



Hewlett Packard
Enterprise

AOS-S and AOS-CX Transceiver Guide

Edition: 25

Abstract

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Updates to this edition

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Updates to this edition 7

General updates

This edition (Edition 25) reflects support up to the AOS-CX 10.18.1001 release

Overview chapter

Added interconnect guidance templates for validated network architectures

QSFP-DD (400G-200G) chapter

Added support for Storage XCVRs and extended temperature AOCs

QSFP28 (100G) chapter

Added support for 100G ZR NPI

QSFP+ (40G) chapter

SFP56 (50G) chapter

Added support for 50G LR TAA NPI

HPE storage products support chapter

Added enablement of select 400G, 200G, 25G, and 10G modules from storage on CX 9300-32D and 8325



Overview

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.hpe.com/us/en/aruba-cx-switches.html>.

How to use this Guide

About this task

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

Procedure

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).

NOTE:

- 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.
 - The port numbers in this document are for illustration only and might be unavailable on your device.
 - Product images in this guide may differ from actual product.
-

Types of transceiver modules and network cables



Transceiver module type	Form factor	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)	MPO 12 - strand or LC 2 - strand
	QSFP28 optical transceiver module	
	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)	MPO 12 - strand or LC 2 - strand
	QSFP+ optical transceiver module	
	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 SFP56 Modules)

Table Continued

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

NOTE: 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 (μm)	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	Zero dispersion at 1310 nm	Connecting transceiver modules with a nominal wavelength of 1310 nm or 1550 nm.
	1530 to 1565		
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



CAUTION: 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.

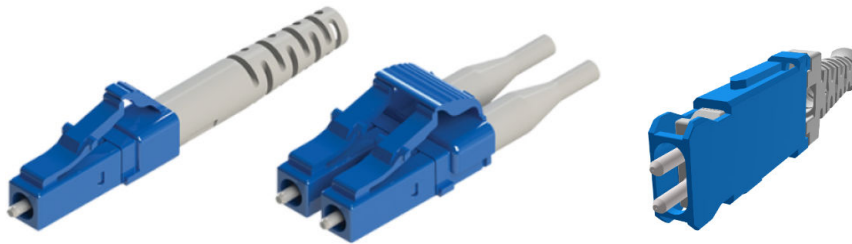
Dual LC connectors (Duplex) are typically used in normal optical types.

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.

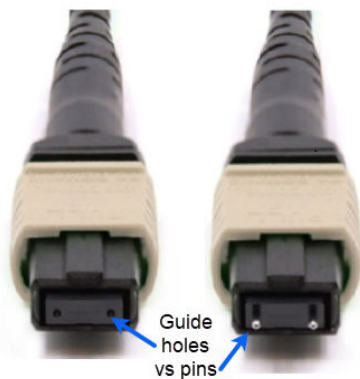
Refer to the transceiver specifications to determine whether to use fiber connectors of PC, UPC or APC.

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

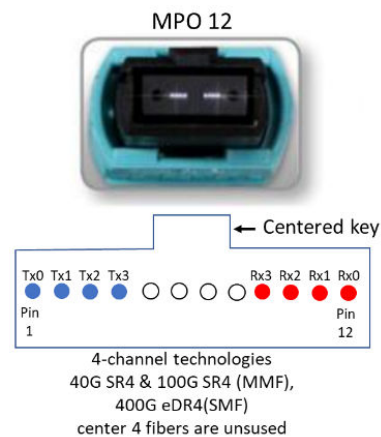
Fibers 4 and 9 form a pair for channel 3 and center 4 fibers are unused

2 - channel technologies:

100G SR2 (MMF)

Fibers 1 and 12 form a pair for channel 0

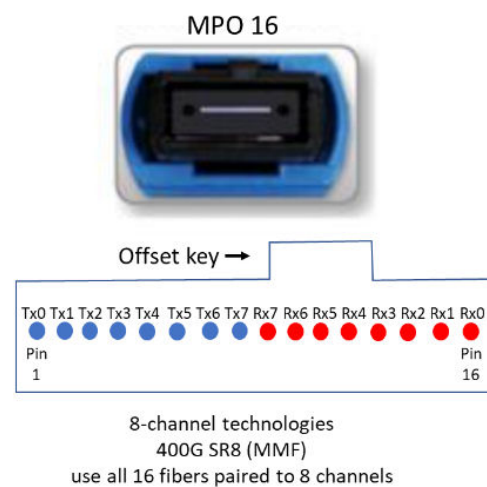
Fibers 2 and 11 form a pair for channel 1 and center 8 fibers are unused



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

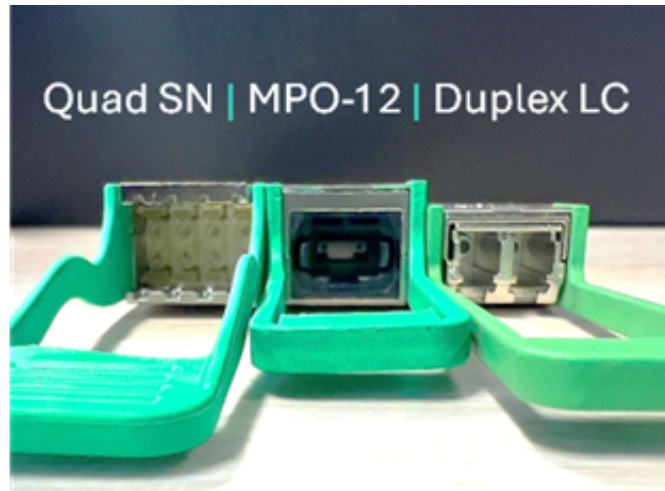
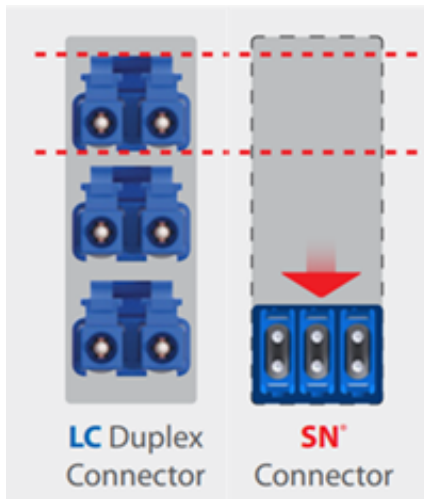
MPO16 uses all 16 fibers; depending on the opposite end transceiver or port type the fibers are mapped differently.

- 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.

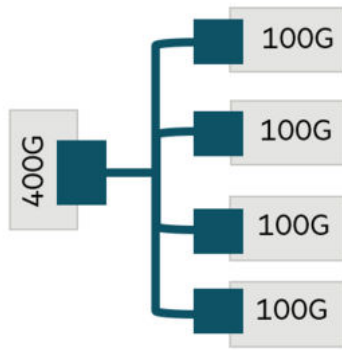


Due to its compact size, a QSFP-DD form factor can accommodate four vertically aligned SN connectors at once when they are stacked next to each other.

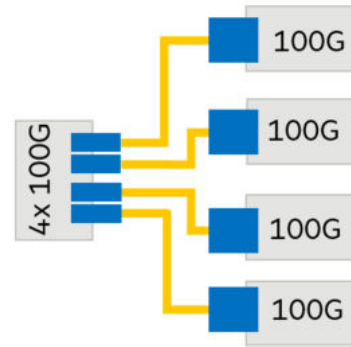


400G QSFP-DD transceivers with SN support are designed for next-generation data centers to reduce the space and effort required for cable installation. A 400G physical port can breakout into 4 independent links of 100G using SN connectors when inserted with full capacity in a Q-DD transceiver. Doing 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.

NOTE: Two clicks indicate the SN connectors are properly inserted. Just one click can result in unreliable connection for that channel.



100G split using MPO to MPO/LC breakout

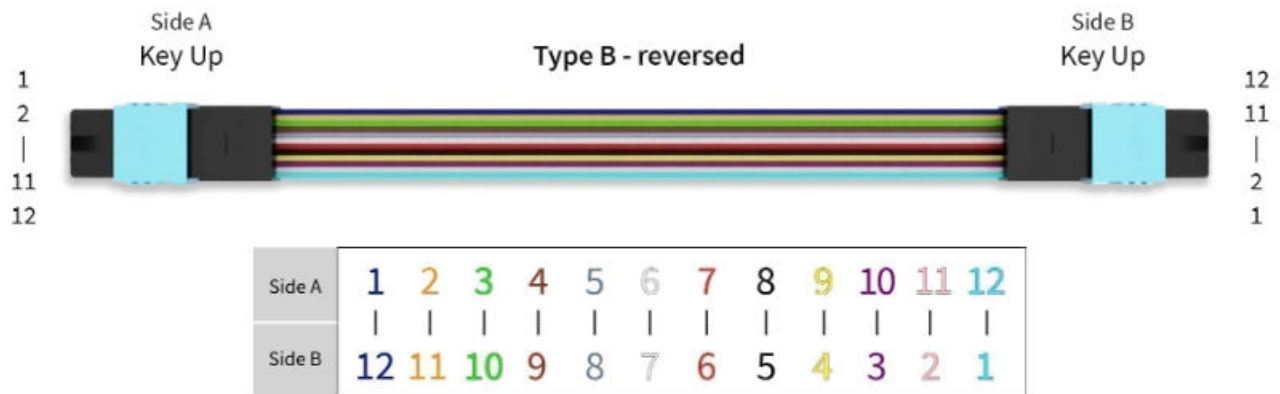


100G split using SN to LC SMF cable

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.



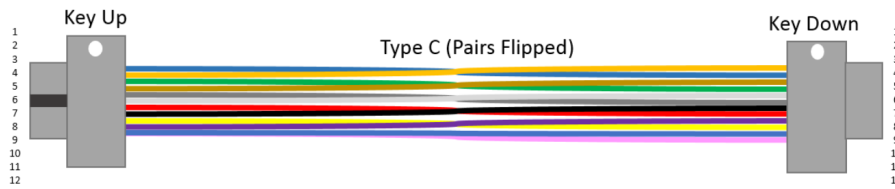
MPO16 type B cables are mapped in a similar fashion with fiber 1 to 16, 2 to 15, and so on.

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 cross over 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).

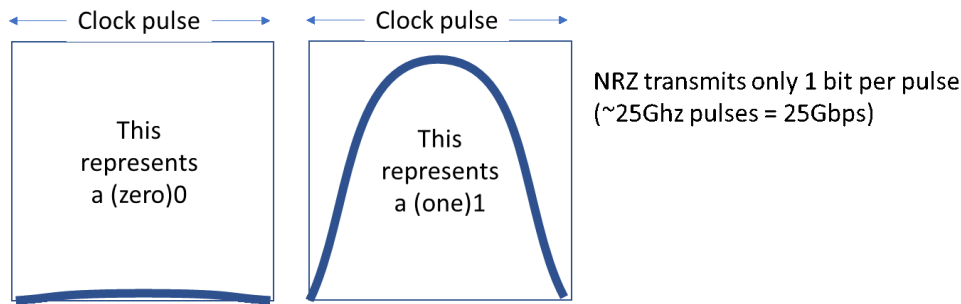
NOTE: Do not use Type A (straight-through) or Type C (paired crossovers) MPO cables for direct transceiver to transceiver connections.

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.

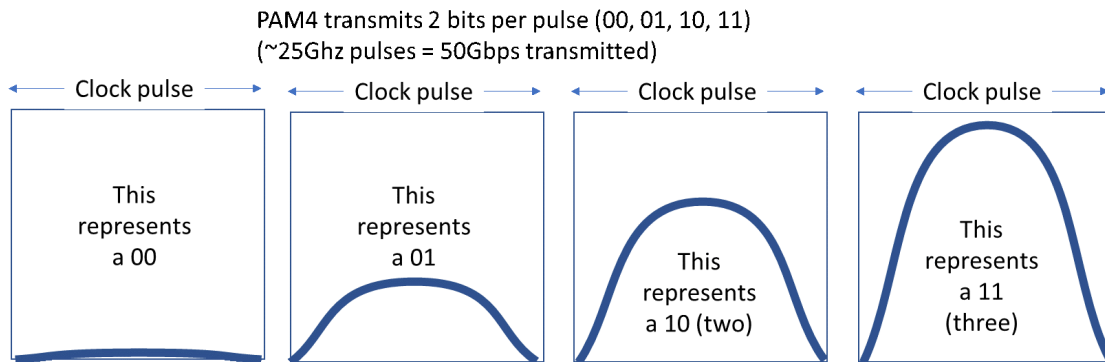


Optical encoding methods (NRZ vs PAM4)

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 40G LR4 (can't be split)
100G	QSFP28 SR4, LR4, ER4L	4	25G NRZ	100G SR4 => 4x 25G SR 100G LR4, ER4L (can't be split)
100G	QSFP28 SR2	2	50G PAM4 (25Ghz signal, 4 levels)	Not applicable
100G	QSFP28 LR4	4	25G NRZ	100G LR4 can't be split
100G	QSFP28 LR	1	100G PAM4 (50Ghz signal, 4 levels)	Not splittable Connects to 1 link of the 400G 4xLR (S3N92A)
200G	QSFP56 SR4	4	50G PAM4 (25Ghz signal, 4 levels)	200G SR4 => 2x 100G SR2 (100G SR2 is not the same as 100G SR4)
400G	QSFP - DD or Q - DD SR8, eDR4	8	50G PAM4 (25Ghz signal, 4 levels)	400G SR8 => 2x 100G SR4 (8 fibers each)
		4	100G PAM4 (50Ghz signal, 4 levels)	400G SR8 => 4x 100G SR2 (4 fibers each)
				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, QSFP56 and OSFP

OSFP is a different form factor than QSFP+/QSFP28/QSFP56. OSFP stands for Octal Small Form-factor Pluggable implying 8 channels, usually for very high-speed optics (400G/800G). OSFP, not to be confused with the routing protocol OSPF - Open Shortest Path First.

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

QSFP28 Transceivers	QSFP56 Transceivers
Supports 4 lanes of 25 Gbps via NRZ1 modulation, and can support QSFP+ (4x10G NRZ) products.	Supports 4 lanes of 50 Gbps via PAM4 ² 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.

¹Non-Return-to-Zero

²Pulse 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+, QSFP28 and QSFP56 optics

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 (Mb/s)	Description
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	--	--

NOTE: 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 on Select switch series

QSFP-DD ports on the Aruba 9300-32D, 9300S and the 10040 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	split 4 100 R9B48A Aruba 400G Q - DD to 4xQSFP 56 100G 7m AOC * connect to HPE Server Adapters that are 100G QSFP 56 R9B42A Aruba 400G Q - DD MPO12 eDR4 2km SMF xcvr * R9B63A ARUBA 100G QSFP28 LC FR1 2KM SMF xcvr
4	100G (over MMF)	split 4 100 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. 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 400G Q - DD optical interoperability for additional details.

Table Continued

Number of child interfaces	Child interface speed	Examples**
2	200G	split 2 200 R9B53A Aruba 400G Q - DD to 2xQSFP56 200G 7m AOC * connect to HPE Server Adapters that are 200G QSFP56
2	100G	split 2 100 R9B58A 200G QDD to 2xQSFP28 100G 7m AOC * connect to ports that are 100G QSFP28
2	100G (over MMF)	split 2 100 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. MPO16 to 2x MPO12 maps fibers 1 - 4 & 12 - 16 to MPO(1) and 5 - 11 to MPO(2).

Table Continued

Number of child interfaces	Child interface speed	Examples**
4	25G	split 4 25 (845420 - B21) HPE QSFP28 to 4x25G SFP28 7m AOC {HPE Server product} * connect to ports that are 25G SFP28 JL309A Aruba 100G QSFP28 MPO SR4 MMF xcvr * Connect to 25G SR transceivers
4	10G	split 4 10 For 10G optical connections, use 40G SR4/eSR4 transceivers (JH231A or JH233A) JH233A HPE X142 40G QSFP+ MPO eSR4 300M xcvr * 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.

NOTE: 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.

NOTE: 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.

SKU #	Description	Notes
*R4D51A	HPE Premier Flex MPO16/MPO16 OM4 2m Cbl	400G SR8 (R9B41A) to 400G SR8 (R9B41A)
*R4D52A	HPE Premier Flex MPO16/MPO16 OM4 5m Cbl	
*R4D53A	HPE Premier Flex MPO16/MPO16 OM4 10m Cbl	
*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).

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.

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	

NOTE: *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.

SKU #	Description	Notes
*K2Q46A	HPE Premier Flex MPO to 4xLC 5m Cbl	40G SR4 to 4x 10G SR; 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

NOTE: 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:

NOTE: 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 (R9B41A)	Multimode fiber, 16 fibers split into 4 groups of 4 to 100G SR2 (70m/OM3; 100m/OM4) 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 400G Q - DD optical interoperability .
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) 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.
QDD 400G PLR8	2 split cables used with one module, 8 fibers on each cable. Single mode fiber, 16 fibers split into 8 groups of 2 fibers to connect 50G or 25G LR. (10km reach).	Uses 2x SMF MPO12 to 4x LC (i.e. 16 fibers with 8 fibers on each cable) connecting to 50G/25G 10km LR technology on the far end. Each link carries 2 fibers.
QSFP56 200G SR4 (S4B43A/R5Z83A*)	Use of fiber type depends upon the mode of operation. Module support MPO12 cable on 200G side. It can support one-one link or, 2-way, 4-way splits.	Uses 1x SMF MPO12 cable for 1:1 link. For 2 way split, it works with MPO12 to 2x MPO12 MMF cable. And MPO12 to 4x LC cable for 4 way split.

Table Continued

Upstream Hi - speed transceiver	Downstream lower - speed transceiver	Notes
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) 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).

NOTE: 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
Aruba 6300 Series SOE91A, SOX44A - 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.
Aruba 6400 Series	V1 or v2 series: No support for split ports.	Contact product management if split use - case is needed.
Aruba 8100 Series R9W94A (R9W86A/R9W87A) - 24XF4C models R9W95A (R9W88A/R9W89A) - 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) 24XT4XF4C model: 29 - 32 (40G or 100G) 48XF and 40XT8XF models cannot split the QSFP28 ports(not enough MACs)

Table Continued

Part number (PN)	Description/notes	Port info
Aruba 8320 Series	JL479A, Aruba 8320 48 10/6 40 X472 5 2 Bdl	49 - 54 (40G)
- JL479A		
- JL579A	JL579A, Aruba 8320 32 40G X472 5 2 Bdl	5 - 28 (40G, center 24 ports)
- JL581A	JL581A, Aruba 8320 48 T/6 40 X472 5 2 Bdl	49 - 54 (40G)
Aruba 8325 48Y8C models	Base system SKU displayed by show system	49 - 56 (40G or 100G)
JL635A (base system)	JL624A Aruba 8325 - 48Y8C FB 6 F 2 PS Bdl	
	JL625A Aruba 8325 - 48Y8C BF 6 F 2 PS Bdl	
Aruba 8325 32C models	Base system SKU displayed by show system	1 - 32 (40G or 100G)
JL636A (base system)	JL626A Aruba 8325 - 32C FB 6 F 2 PS Bdl	
	JL627A Aruba 8325 - 32C BF 6 F 2 PS Bdl	
Aruba 8325P 32C models	Base system SKU displayed by CLI (show system)	1 - 31 (40G or 100G)
S4A48A (base system)	S4A49A - HPE ANW 8325P 32C FB 6Fs DC PSU Bdl	NOTE: last port cannot be split - but can use a single QSA28 adapter (MACs reserved for the 2x SFP+ ports).
	S4A50A - HPE ANW 8325P 32C BF 6Fs DC PSU Bdl	
	S4A51A - HPE ANW 8325P 32C FB 6Fs AC PSU Bdl	
	S4A52A - HPE ANW 8325P 32C BF 6Fs AC PSU Bdl	

Table Continued

Part number (PN)	Description/notes	Port info
Aruba 8325P 32C models SOG12A (base system) for TAA bundles	SOG07A(TAA) - HPE ANW 8325P 32C FB 6Fs DC PSU TAA Bdl SOG08A(TAA) - HPE ANW 8325P 32C BF 6Fs DC PSU TAA Bdl SOG09A(TAA) - HPE ANW 8325P 32C FB 6Fs AC PSU TAA Bdl SOG10A(TAA) - HPE ANW 8325P 32C BF 6Fs AC PSU TAA Bdl	1 - 31 (40G or 100G) NOTE: last port cannot be split - but can use a single QSA28 adapter (MACs reserved for the 2x SFP+ ports).
Aruba 8325H models TAA/Non - TAA:	S2T42A(TAA)/S4B20A - 18Y4C model (FB) S2T46A(TAA)/S4B21A - 18Y4C model (BF) S2T47A(TAA)/S4B22A - 16C model (FB) S2T48A(TAA)/S4B23A - 16C model (BF)	19 - 22 (40G or 100G) 19 - 22 (40G or 100G) 1 - 15 (40G or 100G) 1 - 15 (40G or 100G) Port 16 on the 16C models cannot be split. It can use a QSA28 adapter (MACs reserved for the 2x SFP+ ports).
Aruba 8360 32Y4C models JL717A/JL717C(v2)(base system)	Base system SKU displayed by show system JL700A / JL700C (v2) Aruba 8360 - 32Y4C Prt2Pwr3F2PS Bdl JL701A / JL701C (v2) Aruba 8360 - 32Y4C Pwr2Prt3F2PS Bdl	33 - 36 (40G or 100G)
Aruba 8360 16Y2C models JL718A/JL718C(v2)(base system)	Base system SKU displayed by show system JL702A /JL702C (v2) Aruba 8360 - 16Y2C Prt2Pwr3F2PS Bdl JL703A /JL703C (v2) Aruba 8360 - 16Y2C Pwr2Prt3F2PS Bdl	17 - 18 (40G or 100G)
Aruba 8360 48XT4C models JL720A/JL720C(v2)(base system)	Base system SKU displayed by show system JL706A /JL706C (v2) Aruba 8360 - 48XT4C Prt2Pwr3F2PS Bdl JL707A /JL707C (v2) Aruba 8360 - 48XT4C 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.

Table Continued

Part number (PN)	Description/notes	Port info
Aruba 8360 24XF2C models JL722A/JL722C(v2)(base system)	Base system SKU displayed by show system JL710A /JL710C (v2) Aruba 8360 - 24XF2C Prt2Pwr3F2PS Bdl JL711A /JL711C (v2) Aruba 8360 - 24XF2C Pwr2Pwr3F2PS Bdl	25 - 26 (40G or 100G)
Aruba 8360 48Y6C models JL719C (base system)	Base system SKU displayed by CLI show system JL704C (v2) Aruba 8360 - 48Y6C v2 FB 5F 2AC Bdl JL705C (v2) Aruba 8360 - 48Y6C v2 BF 5F 2AC Bdl	49 - 54 (40G or 100G) MACsec available on ports 53 - 54 and available to the split 10G or 25G links through ports 53 - 54
Aruba 8360 - 12C models JL721A/JL721C(v2) (base system)	Base system SKU displayed by show system JL708A /JL708C (v2) Aruba 8360 - 12C Pwr2Prt3F2PS Bdl JL709A /JL709C (v2) Aruba 8360 - 12C Prt2Pwr3F2PS Bdl	1 - 12 (40G or 100G)
Aruba 8400X modules	JL365A Aruba 8400X 8p 40G QSFP+ Adv Mod JL366A Aruba 8400X 6p 40G/100G QSFP28 Adv Mod	1 - 8 (40G) 1 - 6 Only capable of 40G split into 4 x 10G JL366A modules do not have 25G MACs to support split 100G
Aruba 9300 32D models R8Z96A (base system)	Base system SKU displayed by CLI show system R9A29A Aruba 9300 32D 32D2XF FB 6F2AC Bdl R9A30A Aruba 9300 32D 32D2XF BF 6F2AC Bdl	1 - 32 (40G, 100G, 200G, 400G) 9300 - 32D can split 2x, 4x and 8x The 9300-32D uses split profiles (from 10.15.1000 release onwards): system interface-profile split <NAME> 'profile-1'allows 4-way split on all 32 ports. 'profile-2' allows 2-way, 4-way and 8-way split only on bottom 16 ports. Top 16 ports are not splittable in this profile and can be used only for 400G connections.

Table Continued

Part number (PN)	Description/notes	Port info
Aruba 9300S 32C8D models SOF95A (TAA base system) SOF96A (base system)	Base system SKU displayed by CLI show system SOF81A HPE ANW9300S 32C 8D FB 6Fs AC TAA Bdl SOF83A HPE ANW 9300S 32C 8D BF 6Fs AC TAA Bdl SOF84A HPE ANW 9300S 32C 8D BF 6Fs AC Bdl SOF87A HPE ANW 9300S 32C 8D BF 6Fs DC TAA Bdl SOF88A 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 QSFP28 to SFP28 adapter support for additional details. The 9300S uses split profiles: system interface - profile split < NAME > "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) "profile - 2" maximizes 25G downstream splits (10 ports: 13,15 - 17, 19, 21, 23, 25 - 27) Refer to the AOS - CX Fundamentals Guide for Aruba 9300 Switch Series for more information about the system Interface - profile command. 9300S is only able to split 2x and 4x (8x split is only for the 9300 - 32D)
Aruba 10000 models R8S96A (base system)	Base system SKU displayed by CLI show system R8P13A Aruba CX 10000 - 48Y6C FB 6F 2PS Bdl R8P14A Aruba CX 10000 - 48Y6C BF 6F 2PS Bdl	49 - 54 (40G or 100G)

NOTE: 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.

System Lanes Configuration

This command configures the number of communication lanes used between the system and the transceiver. It was introduced in CX 10.15 software release. For most transceivers, the system can automatically determine the lane count based on the port type, speed, and whether the interface is split. The lane count must be specified when the transceiver supports multiple modes of operation and the default does not match the mode selected at the other end of the link. This command applies only to multi-lane ports such as QSFP28 and QSFP-DD and is only available on CX 8325, 9300, 9300S and 10040 switches.

CLI command: `system-lanes <count>`. Here count is number of lanes you want to define. That is, 1, 2, 4, 8.

NOTE: The system lane count cannot be changed when the port is split and hence should always be configured before configuring split profile of the port or switch.

Example of system lane configuration requirement: When a QSFP56 200G-SR4 transceiver inserted in a QSFP-DD port configured with `split 2 100g`. This transceiver supports a maximum of 4 lanes so `system-lanes 4` must be configured because the default for a split QSFP-DD port is 8 lanes. The system lane count must be configured before splitting the port and cannot be changed after the port is split.

Another example is a 200G DAC inserted in a QSFP56 port with the other end inserted in a QSFP28 port. The QSFP56 port must be configured with `system-lanes 4` so it uses 4 lanes running at 25G for compatibility with the QSFP28 port. Otherwise, the QSFP56 port will default to 2 lanes running at 50G.

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.

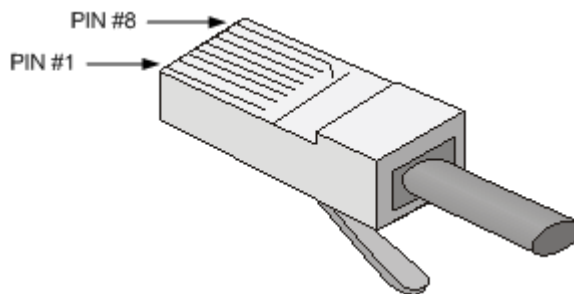
Copper transceiver modules

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.



Pin	Signal	Function
1	MX_0+	Data transmit/receive
2	MX_0 -	Data transmit/receive
3	MX_1+	Data transmit/receive
4	MX_2+	Data transmit/receive
5	MX_2 -	Data transmit/receive
6	MX_1 -	Data transmit/receive

Table Continued

Pin	Signal	Function
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. They represent the operating temperature of the product 'case temperature'. Do not confuse this with the supported operating temperature of the switch. See the switch product Datasheet for operating temperature. Back-to-front (BF) airflow switches usually have elevated temperature air from within the switch. Hence, a 70° C rated switch (eg 4100i) requires an 85° C rated Industrial-Temperature transceiver.

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

Clock Data Recovery (CDR)

Clock Data Recovery (CDR) is a fundamental function inside high-speed transceivers that enables reliable communication over serial links. At a high level, its purpose is to extract timing information (the clock) directly from the incoming data stream so the receiver knows exactly when to sample each bit. In many modern communication systems, especially high-speed links like Ethernet, PCIe, or optical networks, data is transmitted without a separate clock signal. Instead of sending a dedicated timing reference alongside the data, the transmitter embeds timing implicitly in the transitions of the data. This reduces the number of physical connections and improves efficiency. However, it creates a challenge on the receiving side. Example: How to know when one bit ends and the next bit begins? CDR addresses these challenges.



A CDR circuit continuously monitors the incoming signal and aligns an internal clock to match the timing of the data transitions. Once it locks onto the correct timing, it uses that recovered clock to sample the incoming bits at the optimal moment, minimizing errors. Even if the signal has been degraded by noise, distortion, or jitter during transmission, a well-designed CDR can still recover a stable clock and correctly interpret the data.

The following modules support CDR:

- 1000BASE-T copper transceiver
- 10GBASE-T copper transceiver
- 25GbE optics
- 50GbE optics
- 100GbE optics
- 200GbE optics
- 400GbE optics

The following modules do not support CDR:

- 1GbE optics
- 10GbE optics
- 40GbE optics
- All DACs – all speeds, straight and breakout versions

Optics includes both XCVR modules and AOCs.

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+SR@		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
```

Channel#	Tx Bias (mA)	Rx Power (mW/dBm)	Tx Power (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

Switch Connect Program

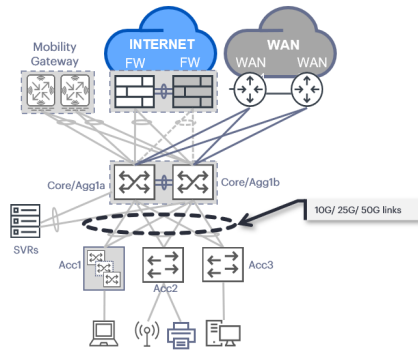
Network deployment guidance for interconnect solutions.

The Switch Connect Program provides validated guidance for building the physical connectivity layer of commonly deployed Aruba CX switching network architectures. It helps users to understand which switch platforms can be connected together, what uplink speeds are supported, which optics or cables should be used, how far those links can reach, and how far the design can scale.

The program complements validated network architecture guidance by focusing specifically on the physical design: switch-to-switch connectivity, interconnect selection, port split behavior, MACsec-capable links, and distance-based deployment options. By mapping supported switch combinations to validated optics, DACs, AOCs, and fiber choices, the program helps simplify planning and enables predictable, repeatable deployments across campus, data center, and collapsed core environments.

Covered	Not Covered
Physical network connectivity for validated and commonly deployed Aruba CX architectures	1G link options
Interconnect scale for connecting two switches within the network	Options for every SKU within each product line
Available interconnect options to build switch-to-switch links	SKU numbers or ordering part numbers for each interconnect module
Supported optics, DACs, AOCs, multimode fiber, and single-mode fiber choices	Detailed port-level constraints or limitations for every interconnect module
Availability and count of MACsec-capable links	Exhaustive transceiver compatibility details for every possible deployment case
Focus on only maximum port configuration SKU of each product line	Replacement for platform datasheets, release notes, or detailed transceiver ordering guides.
For platforms supporting 50G, focus is on 25G and 50G interconnect options	
Architecture-level guidance for common campus, data center, leaf-spine, and collapsed core deployments	

2-Tier Campus



	Max # of ports with MACsec	MACsec link speed
[A]	4	10G/10G/25G
[B]	32	10G/25G
[C]	16	25G/40G/100G

MMF SMF Not Applicable (speed standard not supported)

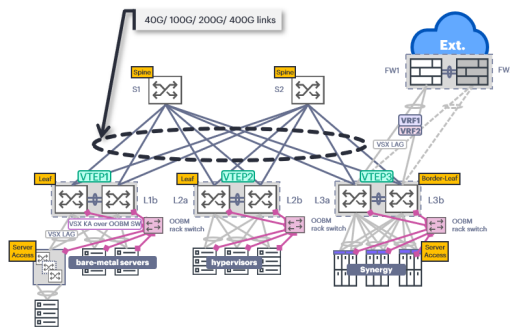
*MACsec links are applied to only MACsec enabled SKUs

	Core/Agg	Uplink speed	Max # of Access	Acc
1	8360	10G/25G	44 + 4 [A]	4100i, 6100, 6200*, 6300*, 6400*
2	6400 32p	10G/25G	22 + 4 [A]	6300*, 6400
3	6400 48p	10G/25G	32 [B]	6100, 6200*, 6300*, 6400*
4	8325 48p	10G/25G	48	4100i, 6100, 6200, 6300, 6400
5	8325 32p	100G	48	4100i, 6100, 6200, 6300, 6400
6	9300-32D	10G/25G (w/ Split Profile 1)	32 x4 = 128	4100i, 6100, 6200, 6300, 6400
		10G/25G (w/ Split Profile 2)	16 x8 = 128 (+ 16x QDD ports with no split)	
		50G/100G (w/ Split Profile 1)	32 x4 = 128	6300, 6400
		50G/100G (w/ Split Profile 2)	16 x8 = 128 (+ 16x QDD ports with no split)	
		40G (w/o split)	32	
7	9300S-32C8D	25G (w/ Split Profile 2)	40 (via 4x Split) + 10 (via QSA28) + 16 [C] (via QSA28) (+ Incentive of 4x QDD ports)	6300, 6400
		100G (w/ Split Profile 1)	32 (via 4x Split) + 16 (via 2x Split) + 8 (no split) + 16 [C] [no split]	

	Core/Agg	4100i	6100	6200	6300	6400
1	8360				250 - SR, eSR, LR, ER, BDI	500 - SR, eSR, LR, ER, BDI
2	6400 32p	10G - SR, LR, ER	10G - SR, LR	10G - SR, LR, ER		
3	6400 48p				250 - SR, eSR, LR, ER, BDI	
4	8325 48p					
5	8325 32p	100G N/A	100G N/A	100G N/A	100G - SR4, SR2, SR1, LC based XCVRs	
6	9300-32D	10G -> 40G SR4/eSR4 -> 4x 10G SR	10G -> 40G SR4/eSR4 -> 4x 10G SR	10G -> 40G SR4/eSR4 -> 4x 10G SR	250 -> 400G PLR8 -> 8x 25G LR	
		50G N/A	50G N/A	50G N/A	500 -> 200G SR4 -> 4x 50G SR, 400G SR8 -> 8x 50G SR, 400G PLR8 -> 8x 50G LR	
					100G -> 400G SR8 -> 4x 100G SR2, 400G LR/PLR4 -> 100G LR	
7	9300S-32C8D	250 N/A	250 N/A	250 N/A	250 -> Over QSA28 - SR, eSR, LR, ER, BDI, Over split - 100G SR4 -> 4x 25G SR	
		100G N/A	100G N/A	100G N/A	100G -> No split - SR4, SR2, BDI, LR, DR, FR, 2x Split - 200G SR4 -> 100G SR2, 4x Split - 400G SR8/DR/DR4/eDR4/PLR4/LR -> 4x 100G SR2/DR/FR/LR	

Figure 1: Tier Campus Architecture

Leaf-Spine DCN



MMF SMF Not Applicable (speed standard not supported)

	Spine	Uplink speed	Max # of Leaf	Leaf
1	8325 (32p)	40G/100G	32	
2	8360	40G/100G	12	
3.1		40G (both split profiles)	32	8100, 8325, 8360, 9300, 9300S, 10000
3.2		100G (w/ Split Profile 1)	32 (w/o split) 128 (using split)	
3.3		100G (w/ Split Profile 2)	32 (w/o split) 80 (using split)	
3.4		200G (w/ Split Profile 1)	32 (w/o split) 64 (using split)	
3.5		200G (w/ Split Profile 2)	32 (w/o split) 48 (using split)	9300, 9300S
3.6		400G (both split profiles)	32	
4.1		40G (both split profiles)	40	
4.2		100G (w/ Split Profile 1)	40 (w/o split) 72 (using split)	8100, 8325, 8360, 9300, 9300S, 10000
4.3		100G (w/ Split Profile 2)	40 (w/o split) 58 (using split)	
4.4		200G (w/ Split Profile 1)	24 (w/o split) 32 (using split)	
4.5		200G (w/ Split Profile 2)	24 (w/o split) 28 (using split)	9300, 9300S
4.6		400G (both split profiles)	8	

	Spine	8100	8325	8360	10000	9300	9300S
1	8325 (32p)	40G - SR4, eSR4, SR2, LR4, ER4					
2	8360	100G - SR4, SR2, SR1.2, BDI, LR, FR					
3	9300-32D				40G - SR4, eSR4, BDI, LR4, ER4		
		40G - SR4, eSR4, BDI, LR4, ER4			100G (w/o split) - SR4, SR2, SR1.2, BDI, LR, LR, FR		
		100G (w/o split) - SR4, SR2, SR1.2, BDI, LR4, DR, LR, FR			100G (w/ split) - Using 2x split - 200G SR4 -> 2x 100G SR2		
		100G (w/ split) - Using 2x split - 200G SR4 -> 2x 100G SR2			Using 4x split - 400G SR8 -> 4x 100G SR2, 400G DR/DR4 -> 4x 100G DR, 400G eDR4/FR/FR4 -> 4x 100G FR, 400G PLR4 -> 4x 100G LR		
4	9300S-32C8D	200G N/A			200G (w/o split) - 200G SR4		
		400G N/A			200G (w split) - 400G SR8 -> 2x 200G SR2		
					400G - SR8, DR, DR4, eDR4, FR, FR4, PLR4, LR, LR, ZR		

Figure 2: Leaf Spine DCN

Collapse Core/Spine with CX 9300-32D

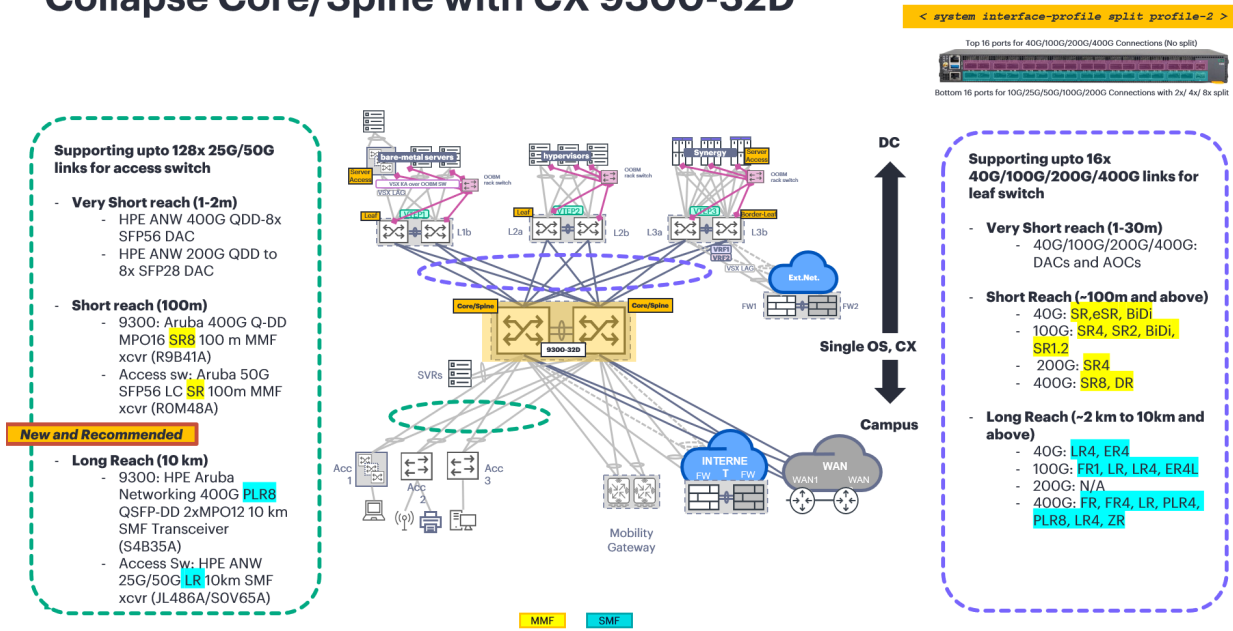


Figure 3: Collapse Core/Spine with CX 9300-32D

Unsupported transceiver mode

The term transceiver applies collectively to optical transceivers, DAC and AOC cables, and port adapters. The **all-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

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

NOTE: 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.

Table Continued

Term	Description
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 show interface dom command is issued. Digital diagnostic monitoring (DDM) is an alternate term for the same feature.

Table Continued

Term	Description
DP-16QAM	Dual-Polarization 16-state Quadrature Amplitude Modulation Used by 400G ZR optics to effect (4 bits/symbol) on two orthogonal polarizations (horizontal and vertical), transmitting up to 8 bits per symbol total. Similar to PAM4 but using two orthogonal wavelengths for transmission of data.
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 Overview 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 of data (see PAM4).
NSP	HPE Aruba Networking Support Portal. (https://networkingsupport.hpe.com). 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.

Table Continued

Term	Description
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 25Ghz 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 or optical split cables).
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.

Table Continued

Term	Description
UTM	UT - mode, or Unsupported Transceiver Mode. See Overview 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.

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



Product name (SKU)	DOM - Digital Optical Monitoring	Nominal wl (nm)	Fiber mode and connector type	Fiber Diameter	Modal Bandwidth	Distance
HPE Aruba Networking 400G VR4 Q- DD MPO12 50m MMF Transceiver (S6H26A)	Yes	850	MMF MPO12 (APC)	50/125	2000 (OM3) 4700 (OM4 & OM5)	30m (OM3) 50m (OM4/ OM5)
Aruba 400G Q - DD MPO16 SR8 100 m MMF xcvr (R9B41A)	Yes	Eight lanes: 850 8x50G PAM4 See "Split to lower - speed" section	MMF MPO16 (APC)	50/125	2000 (OM3) 4700 (OM4 & OM5)	70 m (229.6 ft) 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 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)

Table Continued



Product name (SKU)	DOM - Digital Optical Monitoring	Nominal wl (nm)	Fiber mode and connector type	Fiber Diameter	Modal Bandwidth	Distance
HPE Aruba Networking 4x100G FR QSFP - DD SN 2 km SMF Transceiver (S3N91A)	Yes	Per SN channel One lane, 1310, 1x 100G PAM4 Connects to 100G FR1 (R9B63A) (not compatible to 100G SR4 nor LR4)	SMF 4xSN (UPC)	9/125	N/a	2 km (1.24 miles)
HPE Aruba Networking 400G FR4 QSFP - DD LC 2 km SMF Transceiver (S3N95A)	Yes	Four lanes 1264.5 to 1277.5 1284.5 to 1297.5 1304.5 to 1317.5 1324.5 to 1337.5 Four multiplexed lanes, 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 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)

Table Continued



Product name (SKU)	DOM - Digital Optical Monitoring	Nominal wl (nm)	Fiber mode and connector type	Fiber Diameter	Modal Bandwidth	Distance
HPE Aruba Networking 400G PLR8 QSFP - DD 2xMPO12 10 km SMF Transceiver (S4B35A)	Yes	Eight lanes: 1310 8x50G PAM4 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 10 km SMF Transceiver (S3N96A)	Yes	Four lanes 1264.5 to 1277.5 1284.5 to 1297.5 1304.5 to 1317.5 1324.5 to 1337.5 Four multiplexed lanes, 100G PAM4	SMF LC (UPC)	9/125	N/a	10 km (6.21 miles)
HPE ANW 400G ZR QSFP - DD 80 km SMF Transceiver (S4B38A)	Yes	One lane: 1547.7 1x59.8Gbd DP - 16QAM	SMF Duplex LC (UPC)	9/125	N/a	80 km (see note*)

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.

NOTE: *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.

See 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 (see [400G Q-DD optical interoperability with slower speed optics](#) for additional details).



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	10 W	Commercial (0 to 70°C)
HPE Aruba Networking 4x100G FR QSFP - DD SN 2 km SMF Transceiver (S3N91A)	- 3.1 to +4.0	- 7.1 to +4.0	10 W	Commercial (0 to 70°C)
HPE Aruba Networking 400G FR4 QSFP - DD LC 2 km SMF Transceiver (S3N95A)	- 3.2 to +4.4	- 7.2 to +4.4	8 W	Commercial (0 to 70°C)
HPE Aruba Networking 4x100G LR QSFP - DD SN 10 km SMF Transceiver (S3N92A)	- 1.9 to 4.8	- 8.2 to +4.8	10 W	Commercial (0 to 70°C)
HPE Aruba Networking 400G DR4 QSFP - DD MPO12 500 m SMF Transceiver (S3N93A)	- 2.9 to +4.0	- 5.9 to +4.0	10 W	Commercial (0 to 70°C)
Aruba 400G Q - DD MPO12 eDR4 2 km SMF xcvr (R9B42A)	- 3.1 to +4.0	- 7.1 to +4.0	12 W	Commercial (0 to 70°C)
HPE Aruba Networking 400G PLR4 QSFP - DD MPO12 10 km SMF Transceiver (S3N94A)	- 1.9 to 4.8	- 8.2 to +4.8	10 W	Commercial (0 to 70°C)

Table Continued



Product name (SKU)	Optical parameters (dBm)		Required power*	Temperature Ratings
	Transmit power	Receive power		
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	Commercial (0 to 70°C)
HPE Aruba Networking 400G LR4 QSFP - DD LC 10 km SMF Transceiver (S3N96A)	- 2.7 to +5.1	- 9.0 to 5.1	8 W	Commercial (0 to 70°C)
HPE ANW 400G ZR QSFP - DD 80 km SMF Transceiver (S4B38A)	- 1.0 to +1.0	- 22.0 to 0.0	20 W	Commercial (0 to 70°C)
HPE Aruba Networking 400G VR4 Q-DD MPO12 50m MMF Transceiver	-4.6 to +4.0	-6.3 to +4.0	9.0W	15°C to 70°C

NOTE: The SN connectors require 2 'clicks' to be fully seated - only inserting to the 1st click will result in an unreliable connection for that channel.

NOTE: *Wattage may impact operating temperature for select switches.

Aruba 9300-32D switch series limit the use of QDD optics/AOCs of up to 8 modules max at a time, if running at low-line AC Voltage (100VAC-125VAC). Use High-line voltage to install more than 8 products in the 9300 32D. For more details see the [**CX 9300 Installation and Getting Started Guide**](#).

NOTE: 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.



QSFP - DD capable product name	SKU	Minimum software required	Comments
Aruba 9300 Switch Series	- 32D models	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 may not be able to properly power up more than 8 products.
	R8Z96A - Base	S3N90A, S3N91A, S3N92A, S3N93A, S3N94A: 10.13.1010	
	• R9A29A FB	S3N95A, S3N96A: 10.14.1000	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 split 8 25 or split 8 50 commands and connect an SMF MPO12 to 4xLC fiber cables to the cable plant. The MPO12 connectors should be APC for best performance.
	• R9A30A BF	S4B35A (PLR8): 10.15.1000	
		S4B38A (ZR): 10.16.1006 (only on FB model - R9A29A)	S4B38A (400G ZR): is only supported in the upper (odd - numbered) ports on F2B models of 9300 - 32D with a 5°C reduction in the maximum operating temperature of the chassis. ZR is not supported on B2F models.
		S6H26A (VR4): 10.17.1001	
Aruba 9300S Switch Series	- 32C 8D models displayed by CLI show system	R9B42A, S3N90A, S3N91A, S3N92A, S3N93A: 10.14.0000	QSFP - DD (Q - DD) products cannot be used in QSFP ports (1 - 16 and 25 - 40) on the 9300S.
	Base models: S0F95A - TAA Base, S0F96A - Base	S3N95A, S3N96A: 10.15.0005	
	• S0F81A FB TAA	S3N94A: 10.15.1000	
	• S0F82A FB		
	• S0F83A BF TAA		
	• S0F84A BF		

Table Continued

QSFP - DD capable product name	SKU	Minimum software required	Comments
	- S0F87A BF DC TAA - S0F88A BF DC	S4B38A (ZR): 10.15.1005	S4B38A (400G ZR): is only supported in ports 17, 19, 21 & 23, and only on the FB models with a 10°C reduction in the maximum operating temperature of the chassis. Do not use on BF models or in any other port for thermal reasons.
		S3N94A (PLR4): 10.15.1000	R9B41A(SR8) does not support 8-way split. Can be used as a single link 400G optic using MPO16 cables.
			R9B41A requires a derate of 5°C in BF models with maximum environment temperature of 35°C.
		R9B41A (SR8), R4B35A (PLR8): Not supported	9300S does not support 8 - way splitting, thus, the 400G SR8 (R9B41A) and PLR8 (S4B35A) are not supported.
		S6H26A (VR4): 10.17.1001	VR4 can connect to other side with 200 VR2, 400G OSFP VR4 or 400G QSFP-112 VR4 from server side.
Aruba 10040 32C6D models	S4R58A displayed by CLI (show system)	R9B42A, S3N93A, S3N95A, S3N96A, S3N94A, R9B41A (SR8): 10.16.10xx	
	- S4R54A – 32C6D FB bundle - S4R55A – 32C6D BF bundle		
	TAA models:	S4B38A (ZR): 10.16.10xx	S4B38A (ZR) only supported in ports 25, 27, 29 of the F2B switch models (S4R54A or S4R56A) with a 5°C reduction in the maximum operating temperature of the chassis. Not supported in B2F models.
	- S4R59A displayed by CLI (show system) - S4R56A – 32C6D FB bundle - S4R57A – 32C6D BF bundle		

400G Q-DD optical interoperability with slower speed optics



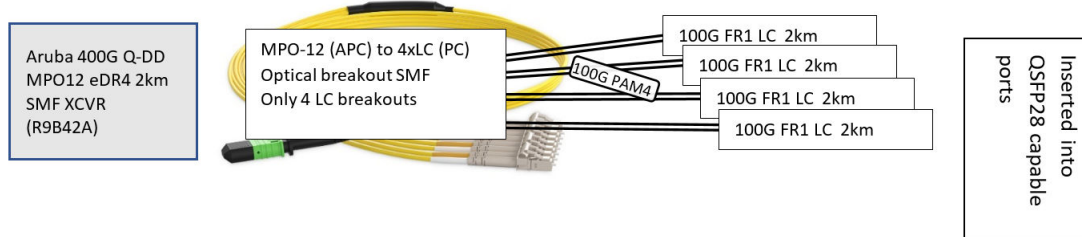
QSFP-DD 400G SR8 is eight channels of 50G PAM4 short reach (MMF) and can be configured into 4 groups of 2x50G, compatible with the 100G SR2 optic (not the same as 100G SR4). Use the CLI command: **split 4 100** on the Q-DD port hosting the R9B41A 400G SR8 optic.

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 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.



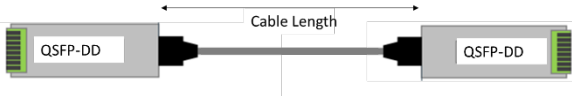
NOTE: A split 400G eDR4 is not compatible (single channel 100G PAM4) with regular QSFP28 100G LR4 (which are 4-channel 25G NRZ).

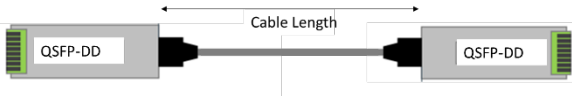
400G Q-DD to Q-DD, Q-DD to split QSFP56 AOC (active optical cables), and Q-DD to split 8x SFP56 DAC

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

NOTE: 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.

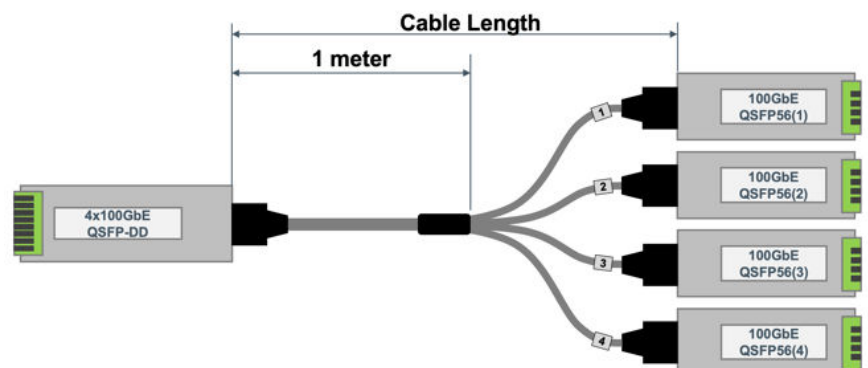
Product name (SKU)	Cable length	Data rate
QDD to QDD Direct Attach Copper Cables 		
(400G to 400G) (These DACs feature a mesh cable design)		
HPE ANW 400G Q - DD to Q - DD 1m DAC (S6H27A)	1m	400G to 400G Direct Attach Copper Cables.
HPE ANW 400G Q - DD to Q - DD 1m DAC (S6H28A)	2m	Only supported in Q-DD ports

Product name (SKU)	Cable length	Data rate
QDD to QDD Active Optical Cables 		
(400G to 400G)		
Aruba 400G Q - DD to Q - DD 3m AOC (R9B45A)	3m	400G to 400G Active Optical Cables.
Aruba 400G Q - DD to Q - DD 7m AOC (R9B43A)	7m	These cables will only work in a QSFP - DD capable port.
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 QSFP**56** compatible port (not the same as a 100G QSFP28 port)



Refer to for additional information.

Table Continued

Product name (SKU)	Cable length	Data rate
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	Requires a QSFP56 port on the far end. See list of validated QSFP56 adapters in the "" section.
Aruba 400G Q - DD to 4xQSFP56 100G 15m AOC (R9B52A)	15m	These cables will not work in a QSFP28 100G port.
Aruba 400G Q - DD to 4xQSFP56 100G 30m AOC (R9B51A)	30m	
Aruba 400G Q - DD to 4xQSFP56 100G 50m AOC (R9B49A)	50m	

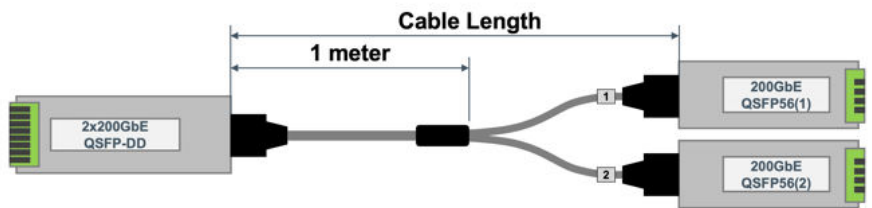
QDD to 2xQSFP56 200G Active Optical Cables

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.

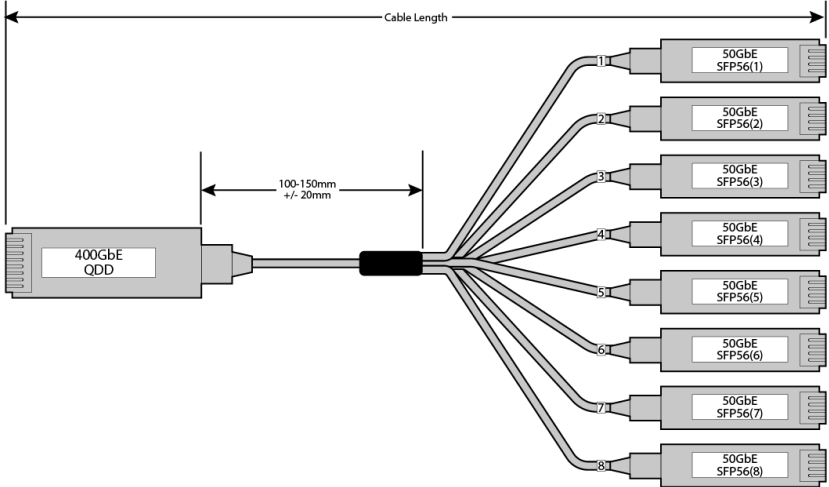
The split ends only operate in a 200G QSFP56 compatible port.

Refer to for additional information.



Aruba 400G Q - DD to 2xQSFP56 200G 3m AOC (R9B55A)	3m	Split 400G port into 2x 200G speed ports.
Aruba 400G Q - DD to 2xQSFP56 200G 7m AOC (R9B53A)	7m	Requires a QSFP56 port on the far end.
Aruba 400G Q - DD to 2xQSFP56 200G 15m AOC (R9B57A)	15m	These cables will not work in a QSFP28 100G port.
Aruba 400G Q - DD to 2xQSFP56 200G 30m AOC (R9B56A)	30m	
Aruba 400G Q - DD to 2xQSFP56 200G 50m AOC (R9B54A)	50m	

Table Continued

Product name (SKU)	Cable length	Data rate
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 - 8SFP56 1m DAC (S4B41A)	1m	Split 400G port into 8x 50G speed ports.
HPE ANW 400G QDD - 8SFP56 2m DAC (S4B42A)	2m	Requires an SFP56 port on the far end. These cables will not work in 1G SFP ports. To use in a 8x25G or 8x10G scenario, use the split 8 <speed> (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.

QSFP - DD AOC/DAC capable product name (SKU)	Minimum software required	Comments
Aruba 9300 Switch Series - 32D models	QDD - QDD AOCs: R9B43A - R9B47A: 10.10.1000 QDD - split 4xQSFP56 AOCs: R9B48A - R9B51A: 10.10.1000 QDD to 2x200G AOCs: R9B53A - R9B57A: 10.10.1000 QDD - 8x split DACs: S4B41A, S4B42A: 10.15.1005 QDD 400G 1m or 2m DACs: S6H27A/ S6H28A 10.17.0001	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. 9300 32D requires the CLI command split - profile 2 to support the 8 - way split cables, and only available on bottom ports in the QDD port groups.
Aruba 9300S Switch Series - 32C 8D models	QDD - QDD AOCs: R9B43A - R9B47A QDD - split 4xQSFP56 AOCs: R9B48A - R9B51A QDD to 2x200G AOCs: R9B53A - R9B57A: 10.14.0005 QDD - 8x split DACs (S4B41A/ S4B42A): Not supported QDD 400G 1m or 2m DACs: S6H27A/ S6H28A 10.17.0001	QDD or QSFP56 end can be used in the 9300S Q - DD ports (17 - 24). QSFP56 end can be used in the 9300S QSFP56 or QDD ports (9 - 32). 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). QSFP - DD (Q - DD) products cannot be used in 100G QSFP28 or in 40G QSFP+ ports. The 9300S series hardware does not support 8x splitting (only 4x splitting).
Aruba 10040 32C6D models Base switch: - S4R58A displayed by CLI (show system) - S4R54A - 32C6D FB bundle - S4R55A - 32C6D BF bundle Base switch TAA: - S4R59A displayed by CLI (show system) - S4R56A - 32C6D FB bundle - S4R57A - 32C6D BF bundle	QDD - QDD AOCs: R9B43A - R9B47A - 10.16.10xx QDD - split 4xQSFP56 AOCs: R9B48A - 10.16.10xx QDD to 2x200G AOCs: R9B53A - R9B57A: 10.16.10xx QDD - 8x split DACs (S4B41A/ S4B42A): Not supported	Supported on all QDD ports 25 - 30 Supported only on ports 25 - 26 & 29 - 30 Supported on all QDD ports 25 - 30



Split Side SFP56 DAC capable product name (SKU)	Comments
Aruba 6100 Switch Series	Supported on all SKUs; only in available 10G capable SFP ports. Requires QDD end has been split with "speed 10" indicated.
Aruba 6200 Switch Series	Supported on all SKUs; only in available 10G capable SFP ports. Requires QDD end has been split with "speed 10" indicated.
Aruba 6300 Switch Series	Supported on all SKUs; only in available SFP56 compatible ports. • Ports 25 - 26 on 24p models with 2x SFP56 ports • Ports 25 - 26 on 24p models with 4x SFP56 ports • Ports 49 - 50 on 48p models with 2x SFP56 ports • Ports 49 - 52 on 48p models with 4x SFP56 ports
Aruba 6300L Switch Series	Only supported in SFP56 compatible ports. • Ports 49 - 50 on 48 port models • Ports 25 - 26 on 24 port models
Aruba 6400 Switch Series	Supported in all SFP ports of the R0X44A and S0E48A models. Other supported ports: • Ports 25 - 28 on 24p models • Ports 49 - 52 on 48p models
Aruba 8100 Switch Series	Supported in: • Ports 1 - 24 of the R9W94A model • Ports 25 - 28 of the R9W95A model • Ports 1 - 48 of the R9W96A model • Ports 41 - 48 of the R9W97A model
Aruba 8325 48Y8C models	Supported in ports 1 - 48
Aruba 8325H Switch Series	Only supported in ports 1 - 18 of the following 18p models: • S2T42A • S4B20A • S2T46A • S4B21A

Table Continued



Split Side SFP56 DAC capable product name (SKU)	Comments
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 This is a QSFP56 module and will not work in a QSFP28 port.	MMF MPO12 (UPC)	50/125	2000 (OM3) 4700 (OM4 and OM5)	70m 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	5W

NOTE: *Wattage may impact operating temperature for select switches.

Aruba 9300-32D switch series limit the use of QDD optics/AOCs of up to 8 modules max at a time, if running at low-line AC Voltage (100VAC-125VAC). Use High-line voltage to install more than 8 products in the 9300 32D. For more details see the **CX 9300 Installation and Getting Started Guide**.

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).



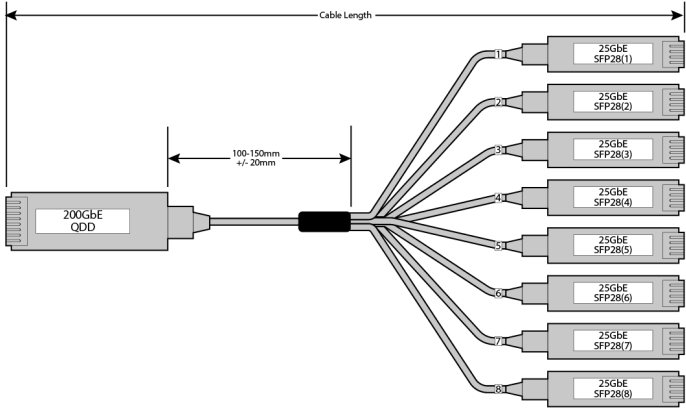
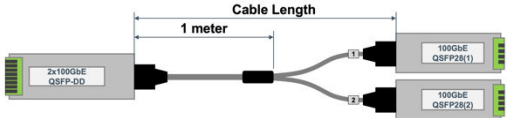
Product name (SKU)	Cable length	Data rate
HPE Aruba Networking 200G QSFP56 to QSFP56 1m Direct Attach Cable (S4B36A)	1m	
HPE Aruba Networking 200G QSFP56 to QSFP56 2.5m Direct Attach Cable (S4B37A)	2.5m	
QDD 200G Split DACs These 8x way DACs can not be used in the 9300S series (9300S does not support splitting 8x ways). Cannot be used as a 4x split cable 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.
HPE ANW 200G QDD to 8x SFP28 3m DAC (S4B40A)	3m	Requires an SFP28 or 25G capable port on the far end These cables will work in supported SFP56/50G, SFP28/25G and SFP+/10G ports. Requires interface CLI command, split 8 <speed> , command to be enabled. Will not work in 1G SFP ports
QDD 200G Split AOCs 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.

Table Continued

Product name (SKU)	Cable length	Data rate
Aruba 200G Q - DD to 2xQSFP28 100G 15m AOC (R9B62A)	15m	QSFP28 end can work in QSFP28, QSFP56, QSFP - DD/Q - DD ports.
Aruba 200G Q - DD to 2xQSFP28 100G 30m AOC (R9B61A)	30m	
Aruba 200G Q - DD to 2xQSFP28 100G 50m AOC (R9B59A)	50m	
*HPE 200Gb QSFP56 to 2x100Gb QSFP56 3m Active Optical Cable (R6F24A)	3m	200G splitting to 2x 100G Can only work in QSF56/Q-DD ports
*HPE 200Gb QSFP56 to 2x100Gb QSFP56 5m Active Optical Cable (R6F25A)	5m	Requires <system lanes 4> before splitting port. For more details, see the overview chapter.
*HPE 200Gb QSFP56 to 2x100Gb QSFP56 15m Active Optical Cable (R6F26A)	15m	
*HPE 200Gb QSFP56/4x50/25Gb SFP56 2.5m DAC (R6F27A)	2.5m	200G splitting to 4x 25G/50G Can only work in QSF56/Q-DD ports

NOTE:

- *Server/Storage product
- Use of R6F24A, R6F25A, R6F26A with 9300 is not supported. Only use R9B58A, R9B60A, R9B562A with 9300

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: 10.12.0000 S4B39A, S4B40A: Not supported	Only the QSFP28 end is supported
Aruba 8325 Switch Series (QSFP28 ports only)	S4B43A, R9B60A, R9B58A, R9B62A, R9B61A, R9B59A: 10.10.1000 S4B39A, S4B40A: Not supported	Only the QSFP28 end is supported.

Table Continued

QSFP56 or QSFP28 capable product name (SKU)	Minimum software required	Comments
Aruba 8360 Switch Series (QSFP28 ports only)	S4B43A, R9B60A, R9B58A, R9B62A, R9B61A, R9B59A: 10.10.1000 S4B39A, S4B40A: 10.15.1020 (only the SFP28 ends, see Comments section.)	Only the QSFP28 end is supported. 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: 10.10.1000 R6F24A, R6F25A, R6F26A, R6F27A: 10.15 S4B40A (8x25G SplitDACs): 10.15.1020 S4B36A, S4B37A: 10.16.1006	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. To use in a 8x25G or 8x10G scenario, use the split 8 <speed> (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 (only SFP+ capable SKUs), 6300, 8100, 8320, 8360, and 8400 switch series. The switches will recognize the SFP end automatically with minimum CX 10.15.1005. Supported in ports 1 - 32.
Aruba 9300S Switch Series - 32C 8D models	S4B43A, R9B60A, R9B58A, R9B62A, R9B61A, R9B59A: 10.14.0005 S4B40A (8x25G SplitDACs): Not supported for 8 - way splits S4B36A, S4B37A: 10.16.1006	QDD or QSFP56 ends can be used in the 9300S Q - DD ports (17 - 24). QSFP56 ends can be used in the 9300S QSFP56 ports (9 - 16 or 25 - 32) configured for speed - group 1 speed - group 1 in groups of 4. QSFP28 ends can be used in any 9300S QSFP28, QSFP56, or QDD port 1 - 40 configured for speed - group 1 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. Supported <i>only</i> in middle ports, 9 - 32.

Table Continued



QSFP56 or QSFP28 capable product name (SKU)	Minimum software required	Comments
Aruba 10000 Switch Series	S4B43A: 10.12.000x S4B39A, S4B40A (8x25G SplitDACs): 10.15.1020 R9B60A, R9B58A, R9B62A, R9B61A, R9B59A: 10.16.1006	QSFP28 ends will list as "unsupported" until a future CX release. To use in a 8x25G or 8x10G scenario, use the split 8 <speed> (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 (only SFP+ capable SKUs), 6300, 8100, 8320, 8360, and 8400 Switch Series. The switches will recognize the SFP end automatically with minimum CX 10.15.1005. QSFP28 ends will be shown as "supported".
Aruba 10040 32C6D models	S4B43A, R9B60A, R9B58A, R9B62A, R9B61A, R9B59A: 10.16.10xx S4B39A, S4B40A (8x25G Split DACs): Not supported	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. All QDD ports also support both ends.



QSFP28 modules

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 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.

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 1990 - 4680 1990 - 4678	4 lanes 850 4x 25G NRZ	MMF (MPO12 - 8 fibers used) (PC)	50/125	2000 (OM3) 4700 (OM4)	70m (229.66 ft) 100m (328.08 ft)
HPE ANW 100G SR2 QSFP28 100m MMF xcvr (S1C93A)	Yes 1990 - 4871 1990 - 4890	2 lanes 850 2x 50G PAM4	MMF (MPO12 - only 4 fibers used) (PC)	50u	OM3 OM4 OM5	70m (229.66 ft) 100m (328.08 ft) 100m (328.08 ft)



NOTE: 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 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 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.

NOTE: Refer to **Breakout optical cables** for APC vs PC vs UPC.

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 MMF xcvr (S1C93A)	MPO (PC polished, 12 - Fiber – only 4 used) do NOT use APC	- 6.5 to +4.0	- 8.4 to +4.0	Commercial (0 to 70°C)	4.0 W



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 S1C93A (SR2): 10.14.1000	These 6300 models are not capable of Splitting the QSFP ports. S0E91A/S0X44A models require interface group 2 or 3 to configure either 40G or 100G speed operation.
Aruba 6400 modules	JL309A (SR4): 10.04.2000	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 (R0X45A) (EOS)	S1C93A (SR2): Not supported JL309A (SR4): 10.09.1000	
Aruba 6400 12p 40G/100G QSFP28 Module v2 (R0X45C)	S1C93A (SR2): 10.14.1000	
HPE ANW 6400 32SFP28 4QSFP28 MACsec v2 Module (S0E48A)	JL309A (SR4): 10.13.1010 S1C93A (SR2): 10.14.1000	
Aruba 8100 Switch Series	JL309A (SR4): 10.12.1000 S1C93A (SR2): 10.15.0005, 10.14.1010	8100 48 port models CANNOT split the QSFP28 port. For the 24p models, 100G SR4 can be optically split.
Aruba 8325 32C models	JL309A (SR4): 10.03.0030	100G SR4 can be optically split as of: 10.05.0001
JL636A displayed by CLI (show system)	S1C93A (SR2): 10.13.1040	
- JL626A - Port - to - Power model (FB) - JL627A - Power - to - Port model (BF)		
Aruba 8325 48Y8C models	JL309A (SR4): 10.03.0030	100G SR4 can be optically split as of: 10.05.0001
JL635A displayed by CLI (show system)	S1C93A (SR2): 10.13.1040	
- JL624A - Port - to - Powermodel(FB) - JL625A - Power - to - Port model (BF)		

Table Continued

QSFP28 capable product name (SKU)	Minimum software required	Comments
Aruba 8325P 32C models S4A48A displayed by CLI (show system) S0G12A displayed by CLI (show system) for TAA bundles - S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl - S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl - S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl - S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl	JL309A (SR4), S1C93A (SR2): 10.15.0005	Port 32 cannot split (not enough MACs in design). 100G SR4 (JL309A) can be optically split in ports 1 - 31.
Aruba 8325H models TAA/Non - TAA: - S2T42A/S4B20A - 18Y4C model (FB) - S2T46A/S4B21A - 18Y4C model (BF) - S2T47A/S4B22A - 16C model (FB) - S2T48A/S4B23A - 16C model (FB)	JL309A (SR4), S1C93A (SR2): 10.15.0005	100G SR4 can be optically split as of 10.06.0001
Aruba 8360 32Y4C models** JL717A/JL717C(v2) displayed by CLI (show system) - JL700A/JL700C(v2) - Port - to - Power model (FB) - JL701A/JL701C(v2) - Power - to - Port model (BF)	JL309A (SR4): v1 models: 10.05.0001 v2 models: 10.09.1000 S1C93A (SR2): 10.15.0005, 10.14.1010, 10.13.1050	100G SR4 can be optically split as of: 10.06.0001

Table Continued

QSFP28 capable product name (SKU)	Minimum software required	Comments
Aruba 8360 16Y2C models JL718A/JL718C(v2) displayed by CLI (show system) - JL702A/JL702C(v2) - Port - to - Power model (FB) - JL703A/JL703C(v2) - Power - to - Port model (BF)	JL309A (SR4): v1 models: 10.05.0005 v2 models: 10.09.1000 S1C93A (SR2): 10.15.0005, 10.14.1010, 10.13.1050	100G SR4 can be optically split as of: 10.06.0001
Aruba 8360 48Y6C models** JL719C displayed by CLI (show system) - JL704C(v2) - Port - to - Power model (FB) - JL705C(v2) - Power - to - Port model (BF)	48Y6C initially released as v2 models: JL309A (SR4): 10.09.0002 S1C93A (SR2): 10.15.0005, 10.14.1010, 10.13.1050	100G SR4 can be optically split as of: 10.09.0002 MACsec available on ports 53 - 54 and via split 10G or 25G on those ports (MACsec not available on ports 49 - 52)
Aruba 8360 48XT4C models JL720A/JL720C(v2) displayed by CLI (show system) - JL706A/JL706C(v2) - Port - to - Power model (FB) - JL707A/JL707C(v2) - Power - to - Port model (BF)	JL309A (SR4): v1 models: 10.05.0001 v2 models: 10.09.1000 S1C93A (SR2):10.15.0005, 10.14.1010, 10.13.1050	Cannot split the SR4 optics into four channels (lack of enough MAC interfaces)
Aruba 8360 12C models JL721A/JL721C(v2) displayed by CLI (show system) - JL708A/JL708C(v2) - Port - to - Power model (FB) - JL709A/JL709C(v2) - Power - to - Port model (BF)	JL309A (SR4): v1 models: 10.05.0001 v2 models: 10.09.1000 S1C93A (SR2): 10.15.0005, 10.14.1010, 10.13.1050	100G SR4 can be optically split as of: 10.06.0001

Table Continued



QSFP28 capable product name (SKU)	Minimum software required	Comments
Aruba 8360 24XF2C models JL722A/JL722C(v2) displayed by CLI (show system) - JL710A/JL710C(v2) - Port - to - Power model (FB) - JL711A/JL711C(v2) - Power - to - Port model (BF)	JL309A (SR4): v1 models: 10.05.0001 v2 models: 10.09.1000 S1C93A (SR2): 10.15.0005, 10.14.1010, 10.13.1050	100G SR4 can be optically split as of: 10.06.0001
Aruba 8400X modules 6p 40G/100G QSFP28 Advanced Module (JL366A)	JL309A (SR4): 10.00.0005 S1C93A (SR2): Not supported	10.00.0005 provided 100G product support. 10.00.0006 provides additional support for 40G on the JL366A. 8400 JL366A QSFP28 module cannot split 100G SR4 into 25G streams (no 25G MAC interfaces).
Aruba 9300 Switch Series - 32D models R8Z96A displayed by CLI show system - R9A29A FB airflow - R9A30A BF airflow	JL309A (SR4): 10.00.0005 S1C93A (SR2): 10.14.1000	100G SR4 can be optically split
Aruba 9300S Switch Series - 32C 8D models displayed by CLI show system Base models: S0F95A - TAA Base, S0F96A - Base - S0F81A FB TAA - S0F82A FB - S0F83A BF TAA - S0F84A BF - S0F87A BF DC TAA - S0F88A BF DC	JL309A (SR4), S1C93A (SR2): 10.14.0001	9300S requires configuration of port - groups to enable 100G speeds. 100G is enabled using speed - group 1 for the selected port (organized in groups of 4). The center QDD ports (17 - 24) do not need a command, and are auto - sensing.

Table Continued

QSFP28 capable product name (SKU)	Minimum software required	Comments
Aruba 10000 48Y6C models R8S96A displayed by CLI (show system) - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle	JL309A (SR4): 10.10.0002 S1C93A (SR2): 10.16.1006	100G SR4 can be optically split
Aruba 10040 32C6D models - S4R54A – 32C6D FB bundle - S4R55A – 32C6D BF bundle	JL309A (SR4), S1C93A (SR2): 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

NOTE: **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.

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: 855 and 908 2x PAM4 50G	MMF LC UPC)	50 u OM3 50 u OM4 50 u OM5	70 m (229.6 ft) 100 m (328.1 ft) 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 2x PAM4 50G	MMF LC PC)	50 u OM3 50 u OM4 50 u OM5	70 m (229.6 ft) 100 m (328.1 ft) 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: 1310 1x100G PAM4 Connects to 1 link from the 400G 4xDR (S3N90A) for 500m over SMF	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: 1264.5 to 1277.5 1284.5 to 1297.5 1304.5 to 1317.5 1324.5 to 1337.5	SMF LC (UPC)	9/125	2 km (1.24 miles)

Table Continued

Product name (SKU)	DOM - Digital Optical Monitoring (4x4 part #)	Nominal wl (nm)	Fiber mode	Fiber diameter (µm)	Transmission distance
Aruba 100G QSFP28 LC FR1 2km SMF Transceiver (R9B63A)	YES (1990 - 4825 1990 - 4826)	Single lane on each fiber: 1310 1x100G PAM4 100G LR is not compatible with 100G LR4. 1 lane vs 4 lanes. Connects to 1 link from the 400G 4xFR (S3N91A) for 2km over SMF Also compatible with a 400G DR4 (S3N93A), but only for 500m over SMF (limitation of the 400G DR4)	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: 1294.53 to 1296.59	SMF LC (UPC)	9/125	10 km (6.21 miles)
HPE ANW 100G QSFP28 LC LR4 TAA 10km SMF 2 - strand Transceiver (S6H32A)		1299.02 to 1301.09 1303.54 to 1305.63 1308.09 to 1310.19			
TAA and non-TAA variants are interoperable					

Table Continued



Product name (SKU)	DOM - Digital Optical Monitoring (4x4 part #)	Nominal wl (nm)	Fiber mode	Fiber diameter (µm)	Transmission distance
HPE Aruba Networking 100G LR QSFP28 LC 10km SMF Transceiver (S3N89A)	YES (1990 - 4929)	Single lane on each fiber: 1310 1x100G PAM4 100G LR is not compatible with 100G LR4. 1 lane vs 4 lanes. 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: 1294.53 to 1296.59	SMF LC (UPC)	9/125	40 km (24.86 miles) Requires FEC
HPE ANW 100G QSFP28 LC ER4L 40km SMF TAA Transceiver (S6H33A)		1299.02 to 1301.09 1303.54 to 1305.63			
TAA and non-TAA variants are interoperable		1308.09 to 1310.19			
HPE ANW 100G ZR QSFP28 LC 80km SMF XCVR DWDM Tunable	Yes (1990-4983)	1528.77 – 1566.31, (48 channel bands for DWDM)	SMF LC (UPC)	9/125	80 km (49.70 miles) without amplification 120 km (74.56 miles) with amplification



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 100m XCVR (S4B44A)	LC	- 6.2 to 4	- 8.2 to 4	Commercial (0 to 70°C)	4.0 W
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

Table Continued



Product name (SKU)	Connector	Optical parameters (dBm) per lane			Required Power
		Transmit power	Receive power	Temperature Rating	
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
HPE ANW 100G QSFP28 LC LR4 TAA 10km SMF 2 - strand Transceiver (S6H32A)					
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
HPE ANW 100G QSFP28 LC ER4L 40km SMF TAA Transceiver (S6H33A)					
HPE ANW 100G ZR QSFP28 LC 80km SMF XCVR DWDM Tunable	LC	Unamplified DWDM -8.0 to 0 Amplified DWDM -8.0 to 0	Unamplified DWDM -27 to -16 Amplified DWDM 16 to 0	Industrial (-40 to 85° C)	6.0 W

NOTE: *Use 10dB attenuator for short SMF cables

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 S4B44A (100G SR1.2 "BiDi"): 10.15.1005 S6H32A (LR4 TAA 10 km): 10.17.1001	S0E91A/S0X44A models require "interface group" 2 or 3 to configure either 40G or 100G speed operation.
Aruba 6400 Modules	*845972 - B21 (100G BiDi): 10.08.0010	The minimum software release for the R0X45C module is 10.09.1000.
12p 40G/100G QSFP28 Module (R0X45A) 12p 40G/100G QSFP28 Module (R0X45C)	R0Z30A (CWDM4 2km): 10.07.0005	The minimum software release for the S0E48A module is 10.13.1010
	JL310A (LR4 10 km): 10.04.2000	
HPE ANW 6400 32SFP28 4QSFP28 MACsec v2 Mod (S0E48A)	JL743A (ER4L 40 km): Not supported	
	R9B63A (FR1 2km): 10.13.1000	
	S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010	
	S4B44A (100G SR1.2 "BiDi"): 10.15.1005	
	*845972 - B21 (100G BiDi), R0Z30A (CWDM4 2km),	
	JL310A (LR4 10 km): 10.09.1000	
	JL743A (ER4L 40 km): Not supported	
	R9B63A FR1 2km: 10.13.00xx	
	S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010	
	*845972 - B21 (100G BiDi), R0Z30A (CWDM4 2km),	
	JL310A (LR4 10 km): 10.13.1010	
	JL743A (ER4L 40 km): 10.17.1001	
	R9B63A FR1 2km: 10.13.1010	
	S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010	

Table Continued

QSFP28 capable Product name (SKU)	Minimum software required	Comments
	S4B44A (100G SR1.2 "BiDi"): 10.15.1005	
	S6H32A (LR4 TAA 10 km): 10.17.1001	
Aruba 8100 Switch Series	*845972 - B21 (100G BiDi): 10.12.0006 R0Z30A (CWDM4 2km): 10.12.0006 JL310A (LR4 10 km): 10.12.0006 JL743A (ER4L 40 km): Not supported R9B63A (FR1 2km): 10.12.0006 R9B63A: only allowed in lower 2 ports on BF airflow bundles (FB models can have full complement) S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010 S4B44A (100G SR1.2 "BiDi"): 10.15.1005 S6H32A (LR4 TAA 10 km), JL743A (ER4L 40 km): 10.17.1001	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.
Aruba 8325 32C models JL636A displayed by CLI (show system) - JL626A - Port - to - Power model (FB) - JL627A - Power - to - Port model (BF)	*845972 - B21 (100G BiDi): 10.08.0010 R0Z30A (CWDM4 2km): 10.03.0030 JL310A (LR4 10 km): 10.03.0030 JL743A (ER4L 40 km): 10.04.3000; ports 29 - 32 only S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010 R9B63A FR1 2km: 10.13.1020 S4B44A (100G SR1.2 "BiDi"): 10.15.1005 S6H32A (LR4 TAA 10 km), S6H33A (ER4L TAA 40 km): 10.17.1001	JL743A/S6H33A (100G ER4L) is limited to quantity 4 and only allowed in ports 29 - 32 (last 4 ports) to limit possible heat issues.

Table Continued

QSFP28 capable Product name (SKU)	Minimum software required	Comments
Aruba 8325 48Y8C models JL635A displayed by CLI (show system)	*845972 - B21 (100G BiDi): 10.08.0010	JL743A/S6H33A (100G ER4L) is limited to quantity 4 and only allowed in ports 49, 51, 53, and 55 (top row) to limit possible heat issues.
JL624A - Port - to - Powermodel(FB)	R0Z30A (CWDM4 2km): 10.03.0030 JL310A (LR4 10 km): 10.03.0030	
JL625A - Power - to - Port model (BF)	JL743A (ER4L 40 km): 10.04.3000; ports 49, 51, 53 and 55 only	
DC PSU bundles:	S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010	
JL635A displayed by CLI (show system)	R9B63A FR1 2km: 10.13.1020	
JL857A - Port - to - Power model (FB)	S4B44A (100G SR1.2 "BiDi"): 10.15.1005	
JL858A - Power - to - Port model (BF)	S6H32A (LR4 TAA 10 km), S6H33A (ER4L TAA 40 km): 10.17.1001	
Aruba 8325P 32C models	*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	JL743A/S6H33A (100G ER4L) is limited to quantity 4 and only allowed in ports 29 - 32 (last 4 ports) to limit possible heat issues.
S4A48A displayed by CLI (show system)		
S0G12A displayed by CLI (show system) for TAA bundles	JL743A (ER4L 40 km):10.15.0005; ports 29 - 32 only	
S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl	S4B44A (100G SR1.2 "BiDi"): 10.15.1005	
S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl	S6H32A (LR4 TAA 10 km), S6H33A (ER4L TAA 40 km): 10.17.1001	
S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl		
S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl		

Table Continued

QSFP28 capable Product name (SKU)	Minimum software required	Comments
Aruba 8325H models TAA/Non - TAA: - S2T42A/S4B20A - 18Y4C model (FB) - S2T46A/S4B21A - 18Y4C model (BF) - S2T47A/S4B22A - 16C model (FB) - S2T48A/S4B23A - 16C model (FB)	*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 S4B44A (100G SR1.2 "BiDi"): 10.16.1006 S6H32A (LR4 TAA 10 km), S6H33A (ER4L TAA 40 km): 10.17.1001	
Aruba 8360 v1 and v2 models (48Y6C noted below)	*845972 - B21 (100G BiDi): 10.08.0010 R0Z30A (CWDM4 2km): 10.07.0005 JL310A (LR4 10 km): 10.06.0001 JL743A (ER4L 40 km): 10.06.0140 and 10.07.0004 v2 models: 10.09.1000 (except 48Y6C noted below) R9B63A FR1 2km: 10.10.1000 S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010 S4B44A (100G SR1.2 "BiDi"): 10.15.1005 S6H32A (LR4 TAA 10 km): 10.17.1001	QSFP28 ports on the various models

Table Continued



QSFP28 capable Product name (SKU)	Minimum software required	Comments
Aruba 8360 48Y6C models JL719C displayed by CLI show system - JL704C(v2) - Port - to - Power model (FB) - JL705C(v2) - Power - to - Port model (BF)	*845972 - B21(100G BiDi): 10.09.0002 R0Z30A (CWDM4 2km): 10.09.0002 JL310A (LR4 10 km): 10.09.0002 JL743A (ER4L 40 km): 10.09.0002 R9B63A FR1 2km: 10.10.1000 S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010 S4B44A (100G SR1.2 "BiDi"): 10.15.1005 S6H32A (LR4 TAA 10 km): 10.17.1001	Ports 49 - 54 NOTE: MACsec available on ports 53 - 54
Aruba 8400X Modules 6p 40G/100G QSFP28 Advanced Module (JL366A)	*845972 - B21 (100G BiDi): 10.08.0010 R0Z30A (CWDM4 2km): 10.06.0001 JL310A (LR4 10 km): 10.00.0005 JL743A (ER4L 40 km): 10.04.3000 R9B63A FR1 2km: Not supported S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010 S4B44A (100G SR1.2 "BiDi"): 10.15.1005	10.00.0005 provides support for 100G products. 10.00.0006 provides additional support for 40G on the JL366A.
Aruba 9300 Switch Series - 32D models R8Z96A - Base displayed by CLI show system - R9A29A FB airflow - R9A30A BF airflow	*845972 - B21(100G BiDi): 10.14.0001 R0Z30A (CWDM4 2km):10.10.1000 JL310A (LR4 10 km):10.10.1000 JL743A (ER4L 40 km):10.10.1000 R9B63A FR1: 10.10.1000 S3N88A (500m DR), S3N89A (10 km LR): 10.13.1010 S4B44A (100G SR1.2 "BiDi"): 10.15.1005 S6H32A (LR4 TAA 10 km), S6H33A (ER4L TAA 40 km): 10.17.1001	

Table Continued



QSFP28 capable Product name (SKU)	Minimum software required	Comments
Aruba 9300S Switch Series - 32C 8D models displayed by CLI show system Base models: S0F95A - TAA Base, S0F96A - Base - S0F81A FB TAA - S0F82A FB - S0F83A BF TAA - S0F84A BF - S0F87A BF DC TAA - S0F88A BF DC	*845972 - B21(100G BiDi), R0Z30A (CWDM4 2km), JL310A (LR4 10 km), JL743A (ER4L 40 km), R9B63A FR1 2km, S3N88A, S3N89A: 10.14.0000 S4B44A (100G SR1.2 "BiDi"): 10.15.1005 S6H32A (LR4 TAA 10 km), S6H33A (ER4L TAA 40 km): 10.17.1001 S6H25A (100G ZR 80 km): 10.18.0001	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.
Aruba 10000 48Y6C models R8S96A displayed by CLI show system - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle	*845972 - B21(100G BiDi):10.10.0002 R0Z30A(CWDM4 2km): 10.10.0002 JL310A (LR4 10 km): 10.10.0002 JL743A (ER4L 40 km): 10.13.000x (only on FB model - R8P13A) R9B63A FR1 2km: 10.10.1000 S3N88A (500m DR), S3N89A (10 km LR), S4B44A (SR1.2): 10.16.1006 S6H32A (LR4 TAA 10 km): 10.17.1001	See Unsupported transceiver mode . JL743A (100G-ER4L) is only supported in ports 53-54 due to power limitations, hence it will not work in ports 49-52 and no link will be established.
Aruba 10040 32C6D models - S4R54A - 32C6D FB bundle - S4R55A - 32C6D BF bundle	*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. 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

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 for more information.



NOTE: 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

QSFP28 DAC capable product name (SKU)	Minimum software required	Comments
Aruba 6300 Switch Series	*845416 - B21: 10.06.0120/10.07.0020	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 4SFP56 Swch (JL663A)	JL663A and JL762A: 10.06.0120/10.07.0020	
Aruba 6300M 48G Pwr2Prt 2F 1PS Bdl (JL762A)	(SFP28 ends)	SOE91A/SOX44A models interface group 2 or 3 to configure either 40G or 100G speed operation, this cable works in either mode.
Aruba 6300M 24G SFP+ 2p50 2p25G (R8S92A)	*845416 - B21: 10.10.1000 only in ports 25 - 28 (only SFP28 ends)	
Aruba 6300 48p Smart Rate 10G and 4x100G (SOE91A/SOX44A)	R0Z25A, JL307A, R0Z26A: 10.13.000x 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	Only SFP56 ends are supported in the following ports:
HPE ANW 6300M 32SR5 CL8 8P 2L 2Y Sw (S4P42A/TAA S4P46A)		- S4P41A/TAA S4P43A: 49 - 50 - S4P42A/TAA S4P46A: 41 - 42 - S4P44A/TAA S4P48A: 25 - 26
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.)
Aruba 6400 Switch Series	JL307A: 10.04.2000	*845416 - B21: 6400 does not yet have split port capability.
12p 40G/100G QSFP28 Module (R0X45A)	R0Z25A/R0Z26A: 10.08.0001	
	*845416 - B21: Not supported	
12p 40G/100G QSFP28 Module (R0X45C)	JL307A, R0Z25A/R0Z26A: 10.09.1000	
HPE ANW 6400 32SFP28 4QSFP28 MACsec v2 Mod (SOE48A)	*845416 - B21: Not supported	
	JL307A, R0Z25A/R0Z26A: 10.13.1010	
	*845416 - B21: Not supported	

Table Continued

QSFP28 DAC capable product name (SKU)	Minimum software required	Comments
Aruba 8100 Switch Series	R0Z25A,JL307A,R0Z26A:10.12.1000 *845416 - B21: 10.12.1000 (requires split command)	48 port models cannot split the QSFP ports
Aruba 8325 32C models	JL307A: 10.03.0030	All 32 QSFP28 ports can be split
JL636A displayed by CLI show system	R0Z25A/R0Z26A: 10.04.2000	10.05.0001: only the QSFP28 end is supported in the switch.
- JL626A - Port - to - Power model (FB) - JL627A - Power - to - Port model (BF)	*845416 - B21: 10.05.0001 (requires split command)	SFP28 end is not supported at this time
Aruba 8325 48Y8C models	JL307A: 10.03.0030	All 8 QSFP28 ports can be split
JL635A displayed by CLI show system	R0Z25A/R0Z26A: 10.04.2000	10.05.0001: only QSFP28 end is supported in the switch.
- JL624A - Port - to - Powermodel(FB) - JL625A - Power - to - Port model (BF)	*845416 - B21: 10.05.0001 (requires split command)	SFP28 end is not supported at this time
Aruba 8325P 32C models	*845416 - B21, R0Z25A,JL307A,R0Z26A: 10.15.0005	Port 32 can support the split *845416 - B21 cable (MAC interfaces reserved for the two SFP+ ports 33 & 34).
S4A48A displayed by CLI (show system)		
S0G12A displayed by CLI (show system) for TAA bundles	*845416 - B21 (requires the split command)	Ports 1 - 31 can support the split cable.
- S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl - S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl - S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl - S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl		

Table Continued

QSFP28 DAC capable product name (SKU)	Minimum software required	Comments
Aruba 8325H models TAA/Non - TAA: - S2T42A/S4B20A - 18Y4C model (FB) - S2T46A/S4B21A - 18Y4C model (BF) - S2T47A/S4B22A - 16C model (FB) - S2T48A/S4B23A - 16C model (FB)	JL307A, R0Z25A/R0Z26A: 10.15.1001 *845416 - B21: 10.05.0001 (requires the split command)	8325H 16C models cannot split port 16.
Aruba 8360 32Y4C models JL717A displayed by CLI show system - JL700A/JL700C(v2) Port - to - Power model - JL701A/JL701C(v2) Power - to - Port model	JL307A, R0Z25A/R0Z26A: 10.06.0001 *845416 - B21: 10.06.0001 (Requires split command) v2 models require: 10.09.1000	33 - 36 (all QSFP28 ports can be split) *845416 - B21: 10.06.0001 Only the QSFP28 end is supported in the switch. SFP28 end is not supported at this time. *845416 - B21: 10.13.1010 added support of 25G ends
8360 16Y2C models JL718A displayed by CLI show system - JL702A/JL702C(v2) Port - to - Power model - JL703A/JL703C(v2) Power - to - Port model	JL307A, R0Z25A/R0Z26A: 10.06.0001 *845416 - B21: 10.06.0001 (requires split command) v2 models require: 10.09.1000	17 - 18 (all QSFP28 ports can be split) *845416 - B21: 10.06.0001 Only the QSFP28 end is supported in the switch. SFP28 end is not supported at this time. *845416 - B21: 10.13.1010 added support of 25G ends

Table Continued



QSFP28 DAC capable product name (SKU)	Minimum software required	Comments
Aruba 8360 48Y6C models JL719C(v2) displayed by CLI show system - JL704C(v2) - Port - to - Power model (FB) - JL705C(v2) - Power - to - Port model (BF)	(introduced as a v2 model) JL307A, R0Z25A/R0Z26A: 10.09.0002 *845416 - B21: 10.09.0002 (requires split command)	Ports 49 - 54 *845416 - B21: 10.06.0001 Only the QSFP28 end is supported in the switch. SFP28 end is not supported at this time. *845416 - B21: 10.13.1010 added support of 25G ends NOTE: MACsec available on ports 53 - 54
8360 48XT4C models JL720A displayed by CLI show system - JL706A/JL706C(v2) Port - to - Power model - JL707A/JL707C(v2) Power - to - Port model	JL307A, R0Z25A/R0Z26A: 10.06.0001 *845416 - B21: Not supported 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.
Aruba 8360 - 12C models JL721A displayed by CLI show system - JL708A/JL708C(v2) Port - to - Power model - JL709A/JL709C(v2) Power - to - Port model	JL307A, R0Z25A/R0Z26A: 10.06.0001 *845416 - B21: 10.06.0001 (requires split command) v2 models require: 10.09.1000	1 - 12 (all QSFP28 ports can be split) There are no SFP28 ports on this model
8360 24XF2C models JL722A displayed by CLI show system - JL710A/JL710C(v2) Port - to - Power model - JL711A/JL711C(v2) Power - to - Port model	JL307A, R0Z25A/R0Z26A: 10.06.0001 *845416 - B21: 10.06.0001 (requires split command) v2 models require: 10.09.1000	25 - 26 (all QSFP28 ports can be split) There are no SFP28 ports on this model (24 ports of 1G/10G SFP and 2 ports of QSFP28)

Table Continued



QSFP28 DAC capable product name (SKU)	Minimum software required	Comments
Aruba 8400X Modules	JL307A: 10.00.0005	*845416 - B21: 8400
6p 40G/100G QSFP28 Advanced Module (JL366A)	R0Z25A/R0Z26A: 10.06.0001 *845416 - B21: Not supported nor any type of 100G split cable	JL366A 6p QSFP28 module cannot support splitting 100G ports into 4x25G speed (no 25G MAC available on the JL366A module)
Aruba 9300 Switch Series - 32D models R8Z96A - Base displayed by CLI show system - R9A29A FB airflow - R9A30A BF airflow	JL307A, R0Z25A/R0Z26A: 10.13.0001 *845416 - B21: 10.17.0001	*845416 - B21 only QSFP28 ends are supported
Aruba 9300S Switch Series - 32C 8D models displayed by CLI show system Base models: S0F95A - TAA Base, S0F96A - Base - S0F81A FB TAA - S0F82A FB - S0F83A BF TAA - S0F84A BF - S0F87A BF DC TAA - S0F88A BF	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. 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. The center QDD ports (17 - 24) do not need a command, and are auto - sensing.
Aruba 10000 48Y6C models R8S96A displayed by CLI show system - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle	JL307A, R0Z25A/R0Z26A: 10.10.0002 *845416 - B21: 10.12.1000	
Aruba 10040 32C6D models - S4R54A - 32C6D FB bundle - S4R55A - 32C6D BF bundle	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

NOTE: * 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	
HPE 100GbE QSFP28 2m Extended Temperature AOC (S6B63A)	2 m (6.6 ft)	100 Gbps	0 - 85°C
HPE Storage 100GbE QSFP28 to QSFP28 5m Extended Temperature AOC (S2T38A)	5 m (16.4 ft)	100 Gbps	

Table Continued



Product name (SKU)	Cable length	Data rate	Temperature Rating
HPE Storage 100GbE QSFP28 to QSFP28 10m Extended Temperature AOC (S2T39A)	10 m (32.8 ft)	100 Gbps	
HPE Storage 100GbE QSFP28 to QSFP28 15m Extended Temperature AOC (S2T40A)	15 m (49.21ft)	100 Gbps	
HPE Storage 100GbE QSFP28 to QSFP28 25m Extended Temperature AOC (S2T41A)	25 m (82.02 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.

NOTE: 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	0 - 70°C
*HPE QSFP28 to 4x25G SFP28 15m AOC (845424 - B21)	15 m (49.21ft)	4 x 25Gbps	



QSFP28 AOC capable product name (SKU)	Minimum software required	Comments
Aruba 6300 (select models) - JL658A - Aruba 6300M 24SFP+ 4SFP56 Swch - JL663A - Aruba 6300M 48G 4SFP56 Swch - JL762A - Aruba 6300M 48G Pwr2Prt 2F 1PS Bd - R8S92A - Aruba 6300M 24G SFP+ 2p50 2p25G - SOE91A HPE ANW 6300M 48SRX CL8 PoE 4p100G Sw - SOX44A HPE ANW 6300M 48SRX CL8 PoE 4p100G TAA Sw	JL856A, R0Z27A, R0Z28A, R0Z29A: Not supported (no 100G ports in these 6300M models) *845420 - B21, *845424 - B21(Split ends): 10.08.0001 JL856A, R0Z27A, R0Z28A, R0Z29A: Not supported (no 100G ports) *845420 - B21, *845424 - B21: 10.10.1000 (Only in ports 25 - 28) JL856A, R0Z27A, R0Z28A, R0Z29A: 10.13.0005 *845420 - B21, *845424 - B21: Not supported	Support for the 25G ends of the split AOC from HPE Compute parts Support for the 25G ends of the split AOC from HPE Compute parts SOE91A / SOX44A models require interface group 2 or 3 to configure either 40G or 100G speed operation. SOE91A and SOX44A models cannot split the QSFP28 port, nor connect via a QSA28 adapter for the 25G ends.
Aruba 6400 (select modules) - Aruba 6400 Module: 12p 40G/ 100G QSFP28 Module (R0X45A/ R0X45C) - HPE ANW 6400 32Y4C MACsec v2 Module (SOE48A)	Not supported R0Z27A, R0Z28A, R0Z29A: 10.13.1010 JL856A, *845420 - B21, *845424 - B21: Not supported on SOE48A	No split port support on R0X45A/ R0X45C No split port support on SOE48A
Aruba 8100 Switch Series	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). The QSFP end (split) can be used on QSFP ports for 24p models, (24XF4C or 24XT4XF4C). 25G ends are not supported to use in the 10G SFP ports.
Aruba 8325 32C models JL636A displayed by CLI show system - JL626A - Port - to - Power model (FB) - JL627A - Power - to - Port model (BF)	JL856A: 10.08.0001 R0Z27A, R0Z28A, R0Z29A: 10.06.0001 *845420 - B21, 845424 - B21: 10.06.0001 (Requires split command) S6B63A, S2T38A, S2T39A, S2T40A, S2T41A: 10.18.0001	845420 - B21, 845424 - B21: only QSFP28 supported for use in this 8325 model

Table Continued

QSFP28 AOC capable product name (SKU)	Minimum software required	Comments
Aruba 8325 48Y8C models JL635A displayed by CLI show system - JL624A - Port - to - Powermodel(FB) - JL625A - Power - to - Port model (BF)	JL856A: 10.08.0001 R0Z27A, R0Z28A, R0Z29A: 10.06.0001 *845420 - B21, 845424 - B21: 10.06.0001 (Requires split command) S6B63A, S2T38A, S2T39A, S2T40A, S2T41A: 10.18.0001	845420 - B21, 845424 - B21: either QSFP28 or SFP28 ends are supported for use 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). See the Hardware Guides for details.
Aruba 8325P 32C models S4A48A displayed by CLI (show system) S0G12A displayed by CLI (show system) for TAA bundles - S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl - S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl - S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl - S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl	JL856A, R0Z27A, R0Z28A, R0Z29A, *845420 - B21, 845424 - B21: 10.15.0005 (Requires split command) S6B63A, S2T38A, S2T39A, S2T40A, S2T41A: 10.18.0001	*845420 - B21, 845424 - B21: can not be used in port 32 (extra MACs reserved for the two SFP+). All other ports 1 - 31 can support split products. S6B63A, S2TXXA modules are not supported on port 32
Aruba 8325H models TAA/Non - TAA: - S2T42A/S4B20A - 18Y4C model (FB) - S2T46A/S4B21A - 18Y4C model (BF) - S2T47A/S4B22A - 16C model (FB) - S2T48A/S4B23A - 16C model (FB)	JL856A, R0Z27A, R0Z28A, R0Z29A, *845420 - B21, 845424 - B21: 10.15.1001 (Requires split command) S6B63A, S2T38A, S2T39A, S2T40A, S2T41A: 10.18.0001	*845420 - B21, 845424 - B21: can not be used in port 16 on the 16C models (extra MACs reserved for the two SFP+). All other ports 1 - 15 can support split products.

Table Continued

QSFP28 AOC capable product name (SKU)	Minimum software required	Comments
Aruba 8360 Switch Series	JL856A: 10.08.0001 R0Z27A, R0Z28A, R0Z29A: 10.07.0005 *845420 - B21, 845424 - B21: 10.07.0005 (Requires split command)	*845420 - B21, *845424 - B21: QSFP28 end of split cables not supported on 8360 48XT4C models (v1 or v2) no support for splitting ports; not enough MACs available. Both ends of the split DACs are supported/recognized for use on other models, in appropriate ports
Aruba 8360 48Y6C models	JL856A, R0Z27A, R0Z28A, R0Z29A: 10.09.0002 *845420 - B21, 845424 - B21: 10.09.0002	*845420 - B21, *845424 - B21: both ends are recognized in this 8360 model.
Aruba 8400X modules	JL856A: Not supported 6p 40G/100G QSFP28 Advanced Module (JL366A) R0Z27A, R0Z28A, R0Z29A: 10.06.0001 32p 1/10/25G SFP/SFP+/SFP28 Module (JL687A) JL366A module: *845420 - B21, 845424 - B21: QSFP28 end not supported JL687A module: *845420 - B21, 845424 - B21: Only the 25G ends of these 4x25G AOC are supported with 10.16.1006	JL687A module: *845420 - B21, *845424 - B21 Only the SFP28 ends are supported for use with 10.06.0001
Aruba 9300 Switch Series - 32D models R8Z96A - Base displayed by CLI show system • R9A29A FB airflow • R9A30A BF airflow	JL856A, R0Z27A, R0Z28A, R0Z29A: 10.11.1000 *845420 - B21, 845424 - B21: 10.17.0001 S6B63A, S2T38A, S2T39A, S2T40A, S2T41A: 10.18.0001	*845420 - B21, 845424 - B21 only QSFP28 ends are supported

Table Continued

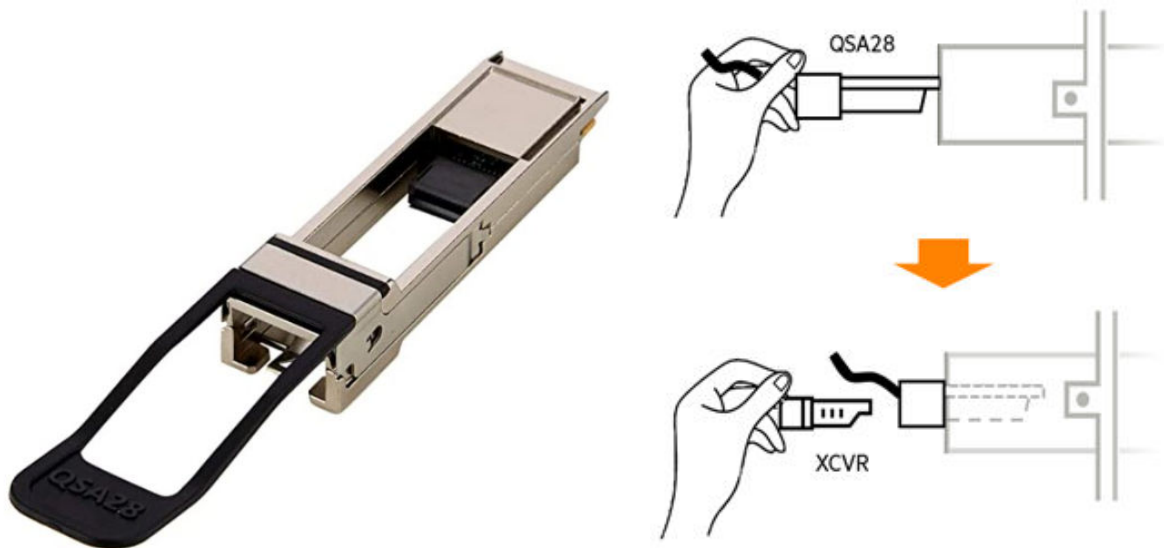


Figure 4: QSFP28 to SFP28 adapter

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

NOTE: 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.

NOTE: 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)

QSFP28 Adapter capable product (SKU shown by <i>show system</i> command)	Minimum software required: Limited to port information	Comments
Aruba 6300 Switch Series 48p SRX 4x100G (S0E91A, S0X44A)	10.13.100x	Use of 10G or 25G optic will automatically be detected. No configuration of the port is needed. No DAC or AOC support; 10GBASE - T xcvr is not supported. UT - mode optics may work (unsupported). The 6300 4x100G models support use of the 25G AOCs through the QSA28.
Aruba 6400 Modules 12p 40G/100G QSFP28 Module (R0X45A/(R0X45C) - HPE ANW 6400 32SFP28 4QSFP28 MACsec v2 Module (S0E48A)	10.15.0005 1 - 12 33 - 36	Use of 10G or 25G optic will automatically be detected. No configuration of the port is needed. No DAC or AOC support; 10GBASE - T xcvr is not supported. UT - mode optics may work (unsupported).
Aruba 8100 Switch Series 24XF4C (R9W94A: R9W86A/87A) 24XT4XF4C (R9W95A: R9W88A/89A) 48XF4C (R9W96A: R9W90A/91A) 40XT8XF4C (R9W97A: R9W92A/93A)	Minimum software: 10.12.0001 25 - 28 29 - 32 49 - 52 49 - 52	Use of 10G or 25G optic will automatically be detected. No configuration of the port is needed. No DAC or AOC support; 10GBASE - T xcvr is not supported. UT - mode optics may work (unsupported).
Aruba 8320 Switch Series 48p SFP and 6p QSFP+: JL479A 32p QSFP+: JL597A 48p 10GBT & 6p QSFP+: JL581A	Minimum software: 10.07.0004 49 - 54 1 - 32 49 - 54	Only 10G optics supported No DAC or AOC support; 10GBASE - T xcvr is not supported. UT - mode optics may work (unsupported).

Table Continued

QSFP28 Adapter capable product (SKU shown by <i>show system</i> command)	Minimum software required: Limited to port information	Comments
Aruba 8325 Switch Series 48Y8C models: JL635A (bundles: JL624A/JL625A) 32C models: JL636A (bundles: JL626A/JL627A)	Minimum software: 10.07.0010 49 - 56 1 - 32	Use of 10G or 25G optic will automatically be detected. 8325 use of 10G LR must be J9151E or later (use of J9151D or earlier should be avoided). No DAC or AOC support; 10GBASE - T xcvr is not supported. UT - mode optics may work (unsupported).
Aruba 8325P 32C models S4A48A displayed by CLI (show system) S0G12A displayed by CLI (show system) for TAA bundles - S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl - S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl - S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl - S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl	All QSFP28 ports: 10.15.0005	No DAC or AOC support; 10GBASE - T xcvr is not supported. UT - mode optics may work (unsupported).
Aruba 8325H models TAA/Non - TAA: - S2T42A/S4B20A - 18Y4C model (FB) - S2T46A/S4B21A - 18Y4C model (BF) - S2T47A/S4B22A - 16C model (FB) - S2T48A/S4B23A - 16C model (FB)	All QSFP28 ports: 10.15.1001	No DAC or AOC support; 10GBASE - T xcvr is not supported. UT - mode optics may work (unsupported).

Table Continued

QSFP28 Adapter capable product (SKU shown by <i>show system</i> command)	Minimum software required: Limited to port information	Comments
Aruba 8360 Switch Series (note v1 vs v2 Min Software required) 32Y4C models: JL717A/ JL717C(v2) 16Y2C models: JL718A/ JL718C(v2) 48XT4C models: JL720A/ JL720C(v2) 12C models: JL721A/JL721C(v2) 24XF2C models: JL722A/ JL722C(v2) 48Y6C models: JL719C(v2)	Minimum software as noted below: v1:10.07.0004 v2:10.09.1000 34 - 35 17 50 - 51 7 - 12 25 49 - 50, 52 - 53 (10.09.0002) (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. No DAC or AOC support; 10GBASE - T xvtr is not supported. UT - mode optics may work (unsupported).
Aruba 8400 Modules - Aruba 8400X 8p 40G QSFP+ Adv Module (JL365A) - Aruba 8400X 6p 40G/100G QSFP28 Adv Module (JL366A)	Not supported	
Aruba 9300 Switch Series - 32D models R8Z96A displayed by CLI show system - R9A29A FB airflow - R9A30A BF airflow	10.14.1000 QSA28 allowed in all ports	No DAC or AOC support; 10GBASE - T xvtr is not supported. UT - mode optics may work (unsupported).

Table Continued

QSFP28 Adapter capable product (SKU shown by <i>show system</i> command)	Minimum software required: Limited to port information	Comments
Aruba 9300S Switch Series - 32C 8D models displayed by CLI show system Base models: S0F95A - TAA Base, S0F96A - Base - S0F81A FB TAA - S0F82A FB - S0F83A BF TAA - S0F84A BF - S0F87A BF DC TAA - S0F88A BF DC	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. 9300S requires configuration of port - groups to enable 25G speeds. 25G thru a QSA28 is enabled using speed - group 1 for the selected port (organized in groups of 4). 10G thru a QSA28 is enabled using speed - group 2 for the selected port.
Aruba 10000 Switch Series - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle	Minimum software: 10.09.0001 49 - 54 49 - 54	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).
Aruba 10040 32C6D models - S4R54A - 32C6D FB bundle - S4R55A - 32C6D BF bundle	Minimum software: 10.16.10xx 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 interface - group <GROUP> speed <SPEED> configured for an interface group. See Fundamentals Guide for more details.

QSFP+ Modules

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.

NOTE: 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.

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+, QSFP28 and QSFP56 optics](#).

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

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. No support for splitting of QSFP optics.

Table Continued



QSFP+ (40G) capable Product name (SKU)	Minimum software required	Comments
Aruba 6400 12p 40G/100G QSFP28	10.04.2000	No support for splitting of SR4 optics.
Module R0X45A	10.09.1000	Aruba 6400 modules with QSFP28 ports do not have split mode enabled in AOS - CX as of the latest release covered by this guide edition.
Module R0X45C	10.13.1010	
HPE ANW 6400 32SFP28 4QSFP28 MACsec v2 Mod (SOE48A)		
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
Aruba 8320 48p G /6p 40G QSFP+ Switch (JL581A)	JH231A/JH233A: 10.00.0012	See <u>Split capabilities of specific models.</u>
Aruba 8325 32C models JL636A displayed by CLI	JH231A/JH233A: 10.03.0030	40G SR4/eSR4 can be optically split: 10.05.0001
show system - JL626A - Port - to - Power model (FB) - JL627A - Power - to - Port model (BF)		See <u>Split capabilities of specific models.</u>
Aruba 8325 48Y8C models	JH231A/JH233A: 10.03.0030	40G SR4/eSR4 can be optically split: 10.05.0001
JL635A displayed by CLI		See <u>Split capabilities of specific models.</u>
show system - JL624A - Port - to - Powermodel(FB) - JL625A - Power - to - Port model (BF)		

Table Continued

QSFP+ (40G) capable Product name (SKU)	Minimum software required	Comments
Aruba 8325P 32C models S4A48A displayed by CLI (show system) S0G12A displayed by CLI (show system) for TAA bundles - S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl - S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl - S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl - S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl	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. See <u>Split capabilities of specific models.</u>
Aruba 8325H models TAA/Non - TAA: - S2T42A/S4B20A - 18Y4C model (FB) - S2T46A/S4B21A - 18Y4C model (BF) - S2T47A/S4B22A - 16C model (FB) - S2T48A/S4B23A - 16C model (FB)	JH231A, JH233A: 10.15.1001	40G SR4/eSR4 can be optically split as of 10.15.1001. MACs reserved for the two SFP+ ports 17 and 18. Ports 1 - 15 can support splitting. See <u>Split capabilities of specific models.</u>
8360 32Y4C models JL717A/JL717C(v2) displayed by CLI show system - JL700A/JL701C(v2) Port - to - Power model - JL701A/JL701C Power - to - Port model	JH231A, JH233A: 10.06.0001	40G SR4/eSR4 can be optically split as of: 10.06.0001 See <u>Split capabilities of specific models.</u>

Table Continued



QSFP+ (40G) capable Product name (SKU)	Minimum software required	Comments
8360 16Y2C models JL718A displayed by CLI show system - JL702A/JL702C(v2) Port - to - Power model - JL703A/JL703C(v2) Power - to - Port model	JH231A, JH233A: 10.06.0001	40G SR4/eSR4 can be optically split as of: 10.06.0001 See <u>Split capabilities of specific models.</u>
8360 48XT4C model JL720A displayed by CLI show system - JL706A/JL706C(v2) Port - to - Power model - JL707A/JL707C(v2) Power - to - Port model	JH231A, JH233A: 10.06.0001	8360 48XT4C does not support split ports
8360 12C models JL721A displayed by CLI show system - JL708A/JL708C(v2) Port - to - Power model - JL709A/JL709C(v2) Power - to - Port model	JH231A, JH233A: 10.06.0001	40G SR4/eSR4 can be optically split as of: 10.06.0001 See <u>Split capabilities of specific models.</u>
8360 24XF2C models JL722A displayed by CLI show system - JL710A/JL710C(v2) Port - to - Power model - JL711A/JL711C(v2) Power - to - Port model	JH231A, JH233A: 10.06.0001	40G SR4/eSR4 can be optically split as of: 10.06.0001 See <u>Split capabilities of specific models.</u>

Table Continued



QSFP+ (40G) capable Product name (SKU)	Minimum software required	Comments
8360 48Y6C models JL719C displayed by CLI show system - JL704C(v2) Port - to - Power model (FB) - JL705C(v2) Power - to - Port model (BF)	JH231A, JH233A: 10.09.0002	40G SR4/eSR4 can be optically split See <u>Split capabilities of specific models.</u> 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
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 See <u>Split capabilities of specific models.</u>
Aruba 9300 Switch Series - 32D models R8Z96A displayed by CLI show system - R9A29A FB airflow - R9A30A BF airflow	JH231A, JH233A: 10.11.1000	9300 32D model: 40G SR4/eSR4 can be optically split. See <u>Split capabilities of specific models.</u>
Aruba 9300S Switch Series - 32C 8D models displayed by CLI show system Base models: S0F95A - TAA Base, S0F96A - Base - S0F81A FB TAA - S0F82A FB - S0F83A BF TAA - S0F84A BF - S0F87A BF DC TAA - S0F88A BF DC	JH231A, JH233A: 10.14.0005	9300S requires configuration of port - groups to enable 40G speeds. 40G is enabled using speed - group 2 for the selected port (in groups of 4). The center QDD ports (17 - 24) do not need a command, and are auto - sensing. 40G SR4/eSR4 can only be optically split when the switch is configured for split profile.

Table Continued

QSFP+ (40G) capable Product name (SKU)	Minimum software required	Comments
Aruba 10000 48Y6C models R8S96A displayed by CLI show system • R8P13A - 48Y6C FB bundle • R8P14A - 48Y6C BF bundle	JH231A, JH233A: 10.10.0002	40G SR4/eSR4 can be optically split
Aruba 10040 32C6D models • S4R54A - 32C6D FB bundle • S4R55A - 32C6D BF bundle	JH231A, JH233A: 10.16.10xx	Supported in all QSFP and Q - DD ports In order to use 40G modules in QSFP ports, 40G speed mode needs to be configured on respective interface group of QSFP ports 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.

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: • 850 • 900	MMF	50/125	2000 (OM3) 4700 (OM4)	100m (328.08 ft) 150m (492.12 ft) Not supported on OM1/OM2.
HPE X142 40G QSFP+ LC LR4 SM Transceiver (JH232A)	YES (1990 - 4556)	Four lanes: • 1271 • 1291 • 1311 • 1331 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: • 1271 • 1291 • 1311 • 1331 4x10G NRZ	SMF	9/125	N/A	30 km (18.6 miles) over SMF for No - FEC 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



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
QSFP+ capable product name (SKU)	Minimum software required		Comments	
Aruba 3810M/2930M 1QSFP+ 40GbE Module (JL078A)	JH232A: All JL308A: KB.16.04.0008 or WC.16.04.0008 Q9G82A: Not supported			
Aruba 3810M 2QSFP+ 40GbE Module (JL079A)	JH232A: All JL308A: KB.16.04.0008 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 z12 Module (J9992A)	JH232A: KB.15.17 JL308A: KB.16.04.0008 Q9G82A: Not supported			
Aruba 2p 40GbE QSFP+ v3 z12 Module (J9996A)	JH232A: KB.15.17 JL308A: KB.16.04.0008 Q9G82A: Not supported			
Aruba 6300 with QSFP28 ports (S0E91A/S0X44A)	JH232A, JL308A, Q9G82A: 10.13.1000		S0E91A/S0X44A models requires the system interface - group 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.	

Table Continued

QSFP+ capable product name (SKU)	Minimum software required	Comments
Aruba 8100 Switch Series	JH232A/JL308A/Q9G82A: 10.12.0001	
All models		
Aruba 8320 48p SFP/SFP+ & 6p 40G QSFP+ Switch (JL479A)	JH232A: 10.00.0006 JL308A: 10.00.0006 Q9G82A: 10.00.0018	
Aruba 8320 32p 40G QSFP+ Switch (JL579A)	JH232A: 10.00.0012 JL308A: 10.00.0012 Q9G82A: 10.00.0018	
Aruba 8320 48p G /6p 40G Q SFP+ Switch (JL581A)	JH232A: 10.00.0012 JL308A: 10.00.0012 Q9G82A: 10.00.0018	
Aruba 8325 32C models	JH232A, JL308A, Q9G82A: 10.03.0030	
JL636A displayed by CLI show system		
- JL626A - Port - to - Power model (FB) - JL627A - Power - to - Port model (BF)		
Aruba 8325 48Y8C models	JH232A, JL308A, Q9G82A: 10.03.0030	
JL635A displayed by CLI show system		
- JL624A - Port - to - Powermodel(FB) - JL625A - Power - to - Port model (BF)		

Table Continued

QSFP+ capable product name (SKU)	Minimum software required	Comments
Aruba 8325P 32C models S4A48A displayed by CLI (show system) SOG12A displayed by CLI (show system) for TAA bundles - S4A49A/SOG07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl - S4A50A/SOG08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl - S4A51A/SOG09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl - S4A52A/SOG10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl	JH232A, JL308A, Q9G82A: 10.15.0001	
Aruba 8325H models TAA/Non - TAA: - S2T42A/S4B20A - 18Y4C model (FB) - S2T46A/S4B21A - 18Y4C model (BF) - S2T47A/S4B22A - 16C model (FB) - S2T48A/S4B23A - 16C model (FB)	JH232A, JL308A, Q9G82A: 10.15.1001	
Aruba 8360 Switch Series All models (except 48Y6C)	JH232A, JL308A, Q9G82A: 10.06.0001	
Aruba 8360 48Y6C models: JL719C	JH232A, JL308A, Q9G82A: 10.09.0002	
Aruba 8400X Modules 8p 40G QSFP+ Advanced Module (JL365A)	JH232A: All JL308A: All Q9G82A: 10.00.0018	
6p 40G/100G QSFP28 Advanced Module (JL366A)	JH232A: 10.00.0006 JL308A: 10.00.0006 Q9G82A: 10.00.0018	10.00.0005 provides support for 100G products. 10.00.0006 provides additional support for 40G on the JL366A.

Table Continued

QSFP+ capable product name (SKU)	Minimum software required	Comments
Aruba 9300 Switch Series - 32D models R8Z96A displayed by CLI show system - R9A29A FB airflow - R9A30A BF airflow	JH232A, JL308A, Q9G82A: 10.11.1000	
Aruba 9300S Switch Series - 32C 8D models displayed by CLI show system Base models: S0F95A - TAA Base, S0F96A - Base - S0F81A FB TAA - S0F82A FB - S0F83A BF TAA - S0F84A BF - S0F87A BF DC TAA - S0F88A BF DC	JH232A, JL308A, Q9G82A: 10.14.0005	9300S requires configuration of port - groups to enable 40G speeds. 40G is enabled using speed - group 2 for the selected port (in groups of 4). The center QDD ports (17 - 24) do not need a command, and are auto - sensing.
Aruba 10000 48Y6C models R8S96A displayed by CLI show system - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle	JH232A(LR4): 10.10.0002 JL308A(BiDi): 10.09.0010 Q8G82A(ER4): 10.10.0002	
Aruba 10040 32C6D models - S4R54A - 32C6D FB bundle - S4R55A - 32C6D BF bundle	JH232A, JL308A, Q9G82A: 10.16.10xx	Supported in all QSFP and Q - DD ports 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)





NOTE: 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.

NOTE: 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 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



QSFP+ (40G) DAC capable product name (SKU)	Minimum software required	Comments
Aruba 3810M/2930M 1QSFP+ 40GbE modules (JL078A)	JH234A, JH235A, JH236A: All *721064 - B21: Not supported	
Aruba 3810M 2QSFP+ 40GbE modules (JL079A)	JH234A, JH235A, JH236A: All *721064 - B21: Not supported	The JL079A 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 modules (J9992A)	JH234A, JH235A, JH236A: KB 15.17 *721064 - B21: Not supported	
Aruba 2p 40GbE QSFP+ v3 zl2 modules (J9996A)	JH234A, JH235A, JH236A: KB 15.17 *721064 - B21: Not supported	
Aruba 6300 Switch Series	*721064 - B21: 10.10.1000	721064 - B21: SFP+ ends
- JL658A Aruba 6300M 24SFP+ 4SFP56 Switch - JL663A Aruba 6300M 48G 4SFP56 Switch - JL762A Aruba 6300M 48G Pwr2Prt 2F 1PS Bundle - R8S92A Aruba 6300M 24G 2SFP56 2p25G Switch	JH234A, JH235A, JH236A: 10.13.1000 *721064 - B21: Not supported	only of the split cable from HPE Compute parts S0E91A/S0X44A models require interface group 2 or 3 to configure either 40G or 100G speed operation.
Aruba 6300 with QSFP28 ports (S0E91A/S0X44A) S4P41A, S4P42A, S4P43A, S4P44A		721064 - B21: only SFP+ ends are supported in the respective SFP ports of S4P41A - S4P48A SKUs
Aruba 6400 12p 40G/100G QSFP28 modules (ROX45A/ROX45C)	JH234A, JH235A, JH236A: 10.04.2000 *721064 - B21: Not supported	The minimum software release for the ROX45C is 10.09.1000. 721064 - B21 not supported on either ROX45A/ROX45C
Aruba 8100 Switch Series	JH234A, JH235A, JH236A: 10.12.0006 *721064 - B21: Not supported	

Table Continued



QSFP+ (40G) DAC capable product name (SKU)	Minimum software required	Comments
Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ models (JL479A)	JH234A, JH235A, JH236A: 10.00.0012 *721064 - B21: Refer to the comments column for 8 - or 9 - digit serial number versions (Requires split 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
Aruba 8320 32p 40G QSFP+ models (JL579A)	JH234A, JH235A, JH236A: 10.00.0012 *721064 - B21: Refer to the comments column for 8 - or 9 - digit serial number versions (Requires split command)	8320 JL579A only allows splitting of ports 5 - 28 (center 24 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.
Aruba 8320 48p 10GBT 6p 40G QSFP+ models (JL581A)	JH234A, JH235A, JH236A: 10.03.0030 *721064 - B21: Refer to the comments column for 8 - or 9 - digit serial number versions (Requires split 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

Table Continued



QSFP+ (40G) DAC capable product name (SKU)	Minimum software required	Comments
Aruba 8325 32C models JL636A displayed by CLI show system - JL626A - Port - to - Power model (FB) - JL627A - Power - to - Port model (BF)	JH234A, JH235A, JH236A: 10.00.0012 *721064 - B21: Refer to the comments column for 8 - or 9 - digit serial number versions (Requires split 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.
Aruba 8325 48Y8C models JL635A displayed by CLI show system - JL624A - Port - to - Powermodel(FB) - JL625A - Power - to - Port model (BF)	JH234A, JH235A, JH236A: 10.03.0030 *721064 - B21: Refer to the comments column for 8 - or 9 - digit serial number versions (Requires split command)	8325 JL635A allows splitting of all 8 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). 10.08 release added support for the 10G ends of the 721064 - B21 split DAC
Aruba 8325P 32C models S4A48A displayed by CLI (show system) SOG12A displayed by CLI (show system) for TAA bundles - S4A49A/SOG07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl - S4A50A/SOG08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl - S4A51A/SOG09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl - S4A52A/SOG10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl	JH234A, JH235A, JH236A, *721064 - B21: 10.15.0001	

Table Continued

QSFP+ (40G) DAC capable product name (SKU)	Minimum software required	Comments
Aruba 8325H models TAA/Non - TAA: - S2T42A/S4B20A - 18Y4C model (FB) - S2T46A/S4B21A - 18Y4C model (BF) - S2T47A/S4B22A - 16C model (FB) - S2T48A/S4B23A - 16C model (FB)	JH234A, JH235A, JH236A, *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.
Aruba 8360 32Y4C models JL717A/JL717C(v2) displayed by CLI show system - JL700A/JL700C(v2) Port - to - Power model - JL701A/JL701C(v2) Power - to - Port model	JH234A, JH235A, JH236A: 10.06.0001 *721064 - B21: Refer to the comments column for 8 - or 9 - digit serial number versions (Requires split 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
Aruba 8360 16Y2C models JL718A/JL718C(v2) displayed by CLI show system - JL702A/JL702C(v2) Port - to - Power model - JL703A/JL703C(v2) Power - to - Port model	JH234A, JH235A, JH236A: 10.06.0001 *721064 - B21: Refer to the comments column for 8 - or 9 - digit serial number versions (Requires split 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
Aruba 8360 48Y6C models JL719C displayed by CLI show system - JL704C(v2) Port - to - Power model (FB) - JL705C(v2) Power - to - Port model (BF)	JH234A, JH235A, JH236A: 10.09.0002 *721064 - B21: 10.09.0002 (Requires split command)	MACsec available on ports 53 - 54.

Table Continued

QSFP+ (40G) DAC capable product name (SKU)	Minimum software required	Comments
Aruba 8360 48XT4C models JL720A/JL720C(v2) displayed by CLI show system - JL706A/JL706C(v2) Port - to - Power model - JL707A/JL707C(v2) Power - to - Port model	JH234A, JH235A, JH236A: 10.06.0001 *721064 - B21: Can NEVER be supported	8360 48XT4C model QSFP28 ports do not support split - mode (hardware is not capable)
Aruba 8360 12C models JL721A/JL721C(v2) displayed by CLI show system - JL708A/JL708C(v2) Port - to - Power model - JL709A/JL709C(v2) Power - to - Port model	JH234A, JH235A, JH236A: 10.06.0001 *721064 - B21: Refer to the comments column for 8 - or 9 - digit serial number versions (Requires split 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.
Aruba 8360 24XF2C models JL722A/JL722C(v2) displayed by CLI show system - JL710A/JL710C(v2) Port - to - Power model - JL711A/JL711C(v2) Power - to - Port model	JH234A, JH235A, JH236A: 10.06.0001 *721064 - B21: Refer to the comments column for 8 - or 9 - digit serial number versions (Requires split 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.
Aruba 8400X modules		
8p 40G QSFP+ Adv Module (JL365A)	JH234A, JH235A, JH236A: 10.00.0002 *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: 10.00.0006 *721064 - B21: Not supported	JL366A 6p QSFP28 module no support for breakout 40G DACs

Table Continued

QSFP+ (40G) DAC capable product name (SKU)	Minimum software required	Comments
Aruba 9300 Switch Series - 32D models R8Z96A displayed by CLI show system - R9A29A FB airflow - R9A30A BF airflow	JH234A, JH235A, JH236A, *721064 - B21: 10.10.1000	
Aruba 9300S Switch Series - 32C 8D models displayed by CLI show system Base models: S0F95A - TAA Base, S0F96A - Base - S0F81A FB TAA - S0F82A FB - S0F83A BF TAA - S0F84A BF - S0F87A BF DC TAA - S0F88A BF DC	JH234A, JH235A, JH236A, *721064 - B21: 10.14.0005	9300S requires configuration of port - groups to enable 40G speeds. 40G is enabled using speed - group 2 for the selected port (in groups of 4) ports 1 - 16, 25 - 40. The center QDD ports (17 - 24) do not need a command, and are auto - sensing. The HPE Server split DAC, *721064 - B21, requires a split profile 2 configuration to be able to use in ports 13, 15 - 17, 19, 21, 23, 25 - 27 as 40G => 4x10G split port.
Aruba 10000 48Y6C models R8S96A displayed by CLI show system - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle	JH234A, JH235A, JH236A: 10.10.0002 *721064 - B21: 10.10.0002	721064 - B21: The 10G ends are NOT supported through the use of the QSA28 used in any QSFP+ port on this model.
Aruba 10040 32C6D models - S4R54A - 32C6D FB bundle - S4R55A - 32C6D BF bundle	JH234A, JH235A, JH236A: 10.16.10xx *721064 - B21: 10.16.10xx	Supported in all QSFP and Q - DD ports. Requires Speed mode 40G to be configured. Split ends are supported in ports 39 & 40.

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





Models, specifications, and compatibility

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.

NOTE: 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.

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

QSFP+ (40G) AOC capable product name (SKU)	Minimum software required	Comments
Aruba 6300 Switch Series	*721076 - B21: 10.08.0001	721076 - B21: SFP+ ends only of the split cable from HPE Compute parts
JL658A Aruba 6300M 24SFP+ 4SFP56 Switch	*721076 - B21: 10.10.1000	721064 - B21: only SFP+ ends are supported in respective SFP for S4P41A - S4P48A SKUs
JL663A Aruba 6300M 48G 4SFP56 Switch	R0Z22A,R0Z23A,R0Z24A:10.13.1000 *721076 - B21: not supported	
JL762A Aruba 6300M 48G Pwr2Prt 2F 1PS Bundle	*721076 - B21: 10.16.1006	
R8S92A Aruba 6300M 24G 2SFP56 2p25G Switch		
S0E91A HPE ANW 6300M 48SRX CL8 PoE 4p100G Switch		
S0X44A HPE ANW 6300M 48SRX CL8 4p100G TAA Switch		
S4P41A, S4P42A, S4P43A, S4P44A		
Aruba 8100 Switch Series	R0Z22A,R0Z23A,R0Z24A:10.12.1001 *721076 - B21:10.12.1001	
Aruba 8320 48p 10G SFP/SFP+ and 6p 40G QSFP+ models (JL479A)	R0Z22A,R0Z23A,R0Z24A: Not supported *721076 - B21: 10.06.0001 (Requires split command)	721076 - B21: 10G ends are not supported through the use of the QSA28 adapter in any QSFP port
Aruba 8320 32p 40G QSFP+ models (JL579A)	R0Z22A,R0Z23A,R0Z24A: Not supported *721076 - B21: 10.06.0001 (Requires split command)	8320 JL579A only allows splitting of ports 5 - 28 (center 24 ports). 721076 - B21: Only the QSFP end is supported
Aruba 8320 48p 10GBT 6p 40G QSFP+ models (JL581A)	R0Z22A,R0Z23A,R0Z24A: Not supported *721076 - B21: 10.06.0001 (Requires split command)	721076 - B21: 10G ends are NOT supported thru the use of the QSA28 adapter in any QSFP port
Aruba 8325 32C models JL636A displayed by CLI show system	R0Z22A, R0Z23A, R0Z24A: 10.03.0040 *721076 - B21: 10.06.0001 (Requires split command)	721076 - B21: Only the QSFP end is supported. 10G ends are NOT supported thru the use of the QSA28 adapter in any QSFP port
- JL626A - Port - to - Power model (FB) - JL627A - Power - to - Port model (BF)		

Table Continued

QSFP+ (40G) AOC capable product name (SKU)	Minimum software required	Comments
Aruba 8325 48Y8C models JL635A displayed by CLI show system - JL624A - Port - to - Powermodel(FB) - JL625A - Power - to - Port model (BF)	R0Z22A, R0Z23A, R0Z24A: 10.03.0040 *721076 - B21: 10.06.0001 (Requires split command)	721076 - B21: Both QSFP+ and SFP+ ends are supported 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). See the Hardware Guides for details.
Aruba 8325P 32C models S4A48A displayed by CLI (show system) S0G12A displayed by CLI (show system) for TAA bundles - S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl - S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl - S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl - S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl	R0Z22A, R0Z23A, R0Z24A: 10.15.0001 *721076 - B21: 10.15.0001 (Requires split command)	
Aruba 8325H models TAA/Non - TAA: - n S2T42A/S4B20A - 18Y4C model (FB) - n S2T46A/S4B21A - 18Y4C model (uBF) - n S2T47A/S4B22A - 16C model (FB) - n S2T48A/S4B23A - 16C model (FB)	R0Z22A, R0Z23A, R0Z24A: 10.15.1001 *721076 - B21: 10.15.1001 (Requires split command)	8325H 16C models cannot split port 16 (not enough MACs in design). *721076 - B21: only allowed in ports 1 - 15 of the 16C models SFP ends of *721076 - B21 allowed in ports 23 - 24 18Y4C models and 17 - 18 16C models.

Table Continued



QSFP+ (40G) AOC capable product name (SKU)	Minimum software required	Comments
Aruba 8360 32Y4C models JL717A/JL717C(v2) displayed by CLI show system - JL700A/JL700C(v2) Port - to - Power model - JL701A/JL701C(v2) Power - to - Port model	R0Z22A, R0Z23A, R0Z24A: 10.07.0005 *721076 - B21: 10.07.0005 (Requires split command)	721076 - B21: Both QSFP+ and 10G SFP+ ends are supported (on the models with SFP28 ports). The 8360 32Y4C model requires configuration of interface groups 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 - detect the speed of the inserted transceiver.
Aruba 8360 16Y2C models JL718A/JL718C(v2) displayed by CLI show system - JL702APoC(v2) - to - Power model - JL703A/JL703C(v2) Power - to - Port model	R0Z22A, R0Z23A, R0Z24A: 10.07.0005 *721076 - B21: 10.07.0005 (Requires split command)	Not applicable to the 24XF (1G/10G) model See the Hardware Guides for details.
Aruba 8360 48XT4C models JL720A/JL720C(v2) displayed by CLI show system - JL706A/JL706C(v2) Port - to - Power model - JL707A/JL707C(v2) Power - to - Port model	R0Z22A, R0Z23A, R0Z24A: 10.07.0005 *721076 - B21: Not supported (No split support on the QSFP28 ports on the 48XT4C models)	
Aruba 8360 12C models JL721A/JL721C(v2) displayed by CLI show system - JL708A/JL708C(v2) Port - to - Power model - JL709A/JL709C(v2) Power - to - Port model	R0Z22A, R0Z23A, R0Z24A: 10.07.0005 *721076 - B21: 10.07.0005 (Requires split command)	

Table Continued

QSFP+ (40G) AOC capable product name (SKU)	Minimum software required	Comments
Aruba 8360 24XF2C models JL722A/JL722C(v2) displayed by CLI show system - JL710A/JL710C(v2) Port - to - Power model - JL711A/JL711C(v2) Power - to - Port model	R0Z22A, R0Z23A, R0Z24A: 10.07.0005 *721076 - B21: 10.07.0005 (only the QSFP end is supported in ports 25 and 26)	
Aruba 8360 48Y6C models JL719C displayed by CLI (show system) - JL704C(v2) Port - to - Power model (FB) - JL705C(v2) Power - to - Port model (BF)	R0Z22A, R0Z23A, R0Z24A: 10.09.0002 *721076 - B21: 10.09.0002 (Requires split command)	MACsec available on ports 53 - 54.
Aruba 8400X modules Aruba 8400X 32p SFP/SFP+ 10G MACsec Module (JL363A) Aruba 8400X 8p 40G QSFP+ Adv Module (JL365A) Aruba 8400X 6p 40G/100G QSFP28 AdvModule (JL366A) Aruba 8400X 32p 25G SFP28 Module(JL687A)	*721076 - B21: (10G SFP+ ends) 10.06.0001 R0Z22A, R0Z23A, R0Z24A: 10.12.0001 *721076 - B21: 10.06.0001 (Requires split command) R0Z22A, R0Z23A, R0Z24A: 10.12.0001 *721076 - B21: 10.05.0001 (Requires split command) *721076 - B21: (10G SFP+ ends) 10.06.0001	721076 - B21: 10G SFP+ end supported by 10.06.0001 721076 - B21: QSFP+ end supported in this module 721076 - B21: QSFP+ end supported in this module 721076 - B21: 10G SFP+ end supported by 10.06.0001 JL687A 32p 25G module 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). See the Hardware Guides for details.
Aruba 9300 Switch Series - 32D models R8Z96A displayed by CLI show system - R9A29A FB airflow - R9A30A BF airflow	R0Z22A, R0Z23A, R0Z24A: 10.10.1000 *721076 - B21: not supported	

Table Continued

QSFP+ (40G) AOC capable product name (SKU)	Minimum software required	Comments
Aruba 9300S Switch Series - 32C 8D models displayed by CLI show system Base models: S0F95A - TAA Base, S0F96A - Base - S0F81A FB TAA - S0F82A FB - S0F83A BF TAA - S0F84A BF - S0F87A BF DC TAA - S0F88A BF DC	R0Z22A, R0Z23A, R0Z24A: 10.14.0005 *721076 - B21: 10.13.1000 (only supported in ports 1 - 8 and 33 - 40)	9300S requires configuration of port - groups to enable 40G speeds. 40G is enabled using speed - group 2 for the selected port (in groups of 4). Only supported in ports 1 - 8 & 33 - 40. The center QDD ports (17 - 24) do not need a command, and are auto - sensing.
Aruba 10000 48Y6C models R8S96A displayed by CLI show system - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle	R0Z22A, R0Z23A, R0Z24A: 10.10.0002 *721076 - B21: 10.10.0002 (Requires split command)	721076 - B21: The 10G ends are NOT supported thru the use of the QSA28 used in any QSFP+ port on this model.
Aruba 10040 32C6D models - S4R54A - 32C6D FB bundle - S4R55A - 32C6D BF bundle	R0Z22A, R0Z23A, R0Z24A: 10.16.10xx *721076 - B21: 10.16.10xx	Supported in all QSFP and Q - DD ports. Requires Speed mode 40G to be configured. 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 Modules

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.

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 (ROM48A)	Yes 1990 - 4803	Single lane, 850 1x 50G PAM4	MMF	50/125	OM3 OM4 and OM5	70m (229.66 ft) 100m (328.08 ft)
HPE ANW 50G eSR 300m MMF xcvr (SOV64A)	Yes 1990 - 4901 1990 - 4900	Single lane, 850 1x 50G PAM4	MMF (duplex LC)	50/125	OM3 OM4 and OM5	200m (656.16 ft) 300m (984.25 ft)

Table Continued



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 LR 10km SMF xcvr (S0V65A) Tri - speed capable	Yes 1990 - 4857 1990 - 4859	Single lane, 1310 1x 50G PAM4	SMF (duplex LC)	9/125	N/A	10 km (6.21 miles)
HPE ANW 50G LR 10km SMF TAA xcvr (S6H23A) (not capable of Tri- speed)						
HPE ANW 50G BR10 - D 1330/1270 xcvr (S1C92A)	Yes 1990 - 4870 1990 - 4866	TX: 1330 RX: 1270 1x50G PAM4	SMF (simplex LC)	9/125	N/A	10 km (6.21 miles)
HPE ANW 50G BR10 - U 1270/1330 xcvr (S1C94A)	Yes 1990 - 4869 1990 - 4865	TX: 1270 RX: 1330 1x50G PAM4	SMF (simplex LC)	9/125	N/A	10 km (6.21 miles)
HPE ANW 50G ER 40 km SMF xcvr (S0V66A)	Yes 1990 - 4902 1990 - 4888	Single lane, 1310 1x50G PAM4	SMF (duplex LC)	9/125	N/A	40 km (24.86 miles)
HPE ANW 50G BR40-D 1314/1289 XCVR (S0V67A)	Yes	TX: 1306 to 1322 RX: 1281 to 1297	SMF (Simplex LC)	9/125	N/A	40 km (24.86 miles)
HPE ANW 50G BR40-U 1289/1314 XCVR (S0V68A)	Yes	TX: 1281 to 1297 RX: 1306 to 1322	SMF (Simplex LC)	9/125	N/A	40 km (24.86 miles)

NOTE: 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).

NOTE: 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.

NOTE: 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.

Product name (SKU)	Connector	Optical parameters (dBm)			
		Transmit power	Receive power	Temperature Ratings	Required Power
Aruba 50G SFP56 LC SR 100m MMF xcvr (R0M48A) Tri - speed capable(10G, 25G, 50G)	Duplex LC (PC or UPC)	- 6 to +4	- 8.4 to +4.0	Commercial (0 to 70°C)	1.5 W
HPE ANW 50G eSR 300m MMF xcvr (S0V64A) 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)	1.5 W
HPE ANW 50G LR 10km SMF xcvr (S0V65A) Tri - speed capable(10G,25G, 50G) HPE ANW 50G LR 10km SMF TAA xcvr (S6H23A) (not capable of Tri-speed)	Duplex LC (PC or UPC)	- 7.0 to +2.0	- 13.3 to +2.0	Industrial (- 40 to +85°C)	2 W

Table Continued



Product name (SKU)	Connector	Optical parameters (dBm)			
		Transmit power	Receive power	Temperature Ratings	Required Power
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)	2 W
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)	2 W
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)	2.5 W
HPE ANW 50G BR40-D 1314/1289 XCVR (S0V67A)	Simplex LC (PC or UPC)	+0.4 to +6.6	-17.6 to -3.4	Industrial (- 40 to +85°C)	2.5 W
HPE ANW 50G BR40-U 1289/1314 XCVR (S0V68A)	Simplex LC (PC or UPC)	+0.4 to +6.6	-17.6 to -3.4	Industrial (- 40 to +85°C)	2.5 W



SFP56 (50G) capable product name	Switch SKU #s	Minimum Software required	Comments
Aruba 6300 Switch Series	All Models M/F except those mentioned below	R0M48A: 10.09.1010 S0V64A, S0V65A, S1C92A, S1C94A, S0V66A: 10.13.1000 S0V67A, S0V68A (40 km BiDi): 10.17.1001 S6H23A (TAA 10 km): 10.18.0001	Tri - speed capability on 50G SR, eSR, LR Optics (BiDi are single speed). TAA LR module is not tri-speed capable
	JL762A (6300M BF airflow)	R0M48A: 10.09.1010 S0V64A, S0V65A, S1C92A, S1C94A, S0V66A: 10.13.1000 S0V67A, S0V68A (40 km BiDi): 10.17.1001 S6H23A (TAA 10 km): 10.18.0001	
	R8S89A, R8S90A, R8S91A, R8S92A	R0M48A: 10.10.1010 S0V64A, S0V65A, S1C92A, S1C94A, S0V66A: 10.13.1000 S0V67A, S0V68A (40 km BiDi): 10.17.1001 S6H23A (TAA 10 km): 10.18.0001	6300M R8S91A: ports 51 - 52 do not support 50G nor 25G (only 10G and 1G). 6300 R8S89A, R8S90A, R8S91A, R8S92A models require interface group <speed> to enable different speed products. 6300M R8S92A: ports 27 - 28 do not support 50G (only 10G and 25G). TAA LR module is not tri-speed capable

Table Continued

SFP56 (50G) capable product name	Switch SKU #s	Minimum Software required	Comments
	6300M TAA Models: S0F99A, S0G00A, S0G01A, S0G02A, S0G03A, S0G04A, S0G05A, S0G06A 6300F TAA Models: S0G95A, S0G96A, S0G97A, S0G98A	R0M48A, S0V64A, S0V65A, S0V66A, S1C92A, S1C94A: 10.14.0001 S0V67A, S0V68A (40 km BiDi): 10.17.1001 S6H23A (TAA 10 km): 10.18.0001	TAA LR module is not tri- speed capable
	S0E91A, S0X44A (100G models):	50G not supported	
	S4P41A, S4P42A, S4P43A, S4P44A	R0M48A, S0V64A, S0V65A, S0V66A, S1C92A, S1C94A: 10.16.1006 S0V67A, S0V68A (40 km BiDi): 10.17.1001 S6H23A (TAA 10 km): 10.18.0001	Supported ports S4P41A/S4P43A: 49 - 50 S4P42A: 41 - 42 S4P44A: 25 - 26 Support extended to respective TAA SKUs When R0M48A is installed in S4P41A, S4P42A, S4P43A, or S4P44A, the switch cannot support excursion up to 131°F (55°C) for any period of time. TAA LR module is not tri- speed capable
Aruba 6300L Switch Series	S3L75A, S3L76A, S3L77A	R0M48A, S0V64A, S0V65A, S0V66A, S1C92A, S1C94A: 10.14.0001 S0V67A, S0V68A (40 km BiDi): 10.17.1001 S6H23A (TAA 10 km): 10.18.0001	Supported in SFP56 ports: S3L75A: Ports 25 - 26 S3L76A: Ports 49 - 50 S3L77A: Ports 49 - 50 TAA LR module is not tri- speed capable

Table Continued

SFP56 (50G) capable product name	Switch SKU #s	Minimum Software required	Comments
Aruba 6400 modules	R0X39B(*EOS), R0X40B(*EOS), R0X41A(*EOS), R0X42A(*EOS), R0X43A(*EOS), R0X39C, R0X40C, R0X41C, R0X42C, R0X43C	R0M48A: 10.09.1000 S0V64A, S0V65A, S1C92A, S1C94A, S0V66A: 10.13.1000 S0V67A, S0V68A (40 km BiDi): 10.17.1001 Only supported in SFP56 ports.	R0X43A/R0X43C: 50G optics are not supported in 10G SFP+ 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 R0X44C (50G only supported in configured bottom ports of interface port groups)	R0M48A: 10.09.1000 S0V64A, S0V65A, S1C92A, S1C94A, S0V66A: 10.13.1000 S0V67A, S0V68A (40 km BiDi): 10.17.1001 Only supported in configured bottom SFP28 ports.	R0X44C port groups are as follows: Group 1 = 1 - 12 Groups 2 through 7 = (13 - 16; 17 - 20; 21 - 24; 25 - 28; 29 - 32; 33 - 36); Group 8 = 37 - 48.
	S1T83A	R0M48A, S0V64A, S0V65A, S1C92A, S1C94A, S0V66A: 10.13.1010 S0V67A, S0V68A (40 km BiDi): 10.17.1001	S1T83A module SFP56 ports are auto - sensing for the supported interconnects. S0E48A port groups are as follows: Group 1 = 1 - 8 Group 2 = 9 - 16 Group 3 = 17 - 24 Group 4 = 25 - 32

Table Continued

SFP56 (50G) capable product name	Switch SKU #s	Minimum Software required	Comments
	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 S0V67A, S0V68A (40 km BiDi): 10.17.1001 Only supported in configured bottom ports of interface port groups	S0E48A: Configure port groups for 50G speed: Default is 10G/25G. S0E48A port groups are as follows: Group 1 = 1 - 8 Group 2 = 9 - 16 Group 3 = 17 - 24 Group 4 = 25 - 32 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.
Aruba 8100 Switch Series	50G not supported		The 8100 does not have any ports that can support 50G speeds
Aruba 8325 Switch Series	50G not supported		The 8325 (32C, 48Y6C), 8325P, and 8325H do not have any ports that can support 50G speeds.

Table Continued



SFP56 (50G) capable product name	Switch SKU #s	Minimum Software required	Comments
Aruba 8360 32Y4C models	JL717C(v2) displayed by CLI show system	ROM48A: 10.09.1000	8360 v1 models (ending in "A") do not support the use of 50G transceivers.
	JL700C(v2) Port - to - Power model	S0V64A, S0V65A, S1C92A, S1C94A, S0V66A: 10.13.1000	The 8360 32Y4C model requires configuration of interface groups (groups of four ports) to select a speed of 50G.
	JL701C(v2) Power - to - Port model	S0V67A, S0V68A (40 km BiDi): 10.17.1001	When selected, the upper two ports in a group are disabled and both bottom ports only support the 50G speed.
		Only supported on even # ports 6 - 32	Ports 1 - 4 on the 8360 32Y4C model do not support 50G speed due to the MACsec capability limiting these ports to a maximum speed of 25G.
		S6H23A (TAA 10 km): 10.18.0001	See the Hardware Guides for details.
			TAA LR module is not tri-speed capable
Aruba 8360 16Y2C models	JL718C(v2) displayed by CLI show system	10.09.1000	8360 v1 models (ending in "A") do not support the use of 50G transceivers.
	JL702C(v2) Port - to - Power model	S0V64A, S0V65A, S1C92A, S1C94A, S0V66A: 10.13.1000	The 8360 16Y2C model requires configuration of interface groups (groups of four ports) to select a speed of 50G. When selected,
	JL703C(v2) Power - to - Port model	S0V67A, S0V68A (40 km BiDi): 10.17.1001	the upper two ports in a group are disabled and both bottom ports only support the 50G speed.
		Only supported on even # ports 2 - 16	See the Hardware Guides for details.
		S6H23A (TAA 10 km): 10.18.0001	TAA LR module is not tri-speed capable

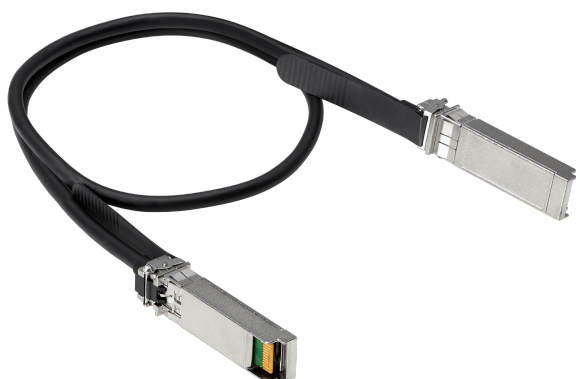
Table Continued

SFP56 (50G) capable product name	Switch SKU #s	Minimum Software required	Comments
Aruba 8360 48Y6C models	JL719C displayed by CLI show system	10.09.1000	The 8360 48Y6C model requires configuration of interface groups (groups of four ports) to select a 50G speed.
	JL704C(v2) Port - to - Power model (FB)	S0V64A, S0V65A, S1C92A, S1C94A, S0V66A: 10.13.1000	
	JL705C(v2) Power - to - Port model (BF)	S0V67A, S0V68A (40 km BiDi): 10.17.1001	When selected, the upper two ports in a group are disabled and both bottom ports only support the 50G speed.
		Only supported on even # ports 6 - 48 S6H23A (TAA 10 km): 10.18.0001	Ports 1 - 4 on the 8360 48Y6C model do not support 50G speeds due to the MACsec capability limiting these ports to a maximum speed of 25G. See the Hardware Guides for details. TAA LR module is not tri-speed capable
Aruba 9300 Switch Series	Not supported		50G products (xcvrs, DACs and AOCs) are not supported for use through a QSA28 adapter.
9300 32D			
9300S 32C8D			
Aruba 10000 Switch Series	50G not supported		The 10000 does not have any ports 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.





NOTE: 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	Required Power
Aruba 50G SFP56 to SFP56 0.65m DAC Cable (ROM46A)	0.65m (2.13 ft)	50Gbps	Commercial (0 to 70°C)	0.1 W per end
Aruba 50G SFP56 to SFP56 3m DAC Cable (ROM47A)	3m (9.84 ft)			

SFP56 (50G) DAC capable product name	Switch SKU #s	Minimum software required	Comments
HPE ANW 5420 Switch Series			No 50G capability in the 5420 at this time
Aruba 6300 Switch Series	All models M and F and JL762A(6300M BF airflow) except those mentioned below	ROM46A, ROM47A: 10.04.0001	Used for stacking or switch - to - switch interconnectivity (non - stack). Only in SFP56 ports.
=	R8S89A, R8S90A, R8S91A R8S92A	ROM46A, ROM47A: 10.10.0002	Used for stacking or switch - to - switch interconnectivity (non - stack). Only in SFP56 ports.
			6300 R8S89A, R8S90A, R8S91A, R8S92A models require interface group <speed> to enable different speed products.

Table Continued

SFP56 (50G) DAC capable product name	Switch SKU #s	Minimum software required	Comments
	6300M TAA Models: S0F99A, S0G00A, S0G01A, S0G02A (BF airflow), S0G03A, S0G04A, S0G05A, S0G06A 6300F TAA Models: S0G95A, S0G96A, S0G97A, S0G98A S0E91A, S0X44A (100G models) 50G not supported	ROM46A, ROM47A: 10.14.0001	Used for stacking or switch - to - switch interconnectivity (non - stack). Only in SFP56 ports.
	S4P41A, S4P42A, S4P43A, S4P44A	ROM48A, SOV64A, SOV65A, SOV66A, S1C92A, S1C94A: 10.16.1006	Supported ports: S4P41A/S4P43A: 49 - 50 S4P42A: 41 - 42 S4P44A: 25 - 26 Support extended to respective TAA SKUs
Aruba 6300L Switch Series	S3L75A, S3L76A, S3L77A	ROM46A, ROM47A: 10.14.0001	Supported in SFP56 ports: S3L75A: Ports 25 - 26 S3L76A: Ports 49 - 50 S3L77A: Ports 49 - 50
Aruba 6400 Switch Series	All modules with SFP56 ports	ROM46A, ROM47A: 10.09.0002	ROX43A/ROX43C: 50G optics are not supported in 10G SFP+ ports.

Table Continued

SFP56 (50G) DAC capable product name	Switch SKU #s	Minimum software required	Comments
	R0X44A(*EOS) does not support 50G products R0X44C (50G only supported in configured bottom ports of interface port groups)	R0M46A, R0M47A: 10.09.0002 Only supported in configured bottom ports of interface port groups	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 port groups are as follows: Group 1= 1 - 12 Groups 2 - 7 = (13 - 16; 17 - 20; 21 - 24; 25 - 28; 29 - 32; 33 - 36) Group 8 = 37 - 48. 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, R0M47A: 10.13.1000	

Table Continued



SFP56 (50G) DAC capable product name	Switch SKU #s	Minimum software required	Comments
	S0E48A (50G only supported in configured bottom ports of interface groups)	ROM46A, ROM47A: 10.13.1060, 10.14.1020, 10.15.0005 Only supported in configured bottom ports of interface groups	S0E48A: Configure port groups for 50G speed: Default is 10G/25G. S0E48A port groups are as follows: Group 1 = 1 - 8 Group 2 = 9 - 16 Group 3 = 17 - 24 Group 4 = 25 - 32 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.
Aruba 8100 Switch Series	50G not supported		The 8100 does not have any ports that can support 50G speeds.
Aruba 8325 Switch Series	50G not supported		The 8325 (32C, 48Y6C), 8325P, and 8325H do not have any ports that can support 50G speeds.
Aruba 8360 Switch Series	Aruba 8360 48Y6C models JL719C displayed by CLI (show system) - JL704C(v2) - Port - to - Power model (FB) - JL705C(v2) - Power - to - Port model (BF) Aruba 8360 32Y4C models JL717C(v2) displayed by CLI (show system) - JL700C(v2) Port - to - Power model - JL701C(v2) Power - to - Port model	ROM46A, ROM47A: 10.09.0002	8360 v1 models (ending in "A") do not support the use of 50G transceivers. 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. 8360 16Y2C does not have MACsec capability. To enable 50G capability, configure interface groups only for applicable ports (in groups of four ports) to enable the use of 50G transceivers / DACs in the <i>lower</i> SFP28 ports.

Table Continued

SFP56 (50G) DAC capable product name	Switch SKU #s	Minimum software required	Comments
	Aruba 8360 16Y2C models JL718C(v2) displayed by CLI (show system) - JL702C(v2) Port - to - Power model - JL703C(v2) Power - to - Port model		(Interface Groups default to 1G, 10G or 25G speeds.) When configured for 50G, only the bottom ports in each group are enabled, and the upper ports are disabled for any use. (The 50G bandwidth reconfigures two ports).
Aruba 9300 Switch Series 32D or 32C8D models	Not supported		50G products (xcvrs, DACs and AOCs) are not supported for use through a QSA28 adapter.
Aruba 10000 Switch Series	50G not supported		The 10000 does not have any ports that can support 50G speeds.



SFP28 Modules

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 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.

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 SR 100m MMF xcvr (JL484A)	Yes (partial)	Single lane, 850	MMF (duplex LC)	50/125	2000 (OM3)	70m (229.66 ft)
HPE ANW 25G SR SFP28 LC 100m MMF C - xcvr (S2P33A)		1x25G NRZ			4700 (OM4)	100m (328.08 ft)
Aruba 25G SFP28 LC eSR	Yes (partial)	Single lane, 850	MMF (duplex LC)	50/125	2000 (OM3)	200m (656.16 ft)

Table Continued



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
400m MMF xcvr (JL485A)		1x25G NRZ			4700 (OM4)	400m (1,312.34 ft)
HPE Aruba Networking 25G eSR SFP28 LC 400m MMF TAA Transceiver (S5U10A)						
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 (S0V69A)	Yes 1990 - 4856 1990 - 4858	Single lane, 1550 1x25G NRZ	SMF (duplex LC)	9/125	N/A	40 km (24.86 miles)

Table Continued



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 1314/1289 Transceiver (S0V70A)	Yes 1990 - 4939 1990 - 4949	Tx: 1314 Rx: 1289 1x25G NRZ	SMF (simplex LC)	9/125	N/A	40 km (24.85 miles)
Aruba 25G SFP28 LC BiDi 40km - U Transceiver (S0V71A)	Yes 1990 - 4940 1990 - 4950	Tx: 1289 Rx: 1314 1x25G NRZ	SMF (simplex LC)	9/125	N/A	40 km (24.85 miles)

NOTE: 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	Required Power
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)	1.2 W
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)	1.2 W

Table Continued



Product name (SKU)	Connector	Optical parameters (dBm)			
		Transmit power	Receive power	Temp Ratings	Required Power
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)	1.5 W
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)	Simplex LC (PC or UPC)	- 7.0 to +2.0	- 13.3 to +2.0	Industrial (- 40 to +85°C)	1.5 W
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)	1.5 W
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)	2.0 W
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)	2.0 W
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)	2.0 W



SFP28 (25G) capable product name	Switch SKU #s	Minimum software required	Comments
5420 Switch Series	S0U63A	JL484A (SR), JL485A (eSR), JL486A (LR),	
	S0U73A (TAA)	S2P33A, S2P34A (25G C - Class), S1C96A/S1C98A	
	S0U64A	(10km BiDi), SOV69A (ER):	
	S0U74A (TAA)	10.15.0001	
	S0U68A	SOV70A, SOV71A (40km BiDi): 10.16.1006	
	S0U78A (TAA)	S5U19A (eSR TAA): 10.16.1006	
Aruba 6300L Switch Series	S3L75A, S3L76A, S3L77A	JL484A (SR), S2P33A (SR C - class), JL485A (eSR), JL486A (LR), S2P34A (LR C - class), S1C96A/S1C98A (10km BiDi), SOV69A (ER): 10.14.0001	Supported in SFP56 and SFP28 ports:
			S3L75A: ports 25 - 28
			S3L76A: ports 49 - 52
		S2N63A (LR TAA): 10.14.1000	S3L77A: ports 49 - 50 (not 51 - 52)
Aruba 6300 Switch Series	All models M and F except those mentioned below	SOV70A, SOV71A (40km BiDi): 10.16.1006	
		S5U19A (eSR TAA): 10.16.1006	
		JL484A (SR), JL485A (eSR), JL486A (LR): 10.04.0001	
		SOV69A(25G ER): 10.13.1000	
		S2P33A, S2P34A (25G C - Class): 10.13.1010	
		S1C96A, S1C98A (25G 10 km BiDi): 10.13.1010	
		S2N63A (25G LR TAA): Not supported	
		SOV70A, SOV71A (40km BiDi): 10.16.1006	
		S5U19A (eSR TAA): 10.16.1006	

Table Continued



SFP28 (25G) capable product name	Switch SKU #s	Minimum software required	Comments
	JL762A (FB airflow model)	JL484A (SR), JL485A (eSR), JL486A (LR): 10.04.3000 SOV69A(25G ER): 10.13.1000 S2P33A, S2P34A (25G C - Class): 10.13.1010 S1C96A/S1C98A (25G 10km BiDi): 10.13.1010 S2N63A (25G LR TAA): Not supported SOV70A, SOV71A (40km BiDi): 10.16.1006 S5U19A (eSR TAA): 10.16.1006	
	R8S89A	JL484A (SR), JL485A (eSR), JL486A (LR): 10.10.0002	S2N63A 25G LR TAA only enabled on R8S92A 6300 model
	R8S90A	SOV69A(25G ER): 10.13.1000	R8S89A, R8S90A and R8S92A require interface - group 2 speed 10
	R8S91A	S2P33A, S2P34A (25G C - Class): 10.13.1010	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.
	R8S92A	S1C96A/S1C98A (25G 10 km BiDi): 10.13.1010 S2N63A (25G LR TAA): 10.13.1000 See comments SOV70A, SOV71A (40km BiDi): 10.16.1006	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 & 52).

Table Continued

SFP28 (25G) capable product name	Switch SKU #s	Minimum software required	Comments
	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	Supported ports S4P41A/S4P43A: 49 - 52 S4P42A: 41 - 44 S4P44A: 25 - 28 Support extended to respective TAA SKUs
	6300M TAA Models: S0F99A, S0G00A, S0G01A, S0G02A (BF airflow), S0G03A, S0G04A, S0G05A, S0G06A 6300F TAA Models: S0G95A, S0G96A, S0G97A, S0G98A	JL484A (SR), JL485A (eSR), JL486A (LR): 10.13.000x S0V69A(25G ER): 10.13.1000 S2P33A, S2P34A (25G C - Class): 10.13.1010 S1C96A/S1C98A (25G 10 km BiDi): 10.13.1000 S2N63A (25G LR TAA): 10.13.1000 S5U19A (eSR TAA): 10.16.1006	
	S0E91A, S0X44A (4x100G models)	(Only through a QSA28) JL484A (SR) JL485A (eSR) JL486A (LR), S1C96A/S1C98A (25G 10 km BiDi), S0V69A (25G ER), S2P33A, S2P34A (25G C - Class): 10.13.1010 S2N63A (25G LR TAA): Not supported S0V70A, S0V71A (40km BiDi): 10.16.1006 S5U19A (eSR TAA): 10.16.1006	QSFP28 ports can support these optical products through a QSA28

Table Continued



SFP28 (25G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 6400 Modules	R0X39B(*EOS), R0X40B(*EOS), R0X41A(*EOS), R0X42A(*EOS), R0X43A(*EOS)	JL484A (SR) JL485A (eSR) JL486A (LR): 10.04.1000	R0X39A/R0X40A (revision A) are no longer supported for use in the 6400 series.
		Only supported in modules with SFP56 or SFP28 ports (not the SFP+ on R0X43A/R0X43C modules)	R0X43A/R0X43C: 25G optics are not supported in 10G SFP+ ports.
		S1C96A/S1C98A (25G BiDi), S0V69A (25G ER): 10.13.1000	R0X44A/R0X44C auto - detects the inserted type of transceiver. It does not require any interface groups like the 8325.
	R0X44A (*EOS)	S2N63A (25G LR TAA): 10.16.1006	S0E48A 25G module defaults to use 25G products.
		S5U19A (eSR TAA): 10.16.1006	
		JL484A (SR) JL485A (eSR) JL486A (LR):10.04.2000 S2P33A, S2P34A (25G C - Class): 10.13.1010	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.
		Suported in all SFP28 ports	
		S1C96A/S1C98A (25G BiDi), S0V69A (25G ER): 10.13.1000	S0E48A port groups are as follows:
		S2N63A (25G LR TAA): not supported	Group 1 = 1 - 8 Group 2 = 9 - 16
		S5U19A (eSR TAA): 10.16.1006	Group 3 = 17 - 24 Group 4 = 25 - 32
	R0X39C, R0X40C, R0X41C, R0X42C, R0X43C, R0X44C	JL484A (SR), JL485A (eSR), JL486A (LR):10.09.1000	
		S2P33A, S2P34A (25G C - Class): 10.13.1010	
		S1C96A/S1C98A (25G 10km BiDi), S0V69A (25G ER): 10.13.1000	
		S2N63A (25G LR TAA): not supported	
		S5U19A (eSR TAA), S0V70A/S0V71A (25G 40km BiDi): 10.16.1006	

Table Continued

SFP28 (25G) capable product name	Switch SKU #s	Minimum software required	Comments
	S1T83A/S0E48A	JL484A (SR), JL485A (eSR), JL486A (LR), S1C96A/S1C98A, S0V69A: 10.13.1000 S2P33A, S2P34A (25G C - Class): 10.13.1010 S2N63A (25G LR TAA): not supported S5U19A (eSR TAA): 10.16.1006	
	All modules above ROX44A(*EOS), ROX44C	JL484A (SR), S2P33A (SR C - class) JL485A (eSR), JL486A (LR), S2P34A (LR C - class), S2P33A, S2P34A (25G C - Class): 10.13.1010 S2N63A (25G LR TAA): not supported Through a QSA28 adapter: JL484A (SR), JL485A (eSR), JL486A (LR), S2P33A, S2P34A (25G C - Class), S1C96A/S1C98A (25G BiDi), S0V69A (25G ER): 10.15.0005 S2N63A (25G LR TAA): not supported S0V70A/S0V71A (40km BiDi): 10.16.1006 S5U19A (eSR TAA): 10.16.1006	

Table Continued



SFP28 (25G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8100 Switch Series All models	Downlink ports on the 8100 are SFP+, 25G products are not supported in SFP+ ports. QSFP28 ports can support these through a QSA28	JL484A (SR), JL485A (eSR), JL486A (LR): 10.12.000X S1C96A/S1C98A(25G 10 km BiDi), S0V69A(25G ER): 10.13.1000 S2P33A,S2P34A (25G C - Class): 10.13.1010 S0V70A/S0V71A (40km BiDi): 10.16.1006 S2N63A (LR TAA): 10.16.1006 S5U19A (eSR TAA): 10.16.1006	25G transceivers on the 8100 only in the QSFP28 ports using a QSA28 adapter. C - Class 25G supported through QSA28 with release 10.13.1010. 40km BiDi , eSR and LR supported through a QSA28 with release 10.16.1000
Aruba 8325 32C models	JL636A displayed by CLI show system - JL626A - Port - to - Power model (FB) - JL627A - Power - to - Port model (BF)	JL484A (SR), JL485A (eSR), JL486A (LR), S1C96A/S1C98A(25G 10 km BiDi), S0V69A(25G ER), S2P33A, S2P34A (25G C - Class), S0V70A/S0V71A (40km BiDi), S2N63A (LR TAA), S5U19A (eSR TAA): 10.13.1000	25G transceivers on the 8325 32C only in the QSFP28 ports using a QSA28 adapter.
Aruba 8325 48Y8C models	JL635A displayed by CLI (show system) - JL624A - Port - to - Powermodel(FB) - JL625A - Power - to - Port model (BF) QSFP28 ports can support these optical products through a QSA28	JL484A (SR), JL485A (eSR), JL486A (LR): 10.02.0001 S1C96A/S1C98A, (25G 10 km BiDi), S0V69A(25G ER): 10.13.1000 S2P33A, S2P34A (25G C - Class): 10.13.1010 S0V70A/S0V71A (40km BiDi): 10.16.1006 S5U19A (eSR TAA): 10.16.1006	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). 25G BiDi when used through a QSA28 will display as unsupported. C - Class 25G supported through QSA28 with release 10.13.1010 See the <i>Hardware Guides</i> for details.

Table Continued



SFP28 (25G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8325P 32C models	S4A48A displayed by CLI (show system)	Through the use of a QSA28 adapter:	
	S0G12A displayed by CLI (show system) for TAA bundles	JL484A (SR), JL485A (eSR), JL486A (LR), S1C96A/ S1C98A (25G 10 km BiDi), S0V69A(25G ER), S2P33A, S2P34A (25G C - Class): 10.15.0005	
	• S4A49A/S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl	S0V70A/S0V71A (40km BiDi): 10.16.1006	
	• S4A50A/S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl	S5U19A (eSR TAA), S2N63A (LR TAA): 10.16.1006	
	• S4A51A/S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl		
	• S4A52A/S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl		
Aruba 8325H	TAA/Non - TAA:	JL484A (SR), JL485A (eSR), JL486A (LR), S1C96A/ S1C98A (25G 10 km BiDi), S0V69A (25G ER), S2P33A, S2P34A (25G C - Class): 10.15.1001	The 16C models and QSFP28 ports on the 18Y4C enable these 25G transceivers through a QSA28 adapter.
	• S2T42A/S4B20A - 18Y4C model (FB)		
	• S2T46A/S4B21A - 18Y4C model (BF)		
	• S2T47A/S4B22A - 16C model (FB)	S5U19A (eSR TAA): 10.16.1006	
	• S2T48A/S4B23A - 16C model (FB)	S0V70A/S0V71A (40km BiDi), S2N63A (LR TAA): 10.16.1006	

Table Continued



SFP28 (25G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8360 32Y4C models	JL717A/JL717C(v2) displayed by CLI (show system) - JL700A/JL700C(v2) Port - to - Power model - JL701A/JL701C(v2) Power - to - Port model	Supported in all SFP28 ports JL484A (SR), JL485A (eSR), JL486A (LR): 10.09.0002 S1C96A/S1C98A (25G BiDi), S0V69A (25G ER), S2N63A (25G LR TAA): 10.13.1000 S2P33A, S2P34A (25G C - Class): 10.13.1010 S0V70A/S0V71A (40km BiDi), S2N63A (LR TAA): 10.16.1006 S5U19A (eSR TAA): 10.16.1006	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). Ports 1 - 4 on the 8360 32Y4C model do not support 1G transceivers. All other ports can individually auto - detect the speed of the inserted transceiver. Not applicable to the 24XF (1G/10G ports) model - 25G BiDi enabled through a QSA28 in the QSFP28 ports. 25G BiDi when used through a QSA28 will display as unsupported. 10G LRR TAA only enabled on 8360/48Y6C (JL719C - JL704C/JL705C). C - Class 25G supported through QSA28 with release 10.13.1010 See the <i>Hardware Guides</i> for details.

Table Continued

SFP28 (25G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8360 16Y2C models	JL718A/JL718C(v2) displayed by CLI (show system) - JL702A/JL702C(v2) Port - to - Power model - JL703A/JL703C(v2) Power - to - Port model QSFP28 ports can support these optical products through a QSA28	Supported in all SFP28 ports JL484A (SR), JL485A (eSR), JL486A (LR): 10.06.0001 S5U19A (eSR TAA): 10.16.1006 S1C96A/S1C98A (25G BiDi), S0V69A (25G ER), S2N63A (25G LR TAA): 10.13.1000 S2P33A, S2P34A (25G C - Class): 10.13.1010 S0V70A/S0V71A (40km BiDi), S2N63A (LR TAA): 10.16.1006	C - Class 25G supported through QSA28 with release 10.13.1010
Aruba 8360 48Y6C models	JL719C displayed by CLI (show system) - JL704C(v2) Port - to - Power model (FB) - JL705C(v2) Power - to - Port model (BF) QSFP28 ports can support these optical products through a QSA28	Supported in all SFP28 ports JL484A (SR), JL485A (eSR), JL486A (LR): 10.09.0002 S1C96A/S1C98A (25G BiDi), S0V69A (25G ER), S2N63A (25G LR TAA): 10.13.1000 S2P33A, S2P34A (25G C - Class): 10.13.1010 S0V70A/S0V71A (40km BiDi), S5U19A (eSR TAA), S2N63A (LR TAA): 10.16.1006	MACsec available on ports 1 - 4 10G or 25G speeds 25G BiDi when used through a QSA28 will display as unsupported. C - Class 25G supported through QSA28 with release 10.13.1010

Table Continued



SFP28 (25G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8360 48XT4C models	JL720A/JL720C(v2) displayed by CLI (show system) - JL706A/JL706C(v2) - Port - to - Power model (FB) - JL707A/JL707C(v2) - Power - to - Port model (BF)	Supported only in ports 50 - 51 ports with a QSA28: JL484A (SR), JL485A (eSR), JL486A (LR): 10.09.0002 S2P33A, S2P34A (25G Class): 10.13.1010 S1C96A/S1C98A (25G BiDi), S0V69A (25G ER), S2N63A (25G LR TAA): 10.15.0005 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. See <u>QSFP28 to SFP28 adapter support</u> . NOTE: Other QSFP ports can support QSFP products.
Aruba 8360 12C models	JL721A/JL721C(v2) displayed by CLI (show system) - JL708A/JL708C(v2) - Port - to - Power model (FB) - JL709A/JL709C(v2) - Power - to - Port model (BF) QSFP28 ports can support these optical products through a QSA28	Supported only in ports 7 - 12 ports JL484A (SR), JL485A (eSR), JL486A (LR): 10.09.0002 S2P33A, S2P34A (25G CClass): 10.13.1010 S1C96A/S1C98A (25G BiDi), S0V69A (25G ER), S2N63A (25G LR TAA): 10.15.0005 S0V70A/S0V71A (40km BiDi): 10.16.1006 S5U19A (eSR TAA): 10.16.1006	The 8360 12C model only supports the use of a QSA28 in ports 7 through 12 See <u>QSFP28 to SFP28 adapter support</u> . NOTE: Other QSFP ports can support QSFP products.

Table Continued



SFP28 (25G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8360 24XF2C models	JL722A/JL722C(v2) displayed by CLI (show system) - JL710A/JL710C(v2) - Port - to - Power model (FB) - JL711A/JL711C(v2) - Power - to - Port model (BF) QSFP28 ports can support these optical products through a QSA28	Supported only in ports 25 ports JL484A (SR), JL485A (eSR), JL486A (LR): 10.09.0002 S2P33A, S2P34A (25G CClass): 10.13.1010 S1C96A/S1C98A (25G BiDi), S0V69A (25G ER), S2N63A (25G LR TAA): 10.15.0005 S0V70A/S0V71A (40km BiDi): 10.16.1006 S5U19A (eSR TAA): 10.16.1006	
Aruba 8400X Modules	JL687A	JL484A (SR), JL485A (eSR), JL486A (LR): 10.04.2000 S1C96A/S1C98A, S0V69A, S0V70A/S0V71A: Not supported S2P33A, S2P34A (25G C - Class): 10.13.1010 S5U19A (eSR TAA): 10.16.1006	JL687A 32p 25G module 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). See the <i>Hardware Guides</i> for details.
9300 Series	Not supported	Requires QSA28: JL484A (SR), JL485A (eSR), JL486A (LR): 10.14.1000 S5U19A (eSR TAA): 10.16.1006 S1C96A/S1C98A (25G BiDi), S0V69A (25G ER), S2N63A (25G LR TAA), S2P33A, S2P34A (25G C - Class): Not supported S0V70A/S0V71A (40km BiDi): 10.16.1006	QSA28 support on the 9300 - 32D model added with release 10.14.1000.

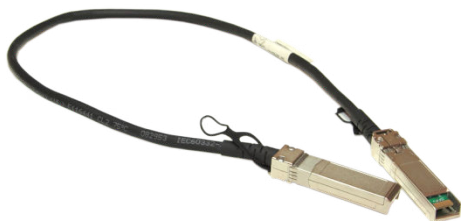
Table Continued

SFP28 (25G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 9300S Switch Series	- 32C 8D models displayed by CLI (show system)	Requires QSA28: JL484A (SR), JL485A (eSR), JL486A(LR), SOV69A (25G ER): 10.14.0001	Ports 1 - 8 and 33 - 48 can not be split, but are capable of using the QSA28 adapter. QSA28 can be used in all ports (1 - 40).
	Base models: SOF95A - TAA Base, SOF96A - Base		
	• SOF81A FB TAA	S1C96A/S1C98A (25G 10 km BiDi), S2P33A, S2P34A (25G C - Class): Not supported	25G xcvrs: The 9300S uses split profiles with the system interface - profile split <NAME> command.
	• SOF82A FB		
	• SOF83A BF TAA		
	• SOF84A BF	SOV70A/SOV71A (40km BiDi): 10.16.1006	Use profile - 2 to enable 25G downstream splits (10 ports: 13,15 - 17, 19, 21, 23, 25 - 27) .
	• SOF87A BF DC TAA	S5U19A (eSR TAA): 10.16.1006	See the AOS - CX Fundamentals Guide for 9300 switches for more information about the system interface - profile command.
	• SOF88A BF DC		
Aruba 10000 48Y6C models	R8S96A displayed by CLI (show system)	JL484A(SR), JL485A(eSR): 10.10.0002	The 10000 series requires configuration
	• R8P13A - 48Y6C FB bundle	JL486A(LR): 10.10.0002	of interface groups (groups of 4 ports)
	• R8P14A - 48Y6C BF bundle	S1C96A/S1C98A(25G 10 km BiDi), SOV69A(25G ER): 10.17.0001	to enable the use of 1G or 10G
		S2P33A, S2P34A (25G C - Class): 10.17.0001	transceivers / DACs in the SFP28 ports (set speed back to 25G for default).
		SOV70A/SOV71A (40km BiDi): 10.17.0001	See the <i>Hardware Guides</i> for details.
		S5U19A (eSR TAA): 10.16.1006	
Aruba 10040 32C6D models	• S4R54A - 32C6D FB bundle	JL484A(SR), JL485A(eSR), JL486A(LR), S1C96A/S1C98A(25G 10 km BiDi), SOV69A(25G ER), S2P33A, S2P34A (25G C - Class), SOV70A/SOV71A (40km BiDi), S5U19A (eSR TAA): 10.16.10xx	Supported in even QSFP ports and all Q - DD ports using QSA28 adapter
	• S4R55A - 32C6D BF bundle		

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.





NOTE: 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	Required power
Aruba 25G SFP28 to SFP28 0.65m DAC Cable (JL487A)	0.65m (2.13 ft)	25 Gbps	Commercial (0 to 70°C)	0.1 W per end
Aruba 25G SFP28 to SFP28 3m DAC Cable (JL488A)	3m (9.8ft)			
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.

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)	



SFP28 (25G) DAC capable product name	Switch SKU #	Minimum software required	Comments
5420 Switch Series	SOU64A/SOU74A (TAA)	JL487A, JL488A, JL489A, *844477 - B21 and *844480 B21: 10.15.0005	
Aruba 6300L Switch Series	S3L75A, S3L76A, S3L77A	JL487A, JL488A, JL489A: 10.14.0001 *844477 - B21, *844480 B21: Not supported	Supported in SFP56 & SFP28 ports: S3L75A: ports 25 - 28 S3L76A: ports 49 - 52 S3L77A: ports 49 - 50 (not 51 - 52)
Aruba 6300 Switch Series	All models M/F and JL762A (BF airflow) except those mentioned below	JL487A, JL488A, JL489A: 10.04.0001 *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. Intermittent issues seen with HPE Servers NICs. See details in
	R8S89A, R8S90A, R8S91A, R8S92A	JL487A, JL488A, JL489A: 10.10.0002 *844477 - B21 and *844480 B21: 10.10.0002 (see note)	6300 R8S89A, R8S90A, R8S91A, R8S92A models require interface group <speed> to enable different speed products.
	6300M TAA Models: S0F99A, S0G00A, S0G01A, S0G02A (BF airflow), S0G03A, S0G04A, S0G05A, S0G06A 6300F TAA Models: S0G95A, S0G96A, S0G97A, S0G98A	JL487A, JL488A, JL489A: 10.14.0001 *844477 - B21 and *844480 B21: 10.14.0001 (see note)	*844477 - B21 and *844480 - B21: only supported on uplink ports on the following 6300 TAA models: S0G00A, S0G02A, S0G03A
	S0E91A, S0X44A (100G models)	25G DACs not supported	DACs are not allowed through QSA28 adapters.

Table Continued

SFP28 (25G) DAC capable product name	Switch SKU #	Minimum software required	Comments
	S4P41A, S4P42A, S4P43A, S4P44A	JL487A, JL488A, JL489A, *844477 - B21, *844480 - B21: 10.16.1006	Supported ports S4P41A/S4P43A: 49 - 52 S4P42A: 41 - 44 S4P44A: 25 - 28 Support extended to respective TAA SKUs
Aruba 6400 modules with SFP56 ports	ROX39B(*EOS), ROX40B(*EOS), ROX41A(*EOS), ROX42A(*EOS), ROX43A(*EOS)	Only supported in SFP56 ports JL487A, JL488A, JL489A: 10.04.1000 *844477 - B21 and *844480 - B21: 10.08.0001	ROX39A/ROX40A (revision A) are no longer supported for use in the 6400 series. ROX44A/ROX44C auto - detects the inserted type of transceiver; it does NOT require any interface groups like the 8325.
	ROX39C, ROX40C, ROX41C, ROX42C, ROX43C	Only supported in SFP56 ports: JL487A, JL488A, JL489A: 10.09.1000 *844477 - B21 and *844480 - B21: 10.10.0001	ROX43A/ROX43C: 25G DACs are not supported in 10G SFP+ ports. Intermittent issues seen with HPE Servers NICs. See details in <u>HPE servers and systems support</u> .
	ROX44A(*EOS)	JL487A, JL488A, JL489A: 10.04.1000 Only supported in SFP56 ports *844477 - B21 and *844480 - B21: 10.08.0001	
	ROX44C	JL487A, JL488A, JL489A, *844477 - B21 and *844480 - B21: 10.09.1000	
	S1T83A	JL487A, JL488A, JL489A, *844477 - B21 and *844480 - B21: 10.13.1000	
Aruba 8325 32C models	All models of the 8325 32C		25G DACs are not enabled through a QSA28 adapter. 25G DACs not possible on the 8325 32C models.

Table Continued

SFP28 (25G) DAC capable product name	Switch SKU #	Minimum software required	Comments
Aruba 8325 48Y8C models	JL635A displayed by CLI (show system) - JL624A - Port - to - Powermodel(FB) - JL625A - Power - to - Port model (BF)	JL487A, JL488A, JL489A: 10.03.0030 *844477 - B21 and *844480 - B21: 10.04.1000	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). See the <i>Hardware Guides</i> for details. 844477 - B21 and 844480 - B21: verified against HPE interconnects listed in HPE servers and systems support .
Aruba 8325P 32C models	All models of the 8325P 32C		25G DACs are not enabled through a QSA28 adapter. 25G DACs not possible on the 8325P 32C models.
Aruba 8325H	TAA/Non - TAA: - S2T42A/S4B20A - 18Y4C model (FB) - S2T46A/S4B21A - 18Y4C model (BF) - S2T47A/S4B22A - 16C model (FB) - S2T48A/S4B23A - 16C model (FB)	Only enabled on the 18Y4C models JL487A, JL488A, JL489A, *844477 - B21, *844480 - B21: 10.15.1001	25G DACs are not enabled through a QSA28 adapter. 25G DACs are not possible on the QSFP28 ports of the 18Y4C or 16C models.

Table Continued



SFP28 (25G) DAC capable product name	Switch SKU #	Minimum software required	Comments
8360 32Y4C models	JL717A/JL717C(v2) displayed by CLI (show system) - JL700A/JL700C(v2) Port - to - Power model - JL701A/JL701C(v2) Power - to - Port model	JL487A, JL488A, JL489A: 10.06.0001 *844477 - B21 and *844480 - B21: 10.06.0001	The 8360 32Y4C model requires configuration of interface group only for ports 1 - 4 (as group number one) to enable the use of 10G transceivers/ DACs in the SFP28 ports (interface groups default to 25G speeds). Ports 1 - 4 on the 8360 32Y4C model do not support 1G transceivers. All other ports can individually auto - detect the speed of the inserted transceiver. Not applicable to the 24XF (1G/10G) model. See the Hardware Guides for details. Intermittent issues seen with HPE Server NICs. See details in <u>HPE servers and systems support</u>.
8360 16Y2C models	JL718A/JL718C(v2) displayed by CLI (show system) - JL702A/JL702C(v2) Port - to - Power model - JL703A/JL703C(v2) Power - to - Port model	JL487A, JL488A, JL489A: 10.06.0001 *844477 - B21 and *844480 - B21: 10.06.0001	Intermittent issues seen with HPE Server NICs. See details in <u>HPE servers and systems support</u>.

Table Continued



SFP28 (25G) DAC capable product name	Switch SKU #	Minimum software required	Comments
8360 48Y6C models	JL719C displayed by CLI (show system)	JL487A, JL488A, JL489A: 10.09.0002	MACsec available on ports 1 - 4 10G or 25G speeds.
	- JL704C(v2) Port - to - Power model (FB) - JL705C(v2) Power - to - Port model (BF)	Supported in all SFP28 ports *844477 - B21 and *844480 - B21: 10.09.0002	The 8360 48Y6C 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). 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. Intermittent issues seen with HPE Server NICs. See details in <u>HPE servers and systems support</u> .
Aruba 8400X Modules	JL687A	JL487A: Not Supported JL488A, JL489A: 10.04.2000 *844477 - B21, *844480 - B21: 10.06.0001	JL487A 0.65m DAC not supported. The JL687A module requires configuration of interface groups (groups of four ports) to enable the use of 1G or 10G transceivers/ DACs in the SFP28ports (Interface Groups default to 25G speed). See the <u>Hardware Guides</u> for details.
Aruba 9300 Switch Series	Not supported		SFP28 DACs and AOCs are not supported for use through a QSA28 adapter.

Table Continued

SFP28 (25G) DAC capable product name	Switch SKU #	Minimum software required	Comments
Aruba 9300S Switch Series	Not supported		9300S supports the QSA28 adapter, but 25G DACs are not supported thru the QSA28
Aruba 10000 48Y6C models	R8S96A displayed by CLI (show system) - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle	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). See the Hardware Guides for details.

25G SFP28 AOC (Active Optical Cable)



Models, specifications, and compatibility



Product name (SKU)	Cable length	Data rate	Temperature Ratings	Required power
Aruba 25G SFP28 to SFP28 3m AOC (ROM44A)	3 m (9.84 ft)	25 Gbps	Commercial (0 to 70°C)	1 W per end
Aruba 25G SFP28 to SFP28 7m AOC (ROM45A)	7 m (22.96 ft)			
Aruba 25G SFP28 to SFP28 15m AOC (ROZ21A)	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.

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)	

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



SFP28 (25G) AOC capable product name	Switch SKU #	Minimum software required	Comments
5420 Switch Series	SOU64A/SOU74A (TAA)	R0M44A, R0M45A, R0Z21A: 10.15.0005 *845420 - B21, *845424 - B21: Not supported	
Aruba 6300L Switch Series	S3L75A, S3L76A, S3L77A	R0M44A, R0M45A, R0Z21A: 10.14.0001 *845420 - B21, *845424 - B21: Not supported (both ends) (HPE Server part)	Supported in SFP56 and SFP28 ports: S3L75A: ports 25 - 28 S3L76A: ports 49 - 52 S3L77A: ports 49 - 50 (not 51 - 52)
Aruba 6300 Switch Series	Only supported in models listed below.		
	R8S89A, R8S90A, R8S91A, R8S92A	R0M44A, R0M45A, R0Z21A,	*845420 - B21, *845424 - B21:
	See comments for these 6300 models	*845420 - B21, *845424 - B21: 10.13.0000	25G ends only 6300 R8S89A, R8S90A, R8S91A, R8S92A models require the interface group <speed> command to enable different speed products.
	S0E91A, S0X44A (100G models)	R0M44A, R0M45A, R0Z21A: 10.13.100x *845420 - B21, *845424 - B21: Not supported	S0E91 and S0X44A models: Only supported through a QSA28 adapter
	S4P41A, S4P42A, S4P43A, S4P44A	R0M44A, R0M45A, R0Z21A: 10.16.100x *845420 - B21, *845424 - B21: Not supported	Supported ports: S4P41A/S4P43A: 49 - 52 S4P42A: 41 - 44 S4P44A: 25 - 28 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.

Table Continued

SFP28 (25G) AOC capable product name	Switch SKU #	Minimum software required	Comments
Aruba 8325 48Y8C models	JL635A displayed by CLI (show system) - JL624A - Port - to - Powermodel (FB) - JL625A - Power - to - Port model (BF) - JL624A - Port - to - Powermodel(FB) - JL625A - Power - to - Port model (BF)	ROM44A, ROM45A, R0Z21A: 10.03.0040 *845420 - B21 (7 m split), *845424 - B21 (15 m split): 10.10.0002 (HPE Server part) *Q9S67A, *Q9S68A, *Q9S69A, *Q9S70A: 10.12.000x (HPE Storage part)	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). 845420 - B21, 845424 - B21 split ends are supported in 6300 select SKUs JL658A (uplink ports only), JL663A, JL762A for 10.08.0001 See the <i>Hardware Guides</i> for details.
Aruba 8325P 32C models	All models of the 8325P 32C	25G AOCs not supported	25G DACs are not enabled through a QSA28 adapter. 25G DACs not possible on the 8325P 32C models.
Aruba 8325H	TAA/Non - TAA: - S2T42A / S4B20A - 18Y4C model (FB) - S2T46A / S4B21A - 18Y4C model (BF) - S2T42A / S4B20A - 18Y4C model (FB) - S2T46A / S4B21A - 18Y4C model (BF) - S2T47A / S4B22A - 16C model (FB) - S2T48A / S4B23A - 16C model (FB)	ROM44A, ROM45A, R0Z21A: 10.15.1001 *845420 - B21 (7 m split), *845424 - B21 (15 m split) (HPE Server part): 10.15.1001 *Q9S67A, *Q9S68A, *Q9S69A, *Q9S70A (HPE Storage part): 10.15.1001	18Y4C models ROM44A, ROM45A, R0Z21A: Only enabled on ports 1 - 18 (25G ports) *845420 - B21 (7 m split), *845424 - B21 (15 m split) (HPE Server part) SFP28 ends enabled on ports 1 - 18 (25G ports) QSFP28 is enabled on ports 19 - 22 *Q9S67A,*Q9S68A,*Q9S69A,*Q9S70A (HPE Storage part): SFP28 ends enabled on ports 1 - 18 (25G ports) *845420 - B21 and *845424 - B21 are only supported on ports 1 - 15. 8325H 16C models cannot support split mode on port 16.

Table Continued

SFP28 (25G) AOC capable product name	Switch SKU #	Minimum software required	Comments
8360 32Y4C models	JL717A/JL717C(v2) displayed by CLI (show system) - JL700A/JL700C(v2) Port - to - Power model - JL701A/JL701C(v2) Power - to - Port model - JL700A/JL700C(v2) Port - to - Power model - JL701A/JL701C(v2) Power - to - Port model	R0M44A, R0M45A, R0Z21A: 10.06.0001 *845420 - B21 (7 m split), *845424 - B21 (15 m split): 10.10.0002 (HPE Server part) *Q9S67A, *Q9S68A, *Q9S69A, *Q9S70A: Not supported (HPE Storage part)	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). Ports 1 - 4 on the 8360 32Y4C model do not support 1G transceivers. All other ports can individually auto - detect the speed of the inserted transceiver. Not applicable to the 24XF (1G/10G) model. 845420 - B21, 845424 - B21 split ends are supported in 6300 select SKUs JL658A (uplink ports only), JL663A, JL762A for 10.08.0001. See the <i>Hardware Guides</i> for details.
8360 16Y2C models	JL718A/JL718C(v2) displayed by CLI (show system) - JL702A/JL702C(v2) Port - to - Power model - JL703A/JL703C(v2) Power - to - Port model - JL702A/JL702C(v2) Port - to - Power model - JL703A/JL703C(v2) Power - to - Port model	R0M44A, R0M45A, R0Z21A: 10.06.0001 *845420 - B21(7 m split), *845424 - B21(15 m split): 10.10.0002 (HPE Server part) *Q9S67A, *Q9S68A, *Q9S69A, *Q9S70A: Not supported (HPE Storage part)	

Table Continued

SFP28 (25G) AOC capable product name	Switch SKU #	Minimum software required	Comments
8360 48Y6C models	JL719C displayed by CLI (show system)	ROM44A, ROM45A, R0Z21A: 10.09.0002	MACsec available on ports 1 - 4 10G or 25G speeds.
	- JL704C(v2) Port - to - Power model (FB) - JL705C(v2) Power - to - Port model (BF) - JL704C(v2) Port - to - Power model (FB) - JL705C(v2) Power - to - Port model (BF)	*845420 - B21 (7 m split), *845424 - B21 (15 m split): 10.10.0002 (HPE Server part) *Q9S67A, *Q9S68A, *Q9S69A, *Q9S70A: Not supported (HPE Storage part)	The 8360 48Y6C 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). 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	ROM44A, ROM45A, R0Z21A, *845420 - B21 (7 m split), *845424 - B21 (15 m split): 10.10.0002 (HPE Server part)	The JL687A module requires configuration of interface groups (groups of four 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 supported in 6300 select SKUs JL658A (uplink ports only), JL663A, JL762A for 10.08.0001 See the <i>Hardware Guides</i> for details.
Aruba 9300 Switch Series	Not supported		SFP28 DACs and AOCs are not supported for use through a QSA28 adapter.

Table Continued

SFP28 (25G) AOC capable product name	Switch SKU #	Minimum software required	Comments
9300S Switch Series	Not supported		9300S supports the QSA28 adapter, but 25G AOCs are not supported through the QSA28.
Aruba 10000 48Y6C models	R8S96A displayed by CLI (show system) - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle	ROM44A, ROM45A, R0Z21A: 10.10.0002 *845420 - B21(7m Split), *845424 - B21(15m Split) (HPE Server part): 10.10.0002 *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). See the <i>Hardware Guides</i> for details.

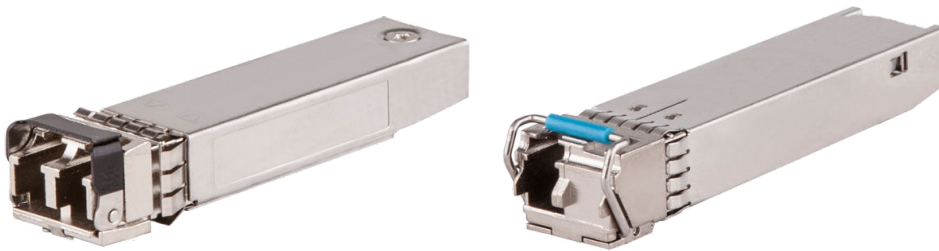
SFP+ Modules

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.



NOTE:

- 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.



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 J9150A/ J9150D: (1990 - 4391,	Single lane, 850 1x10G NRZ	MMF (duplex LC)	50/125	4700 (OM4), 2000 (OM3), 500 (OM2), 400	400 m (1312.34 ft), 300 m (984.25 ft), 82 m (269.03 ft), 66 m (216.54 ft)
Aruba 10G SFP+ LC SR 300m MMF xcvr (J9150D)	1990 - 4635, 1990 - 4634, 1990 - 4175)			62.5/125	200 (OM1), 160	33 m (108.27 ft), 26 m (85.30 ft)
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)					
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)	Single lane, 1310 1x10G NRZ	MMF (duplex LC)	50/125	1500, 500 (OM2), 400	220m (721.78 ft), 220m (721.78 ft), 100m (328.08 ft)
Aruba 10G SFP+ LC LRM 220m MMF xcvr (J9152D)	See note below regarding MCP.			62.5/125	200 (OM1), 160	220m (721.78 ft), 220m (721.78 ft)
			SMF (duplex LC)	9/125	N/A	300m (987.25 ft)

Table Continued

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 LR xcvr (J9151A)*EOS	Yes J9151A/ J9151D:	Single lane, 1310 1x10G NRZ	SMF (duplex LC)	9/125	N/A	10km (6.21 miles)
Aruba 10G SFP+ LC LR 10km SMF xcvr (J9151D*EOS and J9151E)	1990 - 4657, 1990 - 4694, 1990 - 4727 J9151E:					
HPE ANW 10G LR SFP+ LC 10km SMF C - xcvr (S2P31A)	(1990 - 4694, 1990 - 4727) 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 1314/1289 xcvr (R9X54A)	Yes (1990 - 4843)	TX:1314 RX:1289 1x10G NRZ	SMF (simplex LC)	9/125	N/A	40km (24.86 miles)
Aruba 10G LC BiDi 40km - U 1289/1314 xcvr (R9X55A)	Yes (1990 - 4842)	TX:1289 RX:1314 1x10G NRZ	SMF (simplex LC)	9/125	N/A	40km (24.86 miles)

Table Continued



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 ER xcvr (J9153A)*EOS Aruba 10G SFP+ LC ER 40km SMF xcvr (J9153D) HPE ANW 10G ER SFP+ LC 40km SMF C - xcvr (S2P32A)	Yes (1990 - 4365, 1990 - 4656)	Single lane, 1550 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.
HPE ANW 10G BiDi LC 10-D 1330/1270 XCVR (S6H21A) HPE ANW 10G BR10-D 1330/1270 TAA XCVR (S6H24A)	Yes	TX: 1330 RX: 1270	SMF (Simplex LC)	9/125	N/A	10km (6.21 miles)
HPE ANW 10G BiDi LC 10-U 1270/1330 XCVR (S6H20A) HPE ANW 10G BR10-D 1270/1330 TAA XCVR (S6H22A)	Yes	TX: 1330 RX: 1270	SMF (Simplex LC)	9/125	N/A	10km (6.21 miles)

NOTE: MCP note: J9152D 10G LRM (long leach 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.

NOTE: 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.

Product name (SKU)	Connector	Optical parameters (dBm)			
		Transmit power	Receive power	Temperature Ratings	Required power
HPE X132 10G SFP+ LC SR Transceiver (J9150A)*EOS	Duplex LC (PC or UPC)	-7.3 to -1	-9.9 to +0.5	Commercial (0 to +70°	1 W
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)				Industrial (- 40 to +85°	
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)	1 W
Aruba 10G SFP+ LC LRM 220m MMF xcvr (J9152D)					

Table Continued



Product name (SKU)	Connector	Optical parameters (dBm)			
		Transmit power	Receive power	Temperature Ratings	Required power
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)	1 W
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)				Industrial (-40 to +85°C)	
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°	1.5 W
Aruba 10G LC BiDi 40km - U 1270/1330 xcvr (R9X55A)					
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)	1.5 W
Aruba 10G SFP+ LC ER 40km SMF xcvr (J9153D)					
HPE ANW 10G ER SFP+ LC 40km SMF C - xcvr (S2P32A)					

Table Continued

Product name (SKU)	Connector	Optical parameters (dBm)			
		Transmit power	Receive power	Temperature Ratings	Required power
HPE ANW 10G BiDi LC 10-D 1330/1270 XCVR (S6H21A)	Simplex LC (PC or UPC)	-8.2 to +0.5	-14.4 to 0.5	Industrial (- 40 to +85°C)	1.5 W
HPE ANW 10G BR10-D 1330/1270 TAA XCVR (S6H24A)					
HPE ANW 10G BiDi LC 10-U 1270/1330 XCVR (S6H20A)	Simplex LC (PC or UPC)	-8.2 to +0.5	-14.4 to 0.5	Industrial (- 40 to +85°C)	1.5 W
HPE ANW 10G BR10-D 1270/1330 TAA XCVR (S6H22A)					

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
2530 Switch Series*(EOS)	J9853A, J9854A, J9855A, J9856A	J9150A/J9150D, J9151A/J9151D/J9151E, and J9153A/J9153D only: All releases	Unlisted models do not have SFP+ ports
2540 Switch Series*(EOS)	JL354A, JL355A, JL356A, JL357A	J9150A/J9150D and J9151A/J9151D, J9153A/J9153D only: All releases 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
2910al Switch Series*(EOS)	J9008A	J9150A/J9150D and J9151A/J9151D only: All releases J9153A/J9153D: W.15.07.0002	Unlisted models do not have SFP+ ports
2920 Switch Series*(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

Table Continued



SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
2930F Switch Series	JL253A, JL254A, JL255A, JL256A, JL258A,	J9150A/J9150D and J9151A/J9151D/J9151E, J9153A/J9153D: All versions	Unlisted models do not have SFP+ ports.
	JL263A, JL264A, JL558A, JL559A	JL748A/JL749A (TAA xcvsr): 16.08.0021 and 16.10.0007 S2P30A, S2P31A, S2P32A(C - Class): 16.11.0018 J9152A/J9152D (or any type of 10G LRM technology) is not supported in any 2930F model	J9152A/J9152D (or any type of 10G LRM technology) is not supported in any 2930F model.
2930M Switch Series	JL319A, JL320A, JL321A, JL322A, JL323A, JL324A	J9150A/J9150D and J9151A/J9151D/J9151E, J9153A/J9153D: All versions JL748A/JL749A (TAA xcvsr): 16.08.0021 and 16.10.0007 S2P30A, S2P31A, S2P32A(C - Class): 16.11.0018	For use in an installed JL083A Aruba 3810M/2930M 4SFP+ MACsec Module
	ROM67A, ROM68A	J9150A/J9150D, J9151A/J9151D/J9151E, J9152A/J9152D, J9153A/J9153D: WC.16.05.xxxx JL748A/JL749A (TAA xcvsr): 16.08.0021 and 16.10.0007 S2P30A, S2P31A, S2P32A(C - Class): 16.11.0018	
3500yl Switch Series*(EOS)	J8692A, J8693A, J9310A, J9311A	J9150A/J9150D, J9151A/J9151D/J9151E, J9152A/J9152D: K.14.50 J9153A/J9153D: K.15.02.0004	For use in an installed J9312A 10GbE 2 - port SFP+/2 - port CX4 yl Module.
3800 Switch Series*(EOS)	J9575A, J9576A, J9573A, J9574A, J9584A	J9150A/J9150D and J9151A/J9151D/J9151E, J9153A/J9153D: All versions	Unlisted models do not have SFP+ ports.
3810M Switch Series*(EOS)	JL071A, JL072A, JL073A, JL074A, JL075A, JL076A	J9150A/J9150D, J9151A/J9151D/J9151E, J9152A/J9152D, J9153A/J9153D: All versions JL748A/JL749A (TAA xcvsr): 16.08.0021 and 16.10.0007 S2P30A, S2P31A, S2P32A(C - Class): 16.11.0018	For use in an installed JL083A Aruba 3810M/2930M 4SFP+ MACsec Module

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
4100i Switch Series	JL817A, JL818A	Commercial Temp xcvrs J9150D (SR), J9151D (LR), J9153D (ER): 10.08.0001 No Aruba 10G ER industrial temp xcvr available S2P30A, S2P31A, S2P32A(C - Class): 10.13.1000 S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001 J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series (even under UT - mode)	Temp warnings will trigger at lower temperatures (~50C) if Commercial Temp vs Industrial Temp transceivers (~70C) are used. Commercial temp transceivers listed are enabled by 10.08.0001 but will be marked as "unsupported" because of non - compliant temp rating.
		Industrial Temp xcvrs JL782A (SR), JL783A (LR): 10.08.0001	All Third Party transceivers are treated as Commercial Temp, regardless of capability.
5400zl Switch Series*(EOS)	J9309A	J9150A/J9150D and J9151A/J9151D/J9151E: K.14.39 J9153A/J9153D: K.15.02.0004	The J9309A 4 - port SFP+ module supports only 10G transceivers. 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 J9151A/J9151D/J9151E, J9153A/J9153D: K.15.02.0004	
5400R Switch Series	J9538A, J9548A, J9536A	J9150A/J9150D, J9151A/J9151D/J9151E, J9152A/J9152D, J9153A/J9153D: All versions JL748A/JL749A (TAA xcvrs): 16.08.0021 and 16.10.0007 S2P30A, S2P31A, S2P32A(C - Class): 16.11.0018 R9X54A/R9X55A (40km BiDi): Not supported	

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
	J9990A, J9993A	J9150A/J9150D, J9151A/J9151D/J9151E, J9152A/J9152D, J9153A/J9153D: KB.15.17 JL748A/JL749A (TAA xcvs):16.08.0021 and 16.10.0007 S2P30A, S2P31A, S2P32A(C - Class): 16.11.0018 R9X54A/R9X55A (40km BiDi): Not supported	
5420 Switch Series	S0U63A	J9150D, J9151E, J9152D(LRM), S2P30A, S2P31A, S2P32A (C - Class), R9X54A/	Older revisions may exhibit issues. Replace with latest 10G xcvs. When 10G ER (J9153A/J9153D) is installed with in 10G BASE - T (JL536A/JL563B) in S0U63A/S0U73A, cannot support excursion up to 131°F (55°C) for any period of time.
	S0U73A (TAA)	R9X55A (40km BiDi), JL748A (TAA), JL749A (TAA), J9153A/J9153D: 10.15.0001	
	S0U64A		
	S0U74 (TAA)	S6H20A, S6H21A, S6H22A, S6H24A (10km BiDi): 10.17.1001	
	S0U68A		
	S0U78A (TAA)		

Table Continued



SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
6100 Switch Series	All models	J9150D, J9151E: 10.06.0001	Only the listed 4x4 parts are fully supported
		JL748A/JL749A (TAA transceivers): 10.06.0130 /10.07.0010	J9150A/J9150D
		S2P30A, S2P31A (C - Class): 10.13.1000	• 1990 - 4391
		J9153D (ER) is not supported on the 6100 series	• 1990 - 4175 • 1990 - 4635 • 1990 - 4634
			• 1990 - 4391 • 1990 - 4175 • 1990 - 4635 • 1990 - 4634
			J9151A/J9151D
			• 1990 - 4657 • 1990 - 4727 • 1990 - 4694
			• 1990 - 4657 • 1990 - 4727 • 1990 - 4694
			J9151E
			• 1990 - 4727 • 1990 - 4694
			• 1990 - 4727 • 1990 - 4694
			J9152A/J9152D (or any type of 10G LRM technology) is not supported on the 6100 Series

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
6120 Blade Switch Series *(EOS)	516733 - B21 (6120XG)	J9150D, J9151E: 10.06.0001 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.
6200yl Switch Series *(EOS)	J8992A	J9150A/J9150D, J9151A/J9151D/J9151E, J9152A/J9152D: K.14.50 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.
6200F Switch Series	6200F models JL724A through JL728A except 12p models R8Q72A/ R8V13A (TAA)	J9150A/J9150D, J9151A/J9151D, J9151E, J9153A/J9153D: 10.04.1000 JL748A/JL749A (TAA xcvs): 10.06.0130/10.07.0010 S2P30A, S2P31A, S2P32A(C - Class): 10.13.1000 R9X54A/R9X55A (40km BiDi): Not supported	Only the listed 4x4 parts are fully supported: J9150A/J9150D • 1990 - 4391 • 1990 - 4175 • 1990 - 4635 • 1990 - 4634 • 1990 - 4391 • 1990 - 4175 • 1990 - 4635 • 1990 - 4634 • 1990 - 4391 • 1990 - 4175 • 1990 - 4776 • 1990 - 4175 • 1990 - 4776 J9151A/J9151D

Table Continued



SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
	6200F 12p models R8Q72A/R8V13A(TAA)	J9150A/J9150D and J9151A/J9151D/J9151E, JL748A/JL749A (TAA xcvrs), J9153A/J9153D: 10.11.1005	• 1990 - 4657 • 1990 - 4727 • 1990 - 4694 • 1990 - 4657 • 1990 - 4727 • 1990 - 4694 J9151E • 1990 - 4727 • 1990 - 4694 • 1990 - 4727 • 1990 - 4694 JL749A (TAA LR) • 1990 - 4751 • 1990 - 4752 • 1990 - 4751 • 1990 - 4752 J9152A/J9152D (or any type of 10G LRM technology) is not supported on the 6200F revision A and B Series
6200F Switch Series	6200F models: JL724B through JL728B, SOM86A through SOM90A	J9150A/J9150D and J9151A/J9151D/J9151E, JL748A/JL749A (TAA xcvrs), R9X54A/R9X55A (40km BiDi), J9153A/J9153D: 10.13.0001 S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010 S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001	

Table Continued



SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
6200M Switch Series	All 6200M models	J9150A/J9150D and J9151A/J9151D/J9151E, J9152D (LRM), JL748A/JL749A (TAA xcvs), J9153A/J9153D: 10.11.1005 (support for 10G LRM on uplinks)	6200M models support all of the above 10G products in addition to:
		R9X54A/R9X55A (40km BiDi): 10.12.1000	J9152D 10G LRM
		S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010	• 1990 - 4485 • 1990 - 4801
		S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001	• 1990 - 4485 • 1990 - 4801
6300 Switch Series	All models (M and F) except JL762A	J9150A/J9150D and J9151A/J9151D/J9151E, J9153A/J9153D: 10.04.1000	J9150A/J9150D
		JL748A/JL749A (TAA xcvs):	• 1990 - 4391
		10.06.0130 / 10.07.0005	• 1990 - 4175
		S2P30A, S2P31A, S2P32A (C - Class): 10.13.1000	• 1990 - 4635
		R9X54A/R9X55A (40km BiDi): Unsupported, works in UT - mode	• 1990 - 4634
		S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001	• 1990 - 4391
			• 1990 - 4175
			• 1990 - 4635
			• 1990 - 4634
			JL748A (TAA SR)
			• 1990 - 4175
			• 1990 - 4776
			• 1990 - 4175
			• 1990 - 4776
			J9151A/J9151D
			• 1990 - 4657
			• 1990 - 4727
			• 1990 - 4694
			• 1990 - 4657
			• 1990 - 4727
			• 1990 - 4694

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
	JL762A	J9150A/J9150D and J9151A/J9151D/ J9151E, J9153A/J9153D: 10.04.3000	J9151E • 1990 - 4727
		JL748A/JL749A (TAA xcvrs): 10.06.0130 / 10.07.0005	• 1990 - 4694 • 1990 - 4727
		S2P30A, S2P31A, S2P32A (C - Class): 10.13.1000	• 1990 - 4694
		S6H20A, S6H21A, S6H22A, S6H24A (10km bidi):	J9153A/J9153D • 1990 - 4365 • 1990 - 4656 • 1990 - 4365 • 1990 - 4656
			JL749A (TAA LR) • 1990 - 4751 • 1990 - 4752 • 1990 - 4751 • 1990 - 4752

Table Continued



SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
6300 Switch Series (continued)	R8S89A, R8S90A, R8S91A, R8S92A	J9150A/J9150D, J9151A/J9151D, J9151E, J9153A/J9153D, JL748A/JL749A (TAA xcvrs): 10.10.0002 S2P30A, S2P31A, S2P32A (C - Class): 10.13.1000 J9152D are only supported in select ports on 6300M models R8S91A and R8S92A. (Other models in this series do NOT support LRM technology, even in UT - mode). R9X54A/R9X55A (40km BiDi): unsupported, works in UT - mode S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001	J9152D (LRM) 1990 - 4485 1990 - 4801 1990 - 4485 1990 - 4801 6300M models (R8S91A supports LRM in ports 51 & 52) and (R8S92A supports LRM in ports 1 - 24) and only J9152D (earlier J9152A are not supported). Other 6300M models not noted above do not support J9152A/J9152D (or any type of 10G LRM technology) even in UT - mode. R8S89A, R8S90A and R8S92A require interface - group 2 speed 10 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. R8S91A last 2 ports are 10G (LRM capable) and can use

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
			10G optics without issue for ZTP.
	6300M TAA Models: S0F99A, S0G00A, S0G01A, S0G02A (BF airflow), S0G03A, S0G04A, S0G05A, S0G06A	J9150A/J9150D, J9151A/J9151D, J9153A/ J9153D, J9151E, JL748A/JL749A (TAA xcvrs), S2P30A, S2P31A, S2P32A(C - Class): 10.14.0001 J9152D (LRM): Not supported in 6300 TAA models. No support for LRM technology, even in UT - mode.	
	6300F TAA Models: S0G95A, S0G96A, S0G97A, S0G98A	S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001	
	S0E91A/SOX44A	J9150A/J9150D, J9151A/J9151D, J9151E, J9153A/J9153D, JL748A/JL749A (TAA xcvrs), S2P30A, S2P31A, S2P32A C - Class): 10.13.1000 S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001 (not supported on QSFP28 ports via QSA)	
	S4P41A, S4P42A, S4P43A, S4P44A	J9150A/J9150D, J9151A/J9151D, J9152D, J9153A/J9153D, J9151E, JL748A/JL749A (TAA xcvrs), S2P30A, S2P31A, S2P32A (C - Class): 10.16.1006 S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001	S4P41A/S4P43A: 49 - 52 S4P42A: 33 - 40 and 41 - 44 S4P44A: 25 - 28 Support is extended to respective TAA SKUs. J9152D (LRM) module is only supported in ports 33 - 40 of S4P42A/ S4P46A SKUs. Not supported on other SKUs.

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
6300L Switch Series	S3L75A, S3L76A, S3L77A	J9150A/J9150D and J9151A/J9151D/J9151E, J9153D, JL748A/JL749A (TAA xcvs),S2P30A, S2P31A, S2P32A (C - Class): 10.14.0001	S3L75A: Ports 25 - 28 S3L76A: Ports 49 - 52 S3L77A: Ports 49 - 50 (not 51 - 52)
		J9152D: 10.14.0001(only S3L77A 6300L model)	S3L77A: Ports 51 - 52 add support for J9152D (10G LRM)
		R9X54A/R9X55A (40km BiDi): Not supported	
		S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001	1990 - 4485 1990 - 4801
			1990 - 4485 1990 - 4801
6400 modules	R0X39B(*EOS), R0X40B(*EOS), R0X41A(*EOS), R0X42A(*EOS), R0X43A(*EOS)	J9150A/J9150D and J9151A/J9151D/J9151E, J9153D: 10.04.1000	R0X38A/R0X39A/R0X40A (revision A) are no longer supported for use in the 6400 modules.
		JL748A/JL749A (TAA xcvs): 10.06.0140 and 10.07.0005	
		S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010	J9150A/J9150D 1990 - 4391
		J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series.	1990 - 4175 1990 - 4635
		S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001	1990 - 4634
	R0X39C, R0X40C, R0X41C, R0X42C, R0X43C	J9150A/J9150D and J9151A/J9151D/J9151E, J9153D: 10.09.1000	1990 - 4391 1990 - 4175
		JL748A/JL749A (TAA xcvs):	1990 - 4635
		S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010	1990 - 4634
		S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001	JL748A 1990 - 4175 1990 - 4776
			1990 - 4175 1990 - 4776
		J9151A/J9151D	

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
	R0X44A (48p 25G v1)	J9150A/J9150D and J9151A/J9151D/J9151E, J9153A/J9153D: 10.04.2000 JL748A/JL749A (TAA xcvs): 10.06.0140 and 10.07.0005 J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010 S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001	• 1990 - 4657 • 1990 - 4727 • 1990 - 4694 • 1990 - 4657 • 1990 - 4727 • 1990 - 4694 J9151E • 1990 - 4727 • 1990 - 4694 • 1990 - 4727 • 1990 - 4694 J9153A/J9153D • 1990 - 4365 • 1990 - 4656 • 1990 - 4365 • 1990 - 4656 JL749A • 1990 - 4751 • 1990 - 4752 • 1990 - 4751 • 1990 - 4752 J9152A/J9152D (or any type of 10G LRM technology) is not supported in any of the 6400 modules. R0X44A auto - detects the inserted type of transceiver; it does NOT require any interface groups like the 8325.

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
	R0X44C (48p 25G v2)	J9150A/J9150D and J9151A/J9151D/J9151E, J9153D, JL748A, JL749A (TAA xcvsr): 10.09.1000 S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010 R9X54A/R9X55A (10G 40km BiDi): 10.11.0001 J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series. S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001	R9X54A/R9X55A (10G 40km BiDi) only supported for use on the R0X44C module, not in any other SFP56 port on other modules.
	S1T83A S0E48A (32p 25G 4p 100G)	J9150A/J9150D and J9151A/J9151D/J9151E, J9153D, JL748A, JL749A (TAA xcvsr): 10.13.1000 R9X54A/R9X55A (10G 40km BiDi): 10.13.1000 S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010 J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series. S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001 (not supported on QSFP28 ports via QSA).	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. S0E48A port groups are as follows: Group 1 = 1 - 8 Group 2 = 9 - 16 Group 3 = 17 - 24 Group 4 = 25 - 32
6600 Switch Series*	J9264A, J9265A	J9150A and J9151A: K.14.03 J9153A: K.15.02.0004	
	J9452A	J9150A and J9151A: K.14.24 J9153A: K.15.02.0004	

Table Continued



SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
8100 Switch Series	All models	J9150D, J9151E, (SR/LR) JL748A, JL749A (TAA xcvsr): 10.12.000x J9153D (and earlier) (ER): Not supported (in SFP+ ports); Supported when used through a QSA28 in the QSFP28 ports (10.15.000x) S2P30A, S2P31A (C - Class): 10.13.1010 S2P32A (C - Class ER): Not supported (in SFP+ ports); Supported when used through a QSA28 in the QSFP28 ports (10.15.000x) J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001 (not supported on QSFP28 ports via QSA) QSFP28 ports can support 10G SR, LR and ER optical products through a QSA28	J9152A/J9152D (or any type of 10G LRM technology) is not supported on this series (even under UT - mode)
8200zl Switch Series*EOS	J9309A	J9150A/ J9150D and J9151A/9151D: K.14.03 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.

Table Continued



SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
8320 Switch Series	JL479A, JL579A, JL581A	J9150A/J9150D and J9151A/J9151D/J9151E, J9153A/J9153D: 10.03.0001	Only the listed 4x4 parts are fully supported.
		JL748A/JL749A (TAA xcvrs): 10.06.0140 and 10.07.0005	J9150A/J9150D
		S2P30A, S2P31A, S2P32A(C - Class): 10.13.1010	• 1990 - 4391 • 1990 - 4175
		J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series	• 1990 - 4635 • 1990 - 4634
		QSFP28 ports can support these optical products through a QSA28	• 1990 - 4391 • 1990 - 4175 • 1990 - 4635 • 1990 - 4634
			JL748A
			• 1990 - 4175 • 1990 - 4776
			• 1990 - 4175 • 1990 - 4776
			J9151A/J9151D
			• 1990 - 4657 • 1990 - 4727 • 1990 - 4694
			• 1990 - 4657 • 1990 - 4727 • 1990 - 4694
			J9151E
			• 1990 - 4727 • 1990 - 4694
			• 1990 - 4727 • 1990 - 4694

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
			J9153A/J9153D • 1990 - 4365 • 1990 - 4656 • 1990 - 4365 • 1990 - 4656 JL749A • 1990 - 4751 • 1990 - 4752 • 1990 - 4751 • 1990 - 4752 J9152A/J9152D (or any type of 10G LRM technology) is not supported on the 8320 Series.
8325 Switch Series	Aruba 8325 32C models JL636A displayed by CLI (show system) • JL626A - Port - to - Power model (FB) • JL627A - Power - to - Port model (BF) • JL626A - Port - to - Power model (FB) • JL627A - Power - to - Port model (BF)	J9150A/J9150D, J9151A/J9151D/J9151E, J9153A/J9153D: 10.07.0010 JL748A/JL749A (TAA xcvs): 10.07.0010 J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series S2P30A, S2P31A, S2P32A (C - Class): 10.07.0010	QSFP28 ports support these optical products through a QSA28 adapter.

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
	Aruba 8325 48Y8C models JL635A displayed by CLI (show system)	J9150A/J9150D, J9151A/J9151D/J9151E, J9153A/J9153D: 10.03.0030 JL748A/JL749A (TAA xcvrs): 10.06.0140 and 10.07.0005	QSFP28 ports support these optical products through a QSA28 adapter.
	JL624A - Port - to - Powermodel (FB)	J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series	Only the listed 4x4 parts are fully supported.
	JL625A - Power - to - Port model (BF)	S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010	J9150A/J9150D
	JL624A - Port - to - Powermodel(FB)	S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001 (not supported on QSFP28 ports via QSA)	1990 - 4391 1990 - 4175 1990 - 4635 1990 - 4634
	JL625A - Power - to - Port model (BF)		1990 - 4391 1990 - 4175 1990 - 4635 1990 - 4634
			JL748A 4x4: 1990 - 4175 1990 - 4776
			1990 - 4175 1990 - 4776
			8325 is only compatible with J9151E or later. Do not attempt to use J9151D or earlier (unless your 4x4 is one of the following):
			J9151E 1990 - 4727 1990 - 4694
			1990 - 4727 1990 - 4694

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
			J9153A/J9153D • 1990 - 4365 • 1990 - 4656 • 1990 - 4365 • 1990 - 4656 JL749A 4x4: • 1990 - 4751 • 1990 - 4752 • 1990 - 4751 • 1990 - 4752 J9152A/J9152D (or any type of 10G LRM technology) is not supported in the 8325 switches even under UT - mode. 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). See the <u>Hardware Guides</u> for details.

Table Continued



SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
	Aruba 8325P models 32C models	J9150A/J9150D, J9151A/J9151D/J9151E, J9153A/J9153D: 10.03.0030	QSFP28 ports support these optical products through a QSA28 adapter.
	S4A48A displayed by CLI (show system)	JL748A/JL749A (TAA xcvrs): 10.06.0140 and 10.07.0005	Products that are not listed are not supported.
	S0G12A displayed by CLI (show system) for TAA bundles.	J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series	
	- S4A49A/ S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl - S4A50A/ S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl - S4A51A/ S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl - S4A52A/ S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl - S4A49A/ S0G07A(TAA) - 8325P 32C FB 6Fs DC PSU Bdl - S4A50A/ S0G08A(TAA) - 8325P 32C BF 6Fs DC PSU Bdl - S4A51A/ S0G09A(TAA) - 8325P 32C FB 6Fs AC PSU Bdl - S4A52A/ S0G10A(TAA) - 8325P 32C BF 6Fs AC PSU Bdl	S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010 S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001 (not supported on QSFP28 ports via QSA. Only supported in ports 33-34)	Transceivers may be enabled using UT - mode, however a QSA28 must be used.

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
	Aruba 8325H models	J9150A/J9150D, J9151A/J9151D/J9151E, J9153A/J9153D: 10.15.1001	QSFP28 ports support these optical products through a QSA28 adapter.
	TAA/Non - TAA:		
	• S2T42A/S4B20A - 18Y4C model (FB)	JL748A/JL749A (TAA xcvrs): 10.06.0140 and 10.15.1001	
	• S2T46A/S4B21A - 18Y4C model (BF)	R9X54A, R9X55A (10G 40 km BiDi): 10.15.1001	
	• S2T47A/S4B22A - 16C model (FB)	J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series	
	• S2T48A/S4B23A - 16C model (FB)	S2P30A, S2P31A, S2P32A (C - Class): 10.15.1001	
	• S2T42A/S4B20A - 18Y4C model (FB)	S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001 (not supported on QSFP28 ports via QSA)	
	• S2T46A/S4B21A - 18Y4C model (BF)		
	• S2T47A/S4B22A - 16C model (FB)		
	• S2T48A/S4B23A - 16C model (FB)		

Table Continued



SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
8360 Switch Series	8360 32Y4C models	J9150A/J9150D, J9151A/J9151D/J9151E, J9153A/J9153D: 10.06.0001	QSFP28 ports support these optical products through a QSA28 adapter.
	JL717A/JL717C(v2)	JL748A/JL749A (TAA xcvsr): 10.06.0140 and 10.07.0005	
	displayed by CLI (show system)	S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010	Only the listed 4x4 parts are fully supported.
	• JL700A/ JL700C(v2) Port - to - Power model	R9X54A/R9X55A(40km BiDi): 10.15.1000 only supported through a QSA28; if used in the 25G ports, CLI will show as unsupported.	J9150A/J9150D • 1990 - 4391
	• JL701A/ JL701C(v2) Power - to - Port model	J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series.	• 1990 - 4175 • 1990 - 4635
		S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001 (not supported on QSFP28 ports via QSA)	• 1990 - 4634 • 1990 - 4391
	• JL700A/ JL700C(v2) Port - to - Power model		• 1990 - 4175 • 1990 - 4635
	• JL701A/ JL701C(v2) Power - to - Port model		• 1990 - 4634
			JL748A • 1990 - 4175
			• 1990 - 4776
	8360 16Y2C models JL718A/JL718C(v2) displayed by CLI (show system)		• 1990 - 4175 • 1990 - 4776
	• JL702A/ JL702C(v2) Port - to - Power model		J9151A/J9151D • 1990 - 4657
	• JL703A/ JL703C(v2) Power - to - Port model		• 1990 - 4727 • 1990 - 4694
	• JL702A/ JL702C(v2) Port - to - Power model		• 1990 - 4657 • 1990 - 4727
	• JL703A/ JL703C(v2)		• 1990 - 4694 J9151E

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
	Power - to - Port model		1990 - 4727 1990 - 4694
	8360 24XF2C models JL722A displayed by CLI (show system)		1990 - 4727 1990 - 4694
	JL710A/ JL710C(v2) Port - to - Power model		J9153A/J9153D 1990 - 4365
	JL711A/ JL711C(v2) Power - to - Port model		1990 - 4656 1990 - 4365 1990 - 4656
	JL710A/ JL710C(v2) Port - to - Power model		JL749A 1990 - 4751 1990 - 4752
	JL711A/ JL711C(v2) Power - to - Port model		1990 - 4751 1990 - 4752
			J9152A/J9152D (or any type of 10G LRM technology) is not supported on this series.
			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).
			All other ports can individually auto - detect the speed of the inserted xcvr.

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
			Not applicable to the 24XF (1G/10G) model. See the Hardware Guides for details.
8360 48Y6C models JL719C displayed by CLI (show system)	J9150A/J9150D, J9151A/J9151D/J9151E, J9153A/J9153D: 10.09.0002	S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010	
• JL704C(v2) - Port - to - Power model (FB)	R9X54A/R9X55A(40km BiDi): 10.15.1000 only supported through a QSA28; if used in the 25G ports, CLI will show as unsupported.		
• JL705C(v2) - Power - to - Port model (BF)	J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series.		
• JL704C(v2) - Port - to - Power model (FB)	S6H20A, S6H21A, S6H22A, S6H24A (10km bidi): 10.17.1001 (not supported on QSFP28 ports via QSA)		
• JL705C(v2) - Power - to - Port model (BF)			
8360 48XT4C models JL720A/JL720C (v2) displayed by CLI (show system)	J9150A/J9150D, J9151A/J9151D/J9151E, J9153A/J9153D: 10.06	S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010	The 8360 48XT4C model only supports the use of a QSA28 in ports 50 and 51.
• JL706A/ JL706C(v2) Port - to - Power model	RR9X54A/R9X55A(40km BiDi): 10.15.1000	J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series.	See QSFP28 to SFP28 adapter support .
• JL707A/ JL707C(v2) Power - to - Port model			NOTE: Other QSFP ports can support QSFP products.

Table Continued

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
8400X modules	JL363A	J9150A/J9150D and J9151A/J9151D/J9151E, J9152A/J9152D, J9153A/J9153D: 10.00.0001	Only the listed 4x4 parts are fully supported.
		10G LRM technology is supported only on the JL363A module.	J9150A/J9150D
		JL748A/JL749A (TAA xcvs): 10.06.0140 and 10.07.0005	• 1990 - 4391
		JL748A/JL749A (TAA xcvs): 10.07.0005	• 1990 - 4175
		S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010	• 1990 - 4635
			• 1990 - 4634
			• 1990 - 4391
			• 1990 - 4175
			• 1990 - 4635
			• 1990 - 4634
			JL748A
			• 1990 - 4175
			• 1990 - 4776
			• 1990 - 4175
			• 1990 - 4776
			J9151E
			• 1990 - 4727
			• 1990 - 4694
			• 1990 - 4727
			• 1990 - 4694
			JL749A
			• 1990 - 4751
			• 1990 - 4752
			• 1990 - 4751
			• 1990 - 4752
			JL363A module supports

Table Continued



SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
	JL687A	J9150A/J9150D and J9151A/J9151D/J9151E, J9153A/J9153D: 10.04.2000 JL748A/JL749A (TAA xcvrs): 10.06.0140 and 10.07.0005 S2P30A, S2P31A, S2P32A (C - Class): 10.13.1010 J9152A/J9152D (or any type of 10G LRM technology) is not supported in the JL687A module	J9152A/J9152D • 1990 - 4485 • 1990 - 4801 • 1990 - 4485 • 1990 - 4801 JL687A module does NOT support J9152A/J9152D (or any type of 10G LRM technology). The JL687A module requires configuration of interface groups (groups of four ports) to enable the use of 1G or 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed). See the <u>Hardware Guides</u> for details.
9300 Switch Series	R8Z96A displayed by CLI show system • R9A29A FB airflow • R9A30A BF airflow • R9A29A FB airflow • R9A30A BF airflow	For use through a QSA28 adapter: J9150A/J9150D, J9151A/J9151D/J9151E, J9153D: 10.14.1000 S2P30A, S2P31A, S2P32A (C - Class): 10.15.1000 R9X54A/R9X55A (BiDi), JL782A/JL783A (TAA) : 10.16.1006 In ports 33 - 34: J9150A/J9150D, J9151A/J9151D, J9153A/J9153D, JL563B/JL563C (10GBT), 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	10G DACs are not supported for use through a QSA28 adapter.

Table Continued



SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
9300S Switch Series	- 32C 8D models displayed by CLI (show system) Base models: S0F95A - TAA Base, S0F96A - Base • S0F81A FB TAA • S0F82A FB • S0F83A BF TAA • S0F84A BF • S0F87A BF DC TAA • S0F81A FB TAA • S0F82A FB • S0F83A BF TAA • S0F84A BF • S0F87A BF DC TAA • S0F88A BF DC	For use through a QSA28 adapter: J9150A/J9150D, J9151A/J9151D/J9151E, J9153D: 10.14.0001 S2P30A, S2P31A, S2P32A (C - Class): 10.15.1000 J9152A/J9152D (or any type of 10G LRM technology) is not supported in the 9300S	

Table Continued

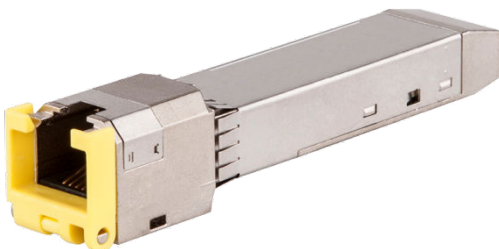


SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
10000 48Y6C models	R8S96A displayed by CLI (show system) - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle TAA models: S4K80A displayed by CLI (show system) - S0F97A - 48Y6C FB bundle - S0F98A - 48Y6C BF bundle	All 10000 models: J9150D, J9153D, J9151E, JL748A (TAA): 10.10.0002 J9152A/J9152D (or any type of 10G LRM technology) is not supported in this series S2P30A, S2P31A, S2P32A (C - Class): 10.17.0001 J9150D can also be used through a QSA28 adapter Other 10G xcvs are not supported through a QSA28. 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 1990 - 4391 1990 - 4175 1990 - 4635 1990 - 4634 1990 - 4391 1990 - 4175 1990 - 4635 1990 - 4634 J9151D is not supported: J9151E: 1990 - 4727 1990 - 4694 1990 - 4727 1990 - 4694 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 Hardware Guides for details.
10040 32C6D models	S4R58A displayed by CLI (show system)	J9150D(SR)/JL748A (TAA), J9151E (LR) / JL749A (TAA), J9153D (ER), S2P30A, S2P31A, S2P32A (C - Class): 10.16.10xx J9152A/J9152D (or any type of 10G	The products listed are supported through a QSA28. They are also supported for use in

SFP+ (10G) capable product name	Switch/Module SKU #'s	Minimum software required	Comments
	- S4R54A – 32C6D FB bundle - S4R55A – 32C6D BF bundle - S4R54A – 32C6D FB bundle - S4R55A – 32C6D BF bundle	LRM technology) is not supported in this series.	the low - speed ports, 39 - 40.
	TAA models: S4R59A displayed by CLI (show system) - S4R56A – 32C6D FB bundle - S4R57A – 32C6D BF bundle - S4R56A – 32C6D FB bundle - S4R57A – 32C6D BF bundle		

NOTE: *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



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

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

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](#)

SFP+ (10G) copper capable product name	SKU	Minimum software required	Comments
Aruba 4100i Switch Series	JL817A, JL818A	Not supported	Not supported
5420 Switch Series	S0U63A S0U73A (TAA) S0U64A S0U74A (TAA) S0U68A S0U78A (TAA)	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.15.0001	JL563A(EOS)/ JL563B(EOS)/JL563C does not support flow control and only operates at 10G speed (does not auto - negotiate to 1G).
Aruba 6100 Switch Series	All models	Not supported	Not supported
Aruba 6200 Switch Series	All models M and F	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.04.1000	JL563A(EOS)/ JL563B(EOS)/JL563C does not support flow control and only operates at 10G speed (does not auto - negotiate to 1G)
Aruba 6300 Switch Series	All models M and F	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.04.0001	JL563A(EOS)/ JL563B(EOS)/JL563C can be used in all SFP+ or SFP56 ports; no quantity limit.

Table Continued



SFP+ (10G) copper capable product name	SKU	Minimum software required	Comments
	R8S89A, R8S90A, R8S91A, R8S92A	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.10.0002	JL563A(EOS)/ JL563B(EOS)/JL563C does not support flow control and only operates at 10G speed (does not auto - negotiate to 1G).
	6300M TAA Models: S0F99A, S0G00A, S0G01A, S0G02A (BF airflow), S0G03A, S0G04A, S0G05A, S0G06A 6300F TAA Models: S0G95A, S0G96A, S0G97A, S0G98A	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.14.1000	R8S89A, R8S90A, and R8S92A require interface - group 2 speed 10 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 (LRM capable) and can use 10G optics without issue for ZTP(10G is the default for ports 51 & 52).
	S0E91A/S0X44A (100G models	JL563A(EOS)/ JL563B(EOS)/JL563C is not supported for use through a QSA28 adapter	
	S4P41A, S4P42A, S4P43A, S4P44A	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.16.1006	S4P41A/S4P43A: 49 - 52 S4P42A: 33 - 40 & 41 - 44 S4P44A: 25 - 28 Support is extended to respective TAA SKUs.

Table Continued



SFP+ (10G) copper capable product name	SKU	Minimum software required	Comments
Aruba 6300L Switch Series	S3L75A, S3L76A, S3L77A	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.14.0001	S3L75A, S3L76A require the interface - group 2 speed 10 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).
			S3L77A last 2 ports are 10G (LRM capable) and can use 10G optics without issue for ZTP (10G is the default for ports 51 & 52).
Aruba 6400 Modules	R0X39B(*EOS), R0X40B(*EOS), R0X41A(*EOS), R0X42A(*EOS), R0X43A(*EOS)	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.04.1000	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.
	R0X39C, R0X40C, R0X41C, R0X42C, R0X43C	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.09.1000	JL563A(EOS)/ JL563B(EOS)/JL563C does not support flow control and only operates at 10G speed (does not auto - negotiate to 1G).
	R0X44A R0X44C	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.04.2000 JL563A(EOS)/ JL563B(EOS)/JL563C: 10.09.1000	R0X44A auto - detects the inserted type of transceiver; it does not require any interface groups. R0X44C requires interface groups to select speed.

Table Continued

SFP+ (10G) copper capable product name	SKU	Minimum software required	Comments
	S1T83A/S0E48A	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.13.1000	S0E48A 25G module defaults to use 25G products. 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. S0E48A port groups are as follows: Group 1 = 1 - 8 Group 2 = 9 - 16 Group 3 = 17 - 24 Group 4 = 25 - 32
8100 Switch Series	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	JL563A(EOS)/ JL563B(EOS)/JL563C does not support flow control and only operates at 10G speed (does not auto - negotiate to 1G). 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. JL563A(EOS)/ JL563B(EOS)/JL563C is not supported for use through a QSA28 adapter.

Table Continued

SFP+ (10G) copper capable product name	SKU	Minimum software required	Comments
Aruba 8325 32C models	All models	JL563A, JL563B, JL563C: Not supported	10GBASE - T transceivers are not supported.
Aruba 8325 48Y8C models	JL635A displayed by CLI (show system) - JL624A - Port - to - Powermodel(FB) - JL625A - Power - to - Port model (BF)	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.03.0030 JL563A(EOS)/ JL563B(EOS)/JL563C is not supported for use through a QSA28 adapter	JL563A(EOS)/ JL563B(EOS)/JL563C does not support flow control and only operates at 10G speed (does not auto - negotiate to 1G). 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. 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 <i>Hardware Guides</i> for details.
8325P Switch Series	All models	JL563A, JL563B, JL563C: Not supported	10GBASE - T transceivers are not supported.

Table Continued



SFP+ (10G) copper capable product name	SKU	Minimum software required	Comments
8325H Switch Series	TAA/Non - TAA:	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.06.0001	The 8325H 18p models do not require interface groups; all 18 ports are auto - sensing for 1G, 10G, 25G products (optics, DACs and AOCs) JL563A(EOS)/ JL563B(EOS)/JL563C does not support flow control and only operates at 10G speed (does not auto - negotiate to 1G).
	• S2T42A/S4B20A - 18Y4C model (FB)	18Y4C models: Ports 1 - 18 & 23 - 24	
	• S2T46A/S4B21A - 18Y4C model (BF)	16C models: Ports 23 - 24	
	• S2T47A/S4B22A - 16C model (FB)		
	• S2T48A/S4B23A - 16C model (FB)		
Aruba 8360 Switch Series	8360 32Y4C models	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). JL563A(EOS)/ JL563B(EOS)/JL563C transceivers can be used in all SFP28 ports in the 8360 switch (unlike the 8320 & 8325). 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). All other ports can individually auto - detect the speed of the inserted xcvr. Not applicable to the 24XF (1G/10G) model. See the Hardware Guides for details. In QSFP+ ports JL563A(EOS)/ JL563B(EOS)/JL563C is not
	JL717A/JL717C (v2) displayed by CLI (show system)		
	• JL700A/JL700C(v2) Port - to - Power model		
	• JL701A/JL701C(v2) Power - to - Port model		
	8360 16Y2C models	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.06.0001	
	JL718A/JL718C (v2) displayed by CLI (show system)		
	• JL702A/JL702C (v2) Port - to - Power model		
	• JL703A/JL703C(v2) 3A Power - to - Port model		
	8360 24XF2C models	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.06.0001	
	JL722A/JL722C(v2) displayed by CLI (show system)		
	• JL710A/JL710C(v2) Port - to - Power model		
	• JL711A/JL711Power - to - Port model		

Table Continued

SFP+ (10G) copper capable product name	SKU	Minimum software required	Comments
	8360 48Y6C models JL719C displayed by CLI (show system) - JL704C(v2) Port - to - Power model (FB) - JL705C(v2) Power - to - Port model (BF)	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.09.0002	supported for use through a QSA28 adapter.
Aruba 8400X modules	JL363A JL687A	JL563A(EOS)/ JL563B(EOS)/JL563C: 10.00.0018 JL563A(EOS)/ JL563B(EOS)/JL563C: 10.04.2000	JL563A(EOS)/ JL563B(EOS)/JL563C does not support 1G operation; only 10G. It is only supported in ports 1 - 12. A maximum of 12 JL563A(EOS)/JL563B(EOS)/JL563C transceivers can be used in the JL363A module. The JL687A 32p 25G module can support the use of the JL563A(EOS)/JL563B(EOS)/JL563C transceiver in all 32 ports. The JL687A module requires configuration of interface groups (groups of 4 ports) to enable the use of 1G or 10G transceivers / DACs in the SFP28 ports (Interface Groups default to 25G speed). See the <i>Hardware Guides</i> for details.
Aruba 9300/9300S Switch Series	Not supported		JL563A(EOS)/ JL563B(EOS)/JL563C and DACs are not supported for use through a QSA28 adapter.

Table Continued



SFP+ (10G) copper capable product name	SKU	Minimum software required	Comments
Aruba 10000 48Y6C models	R8S96A displayed by CLI (show system) - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle	All 10000 models: JL563A is locked out of being used in this series JL563B(EOC)/JL563C: 10.10.0002	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. The 10000 Switch Series requires configuration of interface groups (groups of 4 ports) to enable the use of 1G or 10G transceivers/ DACs in the SFP28 ports. (Interface Groups default to 25G.)
10040 32C6D models	S4R58A displayed by CLI (show system) - S4R54A - 32C6D FB bundle - S4R55A - 32C6D BF bundle TAA models: S4R59A displayed by CLI (show system) - S4R56A - 32C6D FB bundle - S4R57A - 32C6D BF bundle	JL563B (*EOS)/JL563C 10.16.10xx	JL563B/C are NOT supported for use through a QSA28. They are only supported for use in the low - speed ports, 39 - 40

SFP+ DAC cables



NOTE: 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.

Product name (SKU)	Cable length	Data rate	Temperature ratings	Required power
HPE X242 10G SFP+ to SFP+ 1m DAC Cable (J9281B)* Aruba 10G SFP+ to SFP+ 1m DAC Cable (J9281D)	1 m (3.28 ft)	10 Gbps	Commercial (0 to 70° C)	0.1 W per end
HPE X242 10G SFP+ to SFP+ 3m DAC Cable (J9283B)* Aruba 10G SFP+ to SFP+ 3m DAC Cable (J9283D)	3 m (9.84 ft)			
HPE X242 10G SFP+ to SFP+ 7m DAC Cable (J9285B)* Aruba 10G SFP+ to SFP+ 7m DAC Cable (J9285D)	7 m (22.97 ft)			

NOTE: * 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.



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)		
SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
2530 Switch Series(*EOS)	J9853A, J9854A, J9855A, J9856A	J9281A/J9281B, J9283A/J9283B: All	Unlisted models do not have SFP+ ports.
2540 Switch Series(*EOS)	JL354A, JL355A, JL356A, JL357A	All (J9281B/J9281D and J9283B/J9283D only. (See comments for exception)	J9285B/J9285D or any type of 7m DAC is not supported in any of these series. For more information, see Unsupported transceiver mode
2910al Switch Series(*EOS)	J9145A, J9146A, J9147A, J9148A	J9281A/J9281B, J9283A/J9283B: W.14.28	For use in the J9008A 2 - port 10GbE SFP+ al module.
2920 Switch Series(*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+ .
2930F Switch Series	JL253A, JL254A, JL255A, JL256A, JL258A, JL263A, JL264A, JL558A, JL559A	J9281B/J9281D and J9283B/J9283D only: All (See comments for exception) *487655 - B21, *537963 - B21: Not supported	Unlisted models do not have 10G SFP+ports. J9285B/J9285D or any type of 7m DAC is not supported in any of these series.
2930M Switch Series	JL319A, JL320A, JL321A, JL322A, JL323A, JL324A	J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: All *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.
3500yl Switch Series(*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.

Table Continued

SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
3800 Switch Series (*EOS)	J9575A, J9576A, J9573A, J9574A, J9584A	J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: All	Unlisted models not do not have SFP+ ports.
3810M Switch Series (*EOS)	JL071A, JL072A, JL073A, JL074A, JL076A	J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: All *487655 - B21, *537963 - B21: Not supported	For use in an installed JL083A 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.
5400zl Switch Series (*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	
5400R Switch Series	J9538A, J9548A, J9536A	J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: All	
	J9990A, J9993A	J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: KB.15.17	
6120 Blade Switch Series (*EOS)	516733 - B21	J9281B, J9283B, J9285B: All	
6200yl Switch Series (*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.
6600 Switch Series (*EOS)	J9264A, J9265A, J9452A	J9281B/J9281D, J9283B/J9283D, J9285B/J9285D: K.14.32	

Table Continued

SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
8200zl Switch Series(*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	

SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
Aruba 4100i Switch Series	JL817A, JL818A	J9281D, J9283D: Not supported (may be enabled via UT - mode)	J9285D (7 m) Not Supported nor any type of 7m DAC.
		*487655 - B21 and *537963 - B21: Not supported	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
Aruba 5420 Switch Series	S0U63A	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.
	S0U73A (TAA)		
	S0U64A		
	S0U74A (TAA)		
	S0U68A		
	S0U78A (TAA)		

Table Continued



SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
Aruba 6100 Switch Series	All models	J9281B/J9281D, J9283B/J9283D: 10.11.1000 (See comments for exception) *487655 - B21 and *537963 - B21: Not supported	Only the listed 4x4 parts are fully supported: J9281B/J9281D 8121 - 1151 8121 - 1300 8121 - 1797
			J9283B/J9283D 8121 - 1152 8121 - 1298 8121 - 1798 J9285B/J9285D or any type of 7m DAC technology is not supported in any of these series. See Unsupported Transceiver Mode.
Aruba 6200 Switch Series	All M and F models with 10Gb SFP+ ports, except models noted below	J9281B/J9281D and J9283B/J9283D: 10.04.1000 (See comments for exception) *487655 - B21 and *537963 - B21: 10.10.0000 (all models except 6200F SKUs, JL724A through JL728A)	Only the listed 4x4 parts are fully supported: J9281B/J9281D 8121 - 1151 8121 - 1300 8121 - 1797
			J9283B/J9283D 8121 - 1152 8121 - 1298 8121 - 1798 J9285D Aruba 10G SFP+ to SFP+ 7m DAC Cable is only supported on 6200M SKUs. No support for J9285D Aruba 10G SFP+ to SFP+ 7m DAC Cable on 6200F SKUs.

Table Continued

SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
	All 6200M 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: J9281B/J9281D: See list above J9283B/J9283D: See list above J9285B/J9285D: • 8121 - 1305 • 8121 - 1154 • 8121 - 1155 • 8121 - 1305 • 8121 - 1724 • 8121 - 1803 • 8121 - 1899
Aruba 6300 Switch Series	All models M and F (except for S0E91A and S0X44A)	J9281B/J9281D and J9283B/J9283D: 10.04.0001 (See comments for exception) *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 J9281B/J9281D • 8121 - 1151 • 8121 - 1300 • 8121 - 1797 J9283B/J9283D • 8121 - 1152 • 8121 - 1298
	R8S89A, R8S90A, R8S91A, R8S92A	J9281B/J9281D and J9283B/J9283D, *487655 - B21 and *537963 - B21: 10.10.0002	• 8121 - 1798 J9285B/J9285D or any type of 7m DAC is not supported in any 6300 model. R8S89A, R8S90A and R8S92A require interface - group 2 speed 10 applicable to the last 2 ports to use 10G (the

Table Continued

SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
	S0E91A/S0X44A	DACs are not supported for use through a QSA28 adapter	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 (10G is the default for ports 51 & 52).
	S4P41A, S4P42A, S4P43A, S4P44A	J9281B/J9281D and J9283B/J9283D: 10.16.1006 *487655 - B21 and *537963 - B21: 10.16.1006	S4P41A/S4P43A: 49 - 52 4P42A: 33 - 40 & 41 - 44 4P44A: 25 - 28 Support is extended to respective TAA SKUs.
6300M/F Series TAA models:	6300M TAA Models: S0F99A, S0G00A, S0G01A, S0G02A, S0G03A, S0G04A, S0G05A, S0G06A 6300F TAA Models: S0G95A, S0G96A, S0G97A, S0G98A	J9281B/J9281D, J9283B/ J9283D, *487655 - B2, *537963 - B21: 10.14.0001	

Table Continued



SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
Aruba 6300L Switch Series	S3L75A, S3L76A, S3L77A	J9281B/J9281D and J9283B/J9283D: 10.14.0001	Only the listed 4x4 parts are fully supported.
		(See comments for exception)	J9281B/J9281D
		*487655 - B21 and *537963 - B21: Not supported	• 8121 - 1151 • 8121 - 1300 • 8121 - 1797
			J9283B/J9283D • 8121 - 1152 • 8121 - 1298 • 8121 - 1798
			J9285B/J9285D or any type of 7 m DAC is not supported any 6300L model.
			S3L75A and S3L76A require the interface - group 2 speed 10 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 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).

Table Continued

SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
Aruba 6400 modules	ROX39B(*EOS), ROX40B(*EOS), ROX41A(*EOS), ROX42A(*EOS), ROX43A(*EOS)	J9281B/J9281D and J9283B/J9283D: 10.04.1000 (See comments for exception) *487655 - B21and *537963 - B21: 10.08.0001	ROX39A/ROX40A (revision A) are no longer supported for use in the 6400 series. Only the following 4x4 part numbers are supported: J9281B/J9281D • 8121 - 1151
	ROX39C, ROX40C ROX41C, ROX42C, ROX43C	10.09.1000 *487655 - B21 and *537963 - B21: 10.09.0001	• 8121 - 1300 • 8121 - 1797 J9283B/J9283D
	ROX44A(*EOS)	J9281B/J9281D and J9283B/J9283D only: 10.04.2000 (See comments for exception) *487655 - B21 and *537963 - B21: 10.08.0001	• 8121 - 1152 • 8121 - 1298 • 8121 - 1798 J9285B/J9285D or any type of 7m DAC is not supported in any 6400 modules.
	ROX44C	J9281B/J9281D and J9283B/J9283D only: 10.09.1000	ROX44A/ROX44C auto - detects the inserted type of transceiver.
	S1T83A/S0E48A	*487655 - B21 and *537963 - B21: 10.09.0001 J9281B/J9281D and J9283B/J9283D only: 10.13.1000 *487655 - B21 and *537963 - B21: 10.13.0001	It does not require any interface groups like the 8325.

Table Continued

SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
Aruba 8100 Switch Series	All models	J9281D, J9283D, *487655 - B21, *537963 - B21: 10.12.000x	Only the following 4x4 part numbers are supported: J9281B/J9281D: • 8121 - 1151 • 8121 - 1300 • 8121 - 1797 J9283B/J9283D: • 8121 - 1152 • 8121 - 1298 • 8121 - 1798 J9285B/J9285D or any type of 7m DAC is not supported in the 8100 models. *487655 - B21,*537963 - B21: See <u>HPE servers and systems support</u> for HPE Interconnect support.

Table Continued



SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
Aruba 8320 48p 10G SFP/ SFP+ and 6p 40G QSFP+ models	JL479A	J9281B/J9281D and J9283B/J9283D: 10.00.0006 (See comments for exception) *487655 - B21, *537963 - B21: 10.04.1000	Only the following 4x4 part numbers are supported: J9281B/J9281D • 8121 - 1151 • 8121 - 1300 • 8121 - 1797 J9283B/J9283D: • 8121 - 1152 • 8121 - 1298 • 8121 - 1798 J9285B/J9285D or any type of 7m DAC is not supported in the 8320 models. 487655 - B21 and 537963 - B21: See for HPE Interconnect support. 10G DACs are not supported through QSA28.
Aruba 8325 32C models	All models	Not supported	10G DACs are not supported through QSA28.

Table Continued

SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
Aruba 8325 48Y8C models	JL635A displayed by CLI show system - JL624A - Port - to - Powermodel(FB) - JL625A - Power - to - Port model (BF)	J9281B/J9281D and J9283B/J9283D: 10.02.0001 (See comments for exception) *487655 - B21and *537963 - B21: 10.04.1000	Only the following 4x4 part numbers are supported: J9281D: 8121 - 1151 8121 - 1300 8121 - 1797 J9283D: 8121 - 1152 8121 - 1298 8121 - 1798 J9285B/J9285D or any type of 7m DAC is not supported in the 8325 models. 487655 - B21 and 537963 - B21: See for HPE Interconnect support. The 8325 requires configuration of interface groups (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 <u>Hardware Guides</u> for details. 10G DACs are not supported through QSA28.
Aruba 8325P 32C models	All models	Not supported	10G DACs are not supported through QSA28.

Table Continued

SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
Aruba 8325H models	TAA/Non - TAA:	J9281B/J9281D and J9283B/J9283D,	J9285B/J9285D or any type of 7m DAC is not supported in the 8325 models.
	• S2T42A/S4B20A - 18Y4C model (FB)	*487655 - B21, *537963 - B21: 10.15.1001	
	• S2T46A/S4B21A - 18Y4C model (BF)	(See comments for exception)	
	• S2T47A/S4B22A - 16C model (FB)		
	• S2T48A/S4B23A - 16C model (FB)		
Aruba 8360 Switch Series	8360 32Y4C models	J9281B/J9281D and J9283B/J9283D,	Only the following 4x4 part numbers are supported:
	JL717A/JL717C(v2) displayed by CLI show system	*487655 - B21, *537963 - B21:	J9281B/J9281D:
	• JL700A/JL700C(v2) Port - to - Power model	10.06.0001	• 8121 - 1151
	• JL701A/JL701C(v2) Power - to - Port model	See comments for exception.	• 8121 - 1300
		10G DACs are not supported through QSA28	• 8121 - 1797
	8360 16Y2C models		J9283B/J9283D:
	JL718A displayed by CLI show system		• 8121 - 1152
	• JL702A/JL702C(v2) Port - to - Power model		• 8121 - 1298
	• JL703A/JL703C(v2) Power - to - Port model		• 8121 - 1798
	8360 24XF2C models		J9285B/J9285D or any type of 7m DAC is not supported in the 8360 models.
	JL722A/JL722C(v2) displayed by CLI show system		487655 - B21 and 537963 - B21: See for HPE Interconnect support.
	• JL710A/JL710C(v2) Port - to - Power model		The 8360 32Y4C and 48Y6C models require 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).
	• JL711A/JL711C(v2) Power - to - Port model		
			All other ports can individually auto - detect

Table Continued

SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
	8360 48Y6C models JL719C displayed by CLI show system - JL704C(v2) Port - to - Power model (FB) - JL705C(v2) Power - to - Port model (BF)	J9281B/J9281D, J9283B/J9283D, *487655 - B21, *537963 - B21: 10.09.0002 10G DACs are not supported through QSA28	the speed of the inserted transceiver. Not applicable to the 24XF (1G/10G) model. See the <u>Hardware Guides</u> for details.
Aruba 8400X modules	JL363A	J9281D, J9283D, J9285D: 10.00.0003 *487655 - B21and *537963 - B21: 10.06.0001	Only the following 4x4 part numbers are supported: J9281B/J9281D: 8121 - 1151
	JL687A	J9281D, J9283D, J9285D, *487655 - B21 and *537963 - B21: 10.06.0001 (See comments for exception)	8121 - 1300 8121 - 1797 J9283B/J9283D: 8121 - 1152 8121 - 1298 8121 - 1798 J9285B/J9285D: 8121 - 1154 8121 - 1305 8121 - 1724 JL687A 32p 25G module 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). See the <u>Hardware Guides</u> for details.

Table Continued

SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
Aruba 9300 and 9300S Switch Series	Both 9300 - 32D and 9300S	Only in low - speed SFP+ ports: J9281D, J9283D: 10.16.1006 J9285D, *487655 - B21 and *537963 - B21: not supported	DACs are not supported for use through a QSA28 adapter.

Table Continued



SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
Aruba 10000 Switch Series	R8S96A displayed by CLI show system	J9281D and J9283D: 10.10.0002	Only the following 4x4 part numbers are supported:
	- R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle	*487655 - B21and *537963 - B21: 10.10.0002	J9281D: 8121 - 1151 8121 - 1300 8121 - 1797 J9283D: 8121 - 1152 8121 - 1298 8121 - 1798 J9285D or any type of 7m DAC is not supported in the 10000 models. 487655 - B21 and 537963 - B21: See for HPE Interconnect support. 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.
10040 32C6D models	S4R58A displayed by CLI (show system)	J9281D/J9283D: 10.16.10xx	10G DACs are NOT supported for use through a QSA28.
	- S4R54A – 32C6D FB bundle - S4R55A – 32C6D BF bundle TAA models: S4R59A displayed by CLI (show system)		They are only supported for use in the low - speed ports, 39 - 40.

SFP+ (10G) DAC capable product name	Switch/Module SKU	Minimum software required	Comments
	- S4R56A – 32C6D FB bundle - S4R57A – 32C6D BF bundle		



SFP Modules

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.



NOTE:

- 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.
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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.



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 J4858C/ J4858D: 1990 - 4395*, 1990 - 4415*, 1990 - 4750, 1990 - 4793, 1990 - 4395(s/n: MYxxxxxxxxx)	Single lane, 850 1x1G NRZ	MMF	50/125	500 (OM2) 400	550m (1804.46 ft) 500 m (1640.42 ft)
Aruba 1G SFP LC SX 500m MMF xcvr (J4858D)	1990 - 4750, 1990 - 4793, 1990 - 4395(s/n: MYxxxxxxxxx)			62.5/125	200 (OM1) 160	275m (902.23 ft) 220m (721.78 ft)
Aruba 1G SFP LC SX 500m MMF TAA xcvr (JL745A)	JL745A(TAA): 1990 - 4395(s/n: USxxxxxxxxx)					
Aruba 1G I - Tmp SFP LC SX 500m MMF xcvr (JL780A)	JL780A(I - Tmp): 1990 - 4763, 1990 - 4765					
HPE X121 1G SFP LC LX Transceiver (J4859C) (EOS)	Yes J4859C/ J4859D: 1990 - 4414*, 1990 - 4802, 1990 - 4116*, 1990 - 4762 1990 - 4802 1990 - 4891	Single lane, 1310 1x1G NRZ	SMF MMF	9/125 50/125	N/A 500 or 400	10 km (6.21 miles) 550m (1804.46 ft)
Aruba 1G SFP LC LX 10km SMF xcvr (J4859D)	1990 - 4116*, 1990 - 4762 1990 - 4802 1990 - 4891					
Aruba 1G SFP LC LX 10km SMF TAA xcvr (JL746A)	JL746A(TAA): 1990 - 4608*, 1990 - 4753*, 1990 - 4853					
Aruba 1G I - Tmp SFP LC LX 10km SMF xcvr (JL781A)	JL781A (I - Tmp): 1990 - 4764*, 1990 - 4766, 1990 - 4910, 1990 - 4914					

Table Continued

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
			MMF	62.5/125	500	550m (1804.46 ft)
HPE X121 1G SFP LC LH Transceiver (J4860C) (EOS)	Yes	Single lane, 1550	SMF	9/125	N/A	70 km (43.49 miles)
Aruba 1G SFP LC LH 70 km SMF xcvr (J4860D)	J4860C/ J4860D: 1990 - 4385*, 1990 - 4363	1x1G NRZ				

Product name (SKU)	Connector	Optical parameters (dBm)			
		Transmit power	Receive power	Temperature rating	Required power
HPE X121 1G SFP LC SX Transceiver (J4858C) (EOS)	Duplex LC (PC or UPC)	-9.5 to 0	-17 to -3	Commercial (0 to 70° C)	1 W
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)				Industrial (-40 to 85° C)	

Table Continued



Product name (SKU)	Connector	Optical parameters (dBm)			
		Transmit power	Receive power	Temperature rating	Required power
HPE X121 1G SFP LC LX Transceiver (J4859C) (EOS)	Duplex LC (PC or UPC)	-9.5 to -3	-20 to -3	Commercial (0 to 70° C)	1 W
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)				Industrial (-40 to 85° C)	
HPE X121 1G SFP LC LH Transceiver (J4860C) (EOS)	Duplex LC (PC or UPC)	0 to +5	-22 to -3 (use 8dB attenuator for short SMF cables)	Commercial (0 to 70° C)	1 W
Aruba 1G SFP LC LH 70 km SMF xcvr (J4860D)					

SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
2510 Switch Series (*EOS)	J9019A/B, J9020A, J9279A, J9280A	All	
2520 Switch Series (*EOS)	J9137A, J9138A, J9298A, J9299A	All	
2530 Switch Series (*EOS)	J9772A, J9773A, J9774A, J9775A, J9776A, J9777A, J9778A, J9779A, J9780A, J9781A, J9782A, J9783A, J9853A, J9854A, J9855A, J9856A	All	
2540 Switch Series (*EOS)	JL354A, JL355A, JL356A, JL357A	All	
2600 Switch Series (*EOS)	J4899A/B/C, J4900A/B/C, J8164A, J8165A, J8762A	H.08.98	

Table Continued



SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
2610 Switch Series (*EOS)	J9085A, J9086A, J9087A, J9088A, J9089A	All	
2615 - 8 - PoE Switch(*EOS)	J9565A	All	
2620 Switch Series (*EOS)	J9623A, J9624A, J9625A, J9626A, J9627A	All	
2800 Switch Series (*EOS)	J4903A, J4904A	1.08.103	
2810 Switch Series (*EOS)	J9021A, J9022A	All	
2900 Switch Series (*EOS)	J9049A, J9050A	T.13.45	
2910al Switch Series (*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	
2920 Switch Series (*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.
2930F Series Switches	JL253A, JL254A, JL255A, JL256A, JL258A, JL259A, JL260A, JL261A, JL262A, JL263A, JL264A, JL557A, JL558A, JL559A	J4858C/D, J4859C/D, J4860C/D: All WC Software JL745A, JL746A (TAA xcvrs): WC 16.08.0021 and 16.10.0006 and later	
2930M Switch Series	JL319A, JL320A, JL321A, JL322A, JL323A, JL324A	J4858C/D, J4859C/D, J4860C/D: All WC Software JL745A, JL746A (TAA xcvrs): WC 16.08.0021 and 16.10.0006 and later	For use in SFP ports on switch and an installed JL083A Aruba 3810M/ 2930M 4SFP+ MACsec Module.
3400cl Switch Series (*EOS)	J4905A, J4906A	All	
3500 Series Switches (*EOS)	J9470A, J9471A, J9472A, J9473A	K.14.31	

Table Continued

SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
3500yl Switch Series (*EOS)	J8692A, J8693A	All	For use in the SFP ports on the models listed, and in an installed J9312A 10GbE 2 - port SFP+/2 - port CX4 yl Model
	J9310A, J9311A	K.14.50	
3800 Switch Series (*EOS)	J9573A, J9574A, J9575A, J9576A, J9584A	All	
3810M Switch Series	JL071A, JL072A, JL073A, JL074A, JL076A, JL075A	J4858C/D, J4859C/D, J4860C/D: All Software JL745A, JL746A (TAA xcvrs): 16.08.0021 and 16.10.0006 and later	For use in the JL075A 3810M switch. Also for use in any 3810M switch with a JL083A Aruba 3810M/ 2930M 4SFP+ MACsec Module installed.
4100gl Switch Series	J4893A, J4908A	G.07.103	
Aruba 4100i Switch Series	JL817A, JL818A	J4858D, J4859D, J4860D: 10.08.0001 (Commercial Temp) JL780A, JL781A: 10.08.0001 (Ind Temp)	Hi 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.
4200vl Switch Series (*EOS)	J8776A, J9033A	All	
5300xl Switch Series (*EOS)	J4878A/B, J4907A	E.10.36	
5400zl Switch Series (*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.
5400R Switch Series	J9537A, J9549A, J9535A, J9637A, J9538A, J9548A, J9536A	J4858C/D, J4859C/D, J4860C/D: All Software JL745A, JL746A (TAA xcvrs): 16.08.0021 and 16.10.0006 and later	The J9538A 8 - port SFP+ v2 module supports both 1G and 10G transceivers.
	J9988A, J9989A, J9990A, J9993A	KB.15.17	

Table Continued

SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
5420 Switch Series	S0U63A/S0U73A(TAA), S0U64A/S0U74A (TAA), S0U68A/S0U78A (TAA), S0U67A/S0U77A (TAA)	J4858D, J4859D, J4860D: JL745A, JL746A (TAA): 10.15.0005	Older transceivers (C versions and earlier) are not officially supported on the 5420 switch series.
Aruba 6000 Switch Series	All models (1G uplink only) NO support for 100Mbps FX.	J4858C/J4858D, J4859C/J4859D: JL745A, JL746A (TAA): 10.08.0001 J4860C/J4860D: not supported	See list of supported 4x4 part numbers in Gigabit SFP optical transceiver modules table at the beginning of this chapter
Aruba 6100 Switch Series	All models	J4858C/J4858D, J4859C/J4859D: 10.06.0001 JL745A, JL746A (TAA xcvrs): 10.06.0130 and 10.07.0010 J4860C/J4860D: not supported	See list of supported 4x4 part numbers in Gigabit SFP optical transceiver modules table at the beginning of this chapter
6108 Switch Series(*EOS)	J4902A	H.07.88	
6120 Blade Switch Series(*EOS)	498358 - B21, 516733 - B21	SX, LX: all versions LH: not supported	
6200yl - 24G - mGBIC switch(*EOS)	J8992A	All	
Aruba 6200F Switch Series	All 6200F models 12p models R8Q72A/R8V13A (TAA)	J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: 10.04.1000 JL745A (TAA), JL746A (TAA): 10.06.0130 and 10.07.0010	Only the following 4x4 part numbers are supported: J4858C/J4858D: 1990 - 4395 1990 - 4750
Aruba 6200F	All 6200F models, JL724B through JL728B; S0M81A through S0M90A; S0G13A through S0G17A	J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: JL745A (TAA), JL746A (TAA):10.13.0001	1990 - 4793 J4859C/J4859D:

Table Continued

SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 6200M/F Switch Series	All 6200M models and 12p 6200F models R8Q72A/R8V13A(TAA)	J4858C/J4858D,	• 1990 - 4762
		J4859C/J4859D,	• 1990 - 4802
		J4860C/J4860D,	• 1990 - 4891
		JL745A (TAA),	J4860C/J4860D:
		JL746A (TAA): 10.11.0005	1990 - 4363
Aruba 6300 Switch Series	All models M/F except those mentioned below:	J4858C/J4858D, J4859C/J4859D, J4860C/J4860D:	***Only the following 4x4 part numbers are supported:
		10.04.0001	J4858C/J4858D:
		JL745A (TAA), JL746A (TAA):	• 1990 - 4395
			• 1990 - 4750
		10.06.0130 and 10.07.0010	• 1990 - 4793
			J4859C/J4859D:
			• 1990 - 4762
			• 1990 - 4802
			• 1990 - 4891
			J4860C/J4860D:
			1990 - 4363
	JL762A (6300 Pwr2Prt):	J4858C/J4858D, J4859C/J4859D, J4860C/J4860D,	***See the above list of 4x4s
		JL745A (TAA),	
		JL746A (TAA):	
		10.08.0001	

Table Continued

SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
	R8S91A, R8S92A	J4858C/J4858D, J4859C/ J4859D, J4860C/J4860D, JL745A (TAA), JL746A (TAA): 10.10.0002	***See the above list of 4x4s R8S91A port 51 - 52 require the interface - group 2 speed 10 command (the ports default to 10G 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 10G optics are used, for R8S91A, 10G is the default for ports 51 - 52). R8S91A 1G is supported in ports: 51-52: 10.10.0002 49-50: 10.18.0001 Port 49-50 does not support J4860C/D modules R8S92A 1G is supported in ports: 1 - 24 from 10.10.0002 25-28 from 10.18.0001 Port 25-28 does not support J4860C/D modules
	R8S89A, R8S90A,	J4858C/J4858D, J4859C/ J4859D, JL745A (TAA), JL746A (TAA): 10.18.0001 J4860C/J4860D: Not Supported	Remove this part. Add below statement after clearing up existing part: These modules are supported in : R8S89A: 25-28 R8S90A: 49-52

Table Continued

SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
	6300M TAA Models: S0F99A, S0G00A, S0G01A, S0G02A (BF airflow), S0G03A, S0G04A, S0G05A, S0G06A	J4858C/J4858D, J4859C/ J4859D, J4860C/J4860D, JL745A (TAA), JL746A (TAA):	***See the above list of 4x4s
	6300F TAA Models: S0G95A, S0G96A, S0G97A, S0G98A	10.14.0001	
	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, J4859C/J4859D, J4860C/J4860D, JL745A (TAA), JL746A (TAA): 10.16.1006	Support is extended to respective TAA SKUs. Supported in S4P41A from 10.18.0001 on ports 49-52. J4860C/D not supported Supported ports - S4P42A: 33-40 with 10.16.1006 41-44 with 10.18.0001 (except J4860C/D) S4P43A: 1-48 with 10.16.1006 49-52 with 10.18.0001 (except J4860C/D) S4P44A: 1-24 with 10.16.1006 35-28 with 10.18.0001 (except J4860C/D)

Table Continued

SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 6300L Switch Series	All models	J4858C/J4858D, J4859C/J4859D, J4860C/J4860D,	S3L75A, S3L76A support only from 10.18.000. Also, J4860C/D are not supported.
	S3L75A, S3L76A: ports 25-28 and 49-52 respectively S3L77A: Ports 49-52	JL745A (TAA), JL746A (TAA): 10.14.0001	For S3L77A supported on ports- 51-52 from 10.14.0001 (all modules) 49-50 from 10.18.0001 (J4860C/D are not supported)
Aruba 6400 modules	ROX39B(*EOS), ROX40B(*EOS), ROX41A(*EOS), ROX42A(*EOS), ROX43A(*EOS)	J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: 10.04.1000 JL745A, JL746A (TAA): 10.06.0130 and 10.07.0010	ROX39A/ROX40A (revision A) are no longer supported for use in the 6400 series. Only the following 4x4 part numbers are supported: J4858C/J4858D:
	ROX44A(*EOS)	For ROX44A module: J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: 10.04.2000 JL745A, JL746A (TAA xcvs): 10.06.0130 and 10.07.0010	• 1990 - 4395 • 1990 - 4750 • 1990 - 4793 JL745A (TAA): 1990 - 4395 JL745A(TAA): 1990 - 4395 J4859C/J4859D: • 1990 - 4762 • 1990 - 4802 • 1990 - 4891 ROX44A/ROX44C when in default mode, auto - detects the inserted type of transceiver; it does NOT require any interface groups like the 8325.

Table Continued

SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
	R0X39C, R0X40C, R0X41C, R0X42C, R0X43C, R0X44C S1T83A (24p SR10 4p 100G) S0E48A (32p 25G 4p 100G)	10.09.1000 10.13.1000 1G products are not supported	R0X44C has the added feature of enabling the bottom ports to accept a 50G product, and in this mode, will NOT accept these 1G transceivers (see 50G SFP56 chapter).
6600 Switch Series(*EOS)	J9263A, J9264A	K.14.03	
	J9451A	K.14.24	
Aruba 8100 Series	Models with SFP+ ports	J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: JL745A, JL746A (TAA xcvrs): 10.12.000x	Only in SFP+ ports NOT supported thru QSA28
8200zl Switch Series(*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.

Table Continued

SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8320 48p 10G SFP/ SFP+ and 6p 40G QSFP+ models	JL479A	J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: 10.03.0001 JL745A, JL746A (TAA xcvrs): 10.06.0130 and 10.07.0010	Only the following 4x4 part numbers are supported: J4858C/J4858D: 1990 - 4395 1990 - 4750 1990 - 4793 JL745A(TAA): 1990 - 4395 J4859C/J4859D: 1990 - 4762 1990 - 4802 1990 - 4891 J4860C/J4860D: 1990 - 4363
Aruba 8325 Switch Series	JL635A displayed by CLI (show system) - JL624A - Port - to - Powermodel(FB) - JL625A - Power - to - Port model (BF)	J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: 10.03.0010 JL745A, JL746A (TAA xcvrs): 10.06.0130 and 10.07.0010	Only the following 4x4 part numbers are supported: J4858C/J4858D: 1990 - 4395 1990 - 4750 1990 - 4793 JL745A(TAA): 1990 - 4395 J4859C/J4859D: 1990 - 4762 1990 - 4802 1990 - 4891
Aruba 8325P Switch Series	1G products not supported, cannot be enabled through a QSA28		

Table Continued

SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8325H Switch Series	TAA/Non - TAA:	In all SFP ports (not through QSA28)	J4860C/J4860D: 1990 - 4363
	• S2T42A/S4B20A - 18Y4C model (FB)	4858C/J4858D, J4859C/J4859D, J4860C/J4860D, JL745A, JL746A (TAA): 10.15.1000	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 <i>Hardware Guides</i> for details. 1G optics at the opposite end of the link must NOT enable auto - negotiation and operate in full duplex mode.
	• S2T46A/S4B21A - 18Y4C model (BF)		
	• S2T47A/S4B22A - 16C model (FB)		
	• S2T48A/S4B23A - 16C model (FB)		

Table Continued



SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8360 Switch Series	8360 32Y4C models	JL717A/JL717C(v2), JL718A/JL718C(v2), JL722A/JL722C(v2):	Only the following 4x4 part numbers are supported:
	JL717A/JL717C(v2) displayed by CLI (show system)	J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: 10.06.0001	J4858C/J4858D:
	• JL700A/JL700C(v2) Port - to - Power model		• 1990 - 4395
	• JL700A/JL700C(v2) A Power - to - Port model	JL745A, JL746A (TAA xcvrs): 10.06.0130 and 10.07.0010	• 1990 - 4750
			• 1990 - 4793
			JL745A(TAA):
	8360 16Y2C models	JL719C:	1990 - 4395
	JL718A/JL718C(v2) displayed by CLI (show system)	J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: 10.09.0002	J4859C/J4859D:
	• JL702A/JL702C(v2) Port - to - Power model	JL745A, JL746A (TAA xcvrs): 10.09.0002	• 1990 - 4762
	• JL702A/JL702C(v2) A Power - to - Port model		• 1990 - 4802
			• 1990 - 4891
			J4860C/J4860D:
	8360 24XF2C models		1990 - 4363
	JL722A/JL722C(v2) displayed by CLI (show system)		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).
	• JL710A/JL710C(v2) Port - to - Power model		
	• JL711A/JL711C(v2) Power - to - Port model		
	8360 48Y6C models		All other ports can individually auto - detect the speed of the inserted xcvr.
	JL719C displayed by CLI (show system)		
	• JL704C(v2) Port - to - Power model (FB)		Not applicable to the 24XF (1G/10G) model
	• JL705C(v2) Power - to - Port model (BF)		See the Hardware Guides for details.

Table Continued

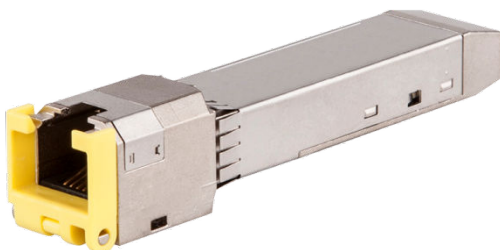


SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8400X modules	JL363A	For JL363A module:	Only the following 4x4 part numbers are supported:
	JL687A	J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: 10.00.0018	J4858C/J4858D:
		JL745A, JL746A (TAA xcvrs): 10.07.0005	• 1990 - 4395 • 1990 - 4750 • 1990 - 4793
		For JL687A module:	
		J4858C/J4858D, J4859C/J4859D, J4860C/J4860D: 10.04.2000	JL745A(TAA):
		JL745A, JL746A (TAA xcvrs): 10.07.0005	1990 - 4395
			J4859C/J4859D:
			• 1990 - 4762 • 1990 - 4802 • 1990 - 4891
			J4860C/J4860D:
			1990 - 4363
			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.
			JL687A: 1G optics at the opposite end of the link must not enable auto - negotiation

Table Continued

SFP (1G) capable product name	Switch SKU #s	Minimum software required	Comments
			and operate in full duplex mode (does not apply to the JL363A module)
9300 Switch Series	Not supported		1G products are not supported on the 9300 Switch Series
Aruba 10000 Switch Series	R8S96A displayed by CLI (show system) - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle	J4858D, J4859D, J4860D: 10.10.0002 JL745A, JL746A (TAA): 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 the speed to 25g for the default). See the Hardware Guides for details. 1G optics at the opposite end of the link must NOT enable auto negotiation and operate in full duplex mode.

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)	100 m (328.08 ft)	1G	Cat5e UTP/STP	RJ45
Aruba 1G SFP RJ45 T 100m Cat5e xcvr		100Mbps (For certain products. See next table.)		
Aruba 1G SFP RJ45 T 100m Cat5e TAA xcvr (JL747A/B) (*EOS)				
HPE ANW 1G SFP RJ45 100m XCVR (J8177E)				
HPE ANW 1G SFP RJ45 100m TAA XCVR (JL747B)				

SFP (1G) copper capable product 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 supported for use in the Dual - Personality ports of the 2920 Series Switches. For use ONLY in the J9731A module.

Table Continued



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

Table Continued

SFP (1G) copper capable product name	Switch SKU #s	Minimum software required	Comments
	J9537A, J9549A, J9535A, J9637A	K.15.02.0004	
5400R Switch Series	J9537A, J9549A, J9535A, J9637A	J8177C/J8177D/J8177E: All Software JL747A/B: KB 16.10.0012	J8177C/J8177D/J8177E support both 100Mbps and 1G operation in this Switch Series.
	J9988A, J9989A, J9990A, J9993A	KB.15.17 JL747A/B (TAA xcvsr): KB 16.10.0012	J8177C/J8177D/J8177E support both 100Mbps and 1G operation in this Switch Series.
5420 Switch Series	SOU63A/SOU73A(TAA), SOU68A/SOU78A (TAA), SOU67A/SOU77A (TAA)	J8177D/J8177E, JL747A/B (TAA): 10.15.0001	100Mbps speed is NOT supported for the J8177D/J8177E/JL747A/B when used in the 5420 Series. J8177D/J8177E/JL747A/B does not support link - level flow control. Only the following part numbers are supported: J8177C/J8177D/J8177E: • 1990 - 3816 • 1990 - 4606 • 1990 - 4640 JL747A/B: • 1990 - 4640 • 1990 - 3816

Table Continued

SFP (1G) copper capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 6000 Switch Series	All models	J8177C/J8177D/J8177E: 10.08.0001 JL747A/B (TAA): 10.14.0001	100Mbps speed is not supported for the J8177D/J8177E when used in the SFP port on the 6000 series. J8177D/J8177E does not support link - level flow control on 6000. Only the following part numbers are supported: J8177C/J8177D/J8177E: • 1990 - 3816 • 1990 - 4606 • 1990 - 4640
Aruba 6100 Switch Series	All models	J8177C/J8177D/J8177E: 10.06.0001 JL747A/B (TAA): 10.06.0130 and 10.07.0010	100Mbps speed is NOT supported for the J8177D/J8177E/JL747A/B when used in SFP+ on the 6100 Series. J8177D/J8177E/JL747A/B does not support link - level flow control on 6100. Only the following part numbers are supported: J8177C/J8177D/J8177E: • 1990 - 3816 • 1990 - 4606 • 1990 - 4640 JL747A/B: • 1990 - 4640 • 1990 - 3816
6120 Blade Switch Series(*EOS)	498358 - B21, 516733 - B21	All	
6200yl - 24G - mGBIC switch (*EOS)	J8992A	All	

Table Continued

SFP (1G) copper capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 6200 Switch Series	All M and F models	J8177C/J8177D/J8177E:	100Mbps speed is NOT supported
	Only 1G speed supported	10.04.1000	
	See Comments	JL747A/B (TAA): 10.06.0130 and 10.07.0010	for the J8177D/J8177E/ JL747A/B when used in SFP on all M and F models.
			J8177D/J8177E/JL747A/B does not support link - level flow control on 6200 series. Only the following part numbers are supported: J8177C/J8177D/J8177E: • 1990 - 3816 • 1990 - 4606 • 1990 - 4640
Aruba 6300 Switch Series	All models M and F	J8177C/J8177D/J8177E:	100Mbps speed is NOT supported for the J8177D/ J8177E or JL747A/B when used in any SFP56 port on the 6300 Series, or SFP+ port of JL658A or S3L77A (6300L).
	Only 1G speed supported	10.04.0001	
	See Comments	JL747A/B (TAA): 10.07.0005	
	R8S89A (ports 25-28), R8S90A (ports 49-52)	J8177C/J8177D/J8177E, JL747A/B (TAA): 10.18.0001	J8177D/J8177E or JL747A/B does not support link - level flow control on 6300
	R8S91A, R8S92A (all ports)	J8177C/J8177D/J8177E: 10.10.0002	Only the following part numbers are supported:
		JL747A/B (TAA): 10.07.0005 (on downlink ports)	J8177C/J8177D/J8177E: • 1990 - 3816
		10.18.0001 (on uplink ports)	• 1990 - 4606 • 1990 - 4640
	S0F99A, S0G00A - S0G06A (TAA)	J8177C/J8177D/J8177E: 10.10.0002	JL747A/B:
		JL747A/B (TAA): 10.07.0005	

Table Continued

SFP (1G) copper capable product name	Switch SKU #s	Minimum software required	Comments
	S0E91A, S0X44A (100G models)	J8177C/J8177D/J8177E, JL747A/B (TAA): 10.14.0001	1990 - 3816 1990 - 4640
	S4P41A, S4P42A, S4P43A, S4P44A	J8177C/J8177D/J8177E, JL747A/B (TAA): 10.16.1006 (downlink ports) 10.18.0001 (uplink ports)	R8S91A: ports 51 - 52 R8S92A: ports 1 - 24 Support is extended to respective TAA SKUs. Supported only on uplink ports of S4P41A
Aruba 6300L Switch Series	All models	J8177C/J8177D/J8177E, JL747A/B (TAA): 10.14.0001 (only on S3L77A) 10.18.0001 (on rest models)	S3L77A: ports 51 - 52 (10.14.0001) S3L77A: ports 49-50, S3L75A: ports 25-28, S3L76A: ports 49-52 (10.18.0001)
Aruba 6400 Switch Series	ROX39B(*EOS), ROX40B(*EOS), ROX41A(*EOS), ROX42A(*EOS), ROX43A(*EOS)	J8177C/J8177D/J8177E: 10.04.1000 JL747A/B (TAA): 10.06.0001	ROX39A/ROX40A (revision A) are no longer supported for use in the 6400 series 100Mbps speed is NOT supported for the J8177D/J8177E or JL747A/B when used in any port (SFP+, SFP28, or SFP56) on the 6400 series.
	ROX39B(*EOS), ROX40B(*EOS), ROX41A(*EOS), ROX42A(*EOS), ROX43A(*EOS)	J8177C/J8177D/J8177E, JL747A/B (TAA): 10.09.1000	J8177D/J8177E or JL747A/B do not support link - level flow control on 6400.
	ROX44A(*EOS)	J8177C/J8177D/J8177E: 10.04.2000 JL747A/B (TAA): 10.06.0001	Only the following part numbers are supported:
	ROX44C	J8177C/J8177D/J8177E, JL747A/B (TAA): 10.09.1000	J8177C/J8177D/J8177E: 1990 - 3816 1990 - 4606
	S1T83A (24p SR10 4p 100G)	J8177C/J8177D/J8177E, JL747A/B (TAA): 10.13.1000	1990 - 4640 JL747A/B:

Table Continued

SFP (1G) copper capable product name	Switch SKU #s	Minimum software required	Comments
	S0E48A (32p 25G 4p 100G)	1G not supported	1990 - 3816 1990 - 4640 R0X44A/R0X44C auto - detects the inserted type of transceiver; it does NOT require any interface groups like the 8325.
Aruba 8100 Switch Series	All models	J8177C/J8177D/J8177E, JL747A/B (TAA): 10.12.0001	100Mbps speed is NOT supported for the J8177D/J8177E or JL474A on the 8100 series.
8200zl Switch Series(*EOS)	J8705A, J8706A	All	
	J9308A	K.14.34	
	J9537A, J9549A, J9535A, J9637A	K.15.02.0004	

Table Continued



SFP (1G) copper capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8320 48p 10G SFP/ SFP+ and 6p 40G QSFP+ models	JL479A	J8177C/J8177D/J8177E, JL747A/B (TAA): 10.06.0001	100Mbps speed is NOT supported for the J8177D/J8177E or JL474A on the 8320 series. J8177D/J8177E/JL747A/B does not support link - level flow control on 8320. Only the following part numbers are supported: J8177C/J8177D/J8177E: • 1990 - 3816 • 1990 - 4606 • 1990 - 4640 JL747A/B: • 1990 - 3816 • 1990 - 4640
Aruba 8325 Switch Series	JL635A displayed by CLI (show system) • JL624A - Port - to - Powermodel(FB) • JL625A - Power - to - Port model (BF)	J8177C/J8177D/J8177E: 10.03.0030 JL747A/B (TAA): 10.07.0005	100Mbps speed is NOT supported for the J8177D/ J8177E or JL474A or JL747A/B on the 8325 series. J8177D/J8177E or JL474A does not support link - level flow control on 8325. Only the following part numbers are supported: J8177C/J8177D/J8177E: • 1990 - 3816 • 1990 - 4606 • 1990 - 4640 JL747A/B part numbers:
Aruba 8325P Switch Series	1G products not supported, cannot be enabled through a QSA28		

Table Continued

SFP (1G) copper capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8325H Switch Series	TAA/Non - TAA:	J8177E, JL747A/B (TAA): 10.15.1000	1990 - 3816 1990 - 4640
	• S2T42A/S4B20A - 18Y4C model (FB)		
	• S2T46A/S4B21A - 18Y4C model (BF)		RJ45 transceivers are only supported for use in the top 2 rows of ports (max of 32 per switch).
	• S2T47A/S4B22A - 16C model (FB)		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.
	• S2T48A/S4B23A - 16C model (FB)		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). See the Hardware Guides for details.

Table Continued

SFP (1G) copper capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8360 32Y4C models	JL717A/JL717C (v2) displayed by CLI (show system)	J8177C/J8177D/J8177E: 10.09.0001	J8177C/D or JL747A/B can only operate at 1G in the 8360 series 32Y4C models.
	- JL700A/JL700C(v2) Port - to - Power model - JL701A/JL701C(v2) Power - to - Port model	JL747A/B (TAA): 10.09.0001 J8177C/J8177D/J8177E, JL747A/B only supported on ports 5 - 32	J8177C/D or JL747A/B does not support link - level flow control on 8360. Only the following part numbers are supported: J8177C/J8177D/J8177E: 1990 - 3816 1990 - 4606 1990 - 4640 JL747A/B part numbers: 1990 - 3816 1990 - 4640 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). 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. The v2 32Y4C models support MACsec on ports 1 - 4 only at 10G/25G speeds (50G speed NOT available for ports 2 and 4) All other ports can individually auto - detect the speed of the inserted transceiver.

Table Continued

SFP (1G) copper capable product name	Switch SKU #s	Minimum software required	Comments
			See the Hardware Guides for details.
Aruba 8360 16Y2C models	JL718A/JL718C (v2) displayed by CLI (show system)	J8177C/J8177D/J8177E: 10.09.0001	J8177C/D or JL747A/B can only operate at 1G in the 8360 series 16Y2C models.
	• JL702A/JL702C(v2) Port - to - Power model	JL747A/B (TAA): 10.09.0001	J8177C/D or JL747A/B do not support link - level flow control on 8360.
	• JL703A/JL703C(v2) Power - to - Port model	Only supported on ports 1 - 16	Only the following part numbers are supported: J8177C/J8177D/J8177E:
			• 1990 - 3816 • 1990 - 4606 • 1990 - 4640 JL747A/B part numbers: • 1990 - 3816 • 1990 - 4640 All ports can individually auto - detect the speed of the inserted transceiver.

Table Continued

SFP (1G) copper capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8360 48Y6C models	JL719C displayed by CLI (show system)	J8177C/J8177D/J8177E: 10.06.0001	J8177D/J8177E or JL747A/B 10.14.0001 code added support for 100Mbps (full duplex only) using the speed command.
	- JL704C(v2) Port - to - Power model (FB) - JL705C(v2) Power - to - Port model (BF)	JL747A/B (TAA): 10.07.0005 Only supported on ports 5 - 48	1G in 8360 series 48Y6C models (only on ports 5 - 48 due to MACsec ports 1 - 4). J8177C/D or JL747A/B do not support link - level flow control on 8360. Only the following 4x4 part numbers are supported: J8177C/J8177D/J8177E: 1990 - 3816 1990 - 4606 1990 - 4640 JL747A/B 4x4 part numbers: 1990 - 3816 1990 - 4640 All ports can individually autodetect the speed of the inserted transceiver.
Aruba 8360 48XT4C models	JL720A/JL720C (v2) displayed by CLI (show system) - JL706A/JL706C(v2) Port - to - Power model - JL707A/JL707C(v2) Power - to - Port model	J8177C/J8177D/J8177E, JL747A/B (TAA): Not supported through the use of the QSA28	No SFP+ ports available Not supported through the use of the QSA28

Table Continued

SFP (1G) copper capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8360 12C models	JL721A/JL721C(v2) displayed by CLI (show system)	J8177C/J8177D/J8177E, JL747A/B (TAA): Not supported through the use of the QSA28	No SFP+ ports available Not supported through the use of the QSA28
	- JL708A/JL708C(v2) Port - to - Power model - JL709A/JL709C(v2) Power - to - Port model		
Aruba 8360 24XF2C models	JL722A/JL722C(v2) displayed by CLI (show system)	J8177C/J8177D/J8177E: 10.06.0001	J8177C/D or JL747A/B can only operate at 1G in the 8360 series 24XF2C models.
	- JL710A/JL710C(v2) Port - to - Power model - JL711A/JL711C(v2) Power - to - Port model	JL747A/B (TAA): 10.07.0005 Only supported on ports 1 - 24 Not supported through the use of the QSA28	J8177C/D or JL747A/B do not support link - level flow control on 8360. Not supported through the use of the QSA28. Only the following part numbers are supported: J8177C/J8177D/J8177E: 1990 - 3816 1990 - 4606 1990 - 4640 JL747A/B: 1990 - 3816 1990 - 4640

Table Continued



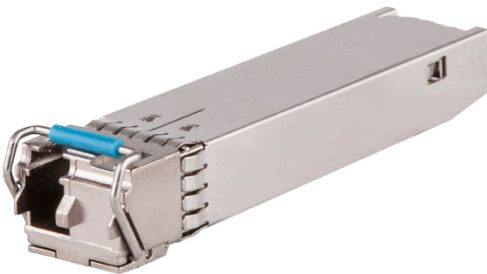
SFP (1G) copper capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 8400X modules	JL363A	J8177C/J8177D/J8177E:	J8177C/D or JL747A/B can only operate at 1G in the 8400 series.
	JL687A	10.00.0018 10.04.2000 JL474A (TAA): 10.07.0005	J8177D/J8177E does not support link - level flow control on 8400. Only the following part numbers are supported: J8177C/J8177D/J8177E: • 1990 - 3816 • 1990 - 4606 • 1990 - 4640 JL747A/B: • 1990 - 3816 • 1990 - 4640 JL687A notes: 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). See the Hardware Guides for details. 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

Table Continued

SFP (1G) copper capable product name	Switch SKU #s	Minimum software required	Comments
Aruba 9300/9300S Switch Series	All	Not supported through the use of the QSA28	
Aruba 10000 Switch Series	R8S96A displayed by CLI (show system) - R8P13A - 48Y6C FB bundle - R8P14A - 48Y6C BF bundle	J8177C/J8177D/J8177E, JL474A (TAA): 10.10.0002	Only the J8177D/J8177E is supported (J8177C not supported). J8177D/J8177E or JL474A/B can only operate at 1G in the 10000 series. 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.

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.

NOTE:

- 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 1x1G NRZ	1310 1x1G NRZ	SMF	9/125	10 km (6.21 miles)
HPE X122 1G SFP LC BX - U Transceiver (J9143B)(EOS)	No	1310 1x1G NRZ	1490 1x1G NRZ			

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

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	

Table Continued

SFP 1G BiDi capable product name	SKU	Minimum software required (J9142B, J9143B)	Comments
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, J9147A, J9148A	All	
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	

Table Continued

SFP 1G BiDi capable product name	SKU	Minimum software required (J9142B, J9143B)	Comments
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. 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	
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.

Table Continued



SFP 1G BiDi capable product name	SKU	Minimum software required (J9142B, J9143B)	Comments
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.
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	Temperature rating	Required power
HPE X111 100M SFP LC FX Transceiver (J9054C)	-19 to -14	-30 to -14	Commercial (0 to 70°C)	1.5 W
Aruba 100M SFP LC FX 2km MMF xcvr (J9054D)				



SFP (100Mbps) capable product name	Switch SKU	100 - Megabit SFP Minimum software required	Comments
2510 - 24 Switch	J9019A/B	Q.10.04	
2510 - 48 Switch	J9020A	All	
Aruba 2510G Switch Series	J9279A, J9280A	All	
Aruba 2520 Switch Series	J9137A, J9138A	All	
Aruba 2520G Switch Series	J9298A, J9299A	J9054B: All J9054C: J.14.32	
Aruba 2530 Switch Series	J9772A, J9773A, J9774A, J9775A, J9776A, J9777A, J9778A, J9779A, J9780A, J9781A, J9782A, J9783A, J9853A, J9854A, J9855A, J9856A	For J9853A, J9854A, J9855A, and J9856A: Not supported For all other switches: All	For use in the SFP ports of the 2530 Series Switches. (The J9853A, J9854A, J9855A, and J9856A models have 1G/10G SFP+ ports that do not support these 100Mbps transceiver modules.)
Aruba 2540 Switch Series	JL354A, JL355A, JL356A, JL357A	All	
Aruba 2610 Switch Series	J9085A, J9086A, J9087A, J9088A, J9089A	All	
2615 - 8 - PoE Switch	J9565A	J9054B: All J9054C: A.14.07	
Aruba 2620 Switch Series	J9623A, J9624A, J9625A, J9626A, J9627A	All	
Aruba 2800 Switch Series	J4903A, J4904A	J9054B/C 1990 - 3613 and J9054C 1990 - 4112: i.10.30 J9054C 1990 - 4483: Not supported	J9054C part number 1990 - 4483 is not supported
Aruba 2810 Switch Series	J9021A, J9022A	N.10.07	
Aruba 2900 Switch Series	J9049A, J9050A	T.12.01	

Table Continued

SFP (100Mbps) capable product name	Switch SKU	100 - Megabit SFP Minimum software required	Comments
Aruba 2910al Switch Series	J9145A, J9146A, J9147A, J9148A	All	
2915 - 8G - PoE Switch	J9562A	J9054B: All J9054C/J9054D: A.14.07	
Aruba 2920 Series Switches	J9726A, J9727A, J9728A, J9729A, J9836A	All	Use in the SFP ports of the 2920 Series Switches. 100FX is not supported in the SFP+ ports of the J9731A 2 - Port 10GbE SFP+ Module
Aruba 2930F Switch Series	All models	J9054B: is not supported in the 2930F Series Switches For J9054C/9054D: All	The 2930F Switch Series models with 1G/10G SFP+ ports added support for this J9054C/J9054D 100FX transceiver. The J9054C/ J9054D are supported in models with 1G SFP ports.
Aruba 2930M Switch Series	JL319A, JL320A, JL321A, JL322A, JL323A, JL324A	J9054B is not supported in the 2930M Series Switches. For J9054C/J9054D: All	For use in SFP ports on switch and an installed JL083A Aruba 3810M/ 2930M 4SFP+ MACsec Module.
Aruba 3500 Series Switches	J9470A, J9471A, J9472A, J9473A	J9054B/C 1990 - 3613: K.14.31 J9054C 1990 - 4112 and 1990 - 4483: K.15.08.0007 J9054D: K.15.08.0007	

Table Continued

SFP (100Mbps) capable product name	Switch SKU	100 - Megabit SFP Minimum software required	Comments
Aruba 3500yl Switch Series	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)	
		For J9310A, J9311A: K.14.50 (for J9054B/C 1990 - 3613); K.15.08.0007 (for J9054C 1990 - 4112 and 1990 - 4483, and J9054D)	
Aruba 3800 Switch Series	J9573A, J9574A, J9575A, J9576A, J9584A	For J9573A, J9574A, J9575A, J9576A: Not supported. 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. Supported in the J8584A 3800 - 24SFP - 2SFP+ Switch
Aruba 3810M Switch Series	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.
Aruba 4100gl Switch Series	J4865A, J4887A	n/a	J9054C/J9054D 100FX is not supported.

Table Continued

SFP (100Mbps) capable product name	Switch SKU	100 - Megabit SFP Minimum software required	Comments
Aruba 4100i Switch Series	JL817A, JL818A	10.08.0001	Hi 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.
Aruba 4200vl Switch Series	J8770A, J8771A, J8772A/B, J8773A	L.10.24	Supported: J9033A Switch vl 20 - Port Gig - T + 4 - Port SFP Module Not supported: J8776A Switch vl 4 - Port Mini - GBIC Module
Aruba 5300xl Switch Series	J4819A, J4850A	n/a	J9054C/J9054D 100FX is not supported.
Aruba 5400zl Switch Series	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 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 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	For use in: J8705A Switch zl 20 - Port 10/100/1000 + 4 - Port Mini - GBIC Module J8706A Switch zl 24 - Port Mini - GBIC Module J9308A 20 - Port 10/100/1000 PoE+ and 4 - Port SFP zl Module J9537A 24 - Port SFP v2 zl Module J9549A 20 - Port Gig - T / 4 - Port SFP v2 zl Module J9535A 20 - Port Gig - T PoE+ / 4 - Port SFP v2 zl Module J9637A 12 - Port Gig - T PoE+ / 12 - Port SFP v2 zl Module

Table Continued

SFP (100Mbps) capable product name	Switch SKU	100 - Megabit SFP Minimum software required	Comments
Aruba 5400R Switch Series	J9821A, J9822A, J9823A, J9824A, J9825A, J9826A, J9868A	For J9535A, J9537A, J9549A, and J9637A modules: All For the J9988A, J9989A, J9990A, and J9993A modules: KB.15.17 and later	For use in:
			J9537A 24 - Port SFP v2 zl Module
			J9549A 20 - Port Gig - T / 4 - Port SFP v2 zl Module
			J9535A 20 - Port Gig - T PoE+ / 4 - Port SFP v2 zl Module
			J9637A 12 - Port Gig - T PoE+ / 12 - Port SFP v2 zl Module
			J9988A 24p 1GbE SFP v3 zl2 Module
			J9989A 12p PoE+ / 12p 1GbE SFP v3 zl2 Module
5420 Switch Series	SOU63A/SOU73A (TAA), SOU68A/SOU78A (TAA), SOU67A/SOU77A (TAA)	J9054D: 10.15.0001	J9990A 20p PoE+ / 4p SFP+ v3 zl2 Module
			J9993A 8p 1G/10GbE SFP+ v3 zl2 Module
Aruba 6000 Switch Series	All models	J9054A/C (EOS), J9054 (100M FX): 10.16.1006	
Aruba 6100 Switch Series	All models	J9054A/C (EOS), J9054D (100M FX): 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

Table Continued

SFP (100Mbps) capable product name	Switch SKU	100 - Megabit SFP Minimum software required	Comments
6200yl - 24G - mGBIC Switch	J8992A	K.12.01 (for J9054B/C 1990 - 3613); K.15.08.0007 (for J9054C 1990 - 4112 and 1990 - 4483) J9054D: K.15.08.0007	For use in all 24 ports of the J8992A Switch 6200yl - 24G - mGBIC
Aruba 6200 Switch Series	6200F models, JL724A through JL728A	J9054A/C (100M FX): 10.16.1006	
	6200F models: JL724B through JL728B; SOM81A through SOM90A; SOG13A through SOG17A and 6200M models	J9054D: 10.11.1001	
Aruba 6300 Switch Series	JL658A	10.06.0120 or 10.07.0010	Only supported for use in SFP+ ports on JL658A/RS892A/SOG03A. 100FX is not supported for use in any SFP56 ports on other models.
	SOG03A (TAA)	10.14.1000	
	R8S92A	10.10.0002	
	SOE91A, SOX44A (100G models)	Not supported through QSA28	100FX link level flow control: not supported.
	S4P42A, S4P43A, S4P44A	J9054A/C (100M FX): 10.16.1006	Support is extended to respective TAA SKUs. Not supported on S4P41A
Aruba 6300L Switch Series	All models	Not supported	
Aruba 6400 Switch Series	ROX43A(*EOS)	10.06.0120 or 10.07.0010	ROX43A/ROX43C 24p SFP+ module: Only supported in ports 1 - 24 (SFP+), NOT supported in ports 25 - 28 (SFP56 ports). ROX44A 48p SFP28: supported for use in ports 1 - 48 (SFP28 ports). ROX44A/ROX44C auto - detects the inserted type of transceiver; it does
	ROX44A(*EOS)	10.06.0120 or 10.07.0010	
	ROX44C	10.09.1000	

Table Continued

SFP (100Mbps) capable product name	Switch SKU	100 - Megabit SFP Minimum software required	Comments
	S0E48A / S1T83A	Not supported (Hdw limitation)	NOT require any interface groups like the 8325. 100FX is NOT supported in any SFP56 port on any other 6400 module. 100FX does not support link - level flow control on the 6400.
Aruba 6600 Switch Series	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) For J9451A: K.14.24 (for J9054B/C 1990 - 3613); K.15.08.0007 (for J9054C 1990 - 4112 and 1990 - 4483) 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)
8100 Switch Series	All models	No support for 100Mbps xcvrs	

Table Continued



SFP (100Mbps) capable product name	Switch SKU	100 - Megabit SFP Minimum software required	Comments
8200zl Switch Series	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) J9054D: K.15.08.0007 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 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 J8706A Switch zl 24 - Port Mini - GBIC Module J9308A 20 - Port 10/100/1000 PoE+ and 4 - Port SFP zl Module J9537A 24 - Port SFP v2 zl Module J9549A 20 - Port Gig - T / 4 - Port SFP v2 zl Module J9535A 20 - Port Gig - T PoE+ / 4 - Port SFP v2 zl Module J9637A 12 - Port Gig - T PoE+ / 12 - Port SFP v2 zl Module
Aruba 8320 Switch Series	All	n/a	100Mbps Transceivers are NOT supported in the 8320 series.
Aruba 8325 Switch Series	All	n/a	100Mbps Transceivers are NOT supported in the 8325 series.
Aruba 8360 Switch Series	48Y6C models: JL719C base (JL704C/JL705C) ports 5 - 48	10.13.1000 J9054D: 10.13.1000 only on the 48Y6C models ports 5 - 48	100Mbps Transceivers only on the models listed. 48Y6C and 32Y4C not supported in ports 1 - 4 (MACsec PHY limitation).

Table Continued

SFP (100Mbps) capable product name	Switch SKU	100 - Megabit SFP Minimum software required	Comments
Aruba 8400X Modules	All	n/a	100Mbps Transceivers are NOT supported in the 8400 series.
Aruba 10000 Switch Series	All	n/a	100Mbps Transceivers are NOT supported in the 10000 series.



HPE servers and systems support

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 section.

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



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

Table Continued

HPE Server SKU#	Description	Use case with 9300 32D series Aruba SKU# (HPE SKU#)
P21927 - B21	HPE 100GbE 2P QSFP28 MCX516A - CCHT Adptr	QDD to 2xQSFP28 100G AOC R9B60A(S1D25A)[3m], R9B58A(S1D26A)[7m], R9B62A(S1D27A)[15m], R9B61A(S1D28A)[30m], R9B59A(S1D29A)[50m] 400G QDD to 2xQSFP28 100G Optical Breakout R9B41A(S1D18A)[SR8 xcvr] to 2x R9F75A(JL309A)[SR4] (MPO16 MMF breakout to 2x MPO12 (8 fibers each)) 400G QDD eDR4 to 4xQSFP28 FR1 100G Optical Breakout R9B42A (S1D19A) [eDR4 xcvr] to 4x R9B63A (S1D17A) [FR1 xcvr] (MPO12 SMF breakout to 4x LC (2 fibers each))
874253 - B21	HPE Eth 100Gb 1p 842QSFP28 Adptr	QDD to 2xQSFP28 100G AOC R9B60A(S1D25A)[3m], R9B58A(S1D26A)[7m], R9B62A(S1D27A)[15m], R9B61A(S1D28A)[30m], R9B59A(S1D29A)[50m] 400G QDD to 2xQSFP28 100G Optical Breakout R9B41A (S1D18A)[SR8 xcvr] to 2x R9F75A (JL309A) [SR4] (MPO16 MMF breakout to 2x MPO12 (8 fibers each)) Known issue with R9B63A(FR1 xcvr): AOSCX - 229645 when used in this Adapter

Table Continued

HPE Server SKU#	Description	Use case with 9300 32D series Aruba SKU# (HPE SKU#)
P21112 - B21	INT E810 100GbE 2p QSFP28 Adptr	QDD to 2xQSFP28 100G AOC R9B60A(S1D25A)[3m], R9B58A(S1D26A)[7m], R9B62A(S1D27A)[15m], R9B61A(S1D28A)[30m], R9B59A(S1D29A)[50m] 400G QDD to 2xQSFP28 100G Optical Breakout R9B41A(S1D18A)[SR8 xcvr] to 2x R9F75A(JL309A)[SR4] (MPO16 MMF breakout to 2x MPO12 (8 fibers each) Known issue with R9B63A(FR1 xcvr 1990 - 4826): AOSCX - 229643 when used in this Adapter

Table Continued



HPE Server SKU#	Description	Use case with 9300 32D series Aruba SKU# (HPE SKU#)
P22767 - B21	INT E810 100GbE 2p QSFP28 OCP3 Adptr	QDD to 2xQSFP28 100G AOC R9B60A (S1D25A) [3m], R9B58A (S1D26A) [7m], R9B62A (S1D27A)[15m], R9B61A(S1D28A) [30m], R9B59A (S1D29A) [50m] 400G QDD to 2xQSFP28 100G Optical Breakout R9B41A(S1D18A) [SR8 xcvr] to 2x R9F75A(JL309A) [SR4] (MPO16 MMF breakout to 2x MPO12 (8 fibers each) Known issue with R9B63A(FR1 xcvr 1990 - 4826): AOSCX - 229643 when used in this Adapter
P37690 - B21	Pensando DSP DSC - 100 Ent100G QSFP28 Card NOTE: This module has been end of sale as of Dec 2022	QDD to 2xQSFP28 100G AOC R9B60A (S1D25A) [3m], R9B58A (S1D26A) [7m], R9B62A (S1D27A) [15m], R9B61A (S1D28A) [30m], R9B59A (S1D29A) [50m] 400G QDD to 2xQSFP28 100G Optical Breakout R9B41A (S1D18A) [SR8 xcvr] to 2x R9F75A (JL309A) [SR4] (MPO16 MMF breakout to 2x MPO12 (8 fibers each) Known issue with R9B63A(FR1 xcvr 1990 - 4826): AOSCX - 229643 when used in this Adapter
HPE SKU	SKU Description	
874253 - B21	HPE Eth 100Gb 1p 842QSFP28 Adptr	
P21927 - B21	HPE 100GbE 2P QSFP28 MCX516A - CCHT Adptr	

Table Continued

HPE SKU**SKU Description**

Aruba is aware of the following known issues:

P25960 - B21

MLX MCX623106AS 100GbE 2p QSFP56 Adptr*

* Intermittent issues seen with 8360/6400 models when using 3m and 5m DACs (JL307A and R0Z26A) (AOSCX - 231260, AOSCX - 218043, AOSCX - 171162)

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)

Table Continued

HPE SKU #	SKU Description	Issue
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)
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 (ROM44A, ROM45A 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 (ROM44A, ROM45A R0Z21A). (AOSCX - 218043, AOSCX - 171162)
P24437 - B21	XIL X2522 - 25G 10/25GbE 2p SFP28 Adptr	ROM44A, ROM45A 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 (ROM44A, ROM45A R0Z21A). (AOSCX - 218043, AOSCX - 171162) s.

Table Continued

HPE SKU #	SKU Description	Issue
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 (ROM44A, ROM45A R0Z21A). (AOSCX - 218043, AOSCX - 171162).
P13188 - B21	MLX MCX512F 10/25GbE 2p SFP28 Adptr	Intermittent issues seen with 25G AOCs (ROM44A, ROM45A 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 (ROM44A, ROM45A 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** **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

Table Continued

HPE SKU #	SKU Description
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

CableType	HIT SKU #	Description
Same speed DACs and AOCs		
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
Breakout DACs and AOCs		
100G to 4x25G DAC	845416 - B21	HPE100G QSFP28 to4x25G SFP28 3mDAC
100G to 4x25G AOC	845420 - B21 845424 - B21	HPE QSFP28 to 4x25G SFP28 7m AOC 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

Table Continued



CableType	HIT SKU #	Description
40G to 4x10G AOC	721076 - B21	HPE BLc QSFP+ to 4x10G SFP+ 15m AOC
Breakout Fiber cables (see breakout optical cables)		
SR4/eSR4 or 100G SR4	K2Q46A K2Q47A	HPE MPO to 4 xLC 5m Cable
transceivers		HPE MPO to 4x LC 15m Cable
NOTE: 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
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

Table Continued



HPE SKU	HPE Description	Aruba SKU	Aruba Description
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

Table Continued



HPE SKU	HPE Description	Aruba SKU	Aruba Description
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 HPE	JH231A	HPE X142 40G QSFP+ MPO SR4 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

Table Continued



HPE SKU	HPE Description	Aruba SKU	Aruba Description
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
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

Table Continued

HPE SKU	HPE Description	Aruba SKU	Aruba Description
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
S1D39A	Aruba 400G DD - 4xQSFP56 100G 50m AOC HPE	R9B49A	Aruba 400G Q - DD to 4xQSFP56 100G 50m AOC

Validated Modules for Switch and Server NIC Connections

This table provides validated, end-to-end interconnect options for connecting a specific server NIC to a specific switch model. Each row represents one NIC-Switch pairing that has been tested/validated. The first column (NIC) identifies the



server adapter by part number, and the second column (Switch) identifies the target switch platform. The last column (XCVR pairs (NIC ↔ Switch)) lists the allowed transceiver/cable combinations that can be used to form a complete link between that NIC and that switch. Each entry in the last column should be read as a matched pair i.e. the item on the left side of the arrow is the interconnect used on the NIC side, and the item on the right side is the interconnect used on the switch side. Multiple validated options may be provided for the same NIC-Switch pair. These options are typically separated by semicolons, and they indicate alternative supported ways to build the link (for example, different optics, different media types, or different reaches). Where the same part appears on both sides (e.g., “Part A ↔ Part A”), it indicates that the same interconnect type is used at both ends of the link. When using this table, select the row matching your NIC and switch, then choose one complete XCVR pair from the last column and ensure it also matches your deployment requirements (speed, media type, distance/reach, and connector/interface type).

NIC	Switch	XCVR pairs (NIC ↔ Switch)
764284-B21	8360-32p (JL717A)	JH235A ↔ JH235A; JH236A ↔ JH236A
817718-B21	8360-32p (JL717A)	844477-B21 ↔ 844477-B21; 844480-B21 ↔ 844480-B21; JL487A ↔ JL487A; JL488A ↔ JL488A; JL489A ↔ JL489A; R4G18A ↔ R4G18A; R4G19A ↔ R4G19A
817753-B21	8360-32p (JL717A)	844477-B21 ↔ 844477-B21; 844480-B21 ↔ 844480-B21; JL487A ↔ JL487A; JL488A ↔ JL488A; JL489A ↔ JL489A; R4G18A ↔ R4G18A; R4G19A ↔ R4G19A
867328-B21	8360-32p (JL717A)	844477-B21 ↔ 844477-B21; 844480-B21 ↔ 844480-B21; JL487A ↔ JL487A; JL488A ↔ JL488A; JL489A ↔ JL489A; R4G18A ↔ R4G18A; R4G19A ↔ R4G19A
870825-B21	8360-32p (JL717A)	844477-B21 ↔ 844477-B21; 844480-B21 ↔ 844480-B21; JL487A ↔ JL487A; JL488A ↔ JL488A; JL489A ↔ JL489A; R4G18A ↔ R4G18A; R4G19A ↔ R4G19A
874253-B21	8360-32p (JL717A)	845416-B21 ↔ 845416-B21
P08443-B21	8360-32p (JL717A)	844477-B21 ↔ 844477-B21; 844480-B21 ↔ 844480-B21; JL487A ↔ JL487A; JL488A ↔ JL488A; JL489A ↔ JL489A; R4G18A ↔ R4G18A; R4G19A ↔ R4G19A

Table Continued



NIC	Switch	XCVR pairs (NIC ↔ Switch)
P08458-B21	8360-32p (JL717A)	844477-B21 ↔ 844477-B21; 844480-B21 ↔ 844480-B21; JL487A ↔ JL487A; JL488A ↔ JL488A; JL489A ↔ JL489A; R4G18A ↔ R4G18A; R4G19A ↔ R4G19A
P11335-B21	8360-32p (JL717A)	845416-B21 ↔ 845416-B21
P13188-B21	8360-32p (JL717A)	844477-B21 ↔ 844477-B21; 844480-B21 ↔ 844480-B21; JL487A ↔ JL487A; JL488A ↔ JL488A; JL489A ↔ JL489A; R4G18A ↔ R4G18A; R4G19A ↔ R4G19A
P21109-B21	8360-32p (JL717A)	844477-B21 ↔ 844477-B21; 844480-B21 ↔ 844480-B21; JL487A ↔ JL487A; JL488A ↔ JL488A; JL489A ↔ JL489A; R4G18A ↔ R4G18A; R4G19A ↔ R4G19A
P21112-B21	8360-32p (JL717A)	845416-B21 ↔ 845416-B21
P26264-B21	8360-32p (JL717A)	844477-B21 ↔ 844477-B21; 844480-B21 ↔ 844480-B21; JL487A ↔ JL487A; JL488A ↔ JL488A; JL489A ↔ JL489A; R4G18A ↔ R4G18A; R4G19A ↔ R4G19A
P26966-B21	8360-32p (JL717A)	844477-B21 ↔ 844477-B21; JL487A ↔ JL487A; JL488A ↔ JL488A; R4G18A ↔ R4G18A; R4G19A ↔ R4G19A
P37690-B21	8360-32p (JL717A)	N/A
P41849-B21	8360-32p (JL717A)	844480-B21 ↔ 844480-B21; JL487A ↔ JL487A; R4G18A ↔ R4G18A; R4G19A ↔ R4G19A
P41852-B21	8360-32p (JL717A)	N/A
P42044-B21	8360-32p (JL717A)	844477-B21 ↔ 844477-B21; 844480-B21 ↔ 844480-B21; JL487A ↔ JL487A; JL488A ↔ JL488A; JL489A ↔ JL489A; R4G18A ↔ R4G18A; R4G19A ↔ R4G19A
R8M41A	8360-32p (JL717A)	845416-B21 ↔ 845416-B21

Table Continued

NIC	Switch	XCVR pairs (NIC ↔ Switch)
MD09032314	8360-48p (JL719A)	JH234A ↔ JH234A; JH235A ↔ JH235A; JH236A ↔ JH236A
874253-B21	9300-32D (R8Z96A)	N/A
P06154-B21	9300-32D (R8Z96A)	R6F24A ↔ R6F24A; R6F25A ↔ R6F25A; R6F26A ↔ R6F26A; R8M51A ↔ R8M51A; R8M51A ↔ R8M52A; R8M55A ↔ R8M55A; R8M56A ↔ R8M56A; R9B63A ↔ S3N91A; S3N88A ↔ S3N90A; S3N89A ↔ S3N92A; S4B36A ↔ S4B36A; S4B37A ↔ S4B37A; S4B43A ↔ S4B43A
P06250-B21	9300-32D (R8Z96A)	N/A
P06251-B21	9300-32D (R8Z96A)	R6F24A ↔ R6F24A; R6F25A ↔ R6F25A; R6F26A ↔ R6F26A; R8M55A ↔ R8M55A; R8M56A ↔ R8M56A;
P10180-B21	9300-32D (R8Z96A)	R6F24A ↔ R6F24A; R6F25A ↔ R6F25A; R6F26A ↔ R6F26A; R8M51A ↔ R8M51A; R8M51A ↔ R8M52A; R8M55A ↔ R8M55A; R8M56A ↔ R8M56A; S4B36A ↔ S4B36A; S4B37A ↔ S4B37A
P21112-B21	9300-32D (R8Z96A)	R8M55A ↔ R8M55A; R8M56A ↔ R8M56A;
P21611-B21	9300-32D (R8Z96A)	R9B63A ↔ S3N91A; S3N88A ↔ S3N90A; S3N89A ↔ S3N92A
P21927-B21	9300-32D (R8Z96A)	R9B63A ↔ S3N91A; S3N88A ↔ S3N90A; S3N89A ↔ S3N92A
P22767-B21	9300-32D (R8Z96A)	R9B63A ↔ S3N91A; S3N88A ↔ S3N90A; S3N89A ↔ S3N92A
P23664-B21	9300-32D (R8Z96A)	R9B63A ↔ S3N91A; S3N88A ↔ S3N90A; S3N89A ↔ S3N92A; S4B36A ↔ S4B36A; S4B37A ↔ S4B37A; S4B43A ↔ S4B43A

Table Continued

NIC	Switch	XCVR pairs (NIC ↔ Switch)
P23666-B21	9300-32D (R8Z96A)	R8M61A ↔ R8M60A; R9B63A ↔ S3N91A; S3N88A ↔ R8M60A; S3N88A ↔ S3N90A; S3N89A ↔ S3N92A
P24252-B21	9300-32D (R8Z96A)	S3N88A ↔ S3N93A
P25960-B21	9300-32D (R8Z96A)	R6F24A ↔ R6F24A; R6F25A ↔ R6F25A; R6F26A ↔ R6F26A; R8M55A ↔ R8M55A; R8M56A ↔ R8M56A
P31323-B21	9300-32D (R8Z96A)	S4B36A ↔ S4B36A; S4B37A ↔ S4B37A; S4B43A ↔ S4B43A
P31324-B21	9300-32D (R8Z96A)	R6F24A ↔ R6F24A; R6F25A ↔ R6F25A; R6F26A ↔ R6F26A; R8M51A ↔ R8M51A; R8M51A ↔ R8M52A; R8M55A ↔ R8M55A; R8M56A ↔ R8M56A; R9B55A ↔ R9B55A; R9B63A ↔ S3N91A; S3N88A ↔ S3N90A; S3N89A ↔ S3N92A; S4B36A ↔ S4B36A; S4B37A ↔ S4B37A; S4B43A ↔ S4B43A
P31348-B21	9300-32D (R8Z96A)	R6F24A ↔ R6F24A; R6F25A ↔ R6F25A; R6F26A ↔ R6F26A; R8M51A ↔ R8M51A; R8M51A ↔ R8M52A; R8M55A ↔ R8M55A; R8M56A ↔ R8M56A; R9B63A ↔ S3N91A; S3N88A ↔ S3N90A; S3N89A ↔ S3N92A; S4B36A ↔ S4B36A; S4B37A ↔ S4B37A; S4B43A ↔ S4B43A; S6B56A ↔ S6H26A
P41611-B21	9300-32D (R8Z96A)	R8M55A ↔ R8M55A; R8M56A ↔ R8M56A
P45641-B23	9300-32D (R8Z96A)	S6B53A ↔ S6H26A
P65333-B21	9300-32D (R8Z96A)	R6F25A ↔ R6F25A; R6F26A ↔ R6F26A; R8M51A ↔ R8M51A; R8M51A ↔ R8M52A; R8M55A ↔ R8M55A; R8M56A ↔ R8M56A; R9B55A ↔ R9B55A; S4B36A ↔ S4B36A; S4B37A ↔ S4B37A; S4B43A ↔ S4B43A

Table Continued

NIC	Switch	XCVR pairs (NIC ↔ Switch)
P66387-H21	9300-32D (R8Z96A)	S6B52A ↔ S6H26A
P74287-H21	9300-32D (R8Z96A)	S6B56A ↔ S6H26A; S6H27A ↔ S6H27A; S6H28A ↔ S6H28A
P06154-B21	9300S (S0F96A)	S4B36A ↔ S4B36A; S4B37A ↔ S4B37A; S4B43A ↔ S4B43A
P10180-B21	9300S (S0F96A)	S4B36A ↔ S4B36A; S4B37A ↔ S4B37A
P23664-B21	9300S (S0F96A)	S4B36A ↔ S4B36A; S4B37A ↔ S4B37A; S4B43A ↔ S4B43A
P31323-B21	9300S (S0F96A)	S4B36A ↔ S4B36A; S4B37A ↔ S4B37A; S4B43A ↔ S4B43A
P31324-B21	9300S (S0F96A)	S4B36A ↔ S4B36A; S4B37A ↔ S4B37A; S4B43A ↔ S4B43A
P31348-B21	9300S (S0F96A)	S4B36A ↔ S4B36A; S4B37A ↔ S4B37A; S4B43A ↔ S4B43A; S6B56A ↔ S6H26A
P45641-B23	9300S (S0F96A)	S6B53A ↔ S6H26A
P65333-B21	9300S (S0F96A)	S4B36A ↔ S4B36A; S4B37A ↔ S4B37A; S4B43A ↔ S4B43A
P66387-H21	9300S (S0F96A)	S6B52A ↔ S6H26A
P74287-H21	9300S (S0F96A)	S6B56A ↔ S6H26A; S6H28A ↔ S6H28A
700751-B21	10040 (S4R58Z)	J9151E ↔ J9151E; J9281D ↔ J9281D
727054-B21	10040 (S4R58Z)	J9151E ↔ J9151E; J9281D ↔ J9281D
817749-B21	10040 (S4R58Z)	JL749A ↔ JL749A; JL783A ↔ JL783A
P06154-B21	10040 (S4R58Z)	S4B36A ↔ S4B36A; S4B37A ↔ S4B37A

Table Continued

NIC	Switch	XCVR pairs (NIC ↔ Switch)
P13188-B21	10040 (S4R58Z)	JL749A ↔ JL749A; JL783A ↔ JL783A
P23664-B21	10040 (S4R58Z)	S4B43A ↔ S4B43A
P25960-B21	10040 (S4R58Z)	S3N88A ↔ S3N89A; S3N89A ↔ S3N88A
P26269-B21	10040 (S4R58Z)	537963-B21 ↔ 537963-B21; J9153D ↔ J9153D
P26966-B21	10040 (S4R58Z)	537963-B21 ↔ 537963-B21; J9153D ↔ J9153D
P31348-B21	10040 (S4R58Z)	S4B43A ↔ S4B43A
P41611-B21	10040 (S4R58Z)	S3N88A ↔ S3N89A; S3N89A ↔ S3N88A
P74287-H21	10040 (S4R58Z)	R9B41A ↔ R9B41A



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.
S6B57A	HPE 10G SFP+ LR 10km 1pk E-Temp PT XCVR	REQ-117754	Y	Yes (including 8325H) (10.18.0001)	Yes (10.18.0001)
JD095C	HPE X240 10G SFP+ SFP+ 0.65m DAC Cable	REQ - 16624	Y	Yes (10.13.0005)	No

Table Continued



SKU	Base product description	Requirement Reference #	SPOCK Certification	8325 (Min Release)	9300 32D (Min Release)
K2Q21A	HPE C - series 3M Passive Copper SFP+ Cbl DAC	REQ - 16622	Y	Yes (10.12.000x) If used in a QSA28, will report as "unsupported".	No. Storage SKUs not yet supported through QSA28 on the 9300 - 32D.
K2Q22A	HPE C - series 5M Passive Copper SFP+ Cbl DAC	REQ - 16622	Y	Yes (10.12.000x) 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) 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) 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.

Table Continued

SKU	Base product description	Requirement Reference #	SPOCK Certification	8325 (Min Release)	9300 32D (Min Release)
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) Q8J73A can be split to 4x25G LR streams.	Yes (10.13.1000) 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 QSA28 on the 9300 - 32D.
S6B58A	HPE 25G SFP28 LR 10km 1pk E-Temp PT XCVR	REQ-117754	Y	Yes (including 8325H) (10.18.0001)	Yes (10.18.0001)
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.

Table Continued

SKU	Base product description	Requirement Reference #	SPOCK Certification	8325 (Min Release)	9300 32D (Min Release)
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) 8325H (10.17.0001)	Yes (10.17.0001) only QSFP28 side
R0R40A	HPE 100Gb QSFP28 LC SWDM4 MM 100m xcvr	REQ - 16624	Y	Yes (10.13.0005)	No. Storage SKUs not yet supported through QSA28 on the 9300 - 32D.
R0R42A	HPE 25Gb SFP28 SR 30m xcvr	REQ - 16622	Y	Yes (10.12.000x) If used in a QSA28, will report as "unsupported".	No. Storage SKUs not yet supported through QSA28 on the 9300 - 32D.

Table Continued

SKU	Base product description	Requirement Reference #	SPOCK Certification	8325 (Min Release)	9300 32D (Min Release)
R4G18A	HPE 25Gb SFP28/ SFP28 0.5m DAC	REQ - 16624	Y	Yes (10.13.0005) 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) 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

Table Continued

SKU	Base product description	Requirement Reference #	SPOCK Certification	8325 (Min Release)	9300 32D (Min Release)
R5Z83A	HPE 200Gb QSFP56 MPO SR4 100m XCVR	REQ - 87479	Y	N/A	10.14.1000
R5Z84A	HPE 200Gb QSFP56 LC CWD4M4 FR4 xcvr	REQ - 16626	Y	N/A	10.14.0001
S6B56A	HPE 200G QSFP56 VR2 50m XCVR	REQ-117729	Y	N/A	10.18.0001 Can be connected to 400G VR4 (S6B51A/S6H26A)
S6B51A	HPE 400GbE QSFP-DD VR4 50m XCVR	REQ-117729	Y	N/A	10.18.0001
R8M60B	HPE 400GbE QSFP-DD DR4 500m XCVR	REQ-117729	Y	N/A	10.18.0001 Can be connected to 4x 100G (S3N88A)
R6F27A	HPE 200Gb QSFP56/4x50/25 Gb 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)

Table Continued

SKU	Base product description	Requirement Reference #	SPOCK Certification	8325 (Min Release)	9300 32D (Min Release)
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 Cable	REQ - 4541	Y	N/A	No
R8M53A	HPE 400GbE QSFP - DD to 8xSFP56 2m Direct Attach Copper Cable	TBD	TBD	N/A	10.15.1000

Table Continued



SKU	Base product description	Requirement Reference #	SPOCK Certification	8325 (Min Release)	9300 32D (Min Release)
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.

Table Continued



SKU	Base product description	Requirement Reference #	SPOCK Certification	8325 (Min Release)	9300 32D (Min Release)
R8M60A/R8M60B	HPE 400GbE QSFP - DD MPO DR4 500m Transceiver	REQ - 58354	Y	N/A	Yes (10.13.1000) NOTE: When the R9M60A/R9M60B 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 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 max operating 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

Table Continued

SKU	Base product description	Requirement Reference #	SPOCK Certification	8325 (Min Release)	9300 32D (Min Release)
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 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)
845410 - B21	HPE 100Gb QSFP28 to QSFP28 7m Active Optical Cable	REQ - 104952	Y	Yes (10.17.0001)	Yes (10.17.0001)
845414 - B21	HPE 100Gb QSFP28 to QSFP28 15m Active Optical Cable	REQ - 104952	Y	Yes (10.17.0001)	Yes (10.17.0001)
845406 - B21	HPE 100Gb QSFP28 to QSFP28 3m Direct Attach Copper Cable	REQ - 104952	Y	Yes (10.17.0001)	Yes (10.17.0001)
845408 - B21	HPE 100Gb QSFP28 to QSFP28 5m Direct Attach Copper Cable	REQ - 104952	Y	Yes (10.17.0001)	Yes (10.17.0001)



Cabling and technology information

Technology standards and safety compliance

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

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

Table Continued



Technology	IEEE Standards	Laser Safety Information	
		EN / IEC Standards	Lasers
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
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

Table Continued

Technology	IEEE Standards	Laser Safety Information	
		EN / IEC Standards	Lasers
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.

NOTE: 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.



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. For more details, see 1000 BASE-T Cable Requirements.
	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. For more details, see 10 GBASE-T Cable Requirements for distances supported with each cable type. CAT6A F/FTP, S/FTP, SF/FTP highly recommended in noisy environments. For more information, see <i>Aruba Support_Advisory_JL563A_10 GBaseT_APSC - RS20180403 - 01</i>
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).



Support and other resources

Accessing Aruba Support

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

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	https://community.arubanetworks.com/
Software licensing	https://lms.arubanetworks.com/
End - of - Life information	https://www.arubanetworks.com/support - services/end - of - life/
Access through the Networking Support Portal, and see the End of Life 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://asp.arubanetworks.com/downloads> <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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Compatible split optical transceivers to lower-speed transceivers

The following optical transceivers can be split and connected to a lower speed optical transceiver on the far-end of the link:

NOTE: 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 (S1C93A) (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. Refer to 400G Q - DD optical interoperability .
QDD 400G eDR4(S3N93A) or 400G eDR4(R9B42A)	Single mode fiber, 8 fibers split into 4 groups of 2 fibers to 100G DR S3N88A (500m reach) or 100G FR1. (2km reach)	Uses SMF MPO12 to 4x LC (2 fibers each) 400G DR4 has a distance limit of 500m 400G eDR4 has a distance limit of 2km. Connecting to the 100G DR (500m) or 100G FR (2km) will be limited by the xcvr with the lowest reach. 100G DR 500m (S3N88A) and 100G FR1 technology (2km) uses a different wavelength than 100G LR4.
QDD 400G PLR4	Single mode fiber, 8 fibers split into 4 groups of 2 fibers to 100G LR. (10km reach)	Uses SMF MPO12 to 4x LC (2 fibers each) 100G LR technology (110 km) uses a single wavelength per fiber, whereas 100G LR4 uses 4 wavelengths per fiber, i.e., 400G PLR4 will not connect to 100G LR4.

Table Continued



Upstream Hi - speed transceiver	Downstream lower - speed transceiver	Notes
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) 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).

NOTE: 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
Aruba 6300 Series SOE91A, SOX44A - 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.
Aruba 6400 Series	V1 or v2 series: No support for split ports.	Contact product management if split use - case is needed.

Table Continued

Part number (PN)	Description/notes	Port info
Aruba 8100 Series	48 port models cannot split the QSFP28 ports as there not enough MACs in the system.	24XF4C models: 25 - 28 (40G or 100G)
		24XT4XF4C model: 29 - 32 (40G or 100G).
	R9W94A (R9W86A/R9W87A) - 24XF4C models	48XF and 40XT8XF models cannot split the QSFP28 ports(not enough MACs)
Aruba 8320 Switch Series	JL479A Aruba 8320 48 10/6 40 X472 5 2 Bdl	49 - 54 (40G)
	JL579A Aruba 8320 32 40G X472 5 2 Bdl	5 - 28 (40G, center 24 ports) JL579A is limited in number of MACs. Software limits only ports 5 - 28 to be able to split. The remaining ports 1 - 4 and 29 - 32 can continue to be used as 40G ports.
Aruba 8325 48Y8C models	Base system SKU displayed by show system	49 - 56 (40G or 100G) 1 - 32 (40G or 100G)
	JL624A Aruba 8325 - 48Y8C FB 6 F 2 PS Bdl	
Aruba 8325 32C models	JL625A Aruba 8325 - 48Y8C BF 6 F 2 PS Bdl	
	Base system SKU displayed by show system	
JL635A (base system)	JL626A Aruba 8325 - 32C FB 6 F 2 PS Bdl	
	JL627A Aruba 8325 - 32C BF 6 F 2 PS Bdl	

Table Continued

Part number (PN)	Description/notes	Port info
Aruba 8360 32Y4C models	Base system SKU displayed by show system	33 - 36 (40G or 100G)
JL717A/JL717C(v2)(base system)	JL700A / JL700C (v2) Aruba 8360 - 32Y4C Prt2Pwr3F2PS Bdl	17 - 18 (40G or 100G)
Aruba 8360 16Y2C models	JL701A / JL701C (v2) Aruba 8360 - 32Y4C 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.
JL718A/JL718C(v2)(base system)	Base system SKU displayed by show system	1 - 12 (40G or 100G)
Aruba 8360 48XT4C models	JL702A / JL702C (v2) Aruba 8360 - 16Y2C Prt2Pwr3F2PS Bdl	25 - 26 (40G or 100G)
JL720A/JL720C(v2)(base system)	JL703A / JL703C (v2) Aruba 8360 - 16Y2C Pwr2Prt3F2PS Bdl	49 - 54 (40G or 100G)
Aruba 8360 - 12C models	Base system SKU displayed by show system	MACsec available on ports 53 - 54 and available to the split 10G or 25G links through ports 53 - 54
JL721A/JL721C(v2)		
(base system)		
Aruba 8360 24XF2C models	JL706A / JL706C (v2) Aruba 8360 - 48XT4C Prt2Pwr3F2PS Bdl	
JL722A/JL722C(v2)(base system)	JL707A / JL707C (v2) Aruba 8360 - 48XT4C Pwr2Prt3F2PS Bdl	
Aruba 8360 48Y6C models	Base system SKU displayed by show system	
JL719C (base system)	JL708A / JL708C (v2) Aruba 8360 - 12C Pwr2Prt3F2PS Bdl	
	JL709A / JL709C (v2) Aruba 8360 - 12C Prt2Pwr3F2PS Bdl	
	Base system SKU displayed by show system	
	JL710A / JL710C (v2) Aruba 8360 - 24XF2C Prt2Pwr3F2PS Bdl	
	JL711A / JL711C (v2) Aruba 8360 - 24XF2C Pwr2Pwr3F2PS Bdl	
	Base system SKU displayed by CLI show system	
	JL704C (v2) Aruba 8360 - 48Y6C v2 FB 5F 2AC Bdl	
	JL705C (v2) Aruba 8360 - 48Y6C v2 BF 5F 2AC Bdl	

Table Continued

Part number (PN)	Description/notes	Port info
Aruba 8400X modules	JL365A Aruba 8400X 8p 40G QSFP+ Adv Mod	1 - 8 (40G)
	JL366A Aruba 8400X 6p 40G/100G QSFP28 Adv Mod	1 - 6 Only capable of 40G split into 4 x 10G
		JL366A modules do not have 25G MACs to support split 100G
Aruba 9300 32D models	Base system SKU displayed by CLI show system	1 - 32 (40G, 100G, 200G, 400G)
R8Z96A (base system)	R9A29A Aruba 9300 32D 32D2XF FB 6F2AC Bdl	
	R9A30A Aruba 9300 32D 32D2XF BF 6F2AC Bdl	
Aruba 9300S 32C8D models	Base system SKU displayed by CLI show system	Ports 1 - 8 and 33 - 48 can not be split but are capable of using the QSA28 adapter.
S0F95A (TAA base system) S0F96A (base system)	S0F81A HPE ANW 9300S 32C 8D FB 6Fs AC TAA Bdl	The 9300S uses split profiles: system interface - profile split < NAME >
	S0F83A HPE ANW 9300S 32C 8D BF 6Fs AC TAA Bdl	"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)
	S0F84A HPE ANW 9300S 32C 8D BF 6Fs AC Bdl	
	S0F87A HPE ANW 9300S 32C 8D BF 6Fs DC TAA Bdl	"profile - 2" maximizes 25G downstream splits (10 ports: 13,15 - 17, 19, 21, 23, 25 - 27)
	S0F88A HPE ANW 9300S 32C 8D BF 6Fs DC Bdl	Refer to the AOS - CX Fundamentals Guide for Aruba 9300 Switch Series for more information about the system Interface - profile command.
Aruba 10000 models	Base system SKU displayed by CLI show system	49 - 54 (40G or 100G)
R8S96A (base system)	R8P13A Aruba CX 10000 - 48Y6C FB 6F 2PS Bdl	
	R8P14A Aruba CX 10000 - 48Y6C BF 6F 2PS Bdl	

NOTE: 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 or FR1) on the far end of the link.

Technology distance specifications

The following table describes the technology distance specifications.

Technology	Supported cable type	Multimode fiber modal bandwidth	Supported distances
1000 BASE - T	Twisted - pair copper	N/A	Up to 100 meters
1000 BASE - SX	Multimode fiber	160 MHz*km	2 - 220 meters
		200 MHz*km	2 - 275 meters
		400 MHz*km	2 - 500 meters
		500 MHz*km	2 - 550 meters
1000 BASE - LX	Single mode fiber	N/A	2 - 10,000 meters
1000 BASE - LH	Single mode fiber	N/A	2 - 70,000 meters**
10 GBASE - T*	Twisted - pair copper	N/A	Cat 6A unshielded - up to 100 meters ²
			Cat 6A shielded - up to 100 meters
			Cat 7 shielded - up to 100 meters
10 GBASE - CR (Direct Attach)	Twinaxial copper	N/A	Various lengths offered
10 GBASE - SR	Multimode fiber	160 MHz*km	2 - 26 meters
		200 MHz*km	2 - 33 meters
		400 MHz*km	2 - 66 meters
		500 MHz*km	2 - 82 meters
		2000 MHz*km	2 - 300 meters
10 GBASE - LR	Single mode fiber	N/A	2 - 10,000 meters
10 GBASE - ER	Single mode fiber	N/A	2 - 40,000 meters**
25 GBASE - CR	Twinaxial copper	N/A	Various lengths offered

Table Continued

Technology	Supported cable type	Multimode fiber modal bandwidth	Supported distances
25 GBASE - SR	Multimode fiber	1500 MHz*km	2 - 70 meters
		3500 MHz*km	2 - 100 meters
25 GBASE - eSR	Multimode fiber	1500 MHz*km	2 - 200 meters
		3500 MHz*km	2 - 400 meters
25 GBASE - LR	Single mode fiber	N/A	2 - 10,000 meters
40 GBASE - CR4	Twinaxial copper	N/A	Various lengths offered
40 GBASE - SR4	Multimode fiber	1500 MHz*km	2 - 100 meters
		3500 MHz*km	2 - 150 meters
40 GBASE - eSR4	Multimode fiber	1500 MHz*km	2 - 330 meters
		3500 MHz*km	2 - 550 meters
40 GBASE - LR4	Single mode fiber	N/A	2 - 10,000 meters
40 GBASE - ER4	Single mode fiber	N/A	2 - 40,000 meters**
40 GBASE - BiDi	Multimode fiber	1500 MHz*km	2 - 100 meters
		3500 MHz*km	2 - 150 meters
100 GBASE - CR4	Twinaxial copper	N/A	Various lengths offered
100 GBASE - SR4	Multimode fiber	1500 MHz*km	2 - 100 meters
		3500 MHz*km	2 - 150 meters
100 GBASE - LR4	Single mode fiber	N/A	2 - 10,000 meters

*The JL563A 10 GBase - T transceiver is limited to a 30m cable length.

**For distances less than 210 km, a 10dB attenuator must be used. For distances between 210 km and 40 km, a 5dB attenuator must be used. Attenuators can be purchased from most cable vendors.