default). See the <i>Hardware Guides</i> for details.</p> |
| <b>10040 32C6D models</b>           | S4R58A displayed by CLI (show system) <ul style="list-style-type: none"> <li>■ S4R54A – 32C6D FB bundle</li> <li>■ S4R55A – 32C6D BF bundle</li> </ul> <p><b>TAA models:</b></p> <p>S4R59A displayed by CLI (show system)</p> <ul style="list-style-type: none"> <li>■ S4R56A – 32C6D FB bundle</li> <li>■ S4R57A – 32C6D BF bundle</li> </ul> | J9281D/J9283D: 10.16.10xx                                                | <p>10G DACs are NOT supported for use through a QSA28.</p> <p>They are only supported for use in the low-speed ports, 39-40.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Gigabit SFP optical transceiver modules

In December 2017, Aruba introduced Revision D versions of 100M, 1G, and 10G transceivers. Revision D products are structured to be specific alternative vendors as sources for the SKU#. Earlier Revision A, B, or C product may have alternative vendors that we no longer actively ship, but remain as fully supported in earlier and current products.

Some switch products will be specifying Revision D transceivers for full support, while other products may support earlier (older) revision transceivers – and some with specific 4x4 part numbers (see [Identification of 4x4 part numbers](#) for information regarding 4x4 part numbers).

Always refer to the Datasheet or QuickSpecs for the Switch product to see the current list of supported transceivers.



- Although a 10G SFP+ transceiver module has the same physical dimensions of a 1G SFP transceiver, a 10G transceiver will NOT operate in a 1G SFP port.
- Many, although not all, 10G SFP+ ports have support to use a 1G SFP transceiver (or even a 100Mbps FX SFP transceiver). See the QuickSpecs for the Switch product and verify if the 1G or 100Mbps SFP transceiver is supported in the 10G SFP+ port.

## Models, specifications, and compatibility

Gigabit SFP optical transceiver modules use LC connectors.

The specifications for Revision D transceiver products are the same as the specified Revision A, B, and C SKUs. Where support for a Revision A, B, or C transceiver existed, Revision D or E parts are also supported. Not all earlier revisions can be re-used on newer product: Check the tables below and compare the 4x4 number of the part to the list of supported 4x4 numbers. See [Identification of 4x4 part numbers](#) for more information. An End of Life 4x4 may continue to work, but consider them limited support -- newly purchased transceivers offer longer and full support.

### Specifications for Gigabit SFP optical transceiver modules

\* recently End of Life 4x4 part (limited support) and earlier revisions indicated as End of Sale (EOS)

| Product name (SKU)                               | DOM digital optical monitoring (4x4 part #)                                                                     | Nominal wl (nm) & encoding type  | Fiber mode | Fiber diameter (µm) | Modal bandwidth (MHz*km) | Transmission distance                       |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|----------------------------------|------------|---------------------|--------------------------|---------------------------------------------|
| HPE X121 1G SFP LC SX Transceiver (J4858C) (EOS) | Yes<br>J4858C/J4858D:<br>1990-4395*,<br>1990-4415*,<br>1990-4750,<br>1990-4793,<br>1990-4395(s/n:<br>MYxxxxxxx) | Single lane,<br>850<br>1x1G NRZ  | MMF        | 50/125              | 500 (OM2)<br><br>400     | 550m (1804.46 ft)<br><br>500 m (1640.42 ft) |
| Aruba 1G SFP LC SX 500m MMF xcvr (J4858D)        | JL745A(TAA):<br>1990-4395(s/n:<br>USxxxxxxx)                                                                    |                                  |            |                     |                          |                                             |
| Aruba 1G SFP LC SX 500m MMF TAA xcvr (JL745A)    | JL780A(I-Tmp):<br>1990-4763,<br>1990-4765                                                                       |                                  |            | 62.5/125            | 200 (OM1)<br>160         | 275m (902.23 ft)<br>220m (721.78 ft)        |
| Aruba 1G I-Tmp SFP LC SX 500m MMF xcvr (JL780A)  |                                                                                                                 |                                  |            |                     |                          |                                             |
| HPE X121 1G SFP LC LX Transceiver (J4859C) (EOS) | Yes<br>J4859C/J4859D:<br>1990-4414*,<br>1990-4802,<br>1990-4116*,<br>1990-4762<br>1990-4802<br>1990-4891        | Single lane,<br>1310<br>1x1G NRZ | SMF        | 9/125               | N/A                      | 10 km (6.21 miles)                          |
| Aruba 1G SFP LC LX 10km SMF xcvr (J4859D)        | JL746A(TAA):<br>1990-4608*,<br>1990-4753*,<br>1990-4853                                                         |                                  | MMF        | 50/125              | 500 or 400               | 550m (1804.46 ft)                           |
| Aruba 1G SFP LC LX 10km SMF TAA xcvr (JL746A)    | JL718A (I-Tmp):<br>1990-4764*,<br>1990-4766,<br>1990-4910,<br>1990-4914                                         |                                  | MMF        | 62.5/125            | 500                      | 550m (1804.46 ft)                           |
| Aruba 1G I-Tmp SFP LC LX 10km SMF xcvr (JL781A)  |                                                                                                                 |                                  |            |                     |                          |                                             |
| HPE X121 1G SFP LC LH Transceiver (J4860C) (EOS) | Yes<br>J4860C/J4860D:<br>1990-4385*,<br>1990-4363                                                               | Single lane,<br>1550<br>1x1G NRZ | SMF        | 9/125               | N/A                      | 70 km (43.49 miles)                         |

### Specifications for Gigabit SFP optical transceiver modules

\* recently End of Life 4x4 part (limited support) and earlier revisions indicated as End of Sale (EOS)

| Product name (SKU)                         | DOM digital optical monitoring (4x4 part #) | Nominal wl (nm) & encoding type | Fiber mode | Fiber diameter (μm) | Modal bandwidth (MHz*km) | Transmission distance |
|--------------------------------------------|---------------------------------------------|---------------------------------|------------|---------------------|--------------------------|-----------------------|
| Aruba 1G SFP LC LH 70 km SMF xcvr (J4860D) |                                             |                                 |            |                     |                          |                       |

| Product name (SKU)                               | Connector             | Optical parameters (dBm) |                                           |                           |
|--------------------------------------------------|-----------------------|--------------------------|-------------------------------------------|---------------------------|
|                                                  |                       | Transmit power           | Receive power                             | Temperature rating        |
| HPE X121 1G SFP LC SX Transceiver (J4858C) (EOS) | Duplex LC (PC or UPC) | -9.5 to 0                | -17 to -3                                 | Industrial (-40 to 85° C) |
| Aruba 1G SFP LC SX 500m MMF xcvr (J4858D)        |                       |                          |                                           |                           |
| Aruba 1G SFP LC SX 500m MMF TAA xcvr (JL745A)    |                       |                          |                                           |                           |
| Aruba 1G ITmp SFP LC SX 500m MMF xcvr (JL780A)   |                       |                          |                                           |                           |
| HPE X121 1G SFP LC LX Transceiver (J4859C) (EOS) | Duplex LC (PC or UPC) | -9.5 to -3               | -20 to -3                                 | Industrial (-40 to 85° C) |
| Aruba 1G SFP LC LX 10km SMF xcvr (J4859D)        |                       |                          |                                           |                           |
| Aruba 1G SFP LC LX 10km SMF TAA xcvr (JL746A)    |                       |                          |                                           |                           |
| Aruba 1G ITmp SFP LC LX 10km SMF xcvr (JL781A)   |                       |                          |                                           |                           |
| HPE X121 1G SFP LC LH Transceiver (J4860C) (EOS) | Duplex LC (PC or UPC) | 0 to +5                  | -22 to -3                                 | Commercial (0 to 70° C)   |
| Aruba 1G SFP LC LH 710 km SMF xcvr (J4860D)      |                       |                          | (use 8dB attenuator for short SMF cables) |                           |

### Compatibility for gigabit SFP optical transceiver modules

| SFP (1G)<br>capable<br>product<br>name | Switch SKU #s                                                                                                                  | Minimum<br>software<br>required               | Comments                                                                                                                         |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>2510 Switch Series</b> (*EOS)       | J9019A/B, J9020A, J9279A, J9280A                                                                                               | All                                           |                                                                                                                                  |
| <b>2520 Switch Series</b> (*EOS)       | J9137A, J9138A, J9298A, J9299A                                                                                                 | All                                           |                                                                                                                                  |
| <b>2530 Switch Series</b> (*EOS)       | J9772A, J9773A, J9774A, J9775A, J9776A, J9777A, J9778A, J9779A, J9780A, J9781A, J9782A, J9783A, J9853A, J9854A, J9855A, J9856A | All                                           |                                                                                                                                  |
| <b>2540 Switch Series</b> (*EOS)       | JL354A, JL355A, JL356A, JL357A                                                                                                 | All                                           |                                                                                                                                  |
| <b>2600 Switch Series</b> (*EOS)       | J4899A/B/C, J4900A/B/C, J8164A, J8165A, J8762A                                                                                 | H.08.98                                       |                                                                                                                                  |
| <b>2610 Switch Series</b> (*EOS)       | J9085A, J9086A, J9087A, J9088A, J9089A                                                                                         | All                                           |                                                                                                                                  |
| 2615-8-PoE Switch(*EOS)                | J9565A                                                                                                                         | All                                           |                                                                                                                                  |
| <b>2620 Switch Series</b> (*EOS)       | J9623A, J9624A, J9625A, J9626A, J9627A                                                                                         | All                                           |                                                                                                                                  |
| <b>2800 Switch Series</b> (*EOS)       | J4903A, J4904A                                                                                                                 | I.08.103                                      |                                                                                                                                  |
| <b>2810 Switch Series</b> (*EOS)       | J9021A, J9022A                                                                                                                 | All                                           |                                                                                                                                  |
| <b>2900 Switch Series</b> (*EOS)       | J9049A, J9050A                                                                                                                 | T.13.45                                       |                                                                                                                                  |
| <b>2910al Switch Series</b> (*EOS)     | J9145A, J9146A, J9147A, J9148A                                                                                                 | All                                           | For use in the SFP ports on the models listed, and in the J9008A 2-port 10GbE SFP+ al module.                                    |
| 2915-8G-PoE Switch(*EOS)               | J9562A                                                                                                                         | All                                           |                                                                                                                                  |
| <b>2920 Switch Series</b> (*EOS)       | J9726A, J9727A, J9728A, J9729A, J9836A                                                                                         | All                                           | For use in the SFP ports on the models listed. Also for use in the dual-speed SFP+ ports of the J9731A 2-Port 10GbE SFP+ Module. |
| <b>2930F Series Switches</b>           | JL253A, JL254A, JL255A, JL256A, JL258A, JL259A, JL260A, JL261A, JL262A, JL263A, JL264A, JL557A, JL558A, JL559A                 | J4858C/D, J4859C/D, J4860C/D: All WC Software |                                                                                                                                  |

| SFP (1G)<br>capable<br>product<br>name     | Switch SKU #s                                     | Minimum<br>software<br>required                                                                                                          | Comments                                                                                                                                                                                                                                  |
|--------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                            |                                                   | JL745A, JL746A (TAA<br>xcvrs): WC<br>16.08.0021 and<br>16.10.0006 and<br>later                                                           |                                                                                                                                                                                                                                           |
| <b>2930M<br/>Switch<br/>Series</b>         | JL319A, JL320A, JL321A, JL322A, JL323A,<br>JL324A | J4858C/D,<br>J4859C/D,<br>J4860C/D: All WC<br>Software<br>JL745A, JL746A (TAA<br>xcvrs): WC<br>16.08.0021 and<br>16.10.0006 and<br>later | For use in SFP ports on switch<br>and an installed JL083A Aruba<br>3810M/2930M 4SFP+ MACsec<br>Module.                                                                                                                                    |
| <b>3400cl<br/>Switch<br/>Series(*EOS)</b>  | J4905A, J4906A                                    | All                                                                                                                                      |                                                                                                                                                                                                                                           |
| <b>3500 Series<br/>Switches<br/>(*EOS)</b> | J9470A, J9471A, J9472A, J9473A                    | K.14.31                                                                                                                                  |                                                                                                                                                                                                                                           |
| <b>3500yl<br/>Switch<br/>Series(*EOS)</b>  | J8692A, J8693A                                    | All                                                                                                                                      | For use in the SFP ports on the<br>models listed, and in an<br>installed J9312A 10GbE 2-port<br>SFP+/2-port CX4 yl Model                                                                                                                  |
|                                            | J9310A, J9311A                                    | K.14.50                                                                                                                                  |                                                                                                                                                                                                                                           |
| <b>3800 Switch<br/>Series(*EOS)</b>        | J9573A, J9574A, J9575A, J9576A, J9584A            | All                                                                                                                                      |                                                                                                                                                                                                                                           |
| <b>3810M<br/>Switch<br/>Series</b>         | JL071A, JL072A, JL073A, JL074A, JL076A,<br>JL075A | J4858C/D,<br>J4859C/D,<br>J4860C/D: All<br>Software<br>JL745A, JL746A (TAA<br>xcvrs): 16.08.0021<br>and 16.10.0006<br>and later          | For use in the JL075A 3810M<br>switch. Also for use in any<br>3810M switch with a JL083A<br>Aruba 3810M/2930M 4SFP+<br>MACsec Module installed.                                                                                           |
| <b>4100gl<br/>Switch<br/>Series</b>        | J4893A, J4908A                                    | G.07.103                                                                                                                                 |                                                                                                                                                                                                                                           |
| <b>Aruba 4100i<br/>Switch<br/>Series</b>   | JL817A, JL818A                                    | J4858D, J4859D,<br>J4860D: 10.08.0001<br>(Commercial Temp)<br>JL780A, JL781A:<br>10.08.0001 (Ind<br>Temp)                                | Hi Temp warnings will trigger<br>at lower temperatures (~50C)if<br>Commercial Temp vs<br>Industrial Temp transceivers<br>(~70C) are used. All Third Party<br>transceivers are treated as<br>Commercial Temp, regardless<br>of capability. |

| SFP (1G)<br>capable<br>product<br>name     | Switch SKU #s                                                                              | Minimum<br>software<br>required                                                                                                 | Comments                                                                                                                                        |
|--------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4200vl<br/>Switch<br/>Series</b> (*EOS) | J8776A, J9033A                                                                             | All                                                                                                                             |                                                                                                                                                 |
| <b>5300xl<br/>Switch<br/>Series</b> (*EOS) | J4878A/B, J4907A                                                                           | E.10.36                                                                                                                         |                                                                                                                                                 |
| <b>5400zl<br/>Switch<br/>Series</b> (*EOS) | J8705A, J8706A                                                                             | All                                                                                                                             |                                                                                                                                                 |
|                                            | J9308A, J9309A                                                                             | K.14.34                                                                                                                         | The J9309A 4-port SFP+ module only supports 10G transceivers.                                                                                   |
|                                            | J9537A, J9549A, J9535A, J9637A, J9538A, J9548A, J9536A                                     | K.15.02.0004                                                                                                                    | The J9538A 8-port SFP+ v2 module supports both 1G and 10G transceivers.                                                                         |
| <b>5400R<br/>Switch<br/>Series</b>         | J9537A, J9549A, J9535A, J9637A, J9538A, J9548A, J9536A                                     | J4858C/D,<br>J4859C/D,<br>J4860C/D: All<br>Software<br>JL745A, JL746A (TAA<br>xcvrs): 16.08.0021<br>and 16.10.0006<br>and later | The J9538A 8-port SFP+ v2 module supports both 1G and 10G transceivers.                                                                         |
|                                            | J9988A, J9989A, J9990A, J9993A                                                             | KB.15.17                                                                                                                        |                                                                                                                                                 |
| <b>5420 Switch<br/>Series</b>              | S0U63A/S0U73A(TAA),<br>S0U64A/S0U74A (TAA),<br>S0U68A/S0U78A (TAA),<br>S0U67A/S0U77A (TAA) | J4858D,<br>J4859D, J4860D:<br>JL745A, JL746A<br>(TAA):<br>10.15.0005                                                            | Older transceivers (C versions and earlier) are not officially supported on the 5420 switch series.                                             |
| <b>Aruba 6000<br/>Switch<br/>Series</b>    | All models<br>(1G uplink only) NO support for<br>100Mbps FX.                               | J4858C/J4858D,<br>J4859C/J4859D:<br>JL745A, JL746A<br>(TAA):<br>10.08.0001                                                      | See list of supported 4x4 part numbers in <a href="#">Specifications for Gigabit SFP optical modules</a> table at the beginning of this chapter |
|                                            |                                                                                            | J4860C/J4860D: not supported                                                                                                    |                                                                                                                                                 |
| <b>Aruba 6100<br/>Switch<br/>Series</b>    | All models                                                                                 | J4858C/J4858D,<br>J4859C/J4859D:<br>10.06.0001<br>JL745A, JL746A (TAA<br>xcvrs): 10.06.0130<br>and 10.07.0010                   | See list of supported 4x4 part numbers in <a href="#">Specifications for Gigabit SFP optical modules</a> table at the beginning of this chapter |

| SFP (1G)<br>capable<br>product<br>name | Switch SKU #s                                            | Minimum<br>software<br>required                                                                                                     | Comments                                                                                                                                                                                                                                                                                                            |
|----------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        |                                                          | J4860C/J4860D: not supported                                                                                                        |                                                                                                                                                                                                                                                                                                                     |
| <b>6108 Switch Series(*EOS)</b>        | J4902A                                                   | H.07.88                                                                                                                             |                                                                                                                                                                                                                                                                                                                     |
| <b>6120 Blade Switch Series(*EOS)</b>  | 498358-B21, 516733-B21                                   | SX, LX: all versions<br>LH: not supported                                                                                           |                                                                                                                                                                                                                                                                                                                     |
| 6200yl-24G-mGBIC switch(*EOS)          | J8992A                                                   | All                                                                                                                                 |                                                                                                                                                                                                                                                                                                                     |
| <b>Aruba 6200 Switch Series</b>        | All 6200F models 12p models R8Q72A/R8V13A (TAA)          | J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D:<br>10.04.1000                                                                    | Only the following 4x4 part numbers are supported:                                                                                                                                                                                                                                                                  |
|                                        |                                                          | JL745A, JL746A (TAA): 10.06.0130 and 10.07.0010                                                                                     | J4858C/J4858D:<br><ul style="list-style-type: none"> <li>1990-4395</li> <li>1990-4750</li> <li>1990-4793</li> </ul>                                                                                                                                                                                                 |
| <b>Aruba 6200F B-revision</b>          | JL724B through JL728B<br>S0M81A through S0M90A           | J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D:<br>JL745A, JL746A (TAA):10.13.0001                                               | J4859C/J4859D:<br><ul style="list-style-type: none"> <li>1990-4762</li> <li>1990-4802</li> <li>1990-4891</li> </ul>                                                                                                                                                                                                 |
| <b>Aruba 6200M/F Switch Series</b>     | All 6200M models and 6200F 12p models R8Q72A/R8V13A(TAA) | J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D,<br>JL745A (TAA),<br>JL746A (TAA):<br>10.11.0005                                  | J4860C/J4860D:<br><ul style="list-style-type: none"> <li>1990-4363</li> </ul>                                                                                                                                                                                                                                       |
| <b>Aruba 6300 Switch Series</b>        | All models M/F except those mentioned below:             | J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D:<br>10.04.0001<br><br>JL745A, JL746A (TAA xcvrs):<br>10.06.0130 and<br>10.07.0010 | ***Only the following 4x4 part numbers are supported:<br><br>J4858C/J4858D:<br><ul style="list-style-type: none"> <li>1990-4395</li> <li>1990-4750</li> <li>1990-4793</li> </ul> J4859C/J4859D:<br><ul style="list-style-type: none"> <li>1990-4762</li> <li>1990-4802</li> <li>1990-4891</li> </ul> J4860C/J4860D: |

| SFP (1G)<br>capable<br>product<br>name | Switch SKU #s | Minimum<br>software<br>required | Comments                                                    |
|----------------------------------------|---------------|---------------------------------|-------------------------------------------------------------|
|                                        |               |                                 | <ul style="list-style-type: none"> <li>1990-4363</li> </ul> |

| SFP (1G)<br>capable<br>product<br>name | Switch SKU #s                                                                                                                                                        | Minimum<br>software<br>required                                                                       | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        | JL762A (6300 Pwr2Prt):                                                                                                                                               | J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D,<br>JL745A (TAA),<br>JL746A (TAA):<br>10.08.0001    | ***See the above list of 4x4s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                        | R8S91A,<br>R8S92A                                                                                                                                                    | J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D,<br>JL745A (TAA),<br>JL746A (TAA):<br>10.10.0002    | <p>***See the above list of 4x4s</p> <p>R8S91A port 51-52 require the <b>interface-group 2 speed 10</b> command (the ports default to 10G use-case). This is different than other 6300 models that auto-detect the inserted transceiver.</p> <p>This may affect Zero-Touch-Provisioning (ZTP) due to a non-factory config. (ZTP is OK on these models if 10G optics are used, for R8S91A, 10G is the default for ports 51-52).</p> <p>R8S92A 1G only in ports 1-24 (1G not supported in uplinks ports 49-52).</p> |
|                                        | R8S89A,<br>R8S90A,                                                                                                                                                   | J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D,<br>JL745A (TAA),<br>JL746A (TAA):<br>Not Supported | <p>Aruba 6300 Switch Series only:</p> <p>Hardware limitations for the following SKUs:<br/>6300M R8S89A and R8S90A<br/>and 6300L S3L75A and S3L76A:<br/>Cannot support 1G transceivers in uplinks</p>                                                                                                                                                                                                                                                                                                              |
|                                        | <p>6300M TAA Models:<br/>S0F99A, S0G00A, S0G01A, S0G02A (BF airflow), S0G03A, S0G04A, S0G05A, S0G06A</p> <p>6300F TAA Models:<br/>S0G95A, S0G96A, S0G97A, S0G98A</p> | J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D,<br>JL745A (TAA),<br>JL746A (TAA):<br>10.14.0001    | ***See the above list of 4x4s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                        | S0E91A, S0X44A (100G models)                                                                                                                                         | Not supported through QSA28 (the QSFP28 port cannot support 1G speeds)                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                        | S4P42A, S4P43A, S4P44A, S4P45A, S4P46A, S4P47A, S4P48A (TAA models)                                                                                                  | J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D,                                                    | Support is extended to respective TAA SKUs.<br>Not supported on S4P41A                                                                                                                                                                                                                                                                                                                                                                                                                                            |

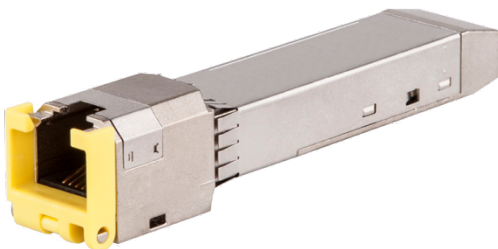
| SFP (1G)<br>capable<br>product<br>name       | Switch SKU #s                                                                  | Minimum<br>software<br>required                                                                                                                              | Comments                                                                                                                                                                                                                                                                     |
|----------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                              |                                                                                | JL745A (TAA),<br>JL746A (TAA):<br>10.16.1006                                                                                                                 | 1G is supported only on<br>downlinks.                                                                                                                                                                                                                                        |
| <b>Aruba<br/>6300L<br/>Switch<br/>Series</b> | All models<br>S3L75A, S3L76A: No support for 1G<br>S3L77A: Only in ports 51-52 | J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D,<br>JL745A (TAA),<br>JL746A (TAA):<br>10.14.0001                                                           |                                                                                                                                                                                                                                                                              |
| <b>Aruba 6400<br/>modules</b>                | R0X39B(*EOS), R0X40B(*EOS), R0X41A<br>(*EOS), R0X42A(*EOS), R0X43A(*EOS)       | J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D:<br>10.04.1000<br>JL745A, JL746A<br>(TAA): 10.06.0130<br>and 10.07.0010                                    | R0X39A/R0X40A (revision A)<br>are no longer supported for<br>use in the 6400 series.<br><br>Only the following 4x4 part<br>numbers are supported:<br>J4858C/J4858D:<br><ul style="list-style-type: none"> <li>1990-4395</li> <li>1990-4750</li> <li>1990-4793</li> </ul>     |
|                                              | R0X44A(*EOS)                                                                   | For R0X44A<br>module:<br>J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D:<br>10.04.2000<br><br>JL745A, JL746A (TAA<br>xcvrs): 10.06.0130<br>and 10.07.0010 | JL745A (TAA):<br><ul style="list-style-type: none"> <li>1990-4395</li> </ul> JL745A(TAA):<br><ul style="list-style-type: none"> <li>1990-4395</li> </ul> J4859C/J4859D:<br><ul style="list-style-type: none"> <li>1990-4762</li> <li>1990-4802</li> <li>1990-4891</li> </ul> |
|                                              | R0X39C, R0X40C, R0X41C, R0X42C,<br>R0X43C, R0X44C                              | 10.09.1000                                                                                                                                                   | R0X44A/R0X44C when in<br>default mode, auto-detects the<br>inserted type of transceiver; it<br>does NOT require any<br>interface groups like the 8325.                                                                                                                       |
|                                              | S1T83A (24p SR10 4p 100G)                                                      | 10.13.1000                                                                                                                                                   |                                                                                                                                                                                                                                                                              |
|                                              | S0E48A (32p 25G 4p 100G)                                                       | 1G products are<br>not supported                                                                                                                             | R0X44C has the added feature<br>of enabling the bottom ports<br>to accept a 50G product, and<br>in this mode, will NOT accept<br>these 1G transceivers (see 50G<br>SFP56 chapter).                                                                                           |
|                                              |                                                                                |                                                                                                                                                              |                                                                                                                                                                                                                                                                              |
| <b>6600 Switch<br/>Series(*EOS)</b>          | J9263A, J9264A                                                                 | K.14.03                                                                                                                                                      |                                                                                                                                                                                                                                                                              |
|                                              | J9451A                                                                         | K.14.24                                                                                                                                                      |                                                                                                                                                                                                                                                                              |
| <b>Aruba 8100<br/>Series</b>                 | Models with SFP+ ports                                                         | J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D:<br>JL745A, JL746A (TAA                                                                                    | Only in SFP+ ports NOT<br>supported thru QSA28                                                                                                                                                                                                                               |

| SFP (1G) capable product name                              | Switch SKU #s                                                                                                                                                                 | Minimum software required                                                                                        | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |                                                                                                                                                                               | xcvrs): 10.12.000x                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>8200zl Switch Series</b> (*EOS)                         | J8705A, J8706A                                                                                                                                                                | All                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                            | J9308A, J9309A                                                                                                                                                                | K.14.34                                                                                                          | The J9309A 4-port SFP+ module only supports 10G transceivers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                            | J9537A, J9549A, J9535A, J9637A, J9538A, J9548A, J9536A                                                                                                                        | K.15.02.0004                                                                                                     | The J9538A 8-port SFP+ v2 module supports both 1G and 10G transceivers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ models</b> | JL479A                                                                                                                                                                        | J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: 10.03.0001<br>JL745A, JL746A (TAA xcvrs): 10.06.0130 and 10.07.0010 | Only the following 4x4 part numbers are supported:<br>J4858C/J4858D:<br><ul style="list-style-type: none"> <li>1990-4395</li> <li>1990-4750</li> <li>1990-4793</li> </ul> JL745A(TAA):<br><ul style="list-style-type: none"> <li>1990-4395</li> </ul> J4859C/J4859D:<br><ul style="list-style-type: none"> <li>1990-4762</li> <li>1990-4802</li> <li>1990-4891</li> </ul> J4860C/J4860D:<br><ul style="list-style-type: none"> <li>1990-4363</li> </ul>                                                                                                                                                                                                                                                           |
| <b>Aruba 8325 Switch Series</b>                            | JL635A displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>JL624A - Port-to-Power model (FB)</li> <li>JL625A - Power-to-Port model (BF)</li> </ul> | J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: 10.03.0010<br>JL745A, JL746A (TAA xcvrs): 10.06.0130 and 10.07.0010 | Only the following 4x4 part numbers are supported:<br>J4858C/J4858D:<br><ul style="list-style-type: none"> <li>1990-4395</li> <li>1990-4750</li> <li>1990-4793</li> </ul> JL745A(TAA):<br><ul style="list-style-type: none"> <li>1990-4395</li> </ul> J4859C/J4859D:<br><ul style="list-style-type: none"> <li>1990-4762</li> <li>1990-4802</li> <li>1990-4891</li> </ul> J4860C/J4860D:<br><ul style="list-style-type: none"> <li>1990-4363</li> </ul> The 8325 requires configuration of "interface groups" (groups of 12 ports) to enable use of 1G or 10G transceivers or DACs in the SFP28 ports (Interface Groups default to 25G speed). See the Hardware Guides for details. 1G optics at the opposite end |

| SFP (1G)<br>capable<br>product<br>name | Switch SKU #s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Minimum<br>software<br>required                                                                                                                                                                                                                                                                                                   | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 8325P Switch Series</b>       | 1G products not supported, cannot be enabled through a QSA28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                   | of the link must NOT enable auto-negotiation and operate in full duplex mode.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Aruba 8325H Switch Series</b>       | TAA/Non-TAA: <ul style="list-style-type: none"> <li>■ S2T42A/S4B20A - 18Y4C model (FB)</li> <li>■ S2T46A/S4B21A - 18Y4C model (BF)</li> <li>■ S2T47A/S4B22A - 16C model (FB)</li> <li>■ S2T48A/S4B23A - 16C model (FB)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | In all SFP ports (not through QSA28)<br>4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D,<br>JL745A, JL746A<br>(TAA): 10.15.1000                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Aruba 8360 Switch Series</b>        | 8360 32Y4C models<br>JL717A/JL717C(v2) displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>■ JL700A/JL700C(v2) Port-to-Power model</li> <li>■ JL700A/JL700C(v2) A Power-to-Port model</li> </ul> 8360 16Y2C models<br>JL718A/JL718C(v2) displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>■ JL702A/JL702C(v2) Port-to-Power model</li> <li>■ JL702A/JL702C(v2) A Power-to-Port model</li> </ul> 8360 24XF2C models<br>JL722A/JL722C(v2) displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>■ JL710A/JL710C(v2) Port-to-Power model</li> <li>■ JL711A/JL711C(v2) Power-to-Port model</li> </ul> 8360 48Y6C models<br>JL719C displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>■ JL704C(v2) Port-to-Power model (FB)</li> <li>■ JL705C(v2) Power-to-Port model (BF)</li> </ul> | JL717A/JL717C(v2),<br>JL718A/JL718C(v2),<br>JL722A/JL722C(v2):<br>J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D:<br>10.06.0001<br>JL745A, JL746A (TAA<br>xcvrs): 10.06.0130<br>and 10.07.0010<br><br>JL719C:<br>J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D:<br>10.09.0002<br>JL745A, JL746A (TAA<br>xcvrs): 10.09.0002 | Only the following 4x4 part numbers are supported:<br>J4858C/J4858D: <ul style="list-style-type: none"> <li>■ 1990-4395</li> <li>■ 1990-4750</li> <li>■ 1990-4793</li> </ul> JL745A(TAA): <ul style="list-style-type: none"> <li>■ 1990-4395</li> </ul> J4859C/J4859D: <ul style="list-style-type: none"> <li>■ 1990-4762</li> <li>■ 1990-4802</li> <li>■ 1990-4891</li> </ul> J4860C/J4860D: <ul style="list-style-type: none"> <li>■ 1990-4363</li> </ul><br>The 8360 32Y4C and 48Y6C models require configuration of "interface groups" only for ports 1-4 (as group #1) to enable the use of 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed).<br><br>All other ports can individually auto-detect the speed of the inserted xcvr.<br><br>Not applicable to the 24XF (1G/10G) model<br><br>See the Hardware Guides for details. |
| <b>Aruba 8400X modules</b>             | JL363A<br>JL687A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | For JL363A module:<br>J4858C/J4858D,<br>J4859C/J4859D,<br>J4860C/J4860D:<br>10.00.0018                                                                                                                                                                                                                                            | Only the following 4x4 part numbers are supported:<br>J4858C/J4858D: <ul style="list-style-type: none"> <li>■ 1990-4395</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| SFP (1G) capable product name | Switch SKU #s                                                                                                                                               | Minimum software required                                                  | Comments                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               |                                                                                                                                                             | JL745A, JL746A (TAA xcvrs): 10.07.0005                                     | <ul style="list-style-type: none"> <li>1990-4750</li> <li>1990-4793</li> </ul> JL745A(TAA):                                                                                                                                                                                                                                                                                                                  |
|                               |                                                                                                                                                             | For JL687A module: J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: 10.04.2000 | <ul style="list-style-type: none"> <li>1990-4395</li> <li>1990-4762</li> <li>1990-4802</li> <li>1990-4891</li> </ul> J4859C/J4859D:                                                                                                                                                                                                                                                                          |
|                               |                                                                                                                                                             | JL745A, JL746A (TAA xcvrs): 10.07.0005                                     | <ul style="list-style-type: none"> <li>1990-4363</li> </ul> J4860C/J4860D:                                                                                                                                                                                                                                                                                                                                   |
|                               |                                                                                                                                                             |                                                                            | <p>JL687A 32p 25G module requires configuration of interface groups (groups of 4 ports) to enable use of 1G or 10G transceivers or DACs in the SFP28 ports (Interface Groups default to 25G speed). See the Hardware Guides for details.</p> <p>JL687A: 1G optics at the opposite end of the link must not enable auto-negotiation and operate in full duplex mode (does not apply to the JL363A module)</p> |
| 9300 Switch Series            | Not supported                                                                                                                                               |                                                                            | 1G products are not supported on the 9300 Switch Series                                                                                                                                                                                                                                                                                                                                                      |
| Aruba 10000 Switch Series     | R8S96A displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>R8P13A - 48Y6C FB bundle</li> <li>R8P14A - 48Y6C BF bundle</li> </ul> | J4858D, J4859D, J4860D: 10.10.0002<br><br>JL745A, JL746A (TAA): 10.10.0002 | <p>The 10000 series requires configuration of interface groups (groups of 4 ports) to enable the use of 1G or 10G transceivers / DACs in the SFP28 ports (Set the speed to 25g for the default). See the Hardware Guides for details.</p> <p>1G optics at the opposite end of the link must NOT enable auto negotiation and operate in full duplex mode.</p>                                                 |

## Gigabit SFP copper transceiver modules



## Models, specifications, and compatibility

The use of Gigabit SFP copper transceiver modules in a switch with only SFP or SFP+ ports, provides IEEE 802.3ab compliance.

| Product name (SKU)                                                                                                                                                                                                                        | Transmission distance | Data rate                                             | Cable type       | Connector type |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------|------------------|----------------|
| HPE X121 1G SFP RJ45 T Transceiver (J8177C)(*EOS)<br>Aruba 1G SFP RJ45 T 100m Cat5e xcvr<br>Aruba 1G SFP RJ45 T 100m Cat5e TAA xcvr (JL747A)(*EOS)<br>HPE ANW 1G SFP RJ45 100m XCVR (J8177E)<br>HPE ANW 1G SFP RJ45 100m TAA XCVR(JL747B) | 100 m (328.08 ft)     | 1G<br>100Mbps (For certain products. See next table.) | Cat5e<br>UTP/STP | RJ45           |

### Compatibility for SFP copper transceiver modules

The specifications for Revision D transceiver products are the same as the specified Revision A, B, and C SKUs.

| SFP (1G)<br>copper<br>capable<br>product<br>name |  | Switch SKU #s                                                                                  | Minimum software required | Comments                    |
|--------------------------------------------------|--|------------------------------------------------------------------------------------------------|---------------------------|-----------------------------|
| 2510 switch                                      |  | J9020A                                                                                         | All                       |                             |
| 2530 Switch Series(*EOS)                         |  | J9782A, J9781A, J9776A, J9775A, J9779A, J9778A, J9773A, J9772A, J9856A, J9855A, J9854A, J9853A | All                       |                             |
| 2540 Switch Series(*EOS)                         |  | JL354A, JL355A, JL356A, JL357A                                                                 | All                       |                             |
| 2610 Switch Series(*EOS)                         |  | J9085A, J9086A, J9087A, J9088A, J9089A                                                         | All                       |                             |
| 2620 Switch Series (*EOS)                        |  | J9623A, J9624A, J9625A, J9626A, J9627A                                                         | All                       |                             |
| 2920 Switch Series(*EOS)                         |  | J9731A                                                                                         | All                       | J8177C/J8177D/J8177E is not |

| SFP (1G)<br>copper<br>capable<br>product<br>name | Switch SKU #s                                                                                                  | Minimum software<br>required                                                    | Comments                                                                                                                                                                                                                                                                 |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                  |                                                                                                                |                                                                                 | supported for use in the Dual-Personality ports of the 2920 Series Switches. For use ONLY in the J9731A module.                                                                                                                                                          |
| <b>2930F Switch Series</b>                       | JL253A, JL254A, JL255A, JL256A, JL258A, JL259A, JL260A, JL261A, JL262A, JL263A, JL264A, JL557A, JL558A, JL559A | J8177C/J8177D/J8177E:<br>All Software<br>JL747A<br>(TAA xcvs):<br>WC 16.10.0012 | J8177C/J8177D/J8177E support both 100Mbps and 1G operation in this Switch Series.                                                                                                                                                                                        |
| <b>2930M Switch Series</b>                       | JL083A                                                                                                         | J8177C/J8177D/J8177E:<br>All Software<br>JL747A<br>(TAA xcvs):<br>WC 16.10.0012 | J8177C/J8177D/J8177E are not supported for use in the Dual-Personality ports of the 2930M Series Switches.<br>For use in an installed JL083A Aruba 3810M/2930M 4SFP+ MACsec Module.<br>J8177C/J8177D/J8177E support both 100Mbps and 1G operation in this Switch Series. |
| <b>3800 Switch Series(*EOS)</b>                  | J9573A, J9574A, J9575A, J9576A, J9584A                                                                         | All                                                                             |                                                                                                                                                                                                                                                                          |
| <b>3810M Switch Series</b>                       | JL075A, JL083A                                                                                                 | J8177C/J8177D/J8177E:<br>All Software<br>JL747A<br>(TAA xcvs):<br>KB 16.10.0012 | For use in the SFP+ ports of the JL075A 3810M switch. Also used in any 3810M switch with a JL083A Aruba 3810M/2930M 4SFP+ MACsec Module installed.<br>J8177C/J8177D/J8177E support both 100Mbps and 1G operation in this Switch Series.                                  |
| <b>4100gl Switch Series(*EOS)</b>                | J4893A, J4908A                                                                                                 | G.07.69                                                                         |                                                                                                                                                                                                                                                                          |
| <b>4100i Switch Series</b>                       | JL817A, JL818A                                                                                                 | Not supported                                                                   |                                                                                                                                                                                                                                                                          |
| <b>4200vl Switch Series(*EOS)</b>                | J8776A, J9033A                                                                                                 | All                                                                             |                                                                                                                                                                                                                                                                          |
| <b>5300xl Switch Series(*EOS)</b>                | J4878A/B                                                                                                       | E.09.22                                                                         |                                                                                                                                                                                                                                                                          |
| <b>5400zl Switch Series(*EOS)</b>                | J8705A, J8706A                                                                                                 | All                                                                             |                                                                                                                                                                                                                                                                          |
|                                                  | J9308A                                                                                                         | K.14.34                                                                         |                                                                                                                                                                                                                                                                          |
|                                                  | J9537A, J9549A, J9535A, J9637A                                                                                 | K.15.02.0004                                                                    |                                                                                                                                                                                                                                                                          |

| <b>SFP (1G)<br/>copper<br/>capable<br/>product<br/>name</b> | <b>Switch SKU #s</b>                                               | <b>Minimum software<br/>required</b>                                              | <b>Comments</b>                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>5400R Switch Series</b>                                  | J9537A, J9549A, J9535A, J9637A                                     | J8177C/J8177D/J8177E:<br>All Software<br>JL747A:<br>KB 16.10.0012                 | J8177C/J8177D/J8177E support both 100Mbps and 1G operation in this Switch Series.                                                                                                                                                                                                                                                                                                                                                                             |
|                                                             | J9988A, J9989A, J9990A, J9993A                                     | KB.15.17<br>JL747A<br>(TAA xcvrs):<br>KB 16.10.0012                               | J8177C/J8177D/J8177E support both 100Mbps and 1G operation in this Switch Series.                                                                                                                                                                                                                                                                                                                                                                             |
| <b>5420 Switch Series</b>                                   | S0U63A/S0U73A(TAA),<br>S0U68A/S0U78A (TAA),<br>S0U67A/S0U77A (TAA) | J8177D/J8177E, JL747A<br>(TAA): 10.15.0001                                        | <p>100Mbps speed is NOT supported for the J8177D/J8177E/JL747A when used in the 5420 Series.<br/>J8177D/J8177E/JL747A does not support link-level flow control.</p> <p>Only the following part numbers are supported:<br/>J8177C/J8177D/J8177E:</p> <ul style="list-style-type: none"> <li>■ 1990-3816</li> <li>■ 1990-4606</li> <li>■ 1990-4640</li> </ul> <p>JL747A:</p> <ul style="list-style-type: none"> <li>■ 1990-4640</li> <li>■ 1990-3816</li> </ul> |
| <b>Aruba 6000 Switch Series</b>                             | All models                                                         | J8177C/J8177D/J8177E:<br>10.08.0001<br>JL747A (TAA):<br>10.14.0001                | <p>100Mbps speed is not supported for the J8177D/J8177E when used in the SFP port on the 6000 series.<br/>J8177D/J8177E does not support link-level flow control on 6000.</p> <p>Only the following part numbers are supported:<br/>J8177C/J8177D/J8177E:</p> <ul style="list-style-type: none"> <li>■ 1990-3816</li> <li>■ 1990-4606</li> <li>■ 1990-4640</li> </ul>                                                                                         |
| <b>Aruba 6100 Switch Series</b>                             | All models                                                         | J8177C/J8177D/J8177E:<br>10.06.0001<br>JL747A (TAA): 10.06.0130<br>and 10.07.0010 | <p>100Mbps speed is NOT supported for the J8177D/J8177E/JL747A when used in SFP+ on the 6100 Series.<br/>J8177D/J8177E/JL747A does not support link-level flow control on 6100.</p> <p>Only the following part numbers are supported:<br/>J8177C/J8177D/J8177E:</p> <ul style="list-style-type: none"> <li>■ 1990-3816</li> <li>■ 1990-4606</li> <li>■ 1990-4640</li> </ul> <p>JL747A:</p>                                                                    |

| SFP (1G)<br>copper<br>capable<br>product<br>name | Switch SKU #s                                                 | Minimum software<br>required                                                      | Comments                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                  |                                                               |                                                                                   | <ul style="list-style-type: none"> <li>1990-4640</li> <li>1990-3816</li> </ul>                                                                                                                                                                                                                                                                               |
| <b>6120 Blade Switch Series</b><br>(*EOS)        | 498358-B21, 516733-B21                                        | All                                                                               |                                                                                                                                                                                                                                                                                                                                                              |
| 6200yl-24G-mGBIC switch<br>(*EOS)                | J8992A                                                        | All                                                                               |                                                                                                                                                                                                                                                                                                                                                              |
| <b>Aruba 6200 Switch Series</b>                  | All models<br>Only 1G speed supported<br>See Comments         | J8177C/J8177D/J8177E:<br>10.04.1000<br>JL747A (TAA): 10.06.0130<br>and 10.07.0010 | <p>100Mbps speed is NOT supported for the J8177D/J8177E/JL747A when used in SFP on the 6200 Series. J8177D/J8177E/JL747A does not support link-level flow control on 6200. Only the following part numbers are supported:</p> <p>J8177C/J8177D/J8177E:</p> <ul style="list-style-type: none"> <li>1990-3816</li> <li>1990-4606</li> <li>1990-4640</li> </ul> |
| <b>Aruba 6300 Switch Series</b>                  | All models M and F<br>Only 1G speed supported<br>See Comments | J8177C/J8177D/J8177E:<br>10.04.0001<br>JL747A (TAA):<br>10.07.0005                | 100Mbps speed is NOT supported for the J8177D/J8177E or JL747A when used in any SFP56 port on the 6300 Series, or SFP+ port of JL658A or S3L77A (6300L).                                                                                                                                                                                                     |
|                                                  | R8S89A, R8S90A                                                | J8177C/J8177D/J8177E,<br>JL747A (TAA):<br>Not supported                           | J8177D/J8177E or JL747A does not support link-level flow control on 6300                                                                                                                                                                                                                                                                                     |
|                                                  | R8S91A, R8S92A                                                | J8177C/J8177D/J8177E:<br>10.10.0002<br>JL747A (TAA):<br>10.07.0005                | <p>Only the following part numbers are supported:</p> <p>J8177C/J8177D/J8177E:</p> <ul style="list-style-type: none"> <li>1990-3816</li> <li>1990-4606</li> <li>1990-4640</li> </ul>                                                                                                                                                                         |
|                                                  | S0F99A, S0G00A-S0G06A (TAA)                                   | J8177C/J8177D/J8177E:<br>10.10.0002<br>JL747A (TAA):<br>10.07.0005                | <p>JL747A:</p> <ul style="list-style-type: none"> <li>1990-3816</li> <li>1990-4640</li> </ul>                                                                                                                                                                                                                                                                |
|                                                  | S0E91A, S0X44A (100G models)                                  | J8177C/J8177D/J8177E,<br>JL747A (TAA):<br>10.14.0001                              | <p>R8S91A: ports 51-52<br/>R8S92A: ports 1-24</p>                                                                                                                                                                                                                                                                                                            |
|                                                  | S4P42A, S4P43A, S4P44A                                        | J8177C/J8177D/J8177E,<br>JL747A (TAA):<br>10.16.1006                              | <p>Support is extended to respective TAA SKUs.</p> <p>Not supported on S4P41A</p>                                                                                                                                                                                                                                                                            |
|                                                  |                                                               |                                                                                   |                                                                                                                                                                                                                                                                                                                                                              |

| SFP (1G)<br>copper<br>capable<br>product<br>name | Switch SKU #s                                                                   | Minimum software<br>required                                       | Comments                                                                                                                                                                                                                                                                            |
|--------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 6300L<br/>Switch Series</b>             | Only S3L77A ports 51-52                                                         | J8177C/J8177D/J8177E,<br>JL747A (TAA):<br>10.14.0001               | S3L77A: ports 51-52                                                                                                                                                                                                                                                                 |
| <b>Aruba 6400<br/>Switch Series</b>              | R0X39B(*EOS), R0X40B<br>(*EOS), R0X41A(*EOS),<br>R0X42A(*EOS), R0X43A<br>(*EOS) | J8177C/J8177D/J8177E:<br>10.04.1000<br>JL747A (TAA):<br>10.06.0001 | R0X39A/R0X40A (revision A) are no<br>longer supported for use in the 6400<br>series 100Mbps speed is NOT<br>supported for the J8177D/J8177E or<br>JL747A when used in any port (SFP+,<br>SFP28, or SFP56) on the 6400 series.                                                       |
|                                                  | R0X39B(*EOS), R0X40B<br>(*EOS), R0X41A(*EOS),<br>R0X42A(*EOS), R0X43A<br>(*EOS) | J8177C/J8177D/J8177E,<br>JL747A (TAA): 10.09.1000                  | J8177D/J8177E or JL747A do not<br>support link-level flow control on<br>6400.                                                                                                                                                                                                       |
|                                                  | R0X44A(*EOS)                                                                    | J8177C/J8177D/J8177E:<br>10.04.2000<br>JL747A (TAA):<br>10.06.0001 | Only the following part numbers are<br>supported:<br>J8177C/J8177D/J8177E:<br><ul style="list-style-type: none"> <li>■ 1990-3816</li> <li>■ 1990-4606</li> <li>■ 1990-4640</li> </ul> JL747A:<br><ul style="list-style-type: none"> <li>■ 1990-3816</li> <li>■ 1990-4640</li> </ul> |
|                                                  | R0X44C                                                                          | J8177C/J8177D/J8177E,<br>JL747A (TAA): 10.09.1000                  | R0X44A/R0X44C auto-detects the<br>inserted<br>type of transceiver; it does NOT<br>require<br>any interface groups like the 8325.                                                                                                                                                    |
|                                                  | S1T83A (24p SR10 4p<br>100G)                                                    | J8177C/J8177D/J8177E,<br>JL747A (TAA): 10.13.1000                  |                                                                                                                                                                                                                                                                                     |
|                                                  | S0E48A (32p 25G 4p<br>100G)                                                     | 1G not supported                                                   |                                                                                                                                                                                                                                                                                     |
| <b>Aruba 8100<br/>Switch Series</b>              | All models                                                                      | J8177C/J8177D/J8177E,<br>JL747A (TAA): 10.12.0001                  | 100Mbps speed is NOT supported for<br>the J8177D/J8177E or JL747A on the<br>8100 series.                                                                                                                                                                                            |
| <b>8200zl Switch<br/>Series(*EOS)</b>            | J8705A, J8706A                                                                  | All                                                                |                                                                                                                                                                                                                                                                                     |
|                                                  | J9308A                                                                          | K.14.34                                                            |                                                                                                                                                                                                                                                                                     |
|                                                  | J9537A, J9549A, J9535A,<br>J9637A                                               | K.15.02.0004                                                       |                                                                                                                                                                                                                                                                                     |

| SFP (1G)<br>copper<br>capable<br>product<br>name                           | Switch SKU #s                                                                                                                                                                                                             | Minimum software<br>required                                       | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 8320<br/>48p 10G<br/>SFP/SFP+ and<br/>6p 40G QSFP+<br/>models</b> | JL479A                                                                                                                                                                                                                    | J8177C/J8177D/J8177E,<br>JL747A (TAA): 10.06.0001                  | 100Mbps speed is NOT supported for the J8177D/J8177E or JL474A on the 8320 series.<br>J8177D/J8177E/JL747A does not support link-level flow control on 8320.<br>Only the following part numbers are supported:<br>J8177C/J8177D/J8177E:<br><ul style="list-style-type: none"> <li>1990-3816</li> <li>1990-4606</li> <li>1990-4640</li> </ul> JL747A:<br><ul style="list-style-type: none"> <li>1990-3816</li> <li>1990-4640</li> </ul>                                                                                                                                                                                                                                                                |
| <b>Aruba 8325<br/>Switch Series</b>                                        | JL635A displayed by CLI<br>( <b>show system</b> ) <ul style="list-style-type: none"> <li>JL624A - Port-to-Power model (FB)</li> <li>JL625A - Power-to-Port model (BF)</li> </ul>                                          | J8177C/J8177D/J8177E:<br>10.03.0030<br>JL747A (TAA):<br>10.07.0005 | 100Mbps speed is NOT supported for the J8177D/J8177E or JL474A or JL747A on the 8325 series.<br>J8177D/J8177E or JL474A does not support link-level flow control on 8325.<br>Only the following part numbers are supported:<br>J8177C/J8177D/J8177E:<br><ul style="list-style-type: none"> <li>1990-3816</li> <li>1990-4606</li> <li>1990-4640</li> </ul> JL747A part numbers:<br><ul style="list-style-type: none"> <li>1990-3816</li> <li>1990-4640</li> </ul> RJ45 transceivers are only supported for use in the top 2 rows of ports (max of 32 per switch).<br>J8177C/D or JL474A will have a delay (~15 secs) before link up or down is properly displayed when a cable is inserted or removed. |
| <b>Aruba 8325P<br/>Switch Series</b>                                       | 1G products not supported, cannot be enabled through a QSA28                                                                                                                                                              |                                                                    | The 8325 requires configuration of interface groups (groups of 12 ports) to enable the use of 1G or 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed).<br>See the Hardware Guides for details.                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Aruba 8325H<br/>Switch Series</b>                                       | TAA/Non-TAA: <ul style="list-style-type: none"> <li>S2T42A/S4B20A - 18Y4C model (FB)</li> <li>S2T46A/S4B21A - 18Y4C model (BF)</li> <li>S2T47A/S4B22A - 16C model (FB)</li> <li>S2T48A/S4B23A - 16C model (FB)</li> </ul> | J8177E, JL747A (TAA):<br>10.15.1000                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Aruba 8360</b>                                                          | JL717A/JL717C (v2)                                                                                                                                                                                                        | J8177C/J8177D/J8177E:                                              | J8177C/D or JL747A can only operate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

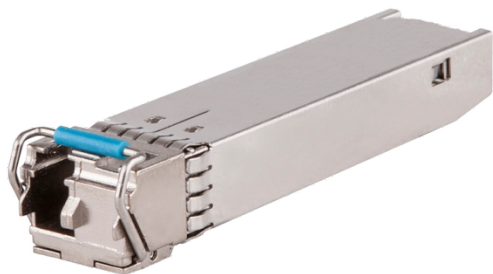
| SFP (1G)<br>copper<br>capable<br>product<br>name | Switch SKU #s                                                                                                                                                                                                | Minimum software<br>required                                                                                  | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>32Y4C models</b>                              | displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>JL700A/JL700C(v2)<br/>Port-to-Power model</li> <li>JL701A/JL701C(v2)<br/>Power-to-Port model</li> </ul>                       | 10.09.0001<br>JL747A (TAA): 10.09.0001<br><br>J8177C/J8177D/J8177E,<br>JL747A only supported on<br>ports 5-32 | at 1G in the 8360 series 32Y4C models.<br>J8177C/D or JL747A does not support link-level flow control on 8360.<br>Only the following part numbers are supported: J8177C/J8177D/J8177E: <ul style="list-style-type: none"> <li>1990-3816</li> <li>1990-4606</li> <li>1990-4640</li> </ul> JL747A part numbers: <ul style="list-style-type: none"> <li>1990-3816</li> <li>1990-4640</li> </ul><br>The 8360 32Y4C model requires configuration of interface groups only for ports 1-4 (as group number 1) to enable the use of 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed).<br><br>Ports 1-4 on the 8360 48Y6C and 32Y4C models (both v1 and v2) do not support 1G transceivers unless upgraded to 10.14 or later.<br><br>The v2 32Y4C models support MACsec on ports 1-4 only at 10G/25G speeds (50G speed NOT available for ports 2 and 4)<br>All other ports can individually auto-detect the speed of the inserted transceiver.<br>See the Hardware Guides for details. |
| <b>Aruba 8360<br/>16Y2C models</b>               | JL718A/JL718C (v2)<br>displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>JL702A/JL702C(v2)<br/>Port-to-Power model</li> <li>JL703A/JL703C(v2)<br/>Power-to-Port model</li> </ul> | J8177C/J8177D/J8177E:<br>10.09.0001<br><br>JL747A (TAA):<br>10.09.0001<br><br>Only supported on ports<br>1-16 | J8177C/D or JL747A can only operate at 1G in the 8360 series 16Y2C models.<br>J8177C/D or JL747A do not support link-level flow control on 8360.<br>Only the following part numbers are supported: J8177C/J8177D/J8177E: <ul style="list-style-type: none"> <li>1990-3816</li> <li>1990-4606</li> <li>1990-4640</li> </ul> JL747A part numbers: <ul style="list-style-type: none"> <li>1990-3816</li> <li>1990-4640</li> </ul> All ports can individually auto-detect the speed of the inserted transceiver.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| SFP (1G)<br>copper<br>capable<br>product<br>name | Switch SKU #s                                                                                                                                                                                                    | Minimum software<br>required                                                                                                                                    | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 8360<br/>48Y6C models</b>               | JL719C displayed by CLI ( <b>show system</b> ) <ul style="list-style-type: none"> <li>JL704C(v2) Port-to-Power model (FB)</li> <li>JL705C(v2) Power-to-Port model (BF)</li> </ul>                                | J8177C/J8177D/J8177E:<br>10.06.0001<br><br>JL747A (TAA):<br>10.07.0005<br><br>Only supported on ports<br>5-48                                                   | J8177D/J8177E or JL747A 10.14.0001<br>code added support for 100Mbps<br>(full duplex only) using the <b>speed</b><br>command.<br><br>1G in 8360 series 48Y6C models (only<br>on ports 5-48 due to MACsec ports 1-<br>4).<br><br>J8177C/D or JL747A do not support<br>link-level flow control on 8360.<br>Only the following 4x4 part numbers<br>are supported:<br>J8177C/J8177D/J8177E: <ul style="list-style-type: none"> <li>1990-3816</li> <li>1990-4606</li> <li>1990-4640</li> </ul> JL747A 4x4 part numbers: <ul style="list-style-type: none"> <li>1990-3816</li> <li>1990-4640</li> </ul> All ports can individually autodetect<br>the<br>speed of the inserted transceiver. |
| <b>Aruba 8360<br/>48XT4C<br/>models</b>          | JL720A/JL720C (v2)<br>displayed by CLI ( <b>show<br/>system</b> ) <ul style="list-style-type: none"> <li>JL706A/JL706C(v2)<br/>Port-to-Power model</li> <li>JL707A/JL707C(v2)<br/>Power-to-Port model</li> </ul> | J8177C/J8177D/J8177E,<br>JL747A (TAA):<br>Not supported through<br>the use of the QSA28                                                                         | No SFP+ ports available<br><br>Not supported through the use of the<br>QSA28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Aruba 8360<br/>12C models</b>                 | JL721A/JL721C(v2)<br>displayed by CLI ( <b>show<br/>system</b> ) <ul style="list-style-type: none"> <li>JL708A/JL708C(v2)<br/>Port-to-Power model</li> <li>JL709A/JL709C(v2)<br/>Power-to-Port model</li> </ul>  | J8177C/J8177D/J8177E,<br>JL747A (TAA):<br><br>Not supported through<br>the use of the QSA28                                                                     | No SFP+ ports available<br><br>Not supported through the use of the<br>QSA28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Aruba 8360<br/>24XF2C<br/>models</b>          | JL722A/JL722C(v2)<br>displayed by CLI ( <b>show<br/>system</b> ) <ul style="list-style-type: none"> <li>JL710A/JL710C(v2)<br/>Port-to-Power model</li> <li>JL711A/JL711C(v2)<br/>Power-to-Port model</li> </ul>  | J8177C/J8177D/J8177E:<br>10.06.0001<br><br>JL747A (TAA): 10.07.0005<br><br>Only supported on ports<br>1-24<br><br>Not supported through<br>the use of the QSA28 | J8177C/D or JL747A can only operate<br>at 1G in the 8360 series 24XF2C<br>models.<br>J8177C/D or JL747A do not support<br>link-level flow control on 8360.<br><br>Not supported through the use of the<br>QSA28.<br><br>Only the following part numbers are                                                                                                                                                                                                                                                                                                                                                                                                                          |

| SFP (1G)<br>copper<br>capable<br>product<br>name | Switch SKU #s                                                                                                                                                        | Minimum software<br>required                                                               | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                  |                                                                                                                                                                      |                                                                                            | <p>supported: J8177C/J8177D/J8177E:</p> <ul style="list-style-type: none"> <li>■ 1990-3816</li> <li>■ 1990-4606</li> <li>■ 1990-4640</li> </ul> <p>JL747A:</p> <ul style="list-style-type: none"> <li>■ 1990-3816</li> <li>■ 1990-4640</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Aruba 8400X<br/>modules</b>                   | JL363A<br>JL687A                                                                                                                                                     | <p>J8177C/J8177D/J8177E:<br/>10.00.0018<br/>10.04.2000</p> <p>JL474A (TAA): 10.07.0005</p> | <p>J8177C/D or JL747A can only operate at 1G in the 8400 series.<br/>J8177D/J8177E does not support link-level flow control on 8400.<br/>Only the following part numbers are supported:<br/>J8177C/J8177D/J8177E:</p> <ul style="list-style-type: none"> <li>■ 1990-3816</li> <li>■ 1990-4606</li> <li>■ 1990-4640</li> </ul> <p>JL747A:</p> <ul style="list-style-type: none"> <li>■ 1990-3816</li> <li>■ 1990-4640</li> </ul> <p>JL687A notes:<br/>The 25G module (JL687A) requires configuration of interface groups (groups of four ports) to enable use of 1G or 10G transceivers or DACs in the SFP28 ports (Interface Groups default to 25G speed).<br/>See the Hardware Guides for details.<br/>The link state of ports on the JL687A module will always show UP if a transceiver is inserted and the interface is enabled, even if the cable is disconnected</p> |
| <b>Aruba 9300/9300S<br/>Switch Series</b>        | All                                                                                                                                                                  | Not supported through the use of the QSA28                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Aruba 10000<br/>Switch Series</b>             | <p>R8S96A displayed by CLI (<b>show system</b>)</p> <ul style="list-style-type: none"> <li>■ R8P13A - 48Y6C FB bundle</li> <li>■ R8P14A - 48Y6C BF bundle</li> </ul> | <p>J8177C/J8177D/J8177E,<br/>JL474A (TAA):<br/>10.10.0002</p>                              | <p>Only the J8177D/J8177E is supported (J8177C not supported).<br/>J8177D/J8177E or JL747A can only operate at 1G in the 10000 series.<br/>The 10000 series requires configuration of interface groups (groups of 4 ports) to enable the use of 1G or 10G transceivers/DACs in the SFP28 ports (set the speed to 25g for the default). See the <i>Hardware Guides</i> for details.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

# Gigabit BiDi optical transceiver modules

Gigabit BiDi transceivers are no longer offered by Aruba. The information presented here is for compatibility use.



## Models, specifications, and compatibility

Gigabit BiDi optical transceiver modules provide a transmission rate of 1,250 Mbps and use LC connectors.



- The J9142B/J9143B were End of Sale in April 2016 and are no longer available. Older J9142B/J9143B transceivers may work in switches using the "allow-unsupported-transceiver" feature. Consult your Aruba Sales team for alternative solutions. The information presented here is for compatibility use.
- BiDi optical transceiver modules use different nominal wavelengths in transmit and receive directions to implement bidirectional transmission of signals over the same fiber.
- Use the HPE X122 1G SFP LC BX 10-D Transceiver (J9142B) and HPE X122 1G SFP LC BX 10-U Transceiver (J9143B) in pairs: a J9142B (where D = downstream) at one end of the connection and a J9143B (where U = upstream) at the other.

| Product name (SKU)                                | DOM - digital optical monitoring (4x4 part #) | Nominal wavelength (nm) & encoding type |                  | Fiber mode | Fiber diameter (µm) | Transmission distance |
|---------------------------------------------------|-----------------------------------------------|-----------------------------------------|------------------|------------|---------------------|-----------------------|
|                                                   |                                               | Transmit end (TX)                       | Receive end (RX) |            |                     |                       |
| HPE X122 1G SFP LC BX-D Transceiver (J9142B)(EOS) | No                                            | 1490<br>1x1G NRZ                        | 1310<br>1x1G NRZ | SMF        | 9/125               | 10 km (6.21 miles)    |
| HPE X122 1G SFP LC BX-U Transceiver (J9143B)(EOS) | No                                            | 1310<br>1x1G NRZ                        | 1490<br>1x1G NRZ |            |                     |                       |

| Product name (SKU)                                                                           | Optical parameters (dBm) |               |
|----------------------------------------------------------------------------------------------|--------------------------|---------------|
|                                                                                              | Transmit power           | Receive power |
| HPE X122 1G SFP LC BX-D Transceiver (J9142B)<br>HPE X122 1G SFP LC BX-U Transceiver (J9143B) | -9 to -3                 | -18.7 to -3   |

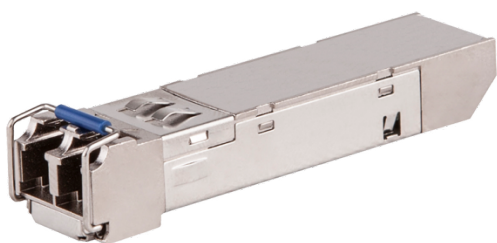
| SFP 1G BiDi capable product name | SKU                                                                                                                            | Minimum software required (J9142B, J9143B) | Comments                                                      |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------------------------------|
| 2510-24 Switch                   | J9019A/B                                                                                                                       | Q.11.16                                    |                                                               |
| 2510-48 Switch                   | J9020A                                                                                                                         | U.11.10                                    |                                                               |
| 2510G-24 Switch                  | J9279A                                                                                                                         | Y.11.03                                    |                                                               |
| 2510G-48 Switch                  | J9280A                                                                                                                         | Y.11.03                                    |                                                               |
| 2520 Switch Series               | J9137A, J9138A, J9298A, J9299A                                                                                                 | All                                        |                                                               |
| 2530 Switch Series               | J9772A, J9773A, J9774A, J9775A, J9776A, J9777A, J9778A, J9779A, J9780A, J9781A, J9782A, J9783A, J9853A, J9854A, J9855A, J9856A | All                                        |                                                               |
| 2540 Switch Series               | JL354A, JL355A, JL356A, JL357A                                                                                                 | n/a                                        | 1G BX is not officially supported for use in the 2540 series. |
| 2600 Switch Series               | J4899A/B/C, 4900A/B/C, J8164A, J8165A, J8762A                                                                                  | H.10.72                                    |                                                               |
| 2610 Switch Series               | J9085A, J9086A, J9087A, J9088A, J9089A                                                                                         | R.11.22                                    |                                                               |
| 2615-8-PoE Switch                | J9565A                                                                                                                         | All                                        |                                                               |
| 2620 Switch Series               | J9623A, J9624A, J9625A, J9626A, J9627A                                                                                         | All                                        |                                                               |
| 2800 Switch Series               | J4903A, J4904A                                                                                                                 | i.10.69                                    |                                                               |
| 2810 Switch Series               | J9021A, J9022A                                                                                                                 | N.11.14                                    |                                                               |
| 2900 Switch Series               | J9049A, J9050A                                                                                                                 | T.13.45                                    |                                                               |
| 2910al Switch Series             | J9145A, J9146A,                                                                                                                | All                                        |                                                               |

| <b>SFP 1G BiDi capable product name</b> | <b>SKU</b>                                                                             | <b>Minimum software required (J9142B, J9143B)</b>                         | <b>Comments</b>                                                                                                                                                                                                                                                            |
|-----------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                         | J9147A, J9148A                                                                         |                                                                           |                                                                                                                                                                                                                                                                            |
| 2915-8G-PoE Switch                      | J9562A                                                                                 | All                                                                       |                                                                                                                                                                                                                                                                            |
| 2920 Series Switches                    | J9726A, J9727A, J9728A, J9729A, J9836A                                                 | All                                                                       |                                                                                                                                                                                                                                                                            |
| 2930F Series Switches                   | JL253A, JL254A, JL255A, JL256A, JL258A, JL259A, JL260A, JL261A, JL262A, JL263A, JL264A | Supported for use with 16.07.0003 software. Enabled only through UT-Mode. | As of April 2016, the J9142B and J9143B 1G BX transceivers have been End of Sale. Contact your Aruba representative for alternative solutions.                                                                                                                             |
| 2930M Switch Series                     | JL319A, JL320A, JL321A, JL322A, JL323A, JL324A, JL083A                                 | Supported for use with 16.07.0003 software. Enabled only through UT-Mode. | As of April 2016, the J9142B and J9143B 1G BX transceivers have been End of Sale. Contact your Aruba representative for alternative solutions.                                                                                                                             |
| 3500 Series Switches                    | J9470A, J9471A, J9472A, J9473A                                                         | K.14.31                                                                   |                                                                                                                                                                                                                                                                            |
| 3500yl Switch Series                    | J8692A, J8693A                                                                         | K.14.31                                                                   |                                                                                                                                                                                                                                                                            |
|                                         | J9310A, J9311A                                                                         | K.14.50                                                                   |                                                                                                                                                                                                                                                                            |
| 3800 Switch Series                      | J9573A, J9574A, J9575A, J9576A, J9584A                                                 | All                                                                       |                                                                                                                                                                                                                                                                            |
| 3810M Switch Series                     | JL075A, JL083A                                                                         | All                                                                       | As of April 2016, the J9142B and J9143B 1G BX transceivers have been End of Sale. Contact your Aruba representative for alternative solutions.<br>For use in the JL075A 3810M switch or in any 3810M switch with a JL083A Aruba 3810M/2930M 4SFP+ MACsec Module installed. |
| 4200vl Switch Series                    | J8776A, J9033A                                                                         | L.11.16                                                                   |                                                                                                                                                                                                                                                                            |
| 5300xl Switch Series                    | J4878A/B, J4907A                                                                       | E.11.08                                                                   |                                                                                                                                                                                                                                                                            |

| <b>SFP 1G BiDi capable product name</b> | <b>SKU</b>                                             | <b>Minimum software required (J9142B, J9143B)</b> | <b>Comments</b>                                                                                                                                |
|-----------------------------------------|--------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 5400zl Switch Series                    | J8705A, J8706A                                         | K.13.45                                           |                                                                                                                                                |
|                                         | J9308A                                                 | K.14.34                                           |                                                                                                                                                |
|                                         | J9537A, J9549A, J9535A, J9637A, J9538A, J9548A, J9536A | K.15.02.0004                                      |                                                                                                                                                |
| 5400R Switch Series                     | J9537A, J9549A, J9535A, J9637A, J9538A, J9548A, J9536A | All                                               | As of April 2016, the J9142B and J9143B 1G BX transceivers have been End of Sale. Contact your Aruba representative for alternative solutions. |
|                                         | J9988A, J9989A, J9990A, J9993A                         | KB.15.17                                          |                                                                                                                                                |
| Aruba 5420 Switch Series                | All                                                    | n/a                                               | 1G BX transceivers are not officially supported.                                                                                               |
| Aruba 6000 Switch Series                | All                                                    | n/a                                               | 1G BX transceivers are not officially supported.                                                                                               |
| Aruba 6100 Switch Series                | All                                                    | n/a                                               | 1G BX transceivers are not officially supported.                                                                                               |
| 6200yl-24G-mGBIC Switch                 | J8992A                                                 | K.13.45                                           |                                                                                                                                                |
| Aruba 6200 Switch Series                | All                                                    | n/a                                               | 1G BX transceivers are not officially supported.                                                                                               |
| Aruba 6300 Switch Series                | All                                                    | n/a                                               | 1G BX transceivers are not officially supported.                                                                                               |
| Aruba 6400 Switch Series                | All                                                    | n/a                                               | 1G BX transceivers are not officially supported.                                                                                               |
| 6600 Switch Series                      | J9263A, J9264A                                         | K.14.03                                           |                                                                                                                                                |
|                                         | J9451A                                                 | K.14.24                                           |                                                                                                                                                |
| 8200zl Switch Series                    | J8705A, J8706A                                         | K.13.45                                           |                                                                                                                                                |
|                                         | J9308A                                                 | K.14.34                                           |                                                                                                                                                |
|                                         | J9537A, J9549A, J9535A, J9637A, J9538A, J9548A, J9536A | K.15.02.0004                                      |                                                                                                                                                |
| Aruba 8320 Switch Series                | JL479A, JL579A                                         | n/a                                               | 1G BX transceivers are not officially supported.                                                                                               |

| <b>SFP 1G BiDi capable product name</b> | <b>SKU</b> | <b>Minimum software required (J9142B, J9143B)</b> | <b>Comments</b>                                  |
|-----------------------------------------|------------|---------------------------------------------------|--------------------------------------------------|
| Aruba 8325 Switch Series                | All        | n/a                                               | 1G BX transceivers are not officially supported. |
| Aruba 8360 Switch Series                | All        | n/a                                               | 1G BX transceivers are not officially supported. |
| Aruba 8400X Modules                     | All        | n/a                                               | 1G BX transceivers are not officially supported. |
| Aruba 10000 Switch Series               | All        | n/a                                               | 1G BX transceivers are not officially supported. |

# 100-Megabit SFP optical transceiver modules



## Models, specifications, and compatibility

100 Megabit SFP optical transceiver modules use LC connectors. The 100FX transceivers enabled by Aruba Switches use an SGMII (Serial Gigabit MII) interface with 8B/10B encoding.

Other 100FX transceivers that use 4B/5B encoding cannot be enabled (even with UT-mode).

The specifications for Revision D transceiver products are the same as the specified Revision A, B, and C SKUs. J9054A, J9054B and J9054C are End of Life, but are listed here for compatibility (usually listed against switch series that may have also been End of Life).

| Product name (SKU)                                 | DOM - digital optical monitoring (4x4 part #) | Nominal wl (nm) & encoding type | Fiber mode | Fiber diameter (µm) | Transmission distance |
|----------------------------------------------------|-----------------------------------------------|---------------------------------|------------|---------------------|-----------------------|
| HPE X111 100M SFP LC FX Transceiver (J9054C) (EOS) | Yes (1990-4483 EOL, 1990-4360, 5400-3917)     | Single lane, 1310 1x100Mbps NRZ | MMF        | 50/125 62.5/125     | 2km (1.24 miles)      |
| Aruba 100M SFP LC FX 2km MMF xcvr (J9054D)         |                                               |                                 |            |                     |                       |

| Product name (SKU)                                                                         | Optical parameters (dBm) |               |
|--------------------------------------------------------------------------------------------|--------------------------|---------------|
|                                                                                            | Transmit power           | Receive power |
| HPE X111 100M SFP LC FX Transceiver (J9054C)<br>Aruba 100M SFP LC FX 2km MMF xcvr (J9054D) | -19 to -14               | -30 to -14    |

| SFP (100Mbps) capable product name | Switch SKU | 100-Megabit SFP Minimum software required | Comments |
|------------------------------------|------------|-------------------------------------------|----------|
| 2510-24 Switch                     | J9019A/B   | Q.10.04                                   |          |

| <b>SFP (100Mbps)<br/>capable product<br/>name</b> | <b>Switch SKU</b>                                                                                                                             | <b>100-Megabit SFP<br/>Minimum<br/>software required</b>                                      | <b>Comments</b>                                                                                                                                                                                    |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2510-48 Switch                                    | J9020A                                                                                                                                        | All                                                                                           |                                                                                                                                                                                                    |
| <b>Aruba 2510G<br/>Switch Series</b>              | J9279A, J9280A                                                                                                                                | All                                                                                           |                                                                                                                                                                                                    |
| <b>Aruba 2520<br/>Switch Series</b>               | J9137A, J9138A                                                                                                                                | All                                                                                           |                                                                                                                                                                                                    |
| <b>Aruba 2520G<br/>Switch Series</b>              | J9298A, J9299A                                                                                                                                | J9054B: All<br>J9054C: J.14.32                                                                |                                                                                                                                                                                                    |
| <b>Aruba 2530<br/>Switch Series</b>               | J9772A, J9773A, J9774A,<br>J9775A, J9776A, J9777A,<br>J9778A, J9779A, J9780A,<br>J9781A, J9782A, J9783A,<br>J9853A, J9854A, J9855A,<br>J9856A | For J9853A, J9854A,<br>J9855A, and J9856A:<br>Not supported<br>For all other switches:<br>All | For use in the SFP ports of the 2530<br>Series Switches. (The J9853A, J9854A,<br>J9855A, and J9856A models have<br>1G/10G SFP+ ports that do not<br>support these 100Mbps transceiver<br>modules.) |
| <b>Aruba 2540<br/>Switch Series</b>               | JL354A, JL355A, JL356A,<br>JL357A                                                                                                             | All                                                                                           |                                                                                                                                                                                                    |
| <b>Aruba 2610<br/>Switch Series</b>               | J9085A, J9086A, J9087A,<br>J9088A, J9089A                                                                                                     | All                                                                                           |                                                                                                                                                                                                    |
| 2615-8-PoE Switch                                 | J9565A                                                                                                                                        | J9054B: All J9054C:<br>A.14.07                                                                |                                                                                                                                                                                                    |
| <b>Aruba 2620<br/>Switch Series</b>               | J9623A, J9624A, J9625A,<br>J9626A, J9627A                                                                                                     | All                                                                                           |                                                                                                                                                                                                    |
| <b>Aruba 2800<br/>Switch Series</b>               | J4903A, J4904A                                                                                                                                | J9054B/C 1990-3613<br>and J9054C 1990-<br>4112: i.10.30<br>J9054C 1990-4483: Not<br>supported | J9054C part number 1990-4483 is<br>not supported                                                                                                                                                   |
| <b>Aruba 2810<br/>Switch Series</b>               | J9021A, J9022A                                                                                                                                | N.10.07                                                                                       |                                                                                                                                                                                                    |
| <b>Aruba 2900<br/>Switch Series</b>               | J9049A, J9050A                                                                                                                                | T.12.01                                                                                       |                                                                                                                                                                                                    |
| <b>Aruba 2910a1<br/>Switch Series</b>             | J9145A, J9146A, J9147A,<br>J9148A                                                                                                             | All                                                                                           |                                                                                                                                                                                                    |
| 2915-8G-PoE<br>Switch                             | J9562A                                                                                                                                        | J9054B: All<br>J9054C/J9054D:<br>A.14.07                                                      |                                                                                                                                                                                                    |
| <b>Aruba 2920 Series<br/>Switches</b>             | J9726A, J9727A, J9728A,<br>J9729A, J9836A                                                                                                     | All                                                                                           | Use in the SFP ports of the 2920<br>Series Switches.<br>100FX is not supported in the SFP+<br>ports of the J9731A 2-Port 10GbE<br>SFP+ Module                                                      |
| <b>Aruba 2930F</b>                                | All models                                                                                                                                    | J9054B: is not                                                                                | The 2930F Switch Series models                                                                                                                                                                     |

| SFP (100Mbps) capable product name | Switch SKU                                     | 100-Megabit SFP Minimum software required                                                                                                                                                                                                                          | Comments                                                                                                                                                                                 |
|------------------------------------|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Switch Series</b>               |                                                | supported in the 2930F Series Switches<br>For J9054C/J9054D: All                                                                                                                                                                                                   | with 1G/10G SFP+ ports added support for this J9054C/J9054D 100FX transceiver. The J9054C/J9054D are supported in models with 1G SFP ports.                                              |
| <b>Aruba 2930M Switch Series</b>   | JL319A, JL320A, JL321A, JL322A, JL323A, JL324A | J9054B is not supported in the 2930M Series Switches.<br>For J9054C/J9054D: All                                                                                                                                                                                    | For use in SFP ports on switch and an installed JL083A Aruba 3810M/2930M 4SFP+ MACsec Module.                                                                                            |
| <b>Aruba 3500 Series Switches</b>  | J9470A, J9471A, J9472A, J9473A                 | J9054B/C 1990-3613: K.14.31<br>J9054C 1990-4112 and 1990-4483: K.15.08.0007<br>J9054D: K.15.08.0007                                                                                                                                                                |                                                                                                                                                                                          |
| <b>Aruba 3500yl Switch Series</b>  | J8692A, J8693A, J9310A, J9311A                 | For J8692A, J8693A: K.12.01 (for J9054B/C 1990-3613); K.15.08.0007 (for J9054C 1990-4112 and 1990-4483, and J9054D 1990-4483 and 1990-4360)<br>For J9310A, J9311A: K.14.50 (for J9054B/C 1990-3613); K.15.08.0007 (for J9054C 1990-4112 and 1990-4483, and J9054D) |                                                                                                                                                                                          |
| <b>Aruba 3800 Switch Series</b>    | J9573A, J9574A, J9575A, J9576A, J9584A         | For J9573A, J9574A, J9575A, J9576A: Not supported.<br>For J9584A: All                                                                                                                                                                                              | Not supported for use in the following 3800 models: J9573A, J9574A, J9575A, and J9576A. The SFP+ ports do not support 100M operation.<br>Supported in the J8584A 3800-24SFP-2SFP+ Switch |
| <b>Aruba 3810M Switch Series</b>   | JL071A, JL072A, JL073A, JL074A, JL076A         | All                                                                                                                                                                                                                                                                | For use in an installed JL083A Aruba 3810M/2930M 4SFP+ MACsec Module.                                                                                                                    |
|                                    | JL075A                                         | All                                                                                                                                                                                                                                                                | For use in the JL075A SFP+ ports. Also used in an installed JL083A Aruba 3810M/2930M 4SFP+ MACsec Module.                                                                                |
| <b>Aruba 4100gl Switch Series</b>  | J4865A, J4887A                                 | n/a                                                                                                                                                                                                                                                                | J9054C/J9054D 100FX is not supported.                                                                                                                                                    |
| <b>Aruba 4100i Switch Series</b>   | JL817A, JL818A                                 | 10.08.0001                                                                                                                                                                                                                                                         | Hi Temp warnings will trigger at lower temperatures (~50C) if                                                                                                                            |

| SFP (100Mbps) capable product name | Switch SKU                                                    | 100-Megabit SFP Minimum software required                                                                                                                                                                                                                                                                                                                                                                                                   | Comments                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    |                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                             | Commercial Temp vs Industrial Temp transceivers (~70C) are used. All Third Party transceivers are treated as Commercial Temp, regardless of capability.                                                                                                                                                                                                                     |
| <b>Aruba 4200vl Switch Series</b>  | J8770A, J8771A, J8772A/B, J8773A                              | L.10.24                                                                                                                                                                                                                                                                                                                                                                                                                                     | Supported: J9033A Switch vl 20-Port Gig-T + 4-Port SFP Module<br>Not supported: J8776A Switch vl 4-Port Mini-GBIC Module                                                                                                                                                                                                                                                    |
| <b>Aruba 5300xl Switch Series</b>  | J4819A, J4850A                                                | n/a                                                                                                                                                                                                                                                                                                                                                                                                                                         | J9054C/J9054D 100FX is not supported.                                                                                                                                                                                                                                                                                                                                       |
| <b>Aruba 5400zl Switch Series</b>  | J8697A, J8698A, J9642A, J9643A                                | For J8705A and J8706A modules: K.12.01 (for J9054B/C 1990-3613); K.15.08.0007 (for J9054C 1990-4112 and 1990-4483) J9054D: K.15.08.0007<br>For the J9308A module: K.14.34 (for J9054B/C 1990-3613); K.15.08.0007 (for J9054C 1990-4112 and 1990-4483) J9054D: K.15.08.0007<br>For J9537A, J9549A, J9535A, and J9637A modules: K.15.02.0004 (for J9054B/C 1990-3613); K.15.08.0007 (for J9054C 1990-4112 and 1990-4483) J9054D: K.15.08.0007 | J8705A Switch zl 20-Port 10/100/1000 + 4-Port Mini-GBIC Module<br>J8706A Switch zl 24-Port Mini-GBIC Module<br>J9308A 20-Port 10/100/1000 PoE+ and 4-Port SFP zl Module<br>J9537A 24-Port SFP v2 zl Module<br>J9549A 20-Port Gig-T / 4-Port SFP v2 zl Module<br>J9535A 20-Port Gig-T PoE+ / 4-Port SFP v2 zl Module<br>J9637A 12-Port Gig-T PoE+ / 12-Port SFP v2 zl Module |
| <b>Aruba 5400R Switch Series</b>   | J9821A, J9822A, J9823A, J9824A, J9825A, J9826A, J9868A        | For J9535A, J9537A, J9549A, and J9637A modules: All<br>For the J9988A, J9989A, J9990A, and J9993A modules: KB.15.17 and later                                                                                                                                                                                                                                                                                                               | J9537A 24-Port SFP v2 zl Module<br>J9549A 20-Port Gig-T / 4-Port SFP v2 zl Module<br>J9535A 20-Port Gig-T PoE+ / 4-Port SFP v2 zl Module<br>J9637A 12-Port Gig-T PoE+ / 12-Port SFP v2 zl Module<br>J9988A 24p 1GbE SFP v3 zl2 Module<br>J9989A 12p PoE+ / 12p 1GbE SFP v3 zl2 Module<br>J9990A 20p PoE+ / 4p SFP+ v3 zl2 Module<br>J9993A 8p 1G/10GbE SFP+ v3 zl2 Module   |
| <b>5420 Switch Series</b>          | S0U63A/S0U73A (TAA), S0U68A/S0U78A (TAA), S0U67A/S0U77A (TAA) | J9054D: 10.15.0001                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                             |

| SFP (100Mbps) capable product name | Switch SKU                       | 100-Megabit SFP Minimum software required                                                                      | Comments                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 6000 Switch Series</b>    | All models                       | J9054A/C (100M FX):<br>10.16.1006                                                                              |                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Aruba 6100 Switch Series</b>    | All models                       | J9054A/C (100M FX):<br>10.16.1006                                                                              |                                                                                                                                                                                                                                                                                                                                                                                  |
| 6108 Switch                        | J4902A                           | n/a                                                                                                            | 100FX is not supported                                                                                                                                                                                                                                                                                                                                                           |
| 6120 Blade Switch Series           | 498358-B21, 516733-B21           | n/a                                                                                                            | 100FX is not supported                                                                                                                                                                                                                                                                                                                                                           |
| 6200yl-24G-mGBIC Switch            | J8992A                           | K.12.01 (for J9054B/C 1990-3613);<br>K.15.08.0007 (for J9054C 1990-4112 and 1990-4483)<br>J9054D: K.15.08.0007 | For use in all 24 ports of the J8992A Switch 6200yl- 24G-mGBIC                                                                                                                                                                                                                                                                                                                   |
| <b>Aruba 6200 Switch Series</b>    | JL724A through JL728A            | J9054A/C (100M FX):<br>10.16.1006                                                                              |                                                                                                                                                                                                                                                                                                                                                                                  |
|                                    | All other 6200F and 6200M models | J9054D: 10.11.1001                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Aruba 6300 Switch Series</b>    | JL658A                           | 10.06.0120 or 10.07.0010                                                                                       | Only supported for use in SFP+ ports on JL658A/RS892A/S0G03A. 100FX is not supported for use in any SFP56 ports on other models. 100FX link level flow control: not supported.                                                                                                                                                                                                   |
|                                    | S0G03A (TAA)                     | 10.14.1000                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                  |
|                                    | R8S92A                           | 10.10.0002                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                  |
|                                    | S0E91A, S0X44A (100G models)     | Not supported through QSA28                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                  |
|                                    | S4P42A, S4P43A, S4P44A           | J9054A/C (100M FX):<br>10.16.1006                                                                              | Support is extended to respective TAA SKUs.<br><br>Not supported on S4P41A                                                                                                                                                                                                                                                                                                       |
| <b>Aruba 6300L Switch Series</b>   | All models                       | Not supported                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Aruba 6400 Switch Series</b>    | R0X43A(*EOS)                     | 10.06.0120 or 10.07.0010                                                                                       | R0X43A/R0X43C 24p SFP+ module: Only supported in ports 1-24 (SFP+), NOT supported in ports 25-28 (SFP56 ports).<br>R0X44A 48p SFP28: supported for use in ports 1-48 (SFP28 ports).<br>R0X44A/R0X44C auto-detects the inserted type of transceiver; it does NOT require any <b>interface groups</b> like the 8325.<br>100FX is NOT supported in any SFP56 port on any other 6400 |

| SFP (100Mbps) capable product name | Switch SKU                             | 100-Megabit SFP Minimum software required                                                                                                                                                                                                                                                                                                                                                                                                        | Comments                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | R0X44A(*EOS)                           | 10.06.0120 or 10.07.0010                                                                                                                                                                                                                                                                                                                                                                                                                         | module.<br>100FX does not support link-level flow control on the 6400.                                                                                                                                                                                                                                                                                                       |
|                                    | R0X44C                                 | 10.09.1000                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                              |
|                                    | S0E48A / S1T83A                        | Not supported (Hdw limitation)                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Aruba 6600 Switch Series</b>    | J9263A, J9264A, J9265A, J9451A, J9452A | For J9263A, J9264A: K.14.03 (for J9054B/C 1990-3613); K.15.08.0007 (for J9054C 1990-4112 and 1990-4483)<br>For J9451A: K.14.24 (for J9054B/C 1990-3613); K.15.08.0007 (for J9054C 1990-4112 and 1990-4483)<br>J9054D: K.15.08.0007                                                                                                                                                                                                               | For use in the SFP ports of the J9263A 6600-24G Switch, the J9264A 6600-24G-4XG Switch, and the J9451A 6600-48G Switch (The J9265A 6600-24XG Switch and J9452A 6600- 48G-4XG Switch do not have SFP ports)                                                                                                                                                                   |
| <b>8100 Switch Series</b>          | All models                             | No support for 100Mbps xcvrs                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                              |
| <b>8200zl Switch Series</b>        | J8715A/B, J9475A, J9640A, J9641A       | For J8705A and J8706A modules: All (for J9054B/C 1990-3613); K.15.08.0007 (for J9054C 1990-4112 and 1990-4483)<br>J9054D: K.15.08.0007<br>For the J9308A module: K.14.34 (for J9054B/C 1990-3613); K.15.08.0007 (for J9054C 1990-4112 and 1990-4483)<br>J9054D: K.15.08.0007<br>For J9537A, J9549A, J9535A, and J9637A modules: K.15.02.0004 (for J9054B/C 1990-3613); K.15.08.0007 (for J9054C 1990-4112 and 1990-4483)<br>J9054D: K.15.08.0007 | J8705A Switch zl 20-Port 10/100/1000 + 4-Port Mini-GBIC Module<br>J8706A Switch zl 24-Port Mini-GBIC Module<br>J9308A 20-Port 10/100/1000 PoE+ and 4-Port SFP zl Module<br>J9537A 24-Port SFP v2 zl Module<br>J9549A 20- Port Gig-T / 4-Port SFP v2 zl Module<br>J9535A 20-Port Gig-T PoE+ / 4-Port SFP v2 zl Module<br>J9637A 12-Port Gig-T PoE+ / 12-Port SFP v2 zl Module |
| <b>Aruba 8320 Switch Series</b>    | All                                    | n/a                                                                                                                                                                                                                                                                                                                                                                                                                                              | 100Mbps Transceivers are NOT supported in the 8320 series.                                                                                                                                                                                                                                                                                                                   |
| <b>Aruba 8325 Switch Series</b>    | All                                    | n/a                                                                                                                                                                                                                                                                                                                                                                                                                                              | 100Mbps Transceivers are NOT supported in the 8325 series.                                                                                                                                                                                                                                                                                                                   |

| <b>SFP (100Mbps)<br/>capable product<br/>name</b> | <b>Switch SKU</b>                                             | <b>100-Megabit SFP<br/>Minimum<br/>software required</b>                       | <b>Comments</b>                                                                                                                 |
|---------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Aruba 8360<br/>Switch Series</b>               | 48Y6C models:<br>JL719C base<br>(JL704C/JL705C)<br>ports 5-48 | 10.13.1000<br><br>J9054D: 10.13.1000<br>only on the 48Y6C<br>models ports 5-48 | 100Mbps Transceivers only on the<br>models listed.<br>48Y6C and 32Y4C not supported in<br>ports 1-4 (MACsec PHY<br>limitation). |
| <b>Aruba 8400X<br/>Modules</b>                    | All                                                           | n/a                                                                            | 100Mbps Transceivers are NOT<br>supported in the 8400 series.                                                                   |
| <b>Aruba 10000<br/>Switch Series</b>              | All                                                           | n/a                                                                            | 100Mbps Transceivers are NOT<br>supported in the 10000 series.                                                                  |

## HPE servers and systems support

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Aruba now supports select HPE Server and Systems interconnect products.

- This chapter summarizes the various interconnect products tested and verified to work with selected Aruba switches. NOT all Aruba switches are certified with HPE Server and Storage Systems products
- The term “HPE” products covers interconnect products sold by the HPE Servers and Systems division or HPE Storage Division. Aruba is a separate division within HPE.
- Aruba products are NOT the same as HPE products of the same speed support. They have different ordering part numbers and in many instances are of slightly different designs, requiring specific changes to the software drivers on either Switch or HPE Interconnect product (network adapters, or host-native ethernet port). For example, both divisions may sell a 10G DAC cable. However, the part incorporates an encoded part number specific for either Aruba or HPE and they are not the same. Steps must be taken to provide specific ‘tuning’ to allow the slightly different parts to provide proper support.
- An HPE only partner is not authorized to purchase Aruba Product Line SKUs, likewise, an Aruba only partner is not authorized to purchase HPE Server and Storage SKUs.
  - To allow HPE Resellers to quote Aruba specific switches and interconnect products, a different set of SKU (stock keeping unit) ordering numbers have been created. This set of SKU #s point to an Aruba part. The 1:1 relationship of these part numbers is covered later in this chapter.
  - The support of Aruba parts are covered in this Guide,
    - Support coverage of the HPE ordering SKU for a particular HPE Server product is covered by the information contained in this document at hpe.com: [HPE Compute transceiver and cable hardware matrix](#).
    - Support information for HPE product ordering SKU #s for a particular HPE Storage products are covered by the [SPOCK](#) (Single Point of Connectivity Knowledge for HPE Storage Products) – requires an HPE Passport Login account to access. Search for “Aruba” on the SPOCK Home page.

Support of HPE products includes interoperability of HPE products with the following Aruba switches:

- Aruba 6300M 48G Pwr2Prt 2F 1PS Bundle (JL762A) – used as an Out Of Band Management (OOBM) 1G switch, usually to connect server ILO ports to the network.  
Other 6300M (or F) series are not in particular the focus of pairing with HPE Servers and Systems.
- Aruba 8320, 8325, 8360 and 10000 series.  
Purchased in either Front-to-Back or Back-to-Front airflow pre-configured bundles.  
The ‘bundles’ are ordered with a particular SKU (stock keeping unit) part number, but each are comprised of the same base switch model – (with a different SKU #).

The following devices were tested against 9300 Switch series with AOS-CX 10.10.1000 and enable the listed use cases. The server adapters are supported by the HPE Server division.

The HPE Storage NICs below were tested with the 9300 series.

The SKUs shown are the Aruba SKU, along with the HPE ordered SKU; for more details see the [HPE servers and systems support](#) section.

HPE Storage and Server partners should use the “HPE” SKU to obtain the Aruba SKU item.

| <b>HPE Server SKU#</b> | <b>Description</b>                                                                                                 | <b>Use case with 9300 32D series Aruba SKU# (HPE SKU#)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P10180-B21             | MLX MCX623105AS 200GbE 1p QSFP56 Adptr                                                                             | <b>QDD to 2x QSFP56 200G AOC</b><br>R9B55A(S1D30A)[3m], R9B53A(S1D31A)[7m], R9B57A(S1D32A)[15m], R9B56A(S1D33A)[30m], R9B54A(S1D34A)[50m]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| P25960-B21             | MLX MCX623106AS 100GbE 2p QSFP56 NIC<br><br>This is a QSFP56 NIC (compatible to use either QSFP28 or QSFP56 parts) | <b>QDD to 4x QSFP56 100G AOC</b><br>R9B50A(S1D35A)[3m], R9B48A(S1D36A)[7m], R9B52A(S1D37A)[15m], R9B51A(S1D38A)[30m], R9B49A(S1D39A)[50m]<br><br><b>QDD to 2xQSFP28 100G AOC</b><br>R9B60A(S1D25A)[3m], R9B58A(S1D26A)[7m], R9B62A(S1D27A)[15m], R9B61A(S1D28A)[30m], R9B59A(S1D29A)[50m]<br><br><b>400G QDD to 2xQSFP28 100G Optical Breakout</b><br>R9B41A(S1D18A)[SR8 xcvr] to 2x R9F75A(JL309A)[SR4] (MPO16 MMF breakout to 2x MPO12 (8 fibers each))<br><br><b>400G QDD eDR4 to 4xQSFP28 FR1 100G Optical Breakout</b><br>R9B42A(S1D19A)[eDR4 xcvr] to 4x R9B63A(S1D17A)[FR1 xcvr] (MPO12 SMF breakout to 4x LC (2 fibers each)) |
| P21927-B21             | HPE 100GbE 2P QSFP28 MCX516A-CCHT Adptr                                                                            | <b>QDD to 2xQSFP28 100G AOC</b><br>R9B60A(S1D25A)[3m], R9B58A(S1D26A)[7m], R9B62A(S1D27A)[15m], R9B61A(S1D28A)[30m], R9B59A(S1D29A)[50m]<br><br><b>400G QDD to 2xQSFP28 100G Optical Breakout</b><br>R9B41A(S1D18A)[SR8 xcvr] to 2x R9F75A(JL309A)[SR4] (MPO16 MMF breakout to 2x MPO12 (8 fibers each))<br><br><b>400G QDD eDR4 to 4xQSFP28 FR1 100G Optical Breakout</b><br>R9B42A(S1D19A)[eDR4 xcvr] to 4x R9B63A(S1D17A)[FR1 xcvr] (MPO12 SMF breakout to 4x LC (2 fibers each))                                                                                                                                                  |

| <b>HPE Server SKU#</b> | <b>Description</b>               | <b>Use case with 9300 32D series Aruba SKU# (HPE SKU#)</b>                                                                                                                                                                                                                                                                                                                            |
|------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 874253-B21             | HPE Eth 100Gb 1p 842QSFP28 Adptr | <b>QDD to 2xQSFP28 100G AOC</b><br>R9B60A(S1D25A)[3m], R9B58A(S1D26A)[7m], R9B62A(S1D27A)[15m], R9B61A(S1D28A)[30m], R9B59A(S1D29A)[50m]<br><br><b>400G QDD to 2xQSFP28 100G Optical Breakout</b><br>R9B41A(S1D18A)[SR8 xcvr] to 2x R9F75A(JL309A)[SR4] (MPO16 MMF breakout to 2x MPO12 (8 fibers each))<br>Known issue with R9B63A(FR1 xcvr): AOSCX-229645 when used in this Adapter |
| P21112-B21             | INT E810 100GbE 2p               | <b>QDD to 2xQSFP28 100G AOC</b>                                                                                                                                                                                                                                                                                                                                                       |

| HPE Server SKU# | Description                                                                                                   | Use case with 9300 32D series Aruba SKU# (HPE SKU#)                                                                                                                                                                                                                                                                                                                                                          |
|-----------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | QSFP28 Adptr                                                                                                  | <p>R9B60A(S1D25A)[3m], R9B58A(S1D26A)[7m], R9B62A(S1D27A)[15m], R9B61A(S1D28A)[30m], R9B59A(S1D29A)[50m]</p> <p><b>400G QDD to 2xQSFP28 100G Optical Breakout</b><br/>R9B41A(S1D18A)[SR8 xcvr] to 2x R9F75A(JL309A)[SR4] (MPO16 MMF breakout to 2x MPO12 (8 fibers each))</p> <p>Known issue with R9B63A(FR1 xcvr 1990-4826): AOSCX-229643 when used in this Adapter</p>                                     |
| P22767-B21      | INT E810 100GbE 2p QSFP28 OCP3 Adptr                                                                          | <p><b>QDD to 2xQSFP28 100G AOC</b><br/>R9B60A(S1D25A)[3m], R9B58A(S1D26A)[7m], R9B62A(S1D27A)[15m], R9B61A(S1D28A)[30m], R9B59A(S1D29A)[50m]</p> <p><b>400G QDD to 2xQSFP28 100G Optical Breakout</b><br/>R9B41A(S1D18A)[SR8 xcvr] to 2x R9F75A(JL309A)[SR4] (MPO16 MMF breakout to 2x MPO12 (8 fibers each))</p> <p>Known issue with R9B63A(FR1 xcvr 1990-4826): AOSCX-229643 when used in this Adapter</p> |
| P37690-B21      | <p>Pensando DSP DSC-100 Ent 100G QSFP28 Card</p> <p>Note: This module has been end of sale as of Dec 2022</p> | <p><b>QDD to 2xQSFP28 100G AOC</b><br/>R9B60A(S1D25A)[3m], R9B58A(S1D26A)[7m], R9B62A(S1D27A)[15m], R9B61A(S1D28A)[30m], R9B59A(S1D29A)[50m]</p> <p><b>400G QDD to 2xQSFP28 100G Optical Breakout</b><br/>R9B41A(S1D18A)[SR8 xcvr] to 2x R9F75A(JL309A)[SR4] (MPO16 MMF breakout to 2x MPO12 (8 fibers each))</p> <p>Known issue with R9B63A(FR1 xcvr 1990-4826): AOSCX-229643 when used in this Adapter</p> |

| HPE SKU                                       | SKU Description                                                                                                                                                                                 |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 874253-B21                                    | HPE Eth 100Gb 1p 842QSFP28 Adptr                                                                                                                                                                |
| P21927-B21                                    | HPE 100GbE 2P QSFP28 MCX516A-CCHT Adptr                                                                                                                                                         |
| Aruba is aware of the following known issues: |                                                                                                                                                                                                 |
| P25960-B21                                    | <p>MLX MCX623106AS 100GbE 2p QSFP56 Adptr*</p> <p>* Intermittent issues seen with 8360/6400 models when using 3m and 5m DACs (JL307A and R0Z26A) (AOSCX-231260, AOSCX-218043, AOSCX-171162)</p> |

The following devices were tested against 10000, 8325, 8360v1 and 8360v2 Switch series with AOS-CX 10.09, and 6400 and 6300 Switch series with AOS-CX 10.08.

| HPE SKU #  | SKU Description                                  | Issue                                                                                                                                                                                                                      |
|------------|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 817749-B21 | HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter | Known issue when using Mellanox FW 14.27 or higher with 4x10G Breakout DAC (721064-B21): (AOSCX-172421)                                                                                                                    |
| 817753-B21 | HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter     | Known issue when using Mellanox FW 14.27 or higher with 4x10G Breakout DAC (721064-B21): (AOSCX-172421)                                                                                                                    |
| 867334-B21 | HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 CAN     | Intermittent issues seen with 8360/6300/6400 models when using 25G DACs. (844477-B21, 844480-B21, JL487A, JL488A, JL489A) The use of AOCs is preferred in these NICs (ROM44A, ROM45A R0Z21A). (AOSCX-218043, AOSCX-171162) |
| 867328-B21 | HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter     | Intermittent issues seen with 8360/6300/6400 models when using 25G DACs. (844477-B21, 844480-B21, JL487A, JL488A, JL489A) The use of AOCs is preferred in these NICs (ROM44A, ROM45A R0Z21A). (AOSCX-218043, AOSCX-171162) |
| 817709-B21 | HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter | Intermittent issues seen with 8360/6300/6400 models when using 25G DACs. (844477-B21, 844480-B21, JL487A, JL488A, JL489A) The use of AOCs is preferred in these NICs (ROM44A, ROM45A R0Z21A). (AOSCX-218043, AOSCX-171162) |
| 817718-B21 | HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter     | Intermittent issues seen with 8360/6300/6400 models when using 25G DACs. (844477-B21, 844480-B21, JL487A, JL488A, JL489A) The use of AOCs is preferred in these NICs (ROM44A, ROM45A R0Z21A). (AOSCX-218043, AOSCX-171162) |
| 870825-B21 | HPE Eth 10/25Gb 2p 661SFP28 Adptr                | No AOCs currently supported. The use of DACs is preferred on this NIC. (AOSCX-153015)                                                                                                                                      |
| P26966-B21 | Pensando DSP DSC-25 10/25G 2p SFP28 Card         | Known issue with Pensando FW 1.28.2-E-93 or lower. Some interfaces will fail to link up on the lower rows of 8360/6400/6300 units. (AOSCX-170735, AOSCX-160057)                                                            |

| HPE SKU #  | SKU Description                          | Issue                                                                                                                                                                                                                         |
|------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P26262-B21 | BCM 57414 10/25GbE 2p SFP28 Adptr        | Intermittent issues seen with 8360/6300/6400 models when using 25G DACs. (844477-B21, 844480-B21, JL487A, JL488A, JL489A) The use of AOCs is preferred in these NICs (R0M44A, R0M45A R0Z21A). (AOSCX-218043, AOSCX-171162)    |
| P10115-B21 | BCM 57414 10/25GbE 2p SFP28 OCP3 Adptr   | Intermittent issues seen with 8360/6300/6400 models when using 25G DACs. (844477-B21, 844480-B21, JL487A, JL488A, JL489A) The use of AOCs is preferred in these NICs (R0M44A, R0M45A R0Z21A). (AOSCX-218043, AOSCX-171162)    |
| P24437-B21 | XIL X2522-25G 10/25GbE 2p SFP28 Adptr    | R0M44A, R0M45A R0Z21A AOCs require FEC ("error-control") = none: (AOSCX-192121)                                                                                                                                               |
| P22702-B21 | MRV QL41232HLCU 10/25GbE 2p SFP28 Adptr  | Intermittent issues seen with 8360/6300/6400 models when using 25G DACs. (844477-B21, 844480-B21, JL487A, JL488A, JL489A) The use of AOCs is preferred in these NICs (R0M44A, R0M45A R0Z21A). (AOSCX-218043, AOSCX-171162) s. |
| P10118-B21 | MRV QL41232 10/25GbE 2p SFP28 OCP3 Adptr | Intermittent issues seen with 8360/6300/6400 models when using 25G DACs. (844477-B21, 844480-B21, JL487A, JL488A, JL489A) The use of AOCs is preferred in these NICs (R0M44A, R0M45A R0Z21A). (AOSCX-218043, AOSCX-171162).   |
| P13188-B21 | MLX MCX512F 10/25GbE 2p SFP28 Adptr      | Intermittent issues seen with 25G AOCs (R0M44A, R0M45A R0Z21A) The use of DACs (844477-B21, 844480-B21, JL487A, JL488A, JL489A) is preferred on this NIC. (AOSCX-175875)                                                      |
| P10112-B21 | MLX MCX562A 10/25GbE 2p SFP28 OCP3 Adptr | Intermittent issues seen with 25G AOCs (R0M44A, R0M45A R0Z21A) The use of DACs (844477-B21, 844480-B21, JL487A, JL488A, JL489A) is preferred on this NIC. (AOSCX-175875)                                                      |

| HPE SKU #  | SKU Description                                                            |
|------------|----------------------------------------------------------------------------|
| P11338-B21 | HPE Ethernet10Gb2-port548SFP+ Adapter**<br>**This SKU has gone end of sale |
| P08446-B21 | HPE Ethernet 10Gb 2-port 524SFP+ Adapter                                   |
| 727055-B21 | HPE Ethernet 10Gb 2-port 562SFP+ Adapter                                   |
| 727054-B21 | HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter                               |
| 700751-B21 | HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter                             |
| 652503-B21 | HPE Ethernet 10Gb 2-port 530SFP+ Adapter                                   |
| 656596-B21 | HPE Ethernet 10Gb 2-port 530T Adapter                                      |
| 700759-B21 | HPE FlexFabric 10Gb 2-port 533FLR-T Adapter                                |
| 817745-B21 | HPE Ethernet 10Gb 2-port 562FLR-T Adapter                                  |
| 817738-B21 | HPE Ethernet 10Gb 2-port 562T Adapter                                      |
| 817721-B21 | HPE Ethernet 10Gb 2-port 535FLR-T Adapter                                  |
| 813661-B21 | HPE Ethernet 10Gb 2-port 535T Adapter                                      |

| HPE SKU #  | SKU Description                           |
|------------|-------------------------------------------|
| 656596-B21 | HPE Ethernet10Gb2-port530TAdapter         |
| 700759-B21 | HPE FlexFabric10Gb 2-port 533FLR-TAdapter |
| 817745-B21 | HPE Ethernet10Gb2-port562FLR-T Adapter    |
| 817738-B21 | HPE Ethernet10Gb2-port562TAdapter         |

***HPE DACs, breakout DACs, AOCs, and breakout fiber cables***

| CableType                       | HIT SKU #  | Description                        |
|---------------------------------|------------|------------------------------------|
| <b>Same speed DACs and AOCs</b> |            |                                    |
| 25G to 25G                      | 844477-B21 | HPE 25Gb SFP28 to SFP28 3m DAC     |
|                                 | 844480-B21 | 25G SFP28                          |
| 10G to 10G                      | 487655-B21 | HPE BLc 10G SFP+ SFP+ 3m DAC Cable |
|                                 | 537963-B21 | HPE BLc 10G SFP+ SFP+ 5m DAC Cable |

| CableType                                                  | HIT SKU #  | Description                                |
|------------------------------------------------------------|------------|--------------------------------------------|
| <b>Breakout DACs and AOCs</b>                              |            |                                            |
| 100G to 4x25G DAC                                          | 845416-B21 | HPE100G QSFP28 to4x25G SFP28 3mDAC         |
| 100G to 4x25G AOC                                          | 845420-B21 | HPE QSFP28 to 4x25G SFP28 7m AOC           |
|                                                            | 845424-B21 | HPE QSFP28 to 4x25G SFP28 15m AOC          |
| 100G to 4x25G DAC                                          | 845416-B21 | HPE 100Gb QSFP28 to 4x25Gb SFP28 3m DAC    |
| 40G to 4x10GDAC                                            | 721064-B21 | HPE BLc 40G QSFP+ to 4x10G SFP+ 3m DAC Cbl |
| 40G to 4x10G AOC                                           | 721076-B21 | HPE BLc QSFP+ to 4x10G SFP+ 15m AOC        |
| <b>Breakout Fiber cables (see breakout optical cables)</b> |            |                                            |
| SR4/eSR4 or 100G SR4 transceivers                          | K2Q46A     | HPE MPO to 4 xLC 5m Cable                  |
|                                                            | K2Q47A     | HPE MPO to 4x LC 15m Cable                 |



Other HPE cables not listed have not been validated against any Aruba Switch. Check the compatibility tables in this guide to determine if a HPE Server Cable is supported for use with the Aruba Switch.

## Aruba data center networking solution for HPE

The table below shows the HPE SKU and Description, and its like-for-like Aruba SKU and Description. An HPE SKU is used by customers who were sold Aruba products as part of their HPE solution, while an Aruba SKU is used by customers who were sold Aruba products as part of an Aruba solution. Both HPE SKU and Aruba SKU, are the same as shown in the table. Support and Serial Number information will be registered under the Aruba SKU.

HPE Resellers should use the “HPE SKU” (stock keeping unit) to obtain the Aruba product. Alert your shipping department that the invoice information may reflect the HPE SKU# while the contents of the package will contain the Aruba item. The table is sorted by HPE SKUs.

| HPE SKU | HPE Description                         | Aruba SKU | Aruba Description                        |
|---------|-----------------------------------------|-----------|------------------------------------------|
| R9F74A  | Aruba 100G QSFP28-QSFP28 3m DAC for HPE | JL307A    | Aruba 100G QSFP28-QSFP28 3m DAC Cable    |
| R9F75A  | HPE DC 100G QSFP28 MPO SR4 MMF XCVR     | JL309A    | Aruba 100G QSFP28 MPO SR4 MMF XCVR       |
| R9F76A  | Aruba 100G QSFP28 to QSFP28 2m AOC HPE  | JL856A    | Aruba 100G QSFP28 to QSFP28 2m AOC       |
| R9F77A  | Aruba 100G QSFP28 to QSFP28 1m DAC HPE  | R0Z25A    | Aruba 100G QSFP28 to QSFP28 1m DAC Cable |

| <b>HPE SKU</b> | <b>HPE Description</b>                   | <b>Aruba SKU</b> | <b>Aruba Description</b>                 |
|----------------|------------------------------------------|------------------|------------------------------------------|
| R9F78A         | Aruba 100G QSFP28 to QSFP28 5m DAC HPE   | R0Z26A           | Aruba 100G QSFP28 to QSFP28 5m DAC Cable |
| R9F79A         | Aruba 100G QSFP28 to QSFP28 7m AOC HPE   | R0Z27A           | Aruba 100G QSFP28 to QSFP28 7m AOC       |
| R9F80A         | Aruba 100G QSFP28 to QSFP28 15m AOC HPE  | R0Z28A           | Aruba 100G QSFP28 to QSFP28 15m AOC      |
| R9F81A         | Aruba 100G QSFP28 to QSFP28 30m AOC HPE  | R0Z29A           | Aruba 100G QSFP28 to QSFP28 30m AOC      |
| R9F82A         | Aruba 10G SFP+ LC SR 300m MMF XCVR HPE   | J9150D           | Aruba 10G SFP+ LC SR 300m MMF XCVR       |
| R9F83A         | Aruba 10G SFP+ to SFP+ 1m DAC for HPE    | J9281D           | Aruba 10G SFP+ to SFP+ 1m DAC Cable      |
| R9F84A         | Aruba 10G SFP+ to SFP+ 3m DAC for HPE    | J9283D           | Aruba 10G SFP+ to SFP+ 3m DAC Cable      |
| R9F85A         | Aruba 10GBASE-T SFP+ 30m Cat6A XCVR HPE  | JL563B           | Aruba 10GBASE-T SFP+ RJ45 30m Cat6A XCVR |
| R9F86A         | Aruba 1G SFP LC SX 500m MMF XCVR for HPE | J4858D           | Aruba 1G SFP LC SX 500m MMF XCVR         |
| R9F87A         | Aruba 1G SFP RJ45 T 100m Cat5e XCVR HPE  | J8177E           | HPE ANW 1G SFP RJ45 100m XCVR            |
| R9F88A         | Aruba 100M SFP LC FX 2km MMF XCVR HPE    | J9054D           | Aruba 100M SFP LC FX 2km MMF XCVR        |
| R9F89A         | Aruba 25G SFP28 LC SR 100m MMF XCVR HPE  | JL484A           | Aruba 25G SFP28 LC SR 100m MMF XCVR      |
| R9F90A         | Aruba 25G SFP28 LC eSR 400m MMF XCVR HPE | JL485A           | Aruba 25G SFP28 LC eSR 400m MMF XCVR     |
| R9F91A         | Aruba 25G SFP28 to SFP28 0.65m DAC HPE   | JL487A           | Aruba 25G SFP28 to SFP28 0.65m DAC Cable |
| R9F92A         | Aruba 25G SFP28 to SFP28 3m DAC for HPE  | JL488A           | Aruba 25G SFP28 to SFP28 3m DAC Cable    |
| R9F93A         | Aruba 25G SFP28 to SFP28 5m DAC for HPE  | JL489A           | Aruba 25G SFP28 to SFP28 5m DAC Cable    |
| R9F94A         | Aruba 25G SFP28 to SFP28 3m AOC for HPE  | R0M44A           | Aruba 25G SFP28 to SFP28 3m AOC          |
| R9F95A         | Aruba 25G SFP28 to SFP28 7m AOC for HPE  | R0M45A           | Aruba 25G SFP28 to SFP28 7m AOC          |
| R9F96A         | Aruba 25G SFP28 to SFP28 15m AOC for HPE | R0Z21A           | Aruba 25G SFP28 to SFP28 15m AOC         |
| R9F97A         | Aruba 40G QSFP+ MPO SR4 XCVR for         | JH231A           | HPE X142 40G QSFP+ MPO SR4               |

| HPE SKU | HPE Description                          | Aruba SKU | Aruba Description                              |
|---------|------------------------------------------|-----------|------------------------------------------------|
|         | HPE                                      |           | Transceiver                                    |
| R9F98A  | Aruba 40G QSFP+ MPO eSR4 300M XCVR HPE   | JH233A    | HPE X142 40G QSFP+ MPO eSR4 300M XCVR          |
| R9F99A  | Aruba 40G QSFP+ to QSFP+ 1m DAC for HPE  | JH234A    | HPE X242 40G QSFP+ to QSFP+ 1m DAC Cable       |
| R9G00A  | Aruba 40G QSFP+ to QSFP+ 3m DAC for HPE  | JH235A    | HPE X242 40G QSFP+ to QSFP+ 3m DAC Cable       |
| R9G01A  | Aruba 40G QSFP+ to QSFP+ 5m DAC for HPE  | JH236A    | HPE X242 40G QSFP+ to QSFP+ 5m DAC Cable       |
| R9G02A  | Aruba 40G QSFP+LC BiDi 150m MMF XCVR HPE | JL308A    | Aruba 40G QSFP+ LC BiDi 150m MMF XCVR          |
| R9G03A  | Aruba 40G QSFP+ to QSFP+ 7m AOC for HPE  | R0Z22A    | Aruba 40G QSFP+ to QSFP+ 7m AOC                |
| R9G04A  | Aruba 40G QSFP+ to QSFP+ 15m AOC for HPE | R0Z23A    | Aruba 40G QSFP+ to QSFP+ 15m AOC               |
| R9G05A  | Aruba 40G QSFP+ to QSFP+ 30m AOC for HPE | R0Z24A    | Aruba 40G QSFP+ to QSFP+ 30m AOC               |
| R9G06A  | Aruba 50G SFP56 to SFP56 0.65m DAC HPE   | R0M46A    | Aruba 50G SFP56 to SFP56 0.65m DAC Cable       |
| R9G07A  | Aruba 50G SFP56 to SFP56 3m DAC for HPE  | R0M47A    | Aruba 50G SFP56 to SFP56 3m DAC Cable          |
| R9Q43A  | Aruba 1G SFP LC SX 500m MMF TAA XCVR HPE | JL745A    | Aruba 1G SFP LC SX 500m MMF TAA Transceiver    |
| R9Q44A  | Aruba 1G SFP LC LX 10km SMF TAA XCVR HPE | JL746A    | Aruba 1G SFP LC LX 10 km SMF TAA Transceiver   |
| R9Q45A  | Aruba 1GBASET SFP 100m Cat5e TAA TRX HPE | JL747A    | Aruba 1G SFP RJ45 T 100m Cat5e TAA Transceiver |
| R9Q46A  | Aruba 10G SFP+ SR 300m MMF TAA XCVR HPE  | JL748A    | Aruba 10G SFP+ LC SR 300m MMF TAA Transceiver  |
| R9Q47A  | Aruba 10G SFP+ LR 10km SMF TAA XCVR HPE  | JL749A    | Aruba 10G SFP+ LC LR 10 km SMF TAA Transceiver |
| S1D17A  | Aruba 100G QSFP28 FR1 SMF 2km XCVR HPE   | R9B63A    | Aruba 100G QSFP28 LC FR1 2km SMF XCVR          |
| S1D18A  | Aruba 400G QSFP-DD SR8 100m MMF XCVR HPE | R9B41A    | Aruba 400G Q-DD MPO16 SR8 100m MMF XCVR        |
| S1D19A  | Aruba 400G QSFP-DD eDR4 2km SMF XCVR HPE | R9B42A    | Aruba 400G Q-DD MPO12 eDR4 2km SMF XCVR        |

| <b>HPE SKU</b> | <b>HPE Description</b>                   | <b>Aruba SKU</b> | <b>Aruba Description</b>                 |
|----------------|------------------------------------------|------------------|------------------------------------------|
| S1D20A         | Aruba 400G QSFP-DD to DD 3m AOC for HPE  | R9B45A           | Aruba 400G Q-DD to Q-DD 3m AOC           |
| S1D21A         | Aruba 400G QSFP-DD to DD 7m AOC for HPE  | R9B43A           | Aruba 400G Q-DD to Q-DD 7m AOC           |
| S1D22A         | Aruba 400G QSFP-DD to DD 15m AOC for HPE | R9B47A           | Aruba 400G Q-DD to Q-DD 15m AOC          |
| S1D23A         | Aruba 400G QSFP-DD to DD 30m AOC for HPE | R9B46A           | Aruba 400G Q-DD to Q-DD 30m AOC          |
| S1D24A         | Aruba 400G QSFP-DD to DD 50m AOC for HPE | R9B44A           | Aruba 400G Q-DD to Q-DD 50m AOC          |
| S1D25A         | Aruba 200G DD-2xQSFP28 100G 3m AOC HPE   | R9B60A           | Aruba 200G Q-DD to 2xQSFP28 100G 3m AOC  |
| S1D26A         | Aruba 200G DD-2xQSFP28 100G 7m AOC HPE   | R9B58A           | Aruba 200G Q-DD to 2xQSFP28 100G 7m AOC  |
| S1D27A         | Aruba 200G DD-2xQSFP28 100G 15m AOC HPE  | R9B62A           | Aruba 200G Q-DD to 2xQSFP28 100G 15m AOC |
| S1D28A         | Aruba 200G DD-2xQSFP28 100G 30m AOC HPE  | R9B61A           | Aruba 200G Q-DD to 2xQSFP28 100G 30m AOC |
| S1D29A         | Aruba 200G DD-2xQSFP28 100G 50m AOC HPE  | R9B59A           | Aruba 200G Q-DD to 2xQSFP28 100G 50m AOC |
| S1D30A         | Aruba 400G DD-2xQSFP56 200G 3m AOC HPE   | R9B55A           | Aruba 400G Q-DD to 2xQSFP56 200G 3m AOC  |
| S1D31A         | Aruba 400G DD-2xQSFP56 200G 7m AOC HPE   | R9B53A           | Aruba 400G Q-DD to 2xQSFP56 200G 7m AOC  |
| S1D32A         | Aruba 400G DD-2xQSFP56 200G 15m AOC HPE  | R9B57A           | Aruba 400G Q-DD to 2xQSFP56 200G 15m AOC |
| S1D33A         | Aruba 400G DD-2xQSFP56 200G 30m AOC HPE  | R9B56A           | Aruba 400G Q-DD to 2xQSFP56 200G 30m AOC |
| S1D34A         | Aruba 400G DD-2xQSFP56 200G 50m AOC HPE  | R9B54A           | Aruba 400G Q-DD to 2xQSFP56 200G 50m AOC |
| S1D35A         | Aruba 400G DD-4xQSFP56 100G 3m AOC HPE   | R9B50A           | Aruba 400G Q-DD to 4xQSFP56 100G 3m AOC  |
| S1D36A         | Aruba 400G DD-4xQSFP56 100G 7m AOC HPE   | R9B48A           | Aruba 400G Q-DD to 4xQSFP56 100G 7m AOC  |
| S1D37A         | Aruba 400G DD-4xQSFP56 100G 15m AOC HPE  | R9B52A           | Aruba 400G Q-DD to 4xQSFP56 100G 15m AOC |
| S1D38A         | Aruba 400G DD-4xQSFP56 100G 30m AOC HPE  | R9B51A           | Aruba 400G Q-DD to 4xQSFP56 100G 30m AOC |

| <b>HPE SKU</b> | <b>HPE Description</b>                  | <b>Aruba SKU</b> | <b>Aruba Description</b>                 |
|----------------|-----------------------------------------|------------------|------------------------------------------|
| S1D39A         | Aruba 400G DD-4xQSFP56 100G 50m AOC HPE | R9B49A           | Aruba 400G Q-DD to 4xQSFP56 100G 50m AOC |

## HPE storage product support

These are products available from the HPE Storage Business Unit. They were enabled on select Aruba Switches to assist in Storage led engagements.

- Switches NOT specified are possibly enabled via UT-Mode – (See Unsupported Transceiver in the Overview chapter for caveats).
- Where noted, SFP product may require the use of a QSFP28-to-SFP28 Adapter (QSA28).
- The Minimum Software where the support has been fully vetted and should not report the use of the item as an “unsupported transceiver”.

Previous CX releases may enable the product, but report it as “unsupported transceiver”.

These products may only be available to resellers authorized to sell HPE Storage products and not available to Aruba-only resellers.

These items are documented as “supported” by referencing the [SPOCK](#) (Single Point of Connectivity Knowledge) maintained by the HPE Storage Business Unit and this guide.

These HPE Storage products are listed here as a group, indicating the Aruba Switches they are supported on, and the minimum release of software that will recognize them, rather than in the preceding chapters based on product speed. If used on an earlier version of AOS-CX, the products below may be identified as an “unsupported transceiver” and may or may not operate properly.

Where indicated, a QSA28 – the QSFP28 to SFP28 Adapter may be required (see the [QSFP28 to SFP28 adapter support](#) chapter).

| SKU        | Base product description                    | Requirement Reference # | SPOCK Certification | 8325 (Min Release)                                                        | 9300 32D (Min Release)                                            |
|------------|---------------------------------------------|-------------------------|---------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------|
| 455883-B21 | HPE BLC 10G SFP+ SR Transceiver             | REQ-16624               | Y                   | Yes (10.13.0005)                                                          | No. Storage SKUs not yet supported through QSA28 on the 9300-32D. |
| JD095C     | HPE X240 10G SFP+ SFP+ 0.65m DAC Cable      | REQ-16624               | Y                   | Yes (10.13.0005)                                                          | No                                                                |
| K2Q21A     | HPE C-series 3M Passive Copper SFP+ Cbl DAC | REQ-16622               | Y                   | Yes (10.12.000x)<br><br>If used in a QSA28, will report as "unsupported". | No. Storage SKUs not yet supported through QSA28 on the 9300-32D. |

| SKU                               | Base product description                    | Requirement Reference # | SPOCK Certification | 8325 (Min Release)                                                        | 9300 32D (Min Release)                                                |
|-----------------------------------|---------------------------------------------|-------------------------|---------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------|
| K2Q22A                            | HPE C-series 5M Passive Copper SFP+ Cbl DAC | REQ-16622               | Y                   | Yes (10.12.000x)<br><br>If used in a QSA28, will report as "unsupported". | No. Storage SKUs not yet supported through QSA28 on the 9300-32D.     |
| Q2F19A                            | HPE M-series 100GbE QSFP28 SR4 100m xcvr    | REQ-16622               | Y                   | Yes (10.12.000x)                                                          | No                                                                    |
| Q2P64B                            | HPE 25Gb SFP28 SW E Temp 1-pack PT xcvr     | REQ-16624               | Y                   | Yes (10.13.0005)<br><br>If used in a QSA28, will report as "unsupported". | No. Storage SKUs not yet supported through QSA28 on the 9300-32D.     |
| Q2P65A                            | HPE 10Gb SFP+ SW E Temp 1-pack PT xcvr      | REQ-16624               | Y                   | Yes (10.13.0005)<br><br>If used in a QSA28, will report as "unsupported". | No. Storage SKUs not yet supported through QSA28 on the 9300-32D.     |
| Q6M30A                            | HPE M-series 10GbE SFP+ SR 300m xcvr        | REQ-16622               | Y                   | Yes (10.12.000x)                                                          | No. Storage SKUs not yet supported through QSA28 on the 9300-32D.     |
| Q7F11A (SKU has been End of Sale) | HPE M-series 40GbE QSFP28 SR4 100m xcvr     | REQ-16622               | Y                   | Yes (10.12.000x)                                                          | No. Q7F11A has been end of sale by the HPE Storage group(Vendor EOS). |
| Q8J73A                            | HPE M-series 100GbE QSFP28 PSM4 500m xcvr   | REQ-16624               | Y                   | Yes (10.13.0005)<br><br>Q8J73A can be split to 4x25G LR streams.          | Yes (10.13.1000)<br><br>Q8J73A can be split to 4x25G LR streams.      |
| Q9S66A                            | HPE 40GbE QSFP+ to 4x10GbE SFP+ 5m AOC      | REQ-16624               | Y                   | Yes (10.13.0005)                                                          | No. Storage SKUs AOCs not yet supported through                       |

| SKU    | Base product description               | Requirement Reference # | SPOCK Certification | 8325 (Min Release) | 9300 32D (Min Release)                                                 |
|--------|----------------------------------------|-------------------------|---------------------|--------------------|------------------------------------------------------------------------|
|        |                                        |                         |                     |                    | QSA28 on the 9300-32D.                                                 |
| Q9S67A | HPE 25GbE SFP28 to SFP28 3m Smart AOC  | REQ-16622               | Y                   | Yes (10.12.000x)   | No. Storage SKUs AOCs not yet supported through QSA28 on the 9300-32D. |
| Q9S68A | HPE 25GbE SFP28 to SFP28 5m Smart AOC  | REQ-16622               | Y                   | Yes (10.12.000x)   | No. Storage SKUs AOCs not yet supported through QSA28 on the 9300-32D. |
| Q9S69A | HPE 25GbE SFP28 to SFP28 10m Smart AOC | REQ-16622               | Y                   | Yes (10.12.000x)   | No. Storage SKUs AOCs not yet supported through QSA28 on the 9300-32D. |
| Q9S70A | HPE 25GbE SFP28 to SFP28 15m Smart AOC | REQ-16624               | Y                   | Yes (10.13.0005)   | No. Storage SKUs AOCs not yet supported through QSA28 on the 9300-32D. |
| Q9S71A | HPE 100GbE QSFP28 to QSFP28 5m AOC     | REQ-16624               | Y                   | Yes (10.13.0005)   | No. Storage SKUs AOCs not yet supported through QSA28 on the 9300-32D. |
| Q9S72A | HPE 100GbE QSFP28 to 4x25GbE 1m DAC    | REQ-16624               | Y                   | Yes (10.13.0005)   | No. Storage SKUs DACs not yet supported through QSA28 on the 9300-32D. |
| R0R40A | HPE 100Gb QSFP28 LC SWDM4 MM 100m xcvr | REQ-16624               | Y                   | Yes (10.13.0005)   | No. Storage SKUs not yet supported through                             |

| SKU    | Base product description                 | Requirement Reference # | SPOCK Certification | 8325 (Min Release)                                                        | 9300 32D (Min Release)                                                 |
|--------|------------------------------------------|-------------------------|---------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------|
|        |                                          |                         |                     |                                                                           | QSA28 on the 9300-32D.                                                 |
| R0R42A | HPE 25Gb SFP28 SR 30m xcvr               | REQ-16622               | Y                   | Yes (10.12.000x)<br><br>If used in a QSA28, will report as "unsupported". | No. Storage SKUs not yet supported through QSA28 on the 9300-32D.      |
| R4G18A | HPE 25Gb SFP28/SFP28 0.5m DAC            | REQ-16624               | Y                   | Yes (10.13.0005)<br><br>If used in a QSA28, will report as "unsupported". | No. Storage SKUs DACs not yet supported through QSA28 on the 9300-32D. |
| R4G19A | HPE 25Gb SFP28/SFP28 1m DAC              | REQ-16622               | Y                   | Yes (10.12.000x)<br><br>If used in a QSA28, will report as "unsupported". | No. Storage SKUs DACs not yet supported through QSA28 on the 9300-32D. |
| R5Z76A | HPE 200Gb QSFP56 to QSFP56 0.5m DA Cable | REQ-16626               | Y                   | N/A                                                                       | 10.14.0001                                                             |
| R5Z77A | HPE 200Gb QSFP56 to QSFP56 1m Cable      | REQ-16626               | Y                   | N/A                                                                       | 10.14.0001                                                             |
| R5Z78A | HPE 200Gb QSFP56 to QSFP56 2m Cable      | REQ-16626               | Y                   | N/A                                                                       | 10.14.0001                                                             |
| R5Z79A | HPE 200Gb QSFP56/QSFP56 2.5m DAC         | REQ-16626               | Y                   | N/A                                                                       | 10.14.0001                                                             |
| R5Z80A | HPE 200Gb QSFP56/QSFP56 5m AOC           | REQ-16626               | Y                   | N/A                                                                       | 10.14.0001                                                             |
| R5Z81A | HPE 200Gb QSFP56/QSFP56 10m AOC          | REQ-16626               | Y                   | N/A                                                                       | 10.14.0001                                                             |
| R5Z82A | HPE 200Gb QSFP56/QSFP56 15m AOC          | REQ-16626               | Y                   | N/A                                                                       | 10.14.0001                                                             |
| R5Z83A | HPE 200Gb                                | REQ-87479               | Y                   | N/A                                                                       | 10.14.1000                                                             |

| SKU    | Base product description                                      | Requirement Reference # | SPOCK Certification | 8325 (Min Release) | 9300 32D (Min Release) |
|--------|---------------------------------------------------------------|-------------------------|---------------------|--------------------|------------------------|
|        | QSFP56 MPO SR4<br>100m XCVR                                   |                         |                     |                    |                        |
| R5Z84A | HPE 200Gb QSFP56 LC CWDM4 FR4 xcvr                            | REQ-16626               | Y                   | N/A                | 10.14.0001             |
| R6F27A | HPE 200Gb QSFP56/4x50/25Gb SFP56 2.5m DAC                     | REQ-16626               | Y                   | N/A                | 10.14.0001             |
| R8M44A | HPE 400GbE QSFP-DD to QSFP-DD 0.5m Direct Attach Copper Cable | REQ-58354               | Y                   | N/A                | Yes (10.13.1000)       |
| R8M45A | HPE 400GbE QSFP-DD to QSFP-DD 1m Direct Attach Copper Cable   | REQ-58354               | Y                   | N/A                | Yes (10.13.1000)       |
| R8M46A | HPE 400GbE QSFP-DD to QSFP-DD 2m Direct Attach Copper Cable   | REQ-58354               | Y                   | N/A                | Yes (10.13.1000)       |
| R8M47A | HPE 400GbE QSFP-DD to QSFP-DD 5m Active Optical Cable         | REQ-58354               | Y                   | N/A                | Yes (10.13.1000)       |
| R8M48A | HPE 400GbE QSFP-DD to QSFP-DD 15m Active Optical Cable        | REQ-58354               | Y                   | N/A                | Yes (10.13.1000)       |
| R8M49A | HPE 400GbE QSFP-DD to 2xQSFP56 5m Active Optical Cable        | REQ-58354               | Y                   | N/A                | 10.16.1006             |
| R8M50A | HPE 400GbE QSFP-DD to 2xQSFP56 15m Active Optical Cable       | REQ-58354               | Y                   | N/A                | 10.16.1006             |
| R8M51A | HPE 400GbE QSFP-DD to 2xQSFP56 1m Direct Attach Cable         | REQ-4541                | Y                   | N/A                | No                     |
| R8M52A | HPE 400GbE QSFP-DD to 2xQSFP56 2m Direct Attach               | REQ-4541                | Y                   | N/A                | No                     |

| SKU           | Base product description                                     | Requirement Reference # | SPOCK Certification | 8325 (Min Release) | 9300 32D (Min Release)                                                                                                                                                                                                    |
|---------------|--------------------------------------------------------------|-------------------------|---------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | Cable                                                        |                         |                     |                    |                                                                                                                                                                                                                           |
| R8M53A        | HPE 400GbE QSFP-DD to 8xSFP56 2m Direct Attach Copper Cable  | TBD                     | TBD                 | N/A                | 10.15.1000                                                                                                                                                                                                                |
| R8M55A        | HPE 400GbE QSFP-DD to 4xQSFP56 1m Direct Attach Copper Cable | REQ-4541                | Y                   | N/A                | No. Early versions of the R8M55A mistakenly identified the split ends as QSFP28. However, they are QSFP56 and incompatible with QSFP28 ports.                                                                             |
| R8M56A        | HPE 400GbE QSFP-DD to 4xQSFP56 2m Direct Attach Copper Cable | REQ-4541                | Y                   | N/A                | No. Early versions of the R8M56A mistakenly identified the split ends as QSFP28. However, they are QSFP56 and incompatible with QSFP28 ports.                                                                             |
| R8M60A/R8M60B | HPE 400GbE QSFP-DD MPO DR4 500m Transceiver                  | REQ-58354               | Y                   | N/A                | Yes (10.13.1000)<br>NOTE: when the R9M60A transceiver is used in a 9300 32D BF model (R9A30A) and a failed fan occurs, the operating temperature is derated by -5C from max operating ambient temperature (in addition to |

| SKU    | Base product description                         | Requirement Reference # | SPOCK Certification | 8325 (Min Release) | 9300 32D (Min Release)                                                                                    |
|--------|--------------------------------------------------|-------------------------|---------------------|--------------------|-----------------------------------------------------------------------------------------------------------|
|        |                                                  |                         |                     |                    | the -1C for every 1000ft from 5K to 10K ft above sea level).                                              |
|        |                                                  |                         |                     |                    | The FB model (R9A29A) can tolerate a single failed fan up to the stated maxoperating ambient temperature. |
|        |                                                  |                         |                     |                    | Both models derate 1C for every 1000ft above Sea Level - up to 10,000ft (3km).                            |
| R8M61A | HPE 100GbE QSFP28 LC DR1 500m 1pk xcvr           | REQ-16622               | Y                   | Yes (10.12.000x)   | No                                                                                                        |
| R8M62A | HPE 400GbE QSFP-DD MPO BD/SR4.2 100m Transceiver | REQ-58354               | Y                   | N/A                | Yes (10.13.1000)                                                                                          |
| R8M63A | HPE 400GbE QSFP-DD MPO SR8 100m XCVR             | REQ-70688               | Y                   | N/A                | 10.14.0001<br><br>10.15.1000 enables 8x splitting of this SR8 optic                                       |
| R8M64A | HPE 400GbE QSFP-DD LC FR4 2km Transceiver        | REQ-58354               | Y                   | N/A                | Yes (10.13.1000)                                                                                          |

## Technology standards and safety compliance

The following table describes the technology standards and safety compliance details.

### *Technology standards and safety compliance*

| Technology     | IEEE Standards             | Laser Safety Information |                       |
|----------------|----------------------------|--------------------------|-----------------------|
|                |                            | EN / IEC Standards       | Lasers                |
| 1000 BASE-T    | IEEE 802.3ab 1000 BASE-T   | –                        | –                     |
| 1000 BASE-SX   | IEEE 802.3z 1000 BASE-SX   | EN/IEC 60825             | Class 1 laser product |
| 1000 BASE-LX   | IEEE 802.3z 1000 BASE-LX   | EN/IEC 60825             | Class 1 laser product |
| 1000 BASE-LH   | (Not an IEEE standard)     | EN/IEC 60825             | Class 1 laser product |
| 10 GBASE-T     | IEEE 802.3an 10 GBASE-T    | –                        | –                     |
| 10 GBASE-SR    | IEEE 802.3ae 10 GBASE-SR   | EN/IEC 60825             | Class 1 laser product |
| 10 GBASE-LR    | IEEE 802.3ae 10 GBASE-LR   | EN/IEC 60825             | Class 1 laser product |
| 10 GBASE-ER    | IEEE 802.3ae 10 GBASE-ER   | EN/IEC 60825             | Class 1 laser product |
| 25 GBASE-SR    | IEEE 802.3by 25 GBASE-SR   | EN/IEC 60825             | Class 1 laser product |
| 25 GBASE-eSR   | (Not an IEEE standard)     | EN/IEC 60825             | Class 1 laser product |
| 25 GBASE--BiDi | IEEE 802.3cp 25 GBASE-BR   | EN/IEC 60825             | Class 1 laser product |
| 25 GBASE-LR    | IEEE 802.3cc 25 GBASE-LR   | EN/IEC 60825             | Class 1 laser product |
| 40 GBASE-SR4   | IEEE 802.3ba 40 GBASE-SR4  | EN/IEC 60825             | Class 1 laser product |
| 40 GBASE-eSR4  | (Not an IEEE standard)     | EN/IEC 60825             | Class 1 laser product |
| 40 GBASE-LR4   | IEEE 802.3ba 40 GBASE-LR4  | EN/IEC 60825             | Class 1 laser product |
| 40 GBASE-ER4   | IEEE 802.3bm 40 GBASE-ER4  | EN/IEC 60825             | Class 1 laser product |
| 40 GBASE-Bidi  | (Not an IEEE standard)     | EN/IEC 60825             | Class 1 laser product |
| 100 GBASE-SR4  | IEEE 802.3bm 100 GBASE-SR4 | EN/IEC 60825             | Class 1 laser product |
| 100 GBASE-LR4  | IEEE 802.3ba 100 GBASE-LR4 | EN/IEC 60825             | Class 1 laser product |

|            |                                                        | Laser Safety Information |                       |
|------------|--------------------------------------------------------|--------------------------|-----------------------|
| Technology | IEEE Standards                                         | EN / IEC Standards       | Lasers                |
| 100G ER4L  | (not an IEEE standard)                                 | EN/IEC 60825             | Class 1 laser product |
| 100G DR    | IEEE 802.3cd 100GBASE-DR                               | EN/IEC 60825             | Class 1 laser product |
| 100G FR    | IEEE 802.3cu 100GBASE-FR1                              | EN/IEC 60825             | Class 1 laser product |
| 100G LR    | IEEE 802.3cu 100GBASE-LR1                              | EN/IEC 60825             | Class 1 laser product |
| 400G SR8   | IEEE 802.3cm 400GBASE-SR8                              | EN/IEC 60825             | Class 1 laser product |
| 4x100G DR  | IEEE 802.3cd 100GBASE-DR                               | EN/IEC 60825             | Class 1 laser product |
| 4x100G FR  | IEEE 802.3cu 100GBASE-FR1                              | EN/IEC 60825             | Class 1 laser product |
| 4x100G LR  | IEEE 802.3cu 100GBASE-LR1                              | EN/IEC 60825             | Class 1 laser product |
| 400G DR4   | IEEE 802.3bs 400GBASE-DR4                              | EN/IEC 60825             | Class 1 laser product |
| 400G eDR4  | Not an IEEE standard but compatible to 4x 100GBASE-FR1 | EN/IEC 60825             | Class 1 laser product |
| 400G PLR4  | Not an IEEE standard but compatible to 4x 100GBASE-LR1 | EN/IEC 60825             | Class 1 laser product |

## Cabling specifications

This chapter describes the switch connector information and network cable information for cables that should be used with the Hewlett Packard Enterprise switches.



Incorrectly wired cabling is a common cause of problems for LAN communications. Hewlett Packard Enterprise recommends that you work with a qualified LAN cable installer for assistance with your cabling requirements.

The following table describes the cabling specifications.

### Cabling specifications

| Type                | Speed               | Notes                                                                                                                                                                                                                                                                                                  |
|---------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Twisted-pair copper | 1000 Mbps operation | Category 5, 100-ohm 4-pair UTP or STP cable, complying with IEEE 802.3ab 1000 BASE-T specifications—Category 5e or better is recommended. See 1000 BASE-T Cable Requirements for additional details.                                                                                                   |
|                     | 10 Gbps operation   | Category 6 or 6A, 100-ohm 4-pair UTP cable, or Category 6A or 7, 100-ohm 4-pair STP cable, complying with IEEE 802.3an 10 GBASE-T specifications. See 10 GBASE-T Cable Requirements below and <a href="#">Technology standards and safety compliance</a> for distances supported with each cable type. |

| Type              | Speed                | Notes                                                                                                                                                                                                                                                                     |
|-------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   |                      | CAT6A F/FTP, S/FTP, SF/FTP highly recommended in noisy environments. Refer to <i>Aruba Support Advisory_JL563A_10 GBaseT_APSC-RS20180403-01</i> for more information.                                                                                                     |
| Twinaxial copper  | Direct attach cables | One-piece devices consisting of a cable with SFP+ connectors permanently attached to each end, complying with SFF 8431 SFP+ specifications.                                                                                                                               |
| Multimode fiber   | -                    | 62.5/125 µm or 50/125 µm (core/cladding) diameter, low metal content, graded index fiber-optic cables, complying with the ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a standards respectively. OM1, OM2, OM3, OM4 and OM5 designations are covered by the ISO/IEC 11801. |
| Single mode fiber | -                    | 9/125 µm (core/cladding) diameter, low metal content fiber-optic cables, complying with the ITU-T G.652 and ISO/IEC 793-2 Type B1 standards.                                                                                                                              |

## 1000 BASE-T Cable Requirements

The Category 5 networking cables that work for 100 BASE-TX connections should also work for 1000 BASE-T, as long as all four-pairs are connected. But, for the most robust connections, you should use cabling that complies with the Category 5e specifications, as described in Addendum 5 to the TIA-568-A standard (ANSI/TIA/EIA-568-A-5).

Because of the increased speed provided by 1000 BASE-T (Gigabit-T), network cable quality is more important than for either 10 BASE-T or 100 BASE-TX. Cabling plants being used to carry 1000 BASE-T networking must comply with the IEEE 802.3ab standards. In particular, the cabling must pass tests for Attenuation, Near-End Crosstalk (NEXT), and Far-End Crosstalk (FEXT). Additionally, unlike the cables for 100 BASE-TX, the 1000 BASE-T cables must pass tests for Equal-Level Far-End Crosstalk (ELFEXT) and Return Loss.

When testing your cabling, be sure to include the patch cables that connect the switch and other end devices to the patch panels on your site. The patch cables are frequently overlooked when testing cable and they must also comply with the cabling standards.

## 10 GBASE-T Cable Requirements

The Category 6 networking cables that work for 1000 BASE-T connections may work for 10 GBASE-T, as long as the distance is less than 30m (for 10GBASE-T transceiver use), or 100m for fixed 10G port use (for example, Smart Rate 10G) and the cable installation has been tested for compliance to IEEE requirements. But, for the most robust connections, you should use cabling that complies with the Category 6A or Category 7 specifications, as described in the TIA-568-C (ANSI/TIA-568-C.2) and ISO/IEC 11801 standards. 10 GBASE-T is a sophisticated technology that relies on high quality cable installations. It is sensitive to Alien Near End Crosstalk (ANEXT) which can be generated on the cable due to cables placed in close proximity to other data cables. It is recommended that cable dressing be done carefully and in compliance with recommendations in the TIA TSB-155A.

Like 1000 BASE-T, 10 GBASE-T requires testing of all the crosstalk and return loss parameters described above, and also ANEXT.

In addition to ANEXT, 10 GBASE-T is more sensitive to external electrical noise in the environment. It is recommended that radio transmitters and other sources of high frequency continuous wave radio frequency be kept away from LAN cables.

When testing your cabling, be sure to include the patch cables that connect the switch and other end devices to the patch panels on your site. The patch cables are frequently overlooked when testing cable and they must also comply with the cabling standards.

For 10 GBASE-T, Category 6 patch cables are sensitive to movement once the link has been established, and could cause the link to drop if moved. Therefore, Hewlett Packard Enterprise recommends using Category 6A patch cables, or using cable management options to tie down (dress) the Category 6 patch cables so they cannot move.

For Conducted and Radiated Immunity in accordance with EN55024, the switch is limited to Performance Criteria A with shielded cables (CAT6A).

Access Aruba support and updates, and view warranty and regulatory information

## Accessing Aruba Support

|                                     |                                                                                                                                                                                        |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aruba Support Services              | <a href="https://www.arubanetworks.com/support-services/">https://www.arubanetworks.com/support-services/</a>                                                                          |
| HPE Aruba Networking Support Portal | <a href="https://networkingsupport.hpe.com">https://networkingsupport.hpe.com</a>                                                                                                      |
| Software documents                  | <b>NOTE:</b> Requires registration and login to access.                                                                                                                                |
| North America telephone             | 1-800-943-4526 (US and Canada Toll-Free Number)<br>+1-408-754-1200 (Primary - Toll Number)<br>+1-650-385-6582 (Backup - Toll Number - Use only when all other numbers are not working) |
| International telephone             | <a href="https://www.arubanetworks.com/support-services/contact-support/">https://www.arubanetworks.com/support-services/contact-support/</a>                                          |

Be sure to collect the following information before contacting Support:

- Technical support registration number (if applicable)
- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages
- Product-specific reports and logs
- Add-on products or components
- Third-party products or components

### Other useful sites

Other websites that can be used to find information:

|                                           |                                                                                                                                                                                                                                                    |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Airheads social forums and Knowledge Base | <a href="https://community.arubanetworks.com/">https://community.arubanetworks.com/</a>                                                                                                                                                            |
| Software licensing                        | <a href="https://lms.arubanetworks.com/">https://lms.arubanetworks.com/</a>                                                                                                                                                                        |
| End-of-Life information                   | <a href="https://www.arubanetworks.com/support-services/end-of-life/">https://www.arubanetworks.com/support-services/end-of-life/</a><br>Access through the Networking Support Portal, and see the <b>End of Life</b> tile for Product or Software |

## Accessing updates

You can access updates from the Aruba Support Portal or the HPE My Networking Website.

### HPE Networking Support Portal

<https://networkingsupport.hpe.com>

If you are unable to find your product in the Aruba Support Portal, you may need to search My Networking, where older networking products can be found.

### My Networking

<https://www.hpe.com/networking/support>

To view and update your entitlements, and to link your contracts and warranties with your profile, go to the Hewlett Packard Enterprise Support Center **More Information on Access to Support Materials** page:

<https://support.hpe.com/portal/site/hpsc/aae/home/>

Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HP Passport set up with relevant entitlements.

Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.

To subscribe to eNewsletters and alerts:

<https://asp.arubanetworks.com/notifications/subscriptions> (requires an active Aruba Support Portal (ASP) account to manage subscriptions). Security notices are viewable without an ASP account.

## Warranty information

To view warranty information for your product, go to <https://www.arubanetworks.com/support-services/product-warranties/>.

## Regulatory information

To view the regulatory information for your product, view the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products*, available at <https://www.hpe.com/support/Safety-Compliance-EnterpriseProducts>

### Additional regulatory information

Aruba is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements, environmental data (company programs, product recycling, energy efficiency), and safety information and compliance data, (RoHS and WEEE). For more information, see <https://www.arubanetworks.com/company/about-us/environmental-citizenship/>.

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content, include the product name, product version, help edition, and publication date located on the legal notices page.