HPE Aruba Networking CX 9300-32D and 9300S-32C8D Switch Series

Installation and Getting Started Guide

Hewlett Packard Enterprise

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Chapter 1
About this Document

This document is intended for network administrators and support personnel.

- The display and command line illustrated in this document are examples and might not exactly match your particular switch or environment.
- The switch and accessory drawings in this document are for illustration only, and may not exactly match your particular switch and accessory products.

Applicable Products

Model	Description
R9A29A	HPE Aruba Networking 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Front-to-Back 6 Fans 2 AC PSU Bundle
R9A30A	HPE Aruba Networking 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Back-to-Front 6 Fans 2 AC PSU Bundle
R8Z96A	HPE Aruba Networking 9300-32D 32-port 100/200/400G QSFP-DD 2-port 10G Switch
R8Z97A	HPE Aruba Networking 1500W 100-240VAC Front-to-Back AC Power Supply
R8Z98A	HPE Aruba Networking 1500W 100-240VAC Back-to-Front AC Power Supply
R8Z99A	HPE Aruba Networking Front-to-Back Fan Module
R9A00A	HPE Aruba Networking Back-to-Front Fan Module

Model	Description
S0F81A	HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Front-to-Back 6xFan 2xAC PSU TAA Bundle
S0F82A	HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Front-to-Back 6xFan 2xAC PSU Bundle
S0F83A	HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xAC PSU TAA Bundle
S0F84A	HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xAC PSU Bundle
S0F87A	HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xDC

Model	Description
	PSU TAA Bundle
S0F88A	HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xDC PSU Bundle
S0F90A	HPE Aruba Networking X3A15 12VDC 1600W 40-75VDC Back-to-Front Input Screw Terminal Power Supply Unit
S0F91A	HPE Aruba Networking X3A13 12VDC 1600W Front-to-Back C15 AC Power Supply Unit
S0F92A	HPE Aruba Networking X3A13 12VDC 1600W Back-to-Front C15 AC Power Supply Unit
S0F93A	HPE Aruba Networking X761 Front-to-Back Fan
S0F94A	HPE Aruba Networking X762 Back-to-Front Fan
S0F95A	HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G TAA Switch
S0F96A	HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Switch

Related Publications

- Start Here: Installation, Safety, and Regulatory Information for the HPE Aruba Networking CX 9300-32D and 9300S-32C8D Switches
- ArubaOS-Switch ArubaOS-CX Transceiver Guide
- ArubaOS-CX software manuals
- Fundamentals Guide for more information about installing, configuring, and managing your switch.

To view and download these publications, visit the HPE Networking Support Portal.

Chapter 2
Introducing the Switches

This chapter covers the following information: Management ports, Console ports, Out-of-band Management port, USB-A Aux port, Network ports, Chassis and port LEDs, Switch Product Label, Chassis grounding location, Power supplies, fan trays, LED Behavior and Switch Features.

Overview

The HPE Aruba Networking CX 9300 Switch Series is a family of premium networking switches, ideal for enterprise data centers, network aggregation and core. They provide the foundation for high-performance networks supporting IoT, mobile, and cloud applications.

These switches are intended for indoor use only. They are for use in commercial applications. A typical installation is in an environmentally controlled data center. The end use environment may or may not be a restricted access location.

HPE Aruba Networking CX 9300-32D

The HPE Aruba Networking CX 9300-32D switch is a next-generation 25.6 Tbps, 1U fixed configuration switch supporting 32-ports of 100GbE, 200GbE or 400GbE, including support for 10G and 25G when using breakouts. The switch is an ideal solution for flexible, cost-effective, high-density 400GbE networking for server, storage, and intra-fabric connectivity. This solution helps protect enterprises investment as they transition server farms from 10GbE and 10GbE/25GbE to 100GbE/400GbE EVPN-VXLAN leaf and/or spine configurations at reduced power and a smaller footprint. The CX 9300-32D switch supports large data center PODS of up to 16,834 x 25GbE servers or up to 8,192 x 100GbE servers when using 4x100G SN transceivers. This is an 24x jump in scale and density over current HPE Aruba Networking CX 8325-32C which scales to 700 x 25GbE servers. The CX 9300-32D switch can be used as a 100GbE Leaf or 100GbE/400GbE Spine switch (128 x 100GbE or 64 x 200GbE ports using breakouts). When deployed as a Spine, the CX 9300-32D switch flexibility connects to a range of leaf switches including HPE Aruba Networking CX 8325 switch series, HPE Aruba Networking CX 8360 switch series, HPE Aruba Networking 9300S, or HPE Aruba Networking CX 10000 switch series. With HPE Aruba Networking's most recent AOS-CX release, the CX 10000, CX 9300, CX 9300S, and CX 8325 switches provide an ideal solution for data center, cloud and storage use cases that support top-of-rack server/storage connectivity and scale-out leaf-spine fabric topologies. These innovative AOS-CX enhancements provide storage-optimization to ensure low-latency and "lossless" network QoS and connectivity characteristics that storage requires

HPE Aruba Networking CX 9300S-32C8D

The HPE Aruba Networking CX 9300S-32C8D switch is a next generation 16 Tbps, 1U fixed configuration switch supporting 32-ports of 100GbE and 8-ports of 400GbE. The switch is an ideal solution for flexible, cost-effective, high-density 10/25/100/200GbE connectivity server, storage, and 400GbE intra-fabric connectivity. This solution helps enterprises protect their investments as they transition server farms from 10GbE to 25GbE to 100GbE/200GbE EVPN-VXLAN leaf-spine configurations at reduced power and a smaller footprint. The switch can also support 200GbE server facing ports for AI/ML deployments. The CX 9300S-32C8D hardware is also PTP capable*. HPE Aruba Networking CX 9300S-32C8D can support 6.4 Tbps of MACSEC and 4.8 Tbps of IPSEC/VXLANSEC* for secure inter-rack and DCI deployments. The switch can be used in spine and leaf for an end to end 28-rack MACSEC deployment with 100G leaf-spine links. The traditional approach to data

encryption has essentially been through IPsec platforms. With the CX 9300S-32C8D users can extend encryption to cover IPSEC and VXLANSEC in addition to existing MACSEC** capabilities. These encryption capabilities are embedded to deliver end-to-end security and eliminates the dates for multiple security services to support encryption. The CX 9300S-32C8D can also be deployed in campus core/collapsed core deployments where a compact form factor, high performance, high density with MACSEC is needed. The CX 9300-32D and CX 9300S-32C8D/10000/8325 switches provide an ideal solution for data center, cloud and storage use cases that support top-of-rack server/storage connectivity and scale-out leaf-spine fabric topologies. These innovative AOS-CX enhancements provide storage-optimization to ensure low-latency and “lossless” network QoS and connectivity characteristics that storage requires.

** HW capable. Currently not supported in current AOS-CX software*

*** HW capable on all ports. AOS-CX currently supports MACSEC only on ports 1-8 and 33-40*

Management ports

The following section provides information about the Console Port, Out-of-band Management (OOBM) Port, and the USB-A Aux port.

Console port

HPE Aruba Networking CX 9300-32D and 9300S-32C8D switches includes an RJ45 serial console port on the front of the switch for the 9300-32D and on the back of the switch for the 9300S-32C8D. This port is used to connect a console to the switch by using an RJ45 serial cable (not supplied). The following cables can be ordered separately from HPE: JL448A HPE Aruba Networking X2C2 RJ45 to DB9 Console Cable; R9G48A HPE Aruba Networking USB-A to RJ45 PC-to-Switch Cable; R9J32A HPE Aruba Networking USB-A to USB-C PC-to-Switch Cable ; R9J33A HPE Aruba Networking USB-C to USB-C PC-to-Switch Cable.

HPE Aruba Networking cables can be purchased separately.

The 9300-32D switch also include a micro-USB port on the front of the switch. This port can be used to connect a console to the switch by using a standard micro-USB cable (not supplied). The micro-USB has precedence for input over RJ45 console port. If both cables are plugged in, the console output is echoed to both the RJ45 and the micro-USB ports, but the input is only accepted from the micro-USB port.

Use of the micro-USB port may require the installation of a standard USB driver. New Windows installs include the driver by default.

The 9300S-32C8D switch also includes a USB-C port on the front of the switch. This port can be used to connect a console to the switch by using a standard USB-C cable (not supplied). The USB-C has precedence for input over RJ45 console port. If both cables are plugged in, the console output is echoed to both the RJ45 and the USB-C port, but the input is only accepted from the USB-C port.

For more information on the console connection, see Setup for Initial Configuration on page 59. The console can be a PC or workstation running a VT-100 terminal emulator, or a VT-100 terminal.

Out-of-band Management (OOBM) port

This RJ-45 port is used to connect a dedicated management network to the switch. To use it, connect an RJ-45 network cable to the management port to manage the switch through Telnet from a remote PC or a UNIX workstation.

To use this port, the switch must have an IP address. IP settings can be configured through a console port connection or automatically from a DHCP/Boot server.

A networked out-of-band connection through the management port allows you to manage data network switches from a physically and logically separate management network.

For more information, see the Fundamentals Guide for your switch.

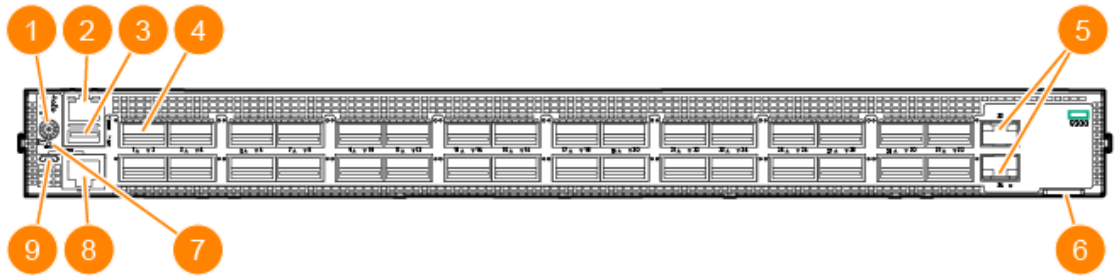
USB-A Aux port

The USB-A port is used for file management, downloading switch software or use of HPE Aruba Networking accessories.

The HPE Aruba Networking CX mobile app and the HPE Aruba Networking USB-A Bluetooth adapter, S1H23A (ordered separately) enable you to configure your switch from your mobile device. For information about using the Aruba CX mobile app to configure the switch, see the Fundamentals Guide for your switch and software release.

Front of the Switches

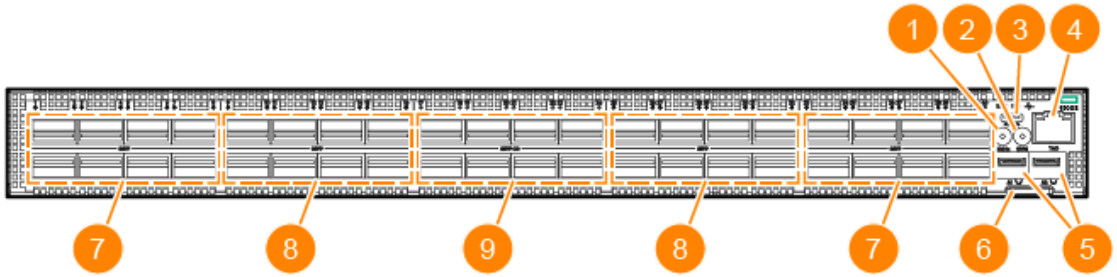
Figure 1 *Example of an 9300-32D switch*



Label	Description
1	1PPS Output DIN 1.0/2.3 connector*
2	Out-of-band Management port
3	USB Type-A auxiliary port
4	QSFP-DD ports
5	SFP+ ports*

Label	Description
6	Switch product label pull tab
7	Reset button
8	RJ-45 console port
9	Micro USB console port

Figure 2 *Example of an 9300S-32C8D switch*



Label	Description
1	10MHz Input / Output SMB connector*
2	1PPS Input / Output SMB connector*
3	USB-C console port
4	Time-of-day port*
5	SFP+ ports*
6	Switch product label pull tab
7	100G/200G QSFP56 ports (Compatible to use 40G and with a QSA28 adapter: 10G, 25G - except DACs)
8	100G/200G QSFP56 ports (Compatible to use 40G and with a QSA28 adapter: 10G, 25G - except DACs)
9	100G/200G/400G QSFP-DD ports (Compatible to use 40G and with a QSA28 adapter: 10G, 25G - except DACs)

** HW Capable, not currently supported on AOS-CX.*

Network Ports

Insert port plugs on any open ports to ensure compliance with FCC part B radiated emission standards.

Switch	Model name	QSFP-DD ports	SFP+ ports*
R8Z96A	HPE Aruba Networking 9300-32D 32-port 100/200/400G QSFP-DD 2-port 10G SFP+ Switch	32	2

Switch	Model name	QSFP-DD ports	QSFP28 ports	QSFP56 ports	SFP+ ports*
S0F95A	HPE Aruba Networking CX 9300S-32C8D 32p QSFP28 100G 8p QSFP-DD 400G TAA Switch	8 Ports 17-24 Supports 400G, 200G, 100G and 40G products	16 Ports 1-8 and 33-40 Supports 100G and 40G products	16 Ports 9-16 and 25-32 Supports 200G, 100G and 40G products	2 Ports 41-42
S0F96A	HPE Aruba Networking CX 9300S-32C8D 32p QSFP28 100G 8p QSFP-DD 400G Switch	8 Ports 17-24 Supports 400G, 200G, 100G and 40G products	16 Ports 1-8 and 33-40 Supports 100G and 40G products	16 Ports 9-16 and 25-32 Supports 200G, 100G and 40G products	2 Ports 41-42

* *HW Capable, not currently supported on AOS-CX.*

For supported transceivers, see the latest version of the ArubaOS-Switch and ArubaOS-CX Transceiver Guide.

Split mode for QSFP56 and QSFP-DD ports

Some QSFP56 and QSFP-DD ports on the HPE Aruba Networking CX 9300 switch series are capable of operating in 'split port' mode using the CLI command:

```
split [<count>] [<speed>] [confirm]
```

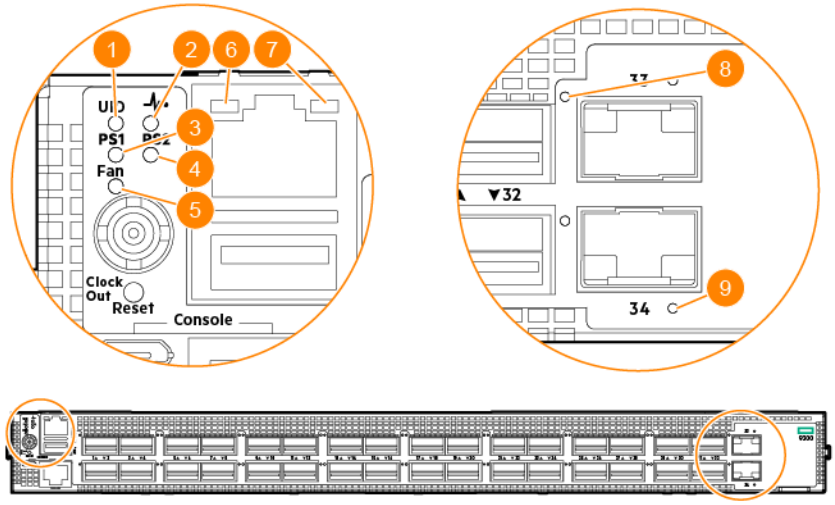
The `<count>` indicates how many split ends are to be configured, and what `<speed>` those ends will be running.

<count> of Split 'ends'	<speed> of the 'ends'	Example product (see datasheet for more) "*" are the solution on the far end of the link
2	200G	R9B53A HPE Aruba Networking 400G QDD to 2xQSFP56 200G 7m AOC * connect to HPE Server Adapters that are 200G QSFP56
2	100G	R9B58A 200G QDD to 2xQSFP28 100G 7m AOC
4	100G	R9B48A HPE Aruba Networking 400G QDD to 4xQSFP56 100G 7m AOC

<count> of Split ‘ends’	<speed> of the ‘ends’	Example product (see datasheet for more) “*” are the solution on the far end of the link
		R9B42A HPE Aruba Networking 400G QDD MPO12 eDR4 2km SMF XCVR * R9B63A HPE Aruba Networking 100G QSFP28 LC FR1 2KM SMF XCVR
4	25G	(845420-B21)HPE QSFP28 to 4x25G SFP28 7m AOC (HPE Server product) JL309A HPE Aruba Networking 100G QSFP28 MPO SR4 MMF XCVR * JL309A HPE Aruba Networking100G QSFP28 MPO SR4 100m MMF XCVR
4	10G	(721064-B21) - HPE 40G QSFP+ to 4x10G SFP+ 3m DAC Splitter JH233A HPE X142 40G QSFP+ MPO eSR4 300M XCVR * J9150D Aruba 10G SFP+ LC SR 300m MMF XCVR

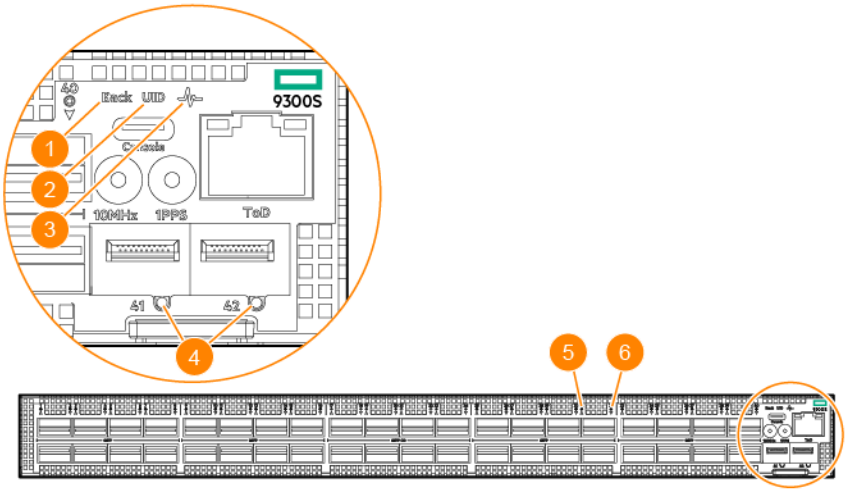
Chassis and Port LEDs on the front of the switch

Figure 1 *Chassis and Port LEDs for the HPE Aruba Networking CX 9300-32D*



Label	Description
1	Unit Identification / Locator LED
2	Global status LED
3	Power Supply 1 status LED
4	Power Supply 2 status LED
5	Fan Status LED
6	Reserved for future use
7	Out-of-band-Management Link/Activity LED
8	QSFP56-DD port indicator LEDs
9	SFP+ port indicator LEDs

Figure 2 *Chassis and Port LEDs for the HPE Aruba Networking 9300S-32C8D*



Label	Description
1	Rear modules status LED
2	Unit Identification / Locator LED
3	Global status LED
4	SFP+ port indicator LEDs
5	QSFP top port indicator LEDs
6	QSFP bottom port indicator LEDs

Switch Product Label

The switch product label is located on the orange pull tab on the bottom right side of the switch front panel. Pull the tab out to view the product label information.

Figure 1 *HPE Aruba Networking CX 9300-32D switch product label (pull tab)*

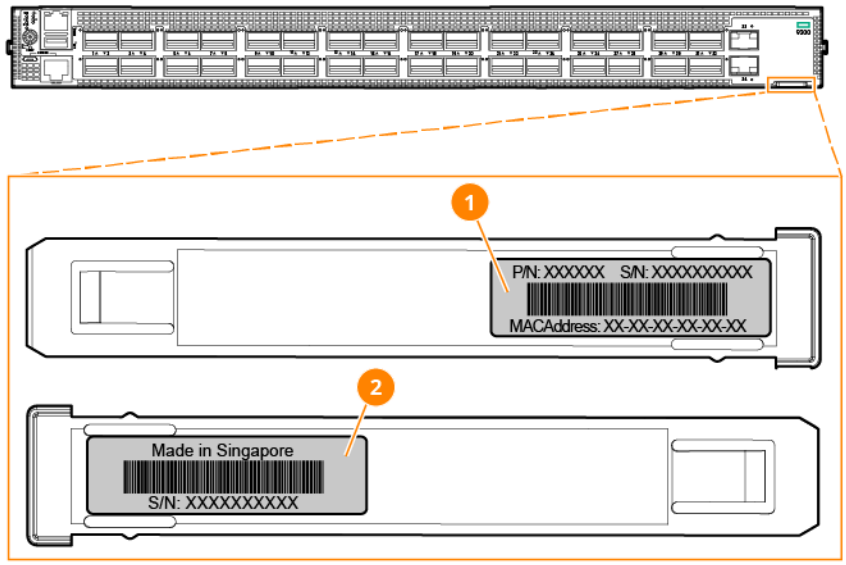
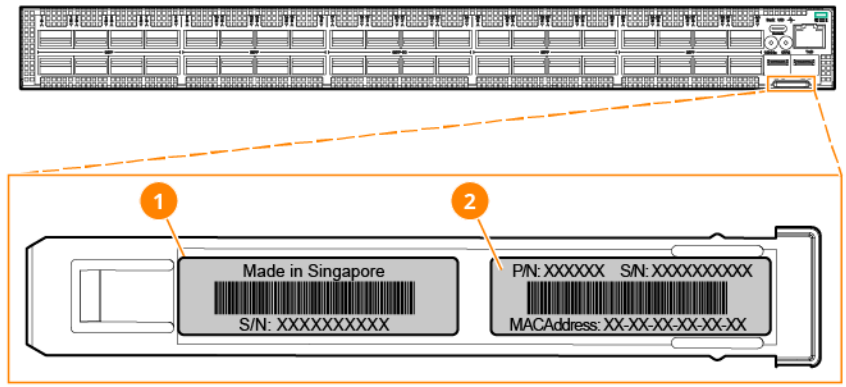


Figure 2 *HPE Aruba Networking CX 9300S-32C8D switch product label (pull tab)*

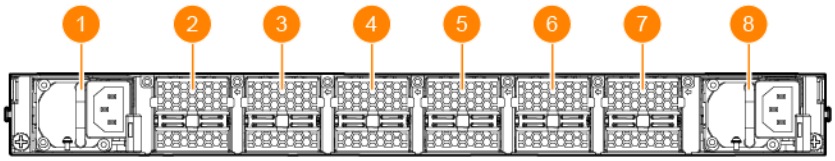


Label	Description
1	Country of origin and Serial number
2	Part number, Serial number and MAC address

Back of the Switches

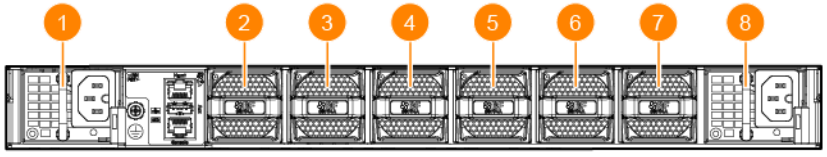
The back of 9300-32D and 9300S-32C8D switches include two power supply units and six fan trays.

Figure 1 *Fans and power supplies on the back of the 9300-32D switch*



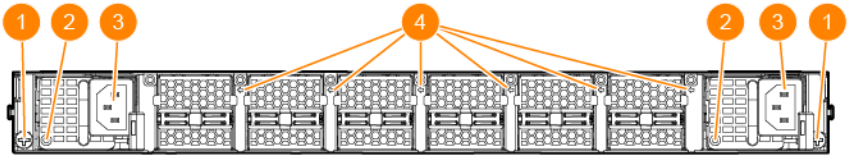
Label	Description
1	Power Supply 1
2	Fan Tray 1
3	Fan Tray 2
4	Fan Tray 3
5	Fan Tray 4
6	Fan Tray 5
7	Fan Tray 6
8	Power Supply 2

Figure 2 *Fans and power supplies on the back of the 9300S-32C8D switch*



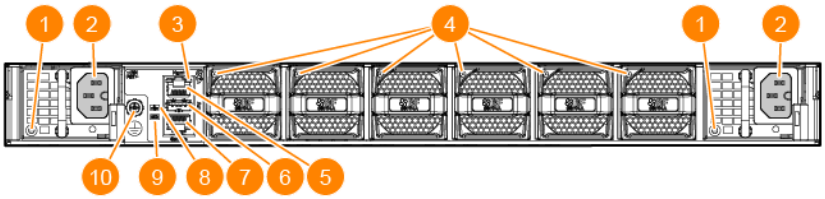
Label	Description
1	Power Supply 1
2	Fan Tray 1
3	Fan Tray 2
4	Fan Tray 3
5	Fan Tray 4
6	Fan Tray 5
7	Fan Tray 6
8	Power Supply 2

Figure 3 *LEDs and components on the back of the 9300-32D switch*



Label	Description
1	Optional Ground Lug mounting locations
2	Power Supply Unit Status LED
3	AC Inlet (C14 Socket)
4	Fan Tray status LED

Figure 4 *LEDs and components on the back of the 9300S-32C8D switch*



Label	Description
1	Power Supply Unit Status LED
2	AC Inlet (C16 Socket) or DC inlet (not shown)
3	Out-of-band-Management (OOBM) LED
4	Fan Tray status LED
5	Out-of-band-Management (OOBM) port
6	USB Type-A auxilliary port
7	RJ45 console port
8	Global Status LED
9	Unit Identification / Locator LED
10	Optional Ground Lug mounting location M5x0.80, T25 Torx recess, 10mm long Ground Screw W/Lock Washer

Power Supplies

The HPE Aruba Networking CX 9300-32D and 9300S-32C8D switches are powered on when at least one powered on when at least one installed power supply is connected to an active power source. The AC power supplies automatically adjust to any voltage between 100-127 and 200-240 volts and either 50 or 60 Hz. There are no voltage range settings required.

WARNING: 9300-32D switches are capable of operating with high-line (200-240VAC) or low-line (100-127VAC) power sources. Switches using low-line (100-127VAC) power sources are limited to a maximum of 8 high-power transceivers (>5W) and all remaining transceivers must be 5 Watts or less. Any excess high-power transceivers will be disabled. Transceivers requiring 5 Watts or less are not affected by the power source voltage.

WARNING: 9300S-32C8D switches using low-line (100-127VAC) power sources cannot enable high-power transceivers that requires more than 5 Watts with the default configuration of N+N redundancy mode. The switch must be configured to non-redundant power mode to use high-power transceivers (>5W) with low-line input. Transceivers requiring 5 Watts or less are not affected by the power source voltage

Never insert or remove a power supply while the power cord is connected. Verify that cord has been disconnected from the power supply before installation or removal.

- The HPE Aruba Networking CX 9300 switch series power supplies adapt electrical power for use with the switch. The chassis has two slots that can hold individual power supplies to support load sharing, redundancy, and fault tolerance.
- System airflow direction is configured automatically at system initialization and cannot be reconfigured by the user. System airflow direction is determined by the power supply type installed in PS1 at initialization time (or PS2 if PS1 is non-operational). Any fan tray or power supply of conflicting airflow type will be disabled by the system. Ensure only matching fan trays and power supplies are used at any given runtime.
- For proper thermal and power operation all power supply latches and fan handles must be the same color (all blue or all red).
- HPE Aruba Networking CX9300-32D and 9300S-32C8D power supplies are not interchangeable. Only use the proper power supply for your switch model.

For 9300-32D:

Figure 1 *(R8Z99A) HPE Aruba Networking 9300 1500W 100-240VAC Front-to-Back AC Power Supply*

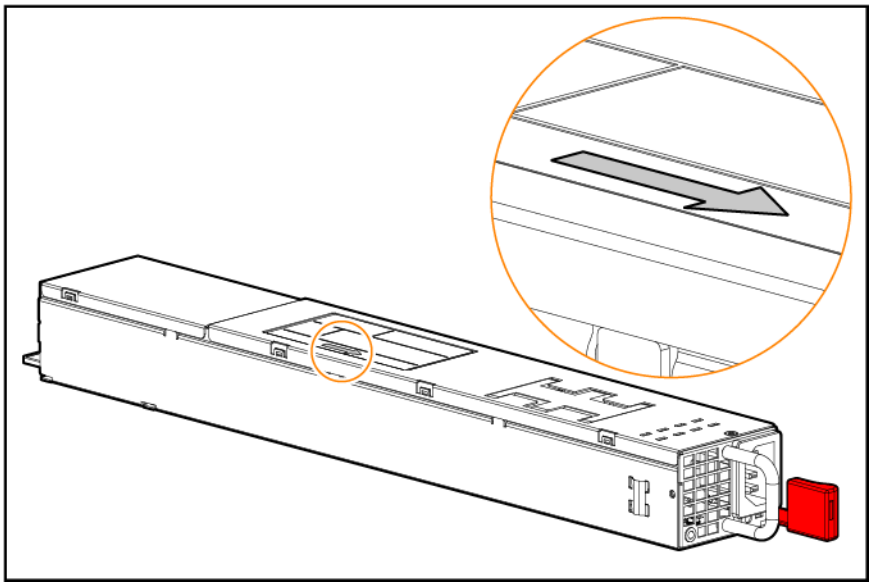
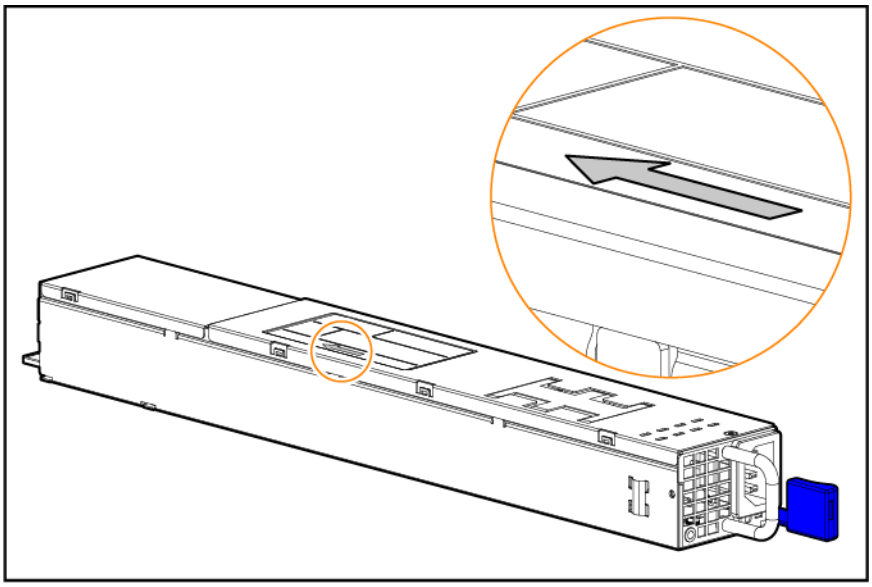


Figure 2 *(R9A00A) HPE Aruba Networking 9300 1500W 100-240VAC Back-to-Front AC Power Supply*



Switch	Power Supply
HPE Aruba Networking 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Front-to-Back 6 Fans 2 AC PSU Bundle (R9A29A)	HPE Aruba Networking 9300 1500W 100-240VAC Front-to-Back AC Power Supply (Red Latch) (R8Z99A)
HPE Aruba Networking 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Back-to-Front 6 Fans 2 AC PSU Bundle (R9A30A)	HPE Aruba Networking 9300 1500W 100-240VAC Back-to-Front AC Power Supply (Blue Latch) (R9A00A)

For 9300S-32C8D:

Figure 3 *(S0F90A) HPE Aruba Networking X3A15 12VDC 1600W 40-75VDC Back-to-Front Input Screw Terminal Power Supply Unit*

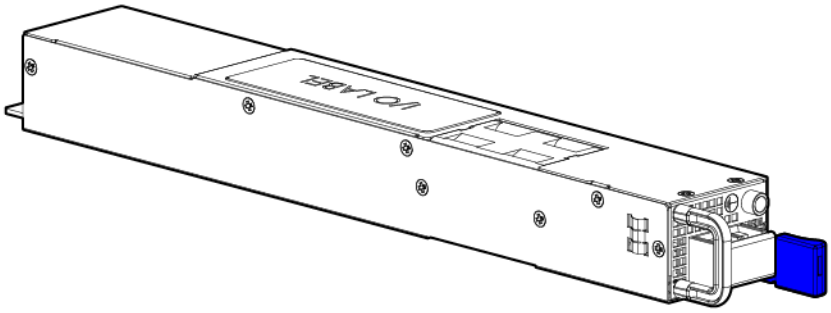


Figure 4 *(S0F91A) HPE Aruba Networking 12VDC 1600W Front-to-Back C15 AC Power Supply Unit*

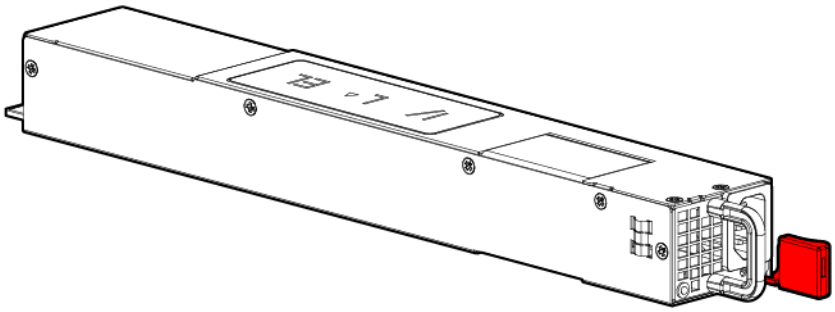
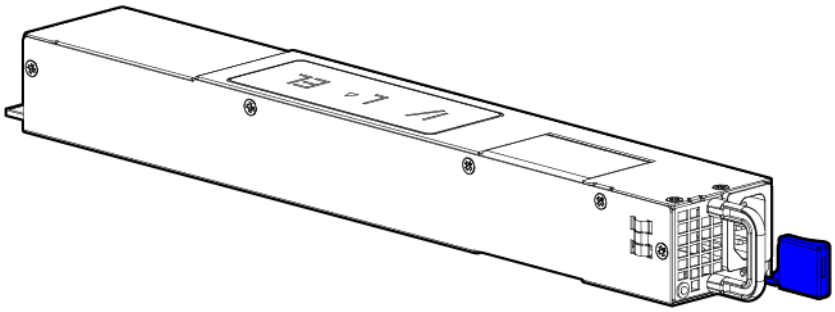


Figure 5 *(S0F92A) HPE Aruba Networking 12VDC 1600W Back-to-Front C15 AC Power Supply Unit*

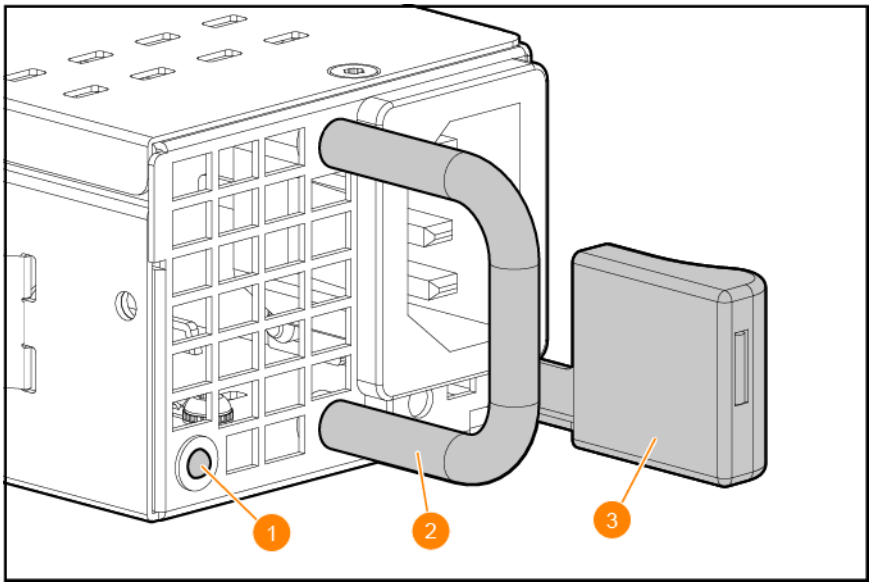


Switch	Power Supply
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xDC PSU TAA Bundle (S0F87A) HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xDC PSU	HPE Aruba Networking X3A15 12VDC 1600W 40-75VDC Back-to-Front Input Screw Terminal Power Supply Unit (Blue Latch) (S0F90A)

Switch	Power Supply
Bundle (S0F88A)	
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Front-to-Back 6xFan 2xAC PSU TAA Bundle (S0F81A) HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Front-to-Back 6xFan 2xAC PSU Bundle (S0F82A)	HPE Aruba Networking X3A13 12VDC 1600W Front-to-Back C15 AC Power Supply Unit (Red Latch) (S0F91A)
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xAC PSU TAA Bundle (S0F83A) HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xAC PSU Bundle (S0F84A)	HPE Aruba Networking X3A13 12VDC 1600W Back-to-Front C15 AC Power Supply Unit (Blue Latch) (S0F92A)

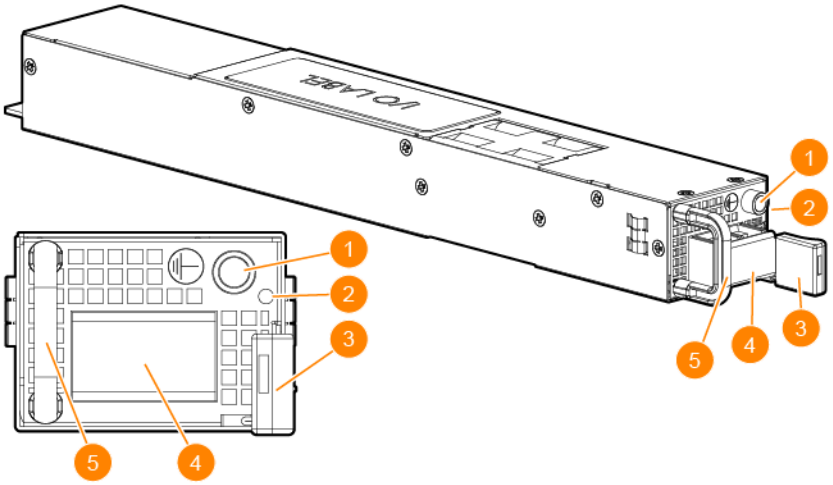
Power Supply LED and Components

Figure 6 *HPE Aruba Networking CX 9300-32D and 9300S-32C8D switch series AC power supplies*



Label	Description
1	Power Supply status LED
2	Handle
3	Release Latch

Figure 7 *HPE Aruba Networking CX 9300S-32C8D switch series DC power supply*



Label	Description
1	Required DC Power Cable Ground Lug mounting location
2	Power Supply status LED
3	Release Latch
4	DC power connector / cover
5	Handle

Power Supply Instructions

WARNING

- For indoor use only. The switch, power cord and all connected cables are not designed for outdoor use.
- During installation, ensure that the power cord is NOT connected to the power supply being installed.

CAUTION

- Do not mix AC and DC power supplies.
- Shock hazard. To completely remove power from the switch, disconnect all power cords.

NOTE

For important safety, environmental, and regulatory information, see Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts.

Brazil Statement	Este equipamento deve ser conectado obrigatoriamente em tomada de rede de energia elétrica que possua aterramento (três pinos), conforme a Norma NBR ABNT 5410, visando a segurança dos usuários contra choques elétricos.

Power Supply Status LED

LEDs	Function	State	Meaning
Power Supply Status LED	Displays power supply status	On green	Normal operation
		Flashing green	PSU FW upgrade in progress.
		Off	PSU fan faults, no input power to PSU, PSU in protection mode or system disabled the PSU due to ID, airflow, or input type.*

** Refer to system logs for details.*

Load Sharing

Load sharing occurs when two power supplies are installed in the switch and turned on. Load sharing divides the total power load of the switch between both power supplies.

Redundancy

With power redundancy, the HPE Aruba Networking CX 9300 switch series can continue normal operation even when one power supply fails or is powered off. When two power supplies are installed, if one becomes unavailable (failed, powered off, or removed) the remaining power supply provides full power for the device*. While the switch can continue normal operation, the Global Status LED, Rear Module status LED (*9300S-32C8D only*), and PS1/PS2 LEDs (*9300-32D only*) will flash in Amber to notify user that a PSU is unavailable. Do not mix AC and DC power supplies.

Even though the switch will run with one power supply removed, for thermal integrity reasons it is highly recommended not to remove a failed power supply, until the replacement can be installed.

* *Only when Redundancy is not turned off.*

Hot Swapping

Hot swapping allows you to replace one failed power supply while the other provides full power*. This makes it unnecessary to shut down the switch during the replacement procedure.

Never insert or remove a power supply while the power cord is connected. Verify that the cord has been disconnected from the power supply before installation or removal.

** Only when Redundancy is not turned off.*

Fan Trays

The switch is equipped with six field-replaceable, hot-swappable fan trays. Each fan tray features individual fans that pull air through the chassis from front to back or back to front.

9300-32D:

- (R8Z99A) HPE Aruba Networking 9300 Front-to-Back Fan (Red Handle)
- (R9A00A) HPE Aruba Networking 9300 Back-to-Front Fan (Blue Handle)

9300S-32C8D:

- (S0F93A) HPE Aruba Networking X761 Front-to-Back Fan (Red Latch)
- (S0F94A) HPE Aruba Networking X762 Back-to-Front Fan (Blue Latch)

NOTE

In the event of a misconfigured airflow direction on a single fan tray or a single faulted fan, the switch will maintain adequate cooling by increasing the fan speeds and/or disabling the misconfigured device.

CAUTION

- Fan trays and power supplies installed in a 9300-32D and 9300S-32C8D switch must have the same cooling air flow direction. Air flow direction is not controlled by software. To change the air flow direction, replace the power supplies and fan trays with power supplies and fan tray units supporting the air flow direction you require.
- If the system detects an overheating condition, the 9300-32D switch will reboot while the 9300S-32C8D switch will power off for five minutes before rebooting and assessing the cooling capabilities..
- If one fan tray is missing for more than two minutes or if two or more fan trays are missing, faulted and/or misconfigured, the 9300-32D switch will reboot while the 9300S-32C8D switch will power off for five minutes before rebooting and assessing the cooling capabilities.
- System airflow direction is configured automatically at system initialization and cannot be reconfigured by the user. System airflow direction is determined by the power supply type installed in PS1 at initialization time (or PS2 if PS1 is non-operational). Any Fan tray or Power supply of conflicting airflow type will be disabled by the system. Ensure only matching Fan trays and Power supplies are used at any given runtime.

Figure 1 *HPE Aruba Networking 9300-32D switch Front-to-Back fan tray*

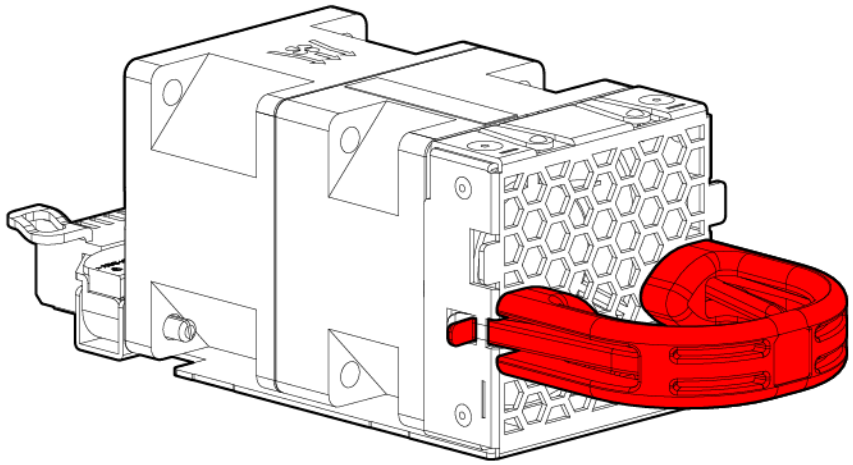


Figure 2 *HPE Aruba Networking 9300-32D switch Back-to-Front fan tray*

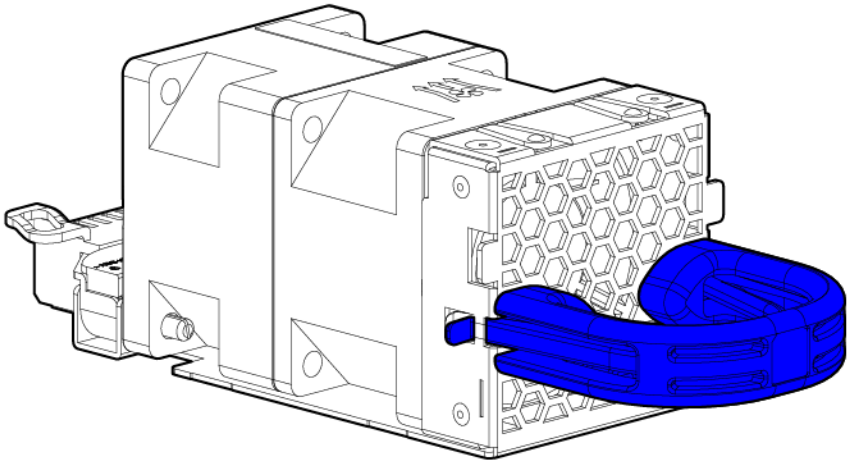


Figure 3 *9300S-32C8D switch Front-to-Back fan tray*

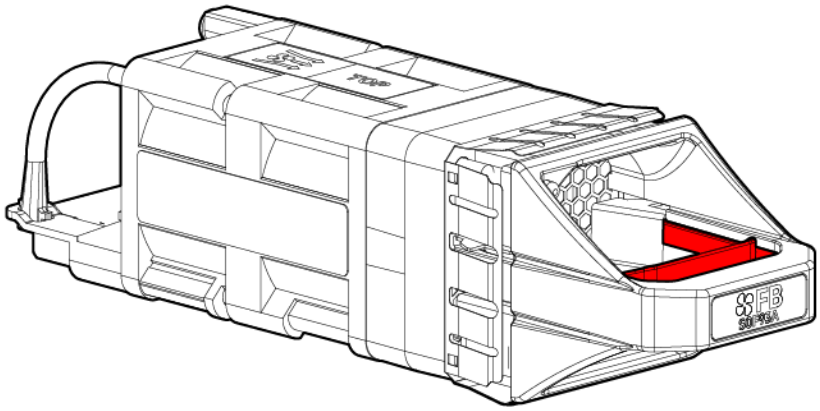
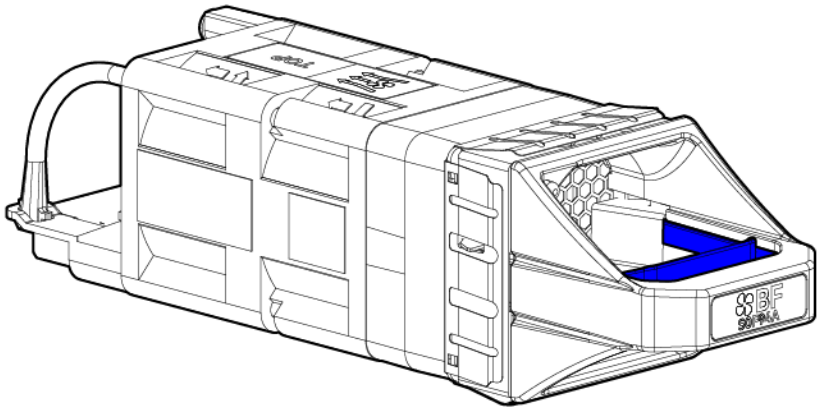


Figure 4 *9300S-32C8D switch Back-to-Front fan tray*



Redundancy

The switch can tolerate the failure of a single fan tray while maintaining a safe operating temperature. The switch may continue to operate with one failed fan tray. For best operation, the failed fan tray should be replaced as soon as possible.

If one fan tray has failed, the Global Status LED, the Fan LED (9300-32D) or Back LED (9300S-32C8D) on the front of the switch and the faulted Fan tray LED will Flash Amber.

If two or more fan trays have failed, the 9300-32D switch will reboot while the 9300S-32C8D switch will power off for five minutes before rebooting and assessing the cooling capabilities.

- The HPE Aruba Networking CX 9300-32D and 9300S-32C8D switch are not compatible with fan trays from other HPE Aruba Networking CX hardware platforms.
- HPE Aruba Networking CX 9300-32D and 9300S-32C8D fan trays are not interchangable. Only use the proper fan tray for your switch model.

Fan Tray Status LED

For 9300-32D:

Fan tray LED	Function	State	Meaning
Fan Tray indicator	To display fan tray status.	On Green	The fan tray is operating normally
		Flashing Amber (OS-CX)	The fan tray is faulted by the system due to a failed fan, insertion of an unsupported fan tray or other fault. All fault events that occur in OS-CX will correspond to a warning available in the Event Log.

For 9300S-32C8D:

Fan tray LED	Function	State	Meaning
Fan Tray indicator	To display fan tray status.	On Green	The fan tray is operating normally
		Flashing Green	The fan tray is initializing
		Flashing Amber	Fan tray faulted, missing or airflow misconfiguration*

** Refer to system logs for details.*

LED Behavior

For 9300-32D switches:

LEDs	Function	Switch Behavior	LED State	Meaning
QSFP-DD and SFP+ port indicator	Displays Link information for the port.	Startup	On Green	OS-CX: Default SVOS: Default
		Normal	Off - No Fault	No valid link.
			On Green	Valid link indication.
		Fault	Flashing Amber blinks with Global Status LED.	Fault*
QSFP-DD port indicator in split mode	Displays Link information for the port.	Startup	On Green	OS-CX: Default SVOS: Default
		Normal	Off - No Fault	No valid link on all lanes.
			On Green	Valid link indication on one or more lanes.
		Fault	Off - No Fault	No fault
			Flashing Amber blinks with Global Status LED.	Fault on one or more lanes.*
Out-Of-Band-Management (OOBM) indicator	Displays Link and Activity information for the OOBM port.	Normal	Off - No Fault	OOBM port is not connected, no link established.
			On Green	Valid link indication
			Activity Flicker Green	Indicator of traffic activity. The blink time is roughly proportional to the % of full bandwidth utilization of the port.
		Fault	Not Implemented	No fault defined.

LEDs	Function	Switch Behavior	LED State	Meaning
Global status indicator	Displays overall health status for the unit.	Startup	Flashing Green	OS-CX: ArubaOS loading
				SVOS: Self test in progress.
		Normal	On Green	OS-CX: Self test PASS, Fans and PSUs OK.
		Fault	Flashing Amber	OS-CX: Fault* SVOS: Self test failure.
Unit Identification/Locator indicator	Customer selectable through UI to help ID/Locate unit.	Normal	Off - No Fault	User defined the locator led: OFF
			On/Flashing Blue	User define the locator led: On/Flash
		Fault	Not implemented	No fault defined.
PSU 1 and PSU 2 indicator (front of chassis)	Indicates status of modular PSUs on the back of the switch.	Normal	On Green	Normal operation.
		Fault	Flashing Amber Blinks with Global Status LED.	The PSU is missing or power is not connected to the PSU, invalid AC input or invalid DC output or, if power is connected, the PSU is in protection mode due to a voltage, current, thermal, or short-circuit condition. PSU with misconfiguration of airflow.*
Fan health status indicator (front of chassis)	Indicates status of modular fans on the back of the switch.	Normal	On Green	Normal operation.
		Fault	Flashing Amber Blinks with Global Status LED	Fan tray faulted, missing or airflow misconfiguration.*
Fan tray indicator	Indicates status of the fan tray.	Normal	On Green	Normal operation.
		Fault	Flashing Amber	Fan tray faulted, missing or airflow misconfiguration.*
PSU module indicator	Indicates status of PSU module.	Normal	On Green	Normal operation.
			Flashing Green	PSU FW upgrade in progress.
		Fault	Off - No Fault	PSU unpowered, disabled, or faulted.*

For 9300S-32C8D switches:

Front Chassis LEDs	Function	Switch Behavior	LED State	Meaning
QSFP-DD, QSFP and SFP+ port indicator	Displays Link information for the port.	Startup	On Green	OS-CX: Default SVOS: Default
		Normal	Off - No Fault	No valid link.
			On Green	Valid link indication.
		Fault	Flashing Amber blinks with Global Status LED.	Fault*
QSFP-DD and QSFP port indicator in split mode	Displays Link information for the lanes.	Startup	On Green	OS-CX: Default SVOS: Default
		Normal	Off - No Fault	No valid link on all lanes.
			On Green	Valid link indication on one or more lanes.
		Fault	Flashing Amber blinks with Global Status LED.	Fault on one or more lanes.*
Out-Of-Band-Management (OOBM) indicator	Displays Link and Activity information for the OOBM port.	Startup	Off - No Fault	OS-CX: Default SVOS: Default
		Normal	Off - No Fault	OOBM port is not connected, no link established.
			On Green	Valid link indication.
			Activity Flicker Green	Indicator of traffic activity.
		Fault	Not Implemented	No fault defined.
Global status indicator	Displays overall health status for the unit.	Startup	Flashing Green	SVOS: Preparing to boot ArubaOS.
		Normal	On Green	OS-CX: Self test PASS, Fans and PSUs OK.
		Fault	Flashing Amber	OS-CX: Fault* SVOS: System failed to boot.
Unit Identification/Locator indicator	Customer selectable through UI to	Startup	On Blue	OS-CX: Default SVOS: Default

Front Chassis LEDs	Function	Switch Behavior	LED State	Meaning
	help ID/Locate unit.			
		Normal	Off - No Fault	Normal operation.
			On/Flashing Blue	User defined.
		Fault	Not implemented	No fault defined.
Rear modules status indicator	Indicates status of devices on the back of the switch.	Startup	Flashing Green	Initialization in progress.
		Normal	On Green	Normal operation.
		Fault	Flashing amber with Global Status LED	Fan tray or PSU faulted, missing or misconfiguration.*

Rear Chassis LEDs	Function	Switch Behavior	LED State	Meaning
Global status indicator	Displays overall health status for the unit.	Startup	Flashing Green	SVOS: Preparing to boot ArubaOS.
		Normal	On Green	OS-CX: Self test PASS, Fans and PSUs OK.
		Fault	Flashing Amber	OS-CX: Fault* SVOS: System failed to boot.
Unit Identification/Locator indicator	Customer selectable through UI to help ID/Locate unit.	Startup	On Blue	OS-CX: Default SVOS: Default
		Normal	Off - No Fault	Normal operation.
			On/Flashing Blue	User defined.
		Fault	Not implemented	No fault defined.
Fan tray indicator	Indicates status of the fan tray.	Startup	Flashing Green	Fan initialization.
		Normal	On Green	Default
		Fault	Flashing Amber	Fan tray faulted, missing or airflow misconfiguration.*
PSU module indicator	Indicates status of PSU module.	Normal	On Green	Default
			Flashing Green	PSU FW upgrade in progress.
		Fault	Off	PSU unpowered, disabled, or faulted.*

* *Refer to system logs for details.*

Switch Features

The features of the 9300 series switches include:

- QSFP-DD, QSFP56, QSFP28, SFP28, SFP+, QSFP+ and SFP, depending on the switch.
  - For a secure environment, all ports are disabled by default.
- Dual power supplies: Adding a second power supply provides redundant system power. If one of the power supplies fails, the second power supply continues to provide the power necessary to keep the switch running if configured in redundant mode.
- Easy management of the switch through several available interfaces:
  - **Command line interface:** A full-featured, easy-to-use, VT-100 terminal interface for out-of-band switch management.
  - **Web browser interface:** An easy-to-use built-in graphical interface that can be accessed from common web browsers.
- Support for up to 4094 IEEE 802.1Q-compliant VLANs so you can divide the attached end nodes into logical groupings that fit your business needs.
- Support for many advanced features to enhance network performance: For a description, see the OS-CX guides for your switch.
- Ability to update the switch software. To download product updates, go to the HPE Support Portal.

The following sections cover the switch installation procedures. For mounting options, see Mount the Switch (9300-32D) or Mount the Switch (9300S-32C8D).

Included Parts

The switch is shipped with the following components:

- Documentation kit
- JL482C, HPE Aruba Networking Universal 2-Post Rack Mount Kit (*for 9300-32D only*)
- JL602A, HPE Aruba Networking X412 1U Universal 2-Post RM Kit (*for 9300S-32C8D only*)
- Two power cords are included for your specific region.
- The following (part number or J-number/SKU) are orderable through HPE Aruba Networking purchasing if replacements are needed.

9300-32D (C13 power cords):

Argentina	8121-0729 J9891A	Israel	8121-1004 J9899A
Australia/New Zealand	8121-0837 J9883A	Japan	8121-1143 J9893A
Brazil	8121-1071 J9894A	Switzerland	8121-0738 J9898A
Chile	8121-0735 J9886A	South Africa	8121-0737 J9897A
China	8121-0943 J9890A	Taiwan	8121-0964 J9887A
Continental Europe/South Korea	8121-0731 J9885A	Philippines/Thailand	8121-0734 J9895A
Denmark	8121-0733 J9888A	UK/Hong Kong/Singapore/Malaysia	8121-0739 J9884A
India	8121-0564 J9892A	US/Canada/Mexico	8121-1141 J9896A
NA Hi-Voltage (non-locking) C13 to NEMA 6-20	8120-3996 J9936A	PDU NA/Japan/TW/Rest of World	142263-001 JL697A
PDU India-only	P09371-001 JL671A		

9300S-32C8D (C15 power cords):

Argentina	8121-1481 J9960A	Israel	8121-1478 J9958A
Australia/New Zealand	8121-1476 J9941A	Japan	8121-1482 J9950A
Brazil	8121-1265 J9951A	Switzerland	8121-1480 J9957A
Chile	8121-1477 J9946A	South Africa	8121-1483 J9956A
China	8121-1484 J9949A	Taiwan	8121-1511 J9947A
Continental Europe/South Korea	8121-1479 J9945A	Philippines/Thailand	8121-1485 J9952A
Denmark	8121-1486 J9948A	UK/Hong Kong/Singapore/Malaysia	8121-1475 J9942A
India	8121-1721 JL696A	US/Canada/Mexico	8121-0914 J9953A
PDU Rest of World (Jumper cable)	8121-1094 J9944A	PDU NA/Japan/TW/Rest of World	8121-1091 J9943A
220V NA	8120-8945 JL336A	PDU India (Jumper cable)	P09373-001 JL672A

Japan Power Cord Warning

製品には、同梱された電源コードをお使い下さい。
同梱された電源コードは、他の製品では使用出来ません。

Installation Precautions and Guidelines

To help avoid personal injury or product damage when installing your switch, read the following installation precautions and guidelines.

- Do not mount the switch on a wall, under a table, or under any other horizontal surface.
- Mount devices as low as possible in a rack or cabinet. Put the heaviest devices at the bottom and progressively lighter devices positioned higher.
- To prevent the rack or cabinet from becoming unstable and/or falling over, ensure that it is adequately secured.
- The switch may use more than one power supply cable. To fully power down the switch, you must disconnect all power supply cables from the switch.

- Do not ship any switch in a rack without checking for restrictions in the latest HPE Aruba Networking Installation and Getting Started Guide. Otherwise, you may void the switch warranty.
- Ensure the power source circuits are properly grounded, then connect the switch to the power source by using the power cords supplied with the switch. For more information on power cords, see Power Cords on page 78
- When installing the switch, the power outlet should be near the switch and be easily accessible in case the switch must be powered off.
- Ensure that the power cords and network cables at the switch mounting location do not create a tripping hazard.
- Do not install the switch in an environment where the operating ambient temperature exceeds its specification. See the environmental operating temperature information in the Environmental Specifications on page 81.
- Ensure that the switch does not overload the power circuits, wiring, and over-current protection. To determine the possibility of overloading the supply circuits, add the ampere ratings of all devices installed on the same circuit as the switch, then compare the total with the rating limit for the circuit. The maximum ampere ratings for a device are usually printed near the device power connectors.
- Do not block any ventilation openings on the front or rear of the switch.
- Leave a minimum of 3 inches (7.62 cm) for cooling at the front and back of the switch. For the air flow direction, see the Fan Trays on page 24.
- If a power supply or fan tray must be removed and reinstalled, wait at least 5 seconds before reinstallation. Otherwise, damage to the switch may occur. The power supply needs this time to discharge any retained power.

- When powered by a DC power supply, the installation shall provide a readily accessible two-pole disconnect device in the fixed installation.
- When powered by a DC power supply, the switch must be installed in a restricted access location. Only trained and qualified personnel should be allowed to install, replace, or service this equipment.
- For switches with DC power supplies, disconnect DC power from the power supply BEFORE installing or removing the power supply. The power supply must NOT be connected to DC power while it is being installed or removed. The switch power supplies are hot-swappable; that is, a power supply that is disconnected from the power source can be installed or removed while the switch is receiving power other power supply slot from another power supply installed in the other power supply slot.
- Always switch input power OFF before connecting and disconnecting the DC input to the unit. If not turned off, there is a risk of injury or severe damage.
- When powered by a DC power supply, the product relies upon the installation to provide short-circuit (overcurrent) protection. Ensure that the protective device is not greater than 40A.
- When installing DC power cords, ensure that appropriate strain relief and cable routing is in place to prevent damage or loosening of connections during use.
- This power supply is declared to be supplied from earthed DC source. As extensive use, this power supply shall be separated from primary circuits/building mains by double/reinforced insulation.

Installation Procedures

1. Prepare the Installation Site on page 37
2. Install Power Supplies on page 37
3. Install Fan Trays on page 39
4. Mount the Switch (9300-32D) on page 41
5. Mount the Switch (9300S-32C8D) on page 49
6. Install Transceivers on page 54
7. Connect the Switch to a Power Source on page 55
8. Power-on the switch and check LEDs on page 58
9. Power off the switch on page 58
10. Setup for Initial Configuration on page 59
11. Connect Network Cables on page 59

Prepare the Installation Site

Cabling Infrastructure: Ensure the cabling infrastructure meets the necessary network specifications.

Installation Location: Before installing the switch, plan its location and orientation relative to other devices and equipment:

- In the front of the switch, leave a minimum of 6 inches (15.24 cm) of space for the ethernet and fiber-optic cabling.
- In the back of the switch, leave a minimum of 6 inches (15.24 cm) of space for the power cord.

Airflow direction in HPE Aruba Networking CX 9300-32D and 9300S-32C8D switches are front-to-back or back-to-front, depending on configuration. All fan trays and power supplies installed in a CX 9300-32D or 9300S-32C8D switch must have the same air flow direction. See Fan Trays for further detail.

To avoid personal injury or product damage, review Installation Precautions and Guidelines on page 35 before starting installation.

Install Power Supplies

Skip this step if two power supplies are already installed in the switch

If two power supplies are not already installed in the switch, use the following steps to install power supplies in empty slots before proceeding.

Air flow direction for all power supplies and fans must match

1. Remove the new power supply from its packaging.
2. Insert the power supply into the empty power supply slot until the latch clicks into place.

Figure 1 *Installing a power supply for 9300-32D*

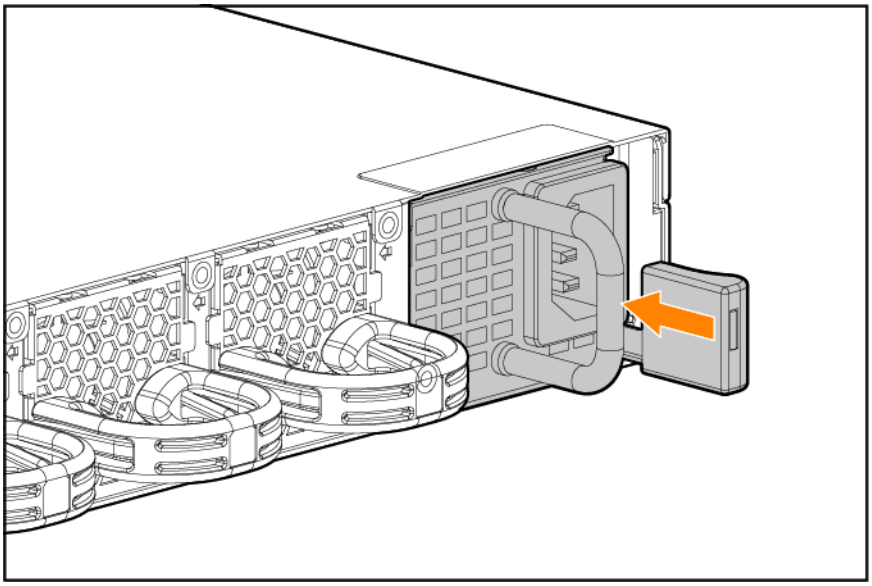


Figure 2 *Installing an AC power supply for 9300S-32C8D*

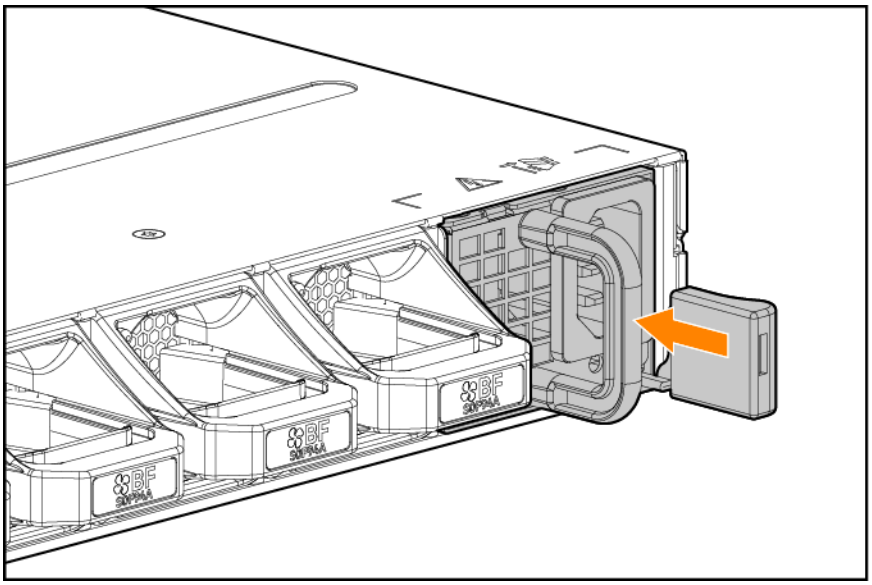
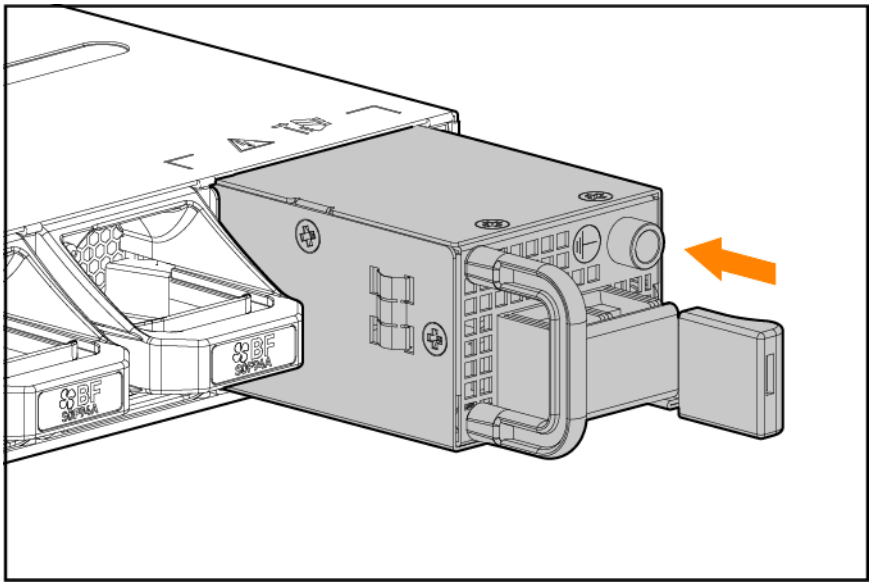


Figure 3 *Installing a DC power supply for 9300S-32C8D*



Install Fan Trays

Skip this step if all six fan tray slots are already populated with fan trays.

Use the following steps to install a fan tray in any empty fan tray slot.

CAUTION

Be careful to not touch any of the circuitry on the board.

NOTE

Ensure that a replacement fan has the same airflow direction as other fan trays and power supplies installed in the switch.

1. Remove the new fan tray from its packaging.
2. Insert the new fan tray fully into the slot so that its face plate is flush with the back face of the switch and the latch clicks.

Figure 1 *Installing a fan tray for 9300-32D*

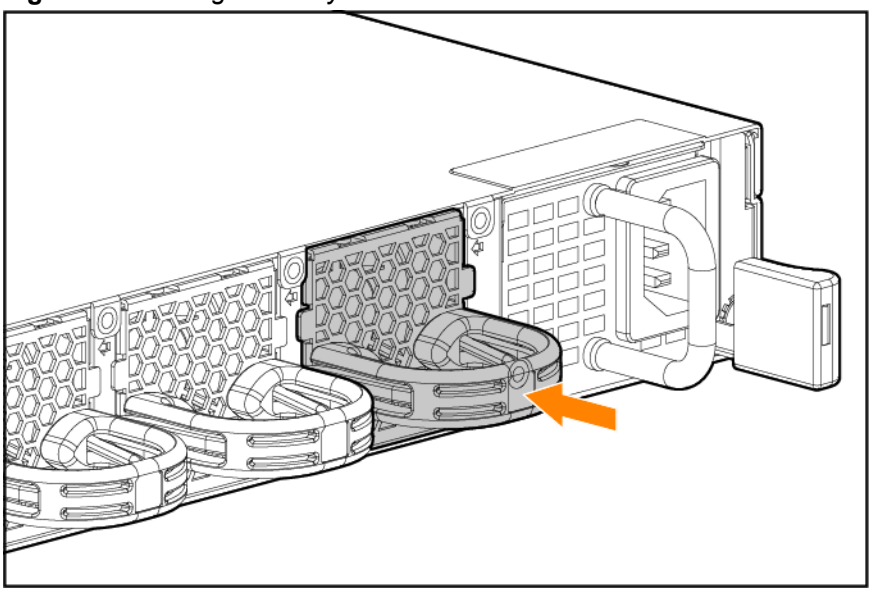
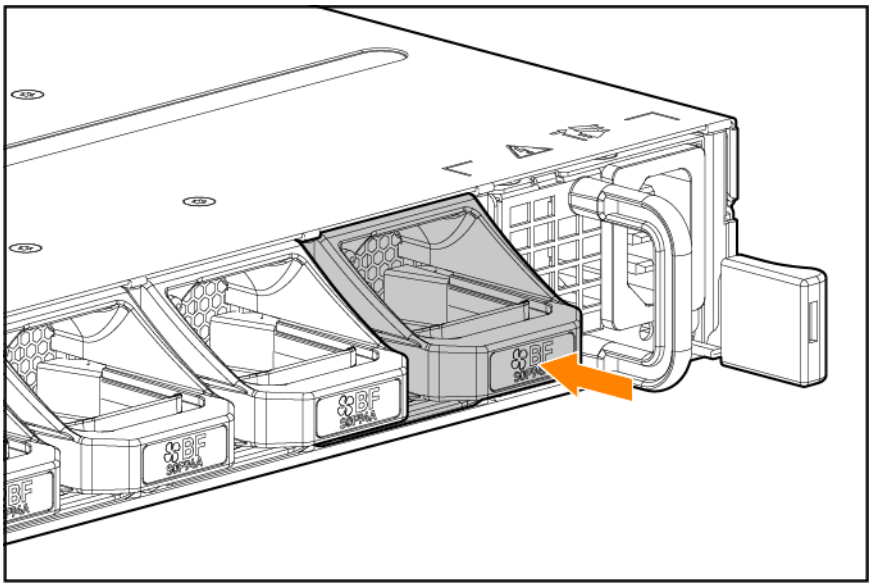


Figure 2 *Installing a fan tray for 9300S-32C8D*



Mount the Switch (9300-32D)

The supported mounting options for the HPE Aruba Networking CX 9300-32D switch include:

HPE Aruba Networking X472 2-post Rack Kit (JL482C; included)

HPE Aruba Networking X474 4-post Rack Kit (JL483C; sold separately)

- For safe operation, please review the mounting precautions in Installation Precautions and Guidelines before mounting the switch.
- To reduce the risk of personal injury or equipment damage, be sure that the rack is adequately stabilized before installing the switch.
- To reduce the risk of personal injury or equipment damage, use two people to lift and stabilize the switch during assembly.
- For safe reliable installation, only use the screws provided in the accessory kit to attach the mounting brackets to the switch.
- Airflow and air temperature within an equipment rack can be variable and are dependent on the overall rack configuration. In some configurations, there may be insufficient or recirculating airflow that causes the switch to operate at elevated temperature. Position and orientation should be considered when configuring the switch within the rack to minimize these effects and maintain compliance with the switch's temperature limits.

WARNING

Two-post Rack Mount Option

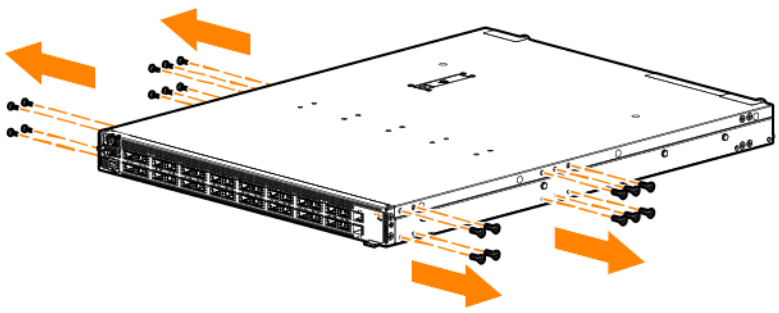
The switch is designed to be mounted in any EIA-standard 2-post rack or communication equipment cabinet using the HPE Aruba Networking X472 2-Post Rack Kit (JL482C).

- Middle Mounted position is the only supported position in 2-post racks as shown in the image below.
- The 12-24 screws supplied with the two-post rack mount kit are the correct threading for standard EIA/TIA 2-post racks. If installing the switch in an equipment cabinet such as a server cabinet, plan which holes you will be using and use the clips and screws that came with the cabinet in place of the 12-24 screws that are supplied with the two-post rack mount kit.

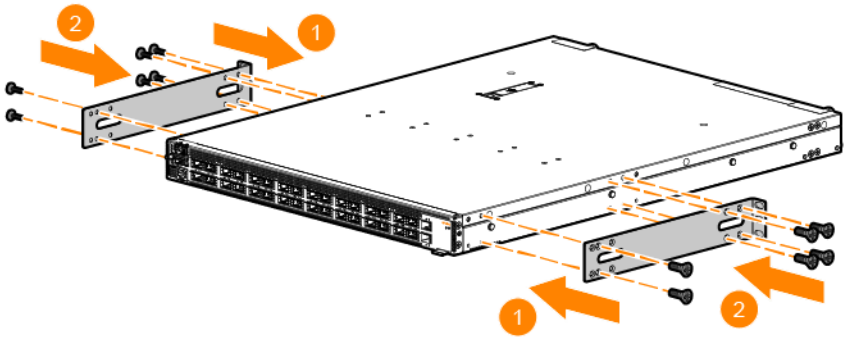
CAUTION

---

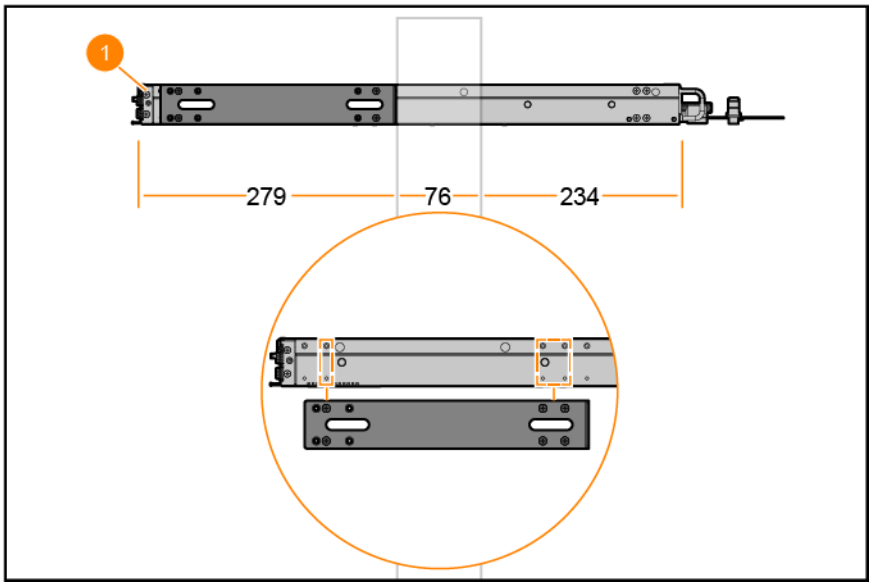
1. Use a Philips screwdriver to remove ten 6-mm M4 screws shown below and retain the screws for the following step.



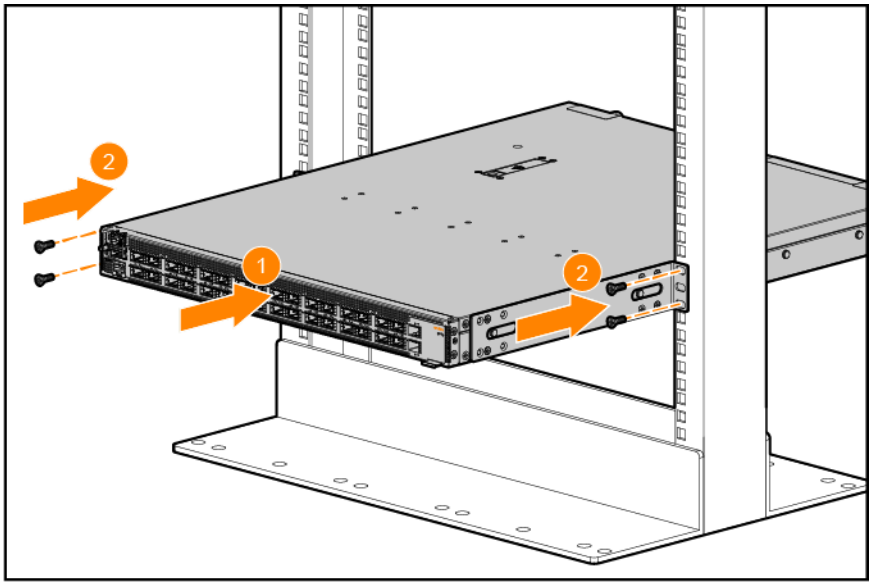
2. Attach the mounting brackets to the switch and secure using six of the removed screws.



3. Ensure the brackets are mounted in the Middle Mount position.



4. Hold the switch with attached brackets up to the 2-post rack to align bracket holes with rack holes, then insert and tighten the four 12-24 screws, attaching the brackets to the rack.



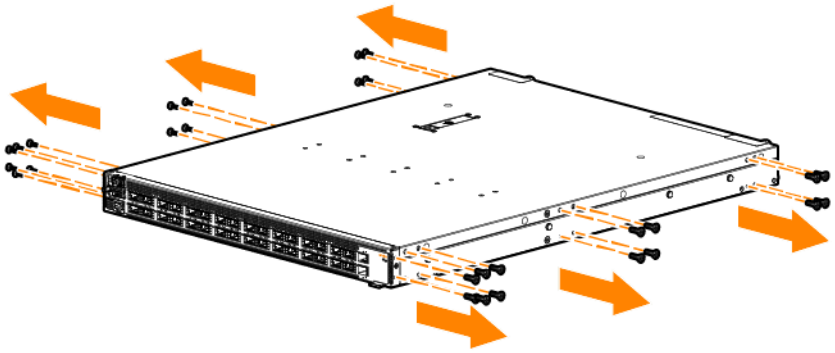
Four-Post Rack Mount Option

The HPE Aruba Networking CX 9300-32D switch can be mounted in four-post racks and cabinets by using the HPE Aruba Networking X474 4-Post Rack Kit (JL483C; sold separately). Determine whether you are installing a front-to-back airflow switch or a back-to-front airflow switch, then use the instructions below to attach the mounting brackets and mount the switch.

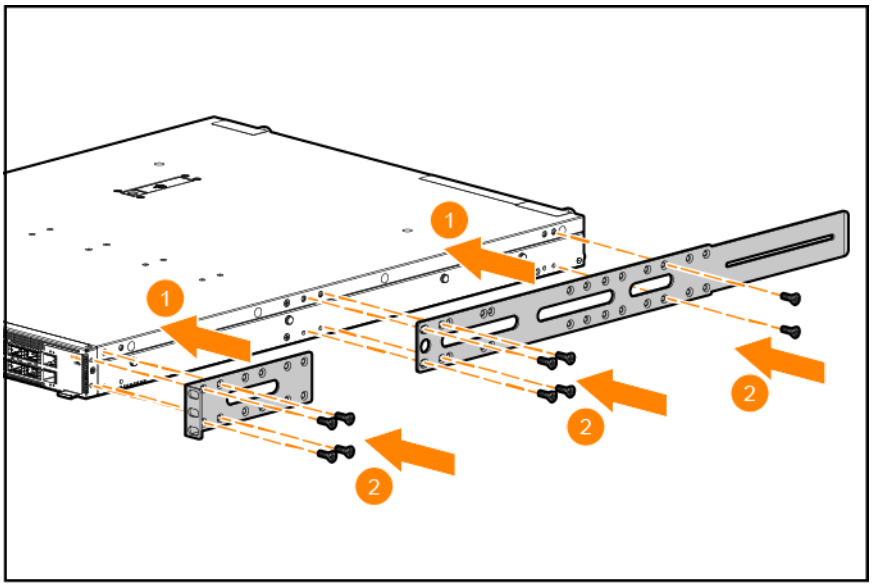
- For safe operation, please review the mounting precautions in Installation Precautions and Guidelines, before mounting a switch.
- The rack rails are intended for ease of installation only, do not use rails to support the switch in any extended position. The switch must be immediately secured with screws after installation.
- To reduce the risk of personal injury or equipment damage, use two people to lift and stabilize the switch during assembly.
- If installing the switch in an equipment cabinet such as a server cabinet, use the clips and screws that came with the cabinet in place of the 12-24 screws that are supplied with four-post rack mount kit (JL483C).

Front-to-Back Airflow configuration

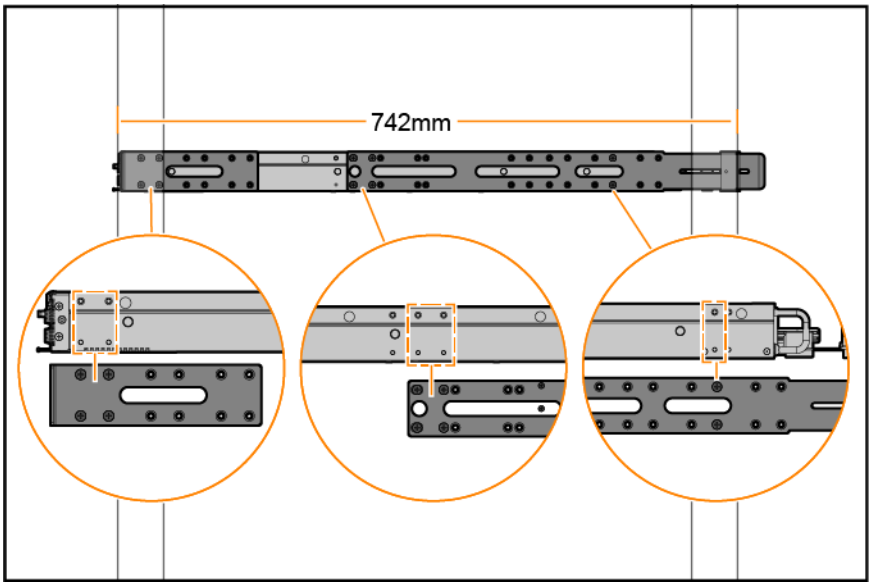
1. Use a Philips screwdriver to remove fourteen 6-mm M4 screws shown below and retain the screws for the following step.



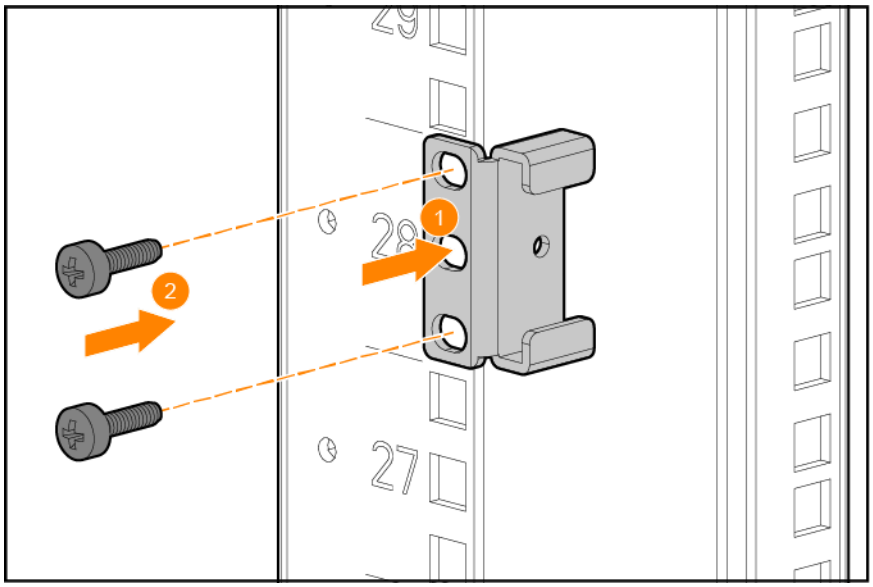
2. Align the front-post and rear-post rack mount brackets with the switch, then secure with ten of the removed screws.



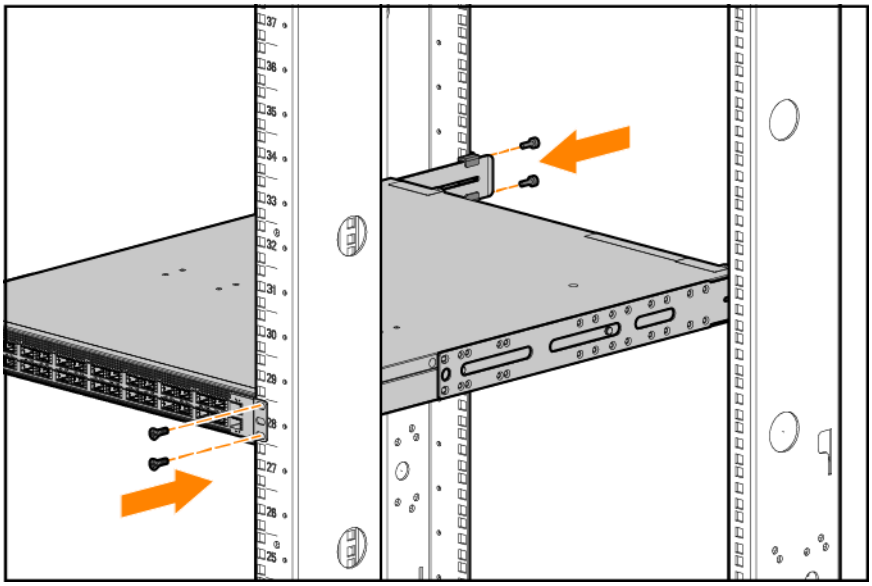
3. Ensure the brackets are mounted in the position shown below.



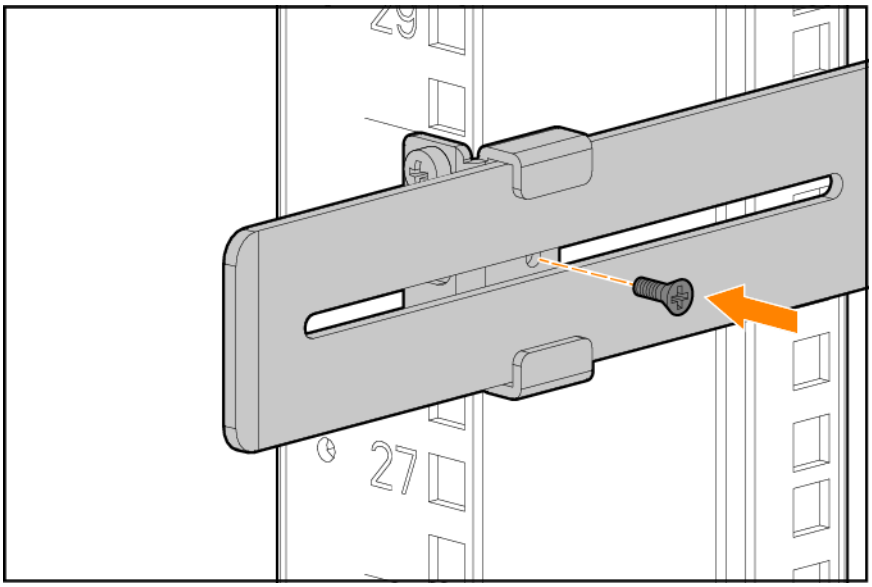
4. Using eight mounting clips supplied with the rack, install two clips onto each rack column in the selected rack unit position.
5. Secure the two rear brackets to the rear column using four screws supplied with the rack.



6. Mount the chassis and secure the front post brackets to the front posts using four screws included with the rack.

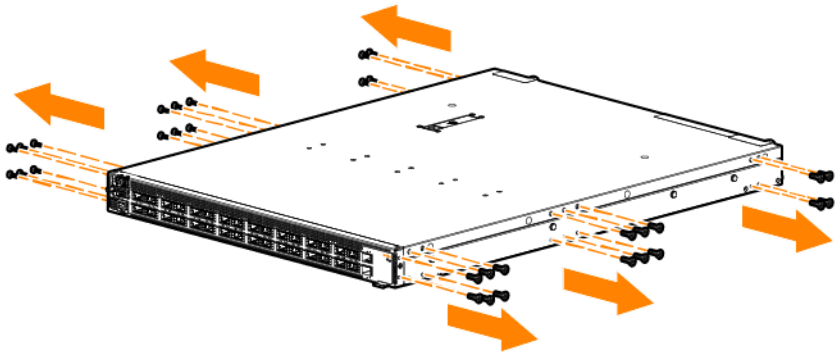


7. Lock the position of the rear post bracket ears using the included position-locking screws.

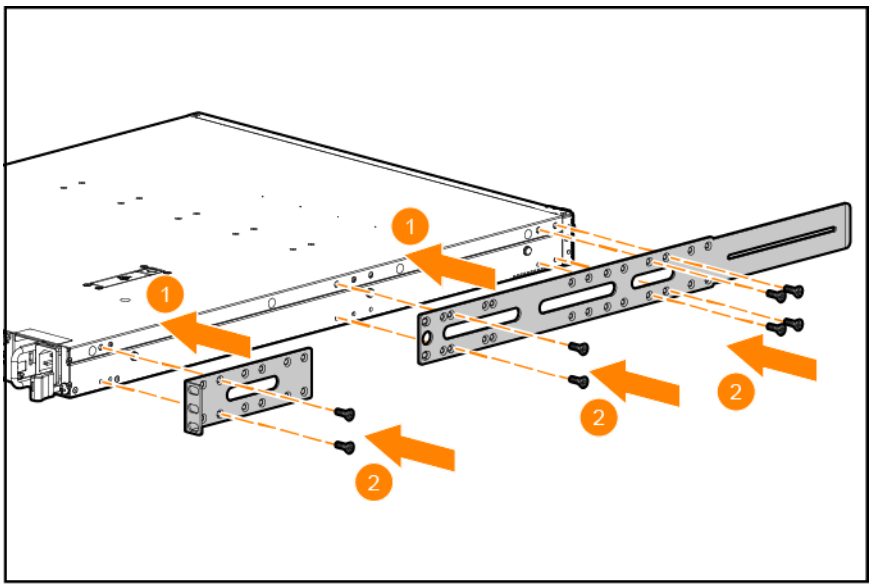


Back-to-Front Airflow configuration

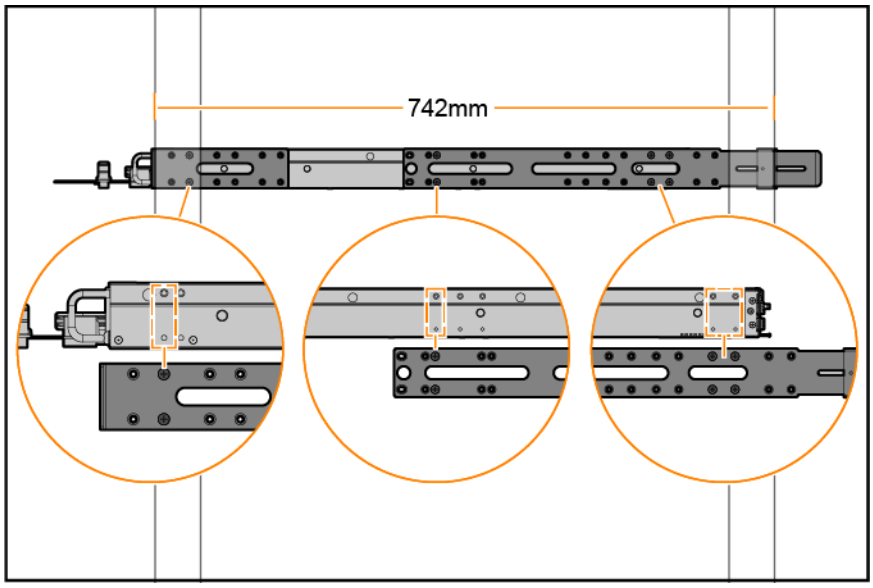
1. Use a Philips screwdriver to remove all sixteen 6-mm M4 screws shown below and retain the screws for the following step.



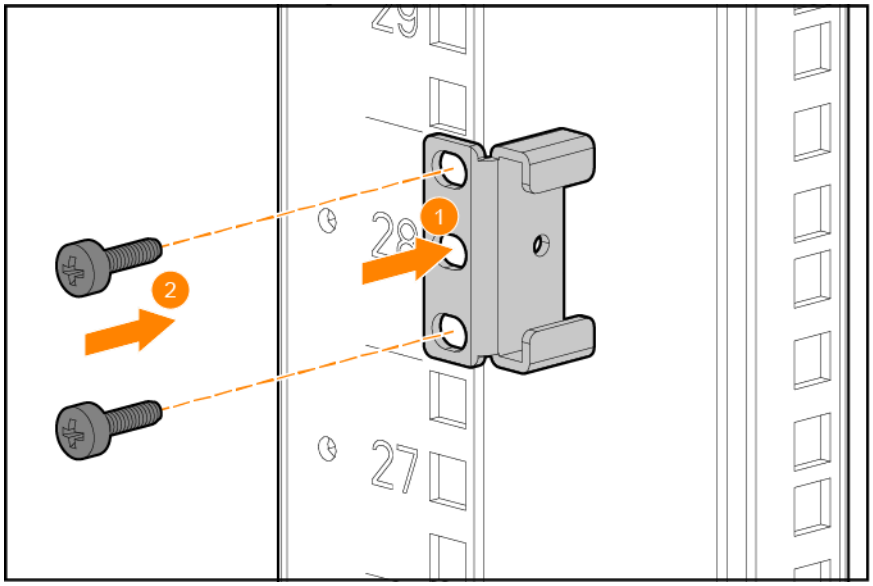
2. Attach the front-post and rear-post rack mount brackets to the switch with eight of the removed screws.



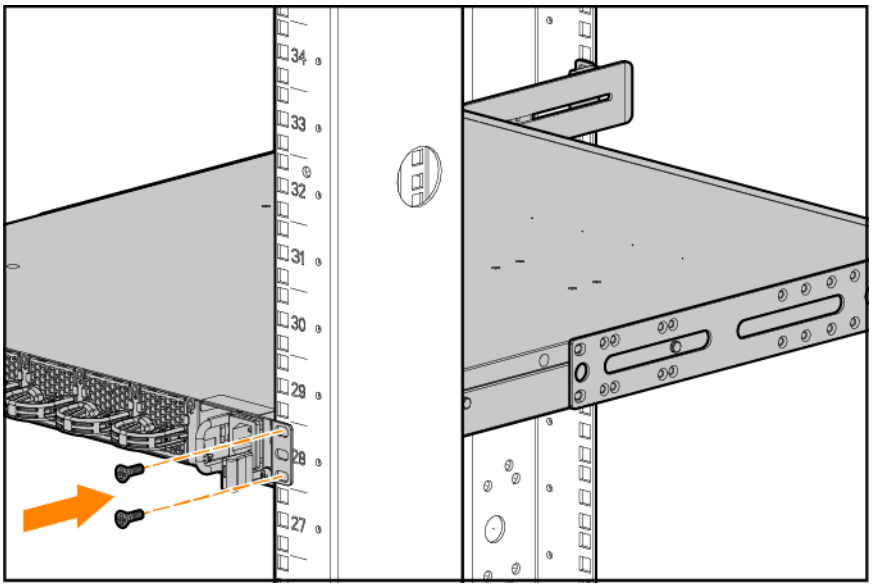
3. Ensure the brackets are mounted in the position shown below.



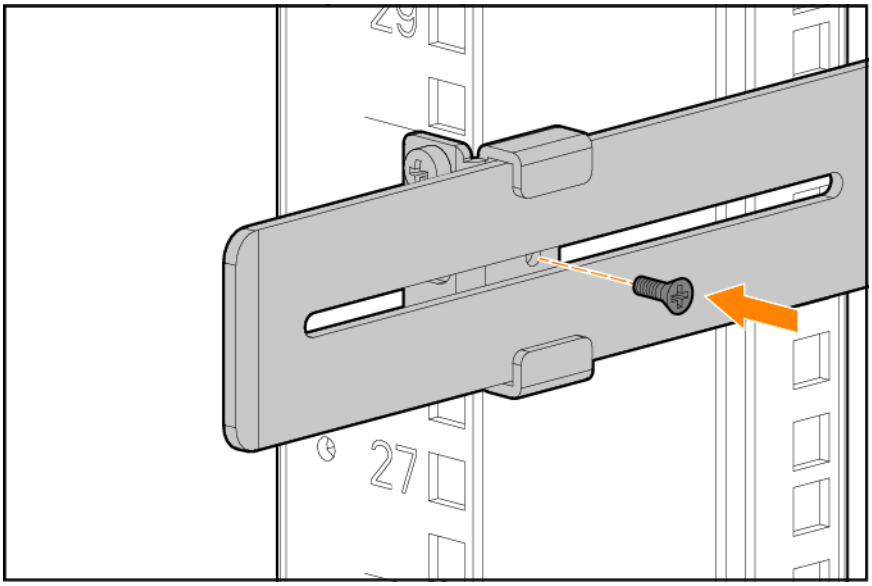
4. Using eight mounting clips supplied with the rack, install two clips onto each rack column in the selected rack unit position.
5. Secure the two rear brackets to the rear column using four screws supplied with the rack.



6. Mount the chassis and secure the front post brackets to the front posts using four screws included with the rack.



7. Lock the position of the rear post bracket ears using the included position-locking screws.



Mount the Switch (9300S-32C8D)

The supported mounting options for the HPE Aruba Networking CX 9300S-32C8D switch include:

HPE Aruba Networking X412 1U Universal 2-Post RM Kit (JL602A; included)

HPE Aruba Networking X414 1U Universal 4-Post Rack Mount Kit (J9583B, sold separately)

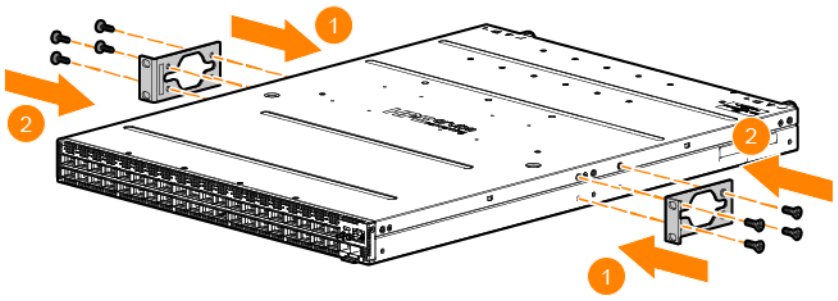
- For safe operation, please review the mounting precautions in Installation Precautions and Guidelines before mounting a switch.
- To reduce the risk of personal injury or equipment damage, be sure that the rack is adequately stabilized before installing the switch.
- To reduce the risk of personal injury or equipment damage, use two people to lift and stabilize the switch during assembly.
- For safe reliable installation, only use the screws provided in the accessory kit to attach the mounting brackets to the switch.
- Airflow and air temperature within an equipment rack can be variable and are dependent on the overall rack configuration. In some configurations, there may be insufficient or recirculating airflow that causes the switch to operate at elevated temperature. Position and orientation should be considered when configuring the switch within the rack to minimize these effects and maintain compliance with the switch's temperature limits.

Two-post Rack Mount Option

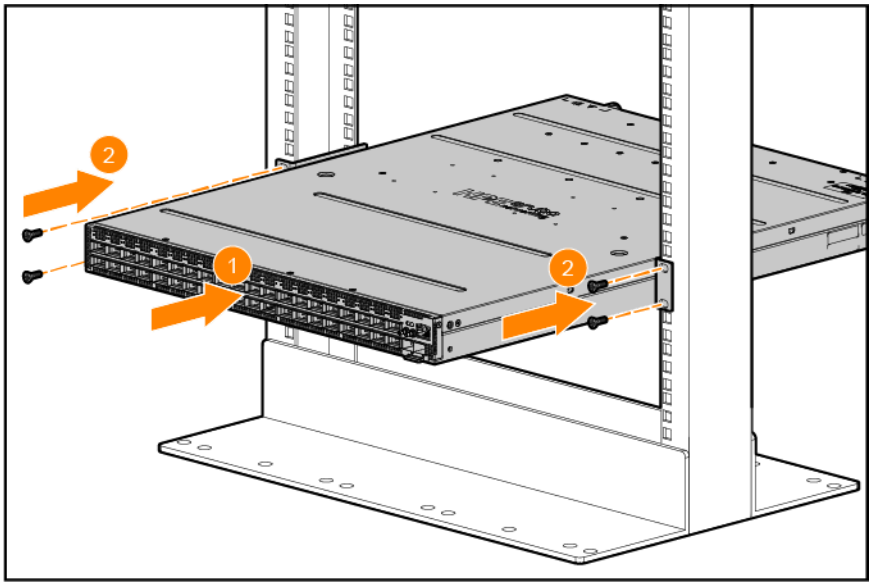
The switch is designed to be mounted in any EIA-standard 2-post rack or communication equipment cabinet using the HPE Aruba Networking X412 1U Universal 2-Post RM Kit (JL602A).

- Middle Mounted position is the only supported position in 2-post racks as shown in the figure below.
- The mounting brackets can be installed in two different orientations on the switch. The recommended orientation is shown in the figure below.
- The 12-24 screws supplied with the four-post rack mount kit are the correct threading for standard EIA/TIA open 19-inch racks. If installing the switch in an equipment cabinet such as a server cabinet, use the clips and screws that came with the cabinet in place of the 12-24 screws that are supplied with the 2-Post rack mount Kit (JL602A).

1. Pre-determine an appropriate position in the rack for mounting the switch.
2. Use a T20 drive screwdriver and attach the mounting brackets to both sides of the switch with eight of the supplied 6mm long M4 screws.



3. Hold the switch with the attached mounting brackets up against the rack and align the bracket and rack mounting holes. Use a Phillp #3 screwdriver to secure the mounting brackets to the rack using four of the supplied 12-24 screws.



Four-Post Rack Mount Option

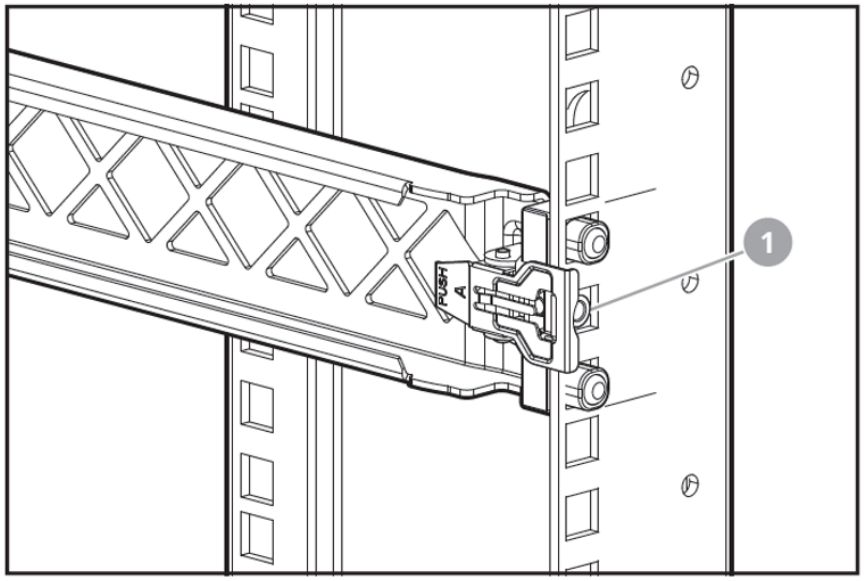
The HPE Aruba Networking CX 9300S-32C8D switch can be mounted in four-post racks and cabinets by using the Aruba X414 1U Universal 4-Post Rack Mount Kit (J9583B).

- The rack rails are intended for ease of switch installation only, do not use rails to support the switch in any extended position. The switch must be immediately secured with screws after installation.
- Be sure to keep the product parallel to the floor when installing the switch. Tilting the product up or down could result in damage to the slides.

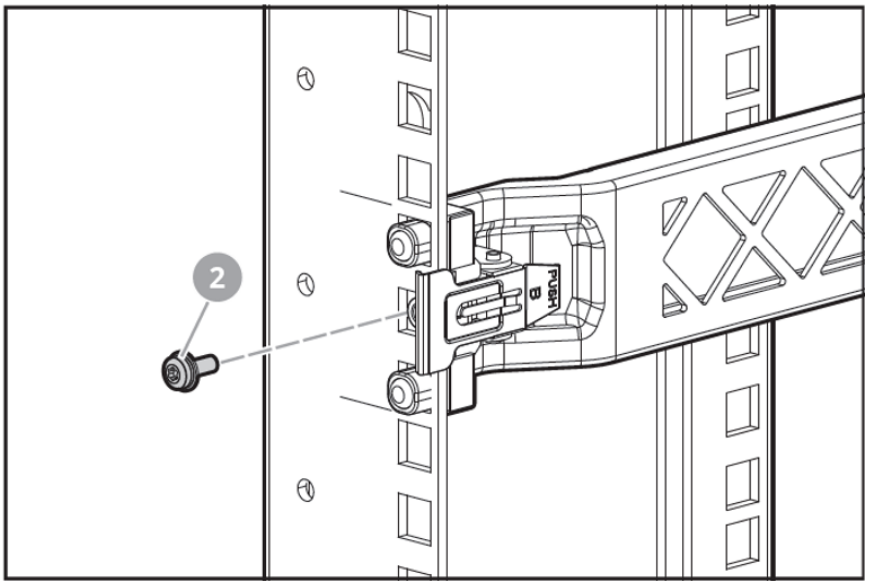
Front-to-Back configuration

1. Pre-determine an appropriate rack position to mount the switch, then secure the rails to the rack's front and rear posts as appropriate. Ensure the rails are at the same level on each rack post, front and rear. Use a T25 screwdriver to install the rear 10-32 mounting screw.

Front rack view

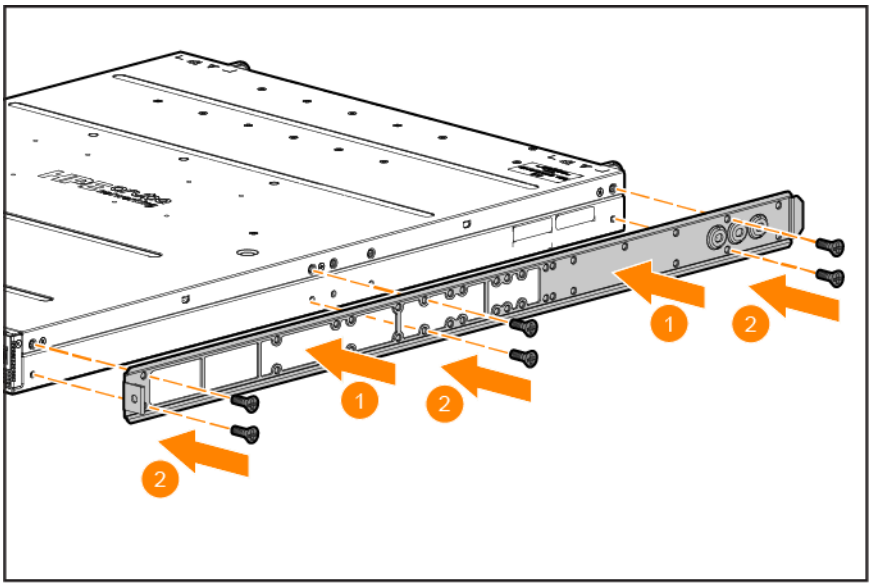


Rear rack view

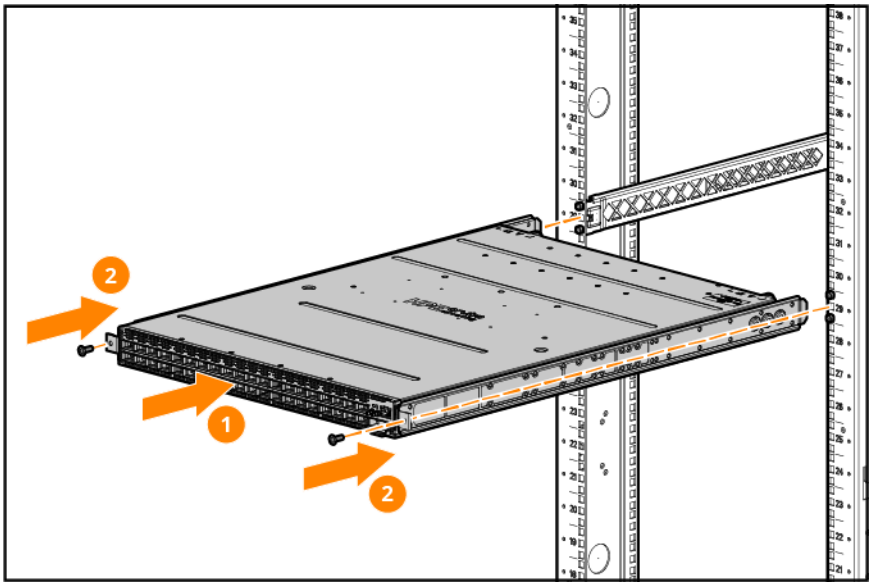


1	Integrated Retaining Clip
2	10-32 screw

2. Use a T20 screwdriver to attach the two sliders to both sides of the switch using twelve of the supplied 8mm long M4 screws.



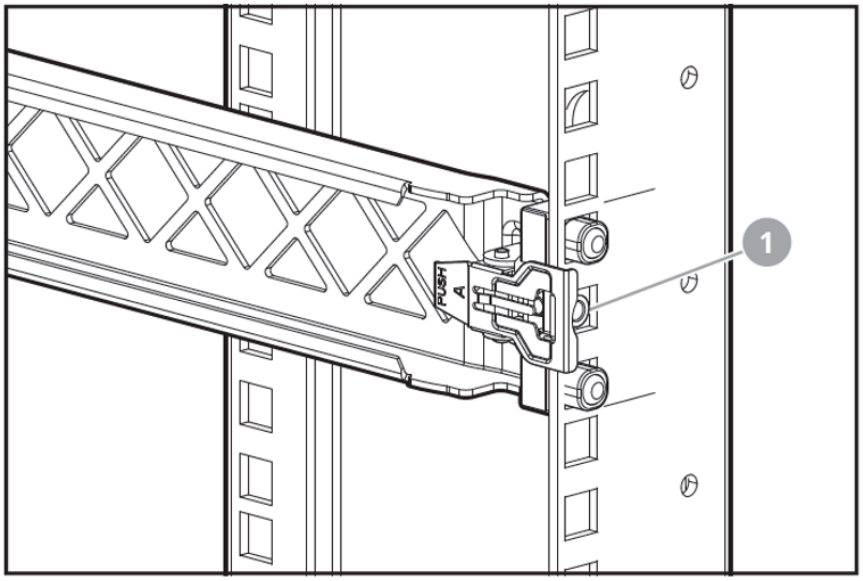
3. Align the sliders with the rails and slide the switch into the rails. At the front of switch, secure the sliders and switch assembly to the rack columns using the supplied 10-32 screws, one on each side. Use a T25 screwdriver to install and tighten the screws.



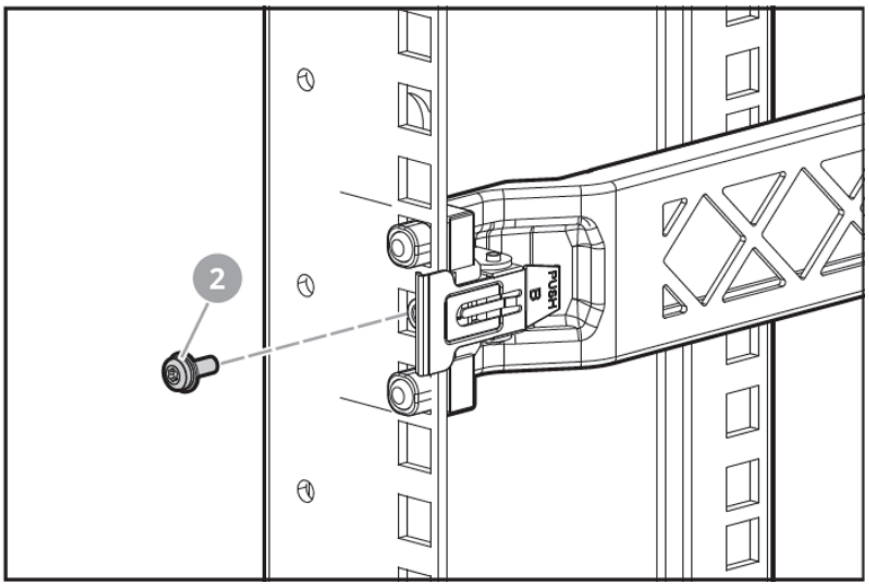
Back-to-Front configuration

1. Pre-determine an appropriate rack position to mount the switch, then secure the rails to the rack's front and rear posts as appropriate. Ensure the rails are at the same level on each rack post, front and rear. Use a T25 screwdriver to install the rear 10-32 mounting screw.

Front rack view

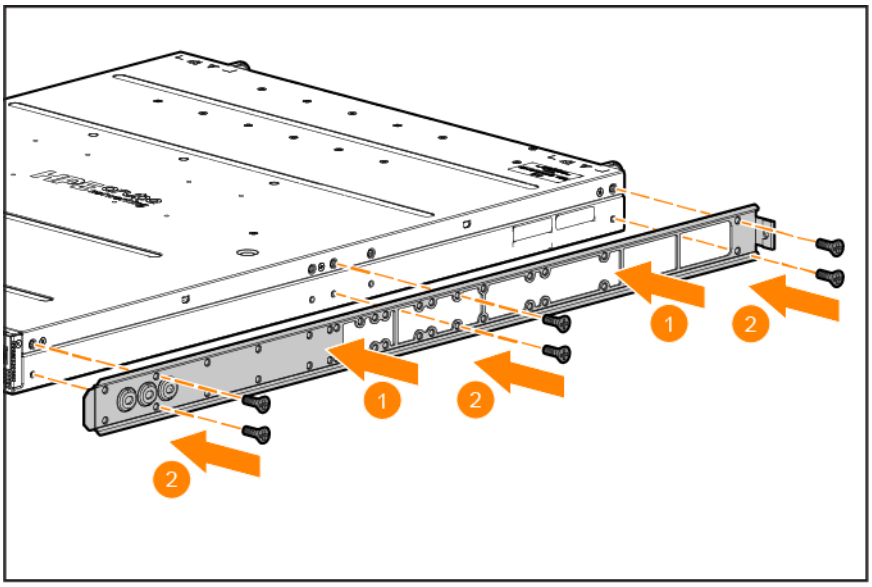


Rear rack view

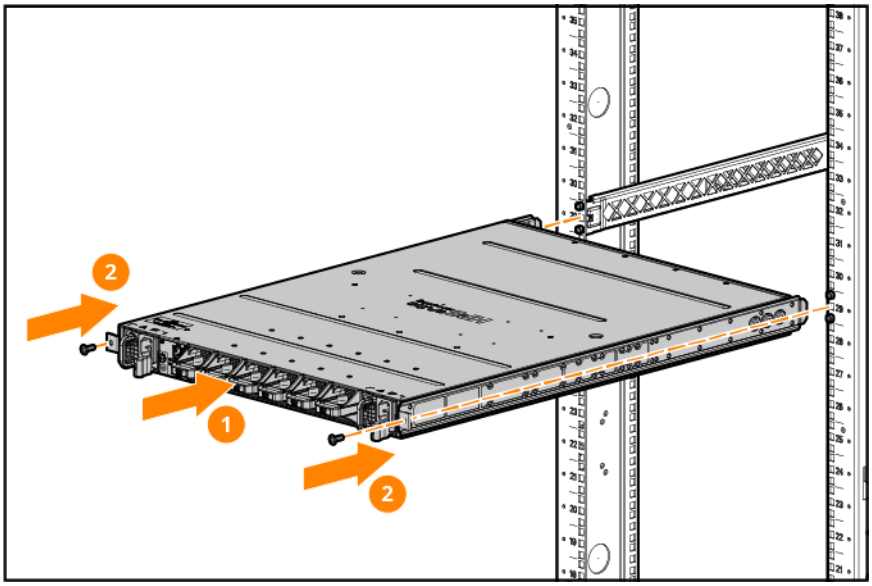


1	Integrated Retaining Clip
2	10-32 screw

2. Use a T20 screwdriver to attach the two sliders to both sides of the switch using twelve of the supplied 8mm long M4 screws.



3. Align the sliders with the rails and slide the switch into the rails. At the rear of switch, secure the sliders and switch assembly to the rack columns using the supplied 10-32 screws, one on each side. Use a T25 screwdriver to install and tighten the screws.



Install Transceivers

Hold the transceiver by its sides and gently insert it into the switch until it clicks into place. When a transceiver is inserted, the switch will authenticate it. This will typically take 1-3 seconds, with the worst case being 5 seconds.

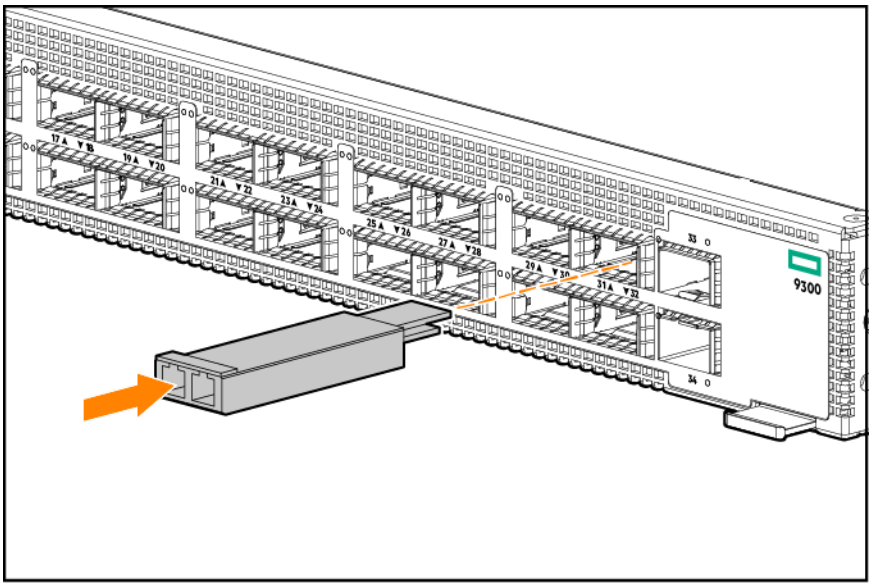
CAUTION

- The HPE Aruba Networking transceivers are Class 1 laser devices. Avoid direct eye exposure to the beam coming from the transmit port.

- The transceivers operate only at full duplex. Half duplex operation is not supported.
- The transceiver slots support 10G SFP+*, 25G SFP28*, QSFP+, QSFP28, QSFP56 and QSFP-DD transceivers.
- Use of supported genuine HPE Aruba Networking transceivers is always recommended. Non-HPE Aruba Networking SFP/SFP+/SFP28/QSFP+/QSFP28/QSFP56/QSFP-DD transceivers can be used in unsupported transceiver mode, but no support or warranty will be provided. Should you require additional transceivers, contact your HPE Aruba Networking sales representative or an authorized reseller.
- Always disconnect the network cable from a transceiver before installing it in the switch.
- You can install or remove a transceiver from a slot without having to power off the switch.
- For more transceiver support information for your switch model, see the ArubaOS-Switch and ArubaOS-CX Transceiver Guide .

** Supported through a QSA28 adapter.*

Figure 1 *Installing a transceiver*



Refer to the latest AOS-S and AOS-CX Transceiver Guide for Transceiver/AOC operating temperature limits.

Connect the Switch to a Power Source

1. If two power supplies are not already installed in the switch, see Install Power Supplies on page 37.
2. Plug the included power cord into the power supply's power connector and into a nearby power source.
3. Check the LEDs. See Chassis and Port LEDs on the front of the switch on page 13.

WARNING: 9300-32D switches are capable of operating with high-line (200-240VAC) or low-line (100-127VAC) power sources. Switches using low-line (100-127VAC) power sources are limited to a maximum of 8 high-power transceivers (>5W) and all remaining transceivers must be 5 Watts or less. Any excess high-power transceivers will be disabled. Transceivers requiring 5 Watts or less are not affected by the power source voltage.

WARNING: 9300S-32C8D switches using low-line (100-127VAC) power sources cannot enable high-power transceivers that requires more than 5 Watts with the default configuration of N+N redundancy mode. Switch

must be configured to non-redundant power mode to use high-power transceivers (>5W) with low-line input. Transceivers requiring 5 Watts or less are not affected by the power source voltage.

NOTE

One power supply with high line power provides power to operate the switch. Installing a second power supply can provide power to the switch in case the initial power supply fails. If the power supplies are plugged into different power sources, redundant power can be supplied in case of loss of one of the AC or DC power sources.

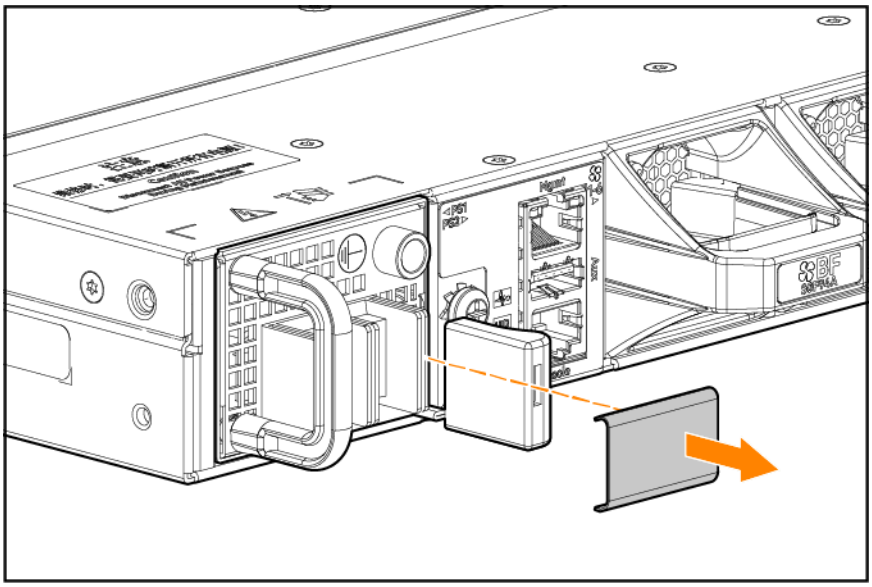
DC Power Supplies

WARNING

When powered by a DC power supply, the switch must be installed in a restricted access location. Only trained and qualified personnel should be allowed to install, replace, or service this equipment. See additional warnings and installation criteria for DC power in the Power Supply Instructions section of this document.

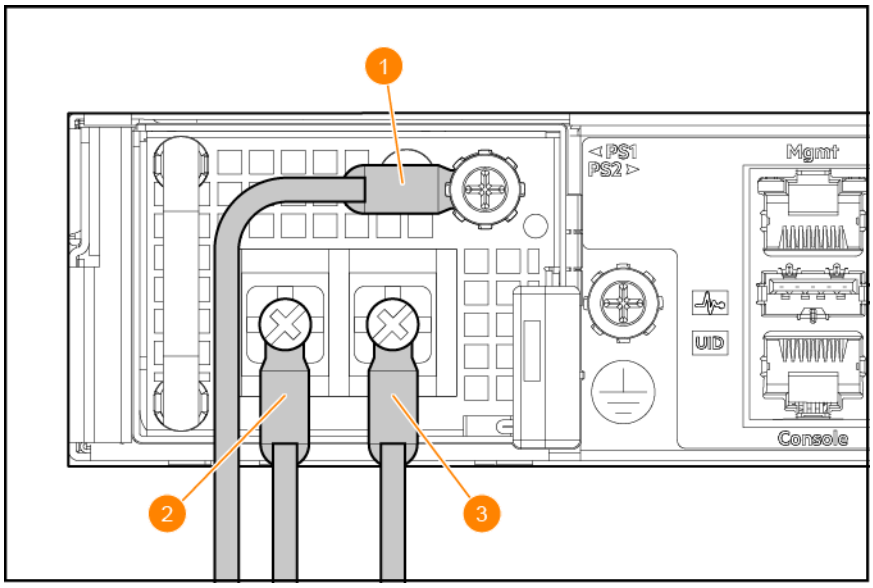
1. Make sure that the DC power source lines are turned off or disconnected from the DC circuit.
2. Remove the transparent protective cover from the DC connector terminals and set it aside.

Figure 1 *Removing a DC Power Supply Cover*



3. Using the supplied DC power cable, connect the DC cable's Ground, "+" and "-" wires to the PSU terminals (as marked on the power supply).

Figure 2 *Connecting DC Power to the Switch*



Item	Description
1	Ground Wire Terminal
2	- Wire Terminal
3	+ Wire terminal

4. Replace the transparent protective cover on the DC connector terminals
5. Turn on the DC power source lines or reconnect them to the DC circuit.

Power-on the switch and check LEDs

The switch does not contain a power on/off switch. It is turned on by connecting the power cord to the switch and a power source.

Check LEDs for proper switch operation. For further detail see Checking the Switch LEDs on page 75.

Power off the switch

To power-off a switch, remove both power cords from the switch and / or from the power source.

Setup for Initial Configuration

You can perform the initial configuration of the switch using one of these methods:

- **Using Zero Touch Provisioning (ZTP):** Use ZTP to configure a switch automatically from a remote server. The switch must be in the factory default configuration. If ZTP is to be used, your network administrator or installation site coordinator must provide an RJ-45 cable connected to the appropriate network. Connect the switch to the network using the RJ-45 out-of-band management port and power on the switch (or power off, then power on the switch). The ZTP operation is attempted for the first 10 minutes after the switch is powered on. For more information about ZTP, see the Fundamentals Guide for your switch and software release.
- **Using the HPE Aruba Networking CX mobile app:** The HPE Aruba Networking CX mobile app and the HPE Aruba Networking USB Bluetooth adapter (separately orderable SKU# S1H23A) enable you to configure your switch from your mobile device. For information about using the HPE Aruba Networking CX mobile app to configure the switch, see the *Fundamentals Guide* for your switch and software release.
- **Using an out-of-band serial console:** Use a workstation configured with suitable VT-100 terminal emulation software and connect the workstation to the switch's RJ-45 Console Port. A DB9-to-RJ-45 console cable can be ordered from HPE: JL448A, HPE Aruba Networking X2C2 RJ45 to DB9 Console Cable. For more information about this method see Initial Configuration with an Out-of-Band Serial Connection.
- **Using connections to the out-of-band dedicated management network:** Use a workstation configured with suitable VT-100 terminal emulation software and SSH software. Connect the workstation and the switch to the same management network. Connect the switch to the network using the RJ-45 out-of-band management port. For more information about using this method, see the Fundamentals Guide for your switch and software release. The switch can simultaneously support one console session through the console port and multiple network SSH sessions through the management port.

Connect Network Cables

Connect the network cables from the network devices or your patch panels to the RJ-45 out-of-band management port on the switch. See Prepare the Installation Site for further detail.

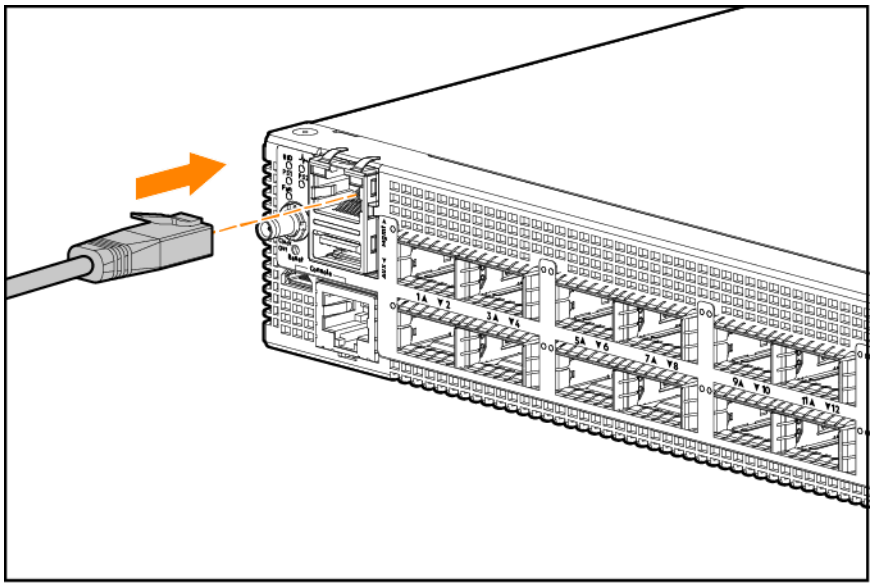
Using RJ-45 Out-of-band Management (OOBM) port

If you plan to manage the switch from a dedicated management network, connect an RJ-45 network cable from the management network to the Mgmt port. The Mgmt port supports 10, 100, and 1000 Mbps connections.

To connect:

Push the RJ-45 plug into the RJ-45 port until the tab on the plug clicks into place. When the switch and the connected device are powered, the OOBM port LED lights up to confirm a link has been established to the connected device.

If the LED does not turn on when the network cable is connected to the port, see Diagnosing with the LEDs in the Troubleshooting chapter.



To disconnect:

Press the small tab on the plug and pull the plug out of the port.

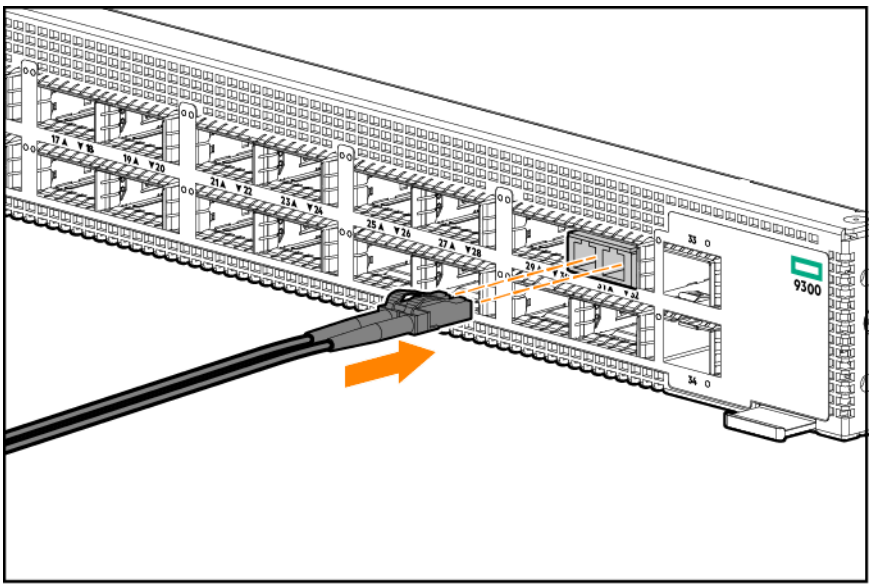
Connecting Cables to Transceivers

If you have any transceivers installed in the switch, the type of network connections you will need to use depends on the type of transceivers installed.

For transceiver ports, and in general for all the switch ports, a network cable from an active network device is connected to the port. If the port LED does not come on when the network cable is connected to the port, see Diagnosing with the LEDs in the Troubleshooting chapter.

NOTE

Ports are disabled by default.



Terminal Configuration

To connect a console to the switch, configure the PC terminal emulator as a DEC VT-100 (ANSI) terminal or use a VT-100 terminal, and configure either one to operate with these settings:

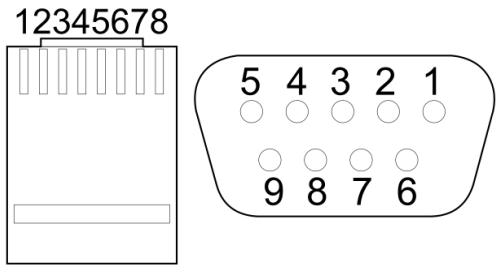
- A baud rate of 115200.
- 8 data bits, 1 stop bit, no parity, and flow control set to off.
- For the Windows Terminal program, also disable (uncheck) the “Use Function, Arrow, and Ctrl Keys for Windows” option.
- For the Hilgraeve HyperTerminal program, select the “Terminal keys” option for the “Function, arrow, and ctrl keys act as” parameter.

If you want to operate the console using a different configuration, make sure you change the settings on both the terminal and on the switch so they are compatible. Change the switch settings first, then change the terminal settings, then reboot the switch and reestablish the console session.

Console Cable Pinout

The HPE Aruba Networking X2C2 RJ45 to DB9 Console Cable (JL448A) has an RJ-45 plug on one end and a DB-9 female connector on the other end.

RJ-45 to DB-9 pinouts



RJ-45 Signals (Signal reference from chassis)	RJ-45 Pin	DB9 Pin	DB-9 Signals (Signal reference from PC
Reserved	1	8	CTS
Reserved	2	6	DSR
TXD	3	2	RXD

RJ-45 Signals (Signal reference from chassis)	RJ-45 Pin	DB9 Pin	DB-9 Signals (Signal reference from PC
Reserved	4	1	DCD
GND	5	5	GND
RXD	6	3	TXD
Reserved	7	4	DTR
Reserved	8	7	RTS
No connection	-	9	RI

Connect to a Console Port

To connect a console to the switch, follow these steps:

1. Connect the PC or terminal to the switch's Console Port using a console cable (JL448A; sold separately).
2. Turn on the terminal or PC's power and, if using a PC, start the PC terminal program.
3. Press **[Enter]** two or three times. When prompted to log in specify **admin**. When prompted for the password, press **[Enter]**. (by default, no password is defined).

You are placed into the manager command context, which is identified by the prompt: `switch#`. For example:

```
login as: admin
Password:

switch#
```

If you want to continue with console management of the switch at this time, see the Fundamentals Guide for initial configuration steps. For more detailed information, refer to the switch software manuals for your switch and software version.

Chapter 5
Replacing Components

This chapter describes how to remove and install the following components:

- Power supply
- Fan tray

The power supplies* and fan trays are hot swappable. You do not need to power off the switch before installing or replacing a power supply or fan tray.

- The switch and its components are sensitive to static discharge. Use an antistatic wrist strap and observe all static precautions when replacing components.
- If a power supply must be removed and then reinstalled, wait at least 5 seconds before reinstallation. Otherwise, damage to the switch may occur. The power supply needs this time to discharge any retained power.

** Only when Redundancy is not turned off.*

Replacing a Power Supply

Never insert or remove a power supply while the power cord is connected. Verify that cord has been disconnected from the power supply before installation or removal.

Air flow direction must be the same for both the power supplies and the fan trays installed in the switch.

If the switch is configured with a redundant power supply, the switch will not suffer any loss of traffic or performance if a power supply fails on a DC or a high line AC source. To maintain system redundancy, a failed power supply should be replaced as soon as possible. The LED on PSU1 or PSU2 will be OFF if faulted.

Two power supplies are available for use with the 9300-32D switch:

- (R8Z97A) HPE Aruba Networking 1500W 100-240VAC Front-to-Back AC Power Supply
- (R8Z98A) HPE Aruba Networking 1500W 100-240VAC Back-to-Front AC Power Supply

Three power supplies are available for use with the 9300S-32C8D switch:

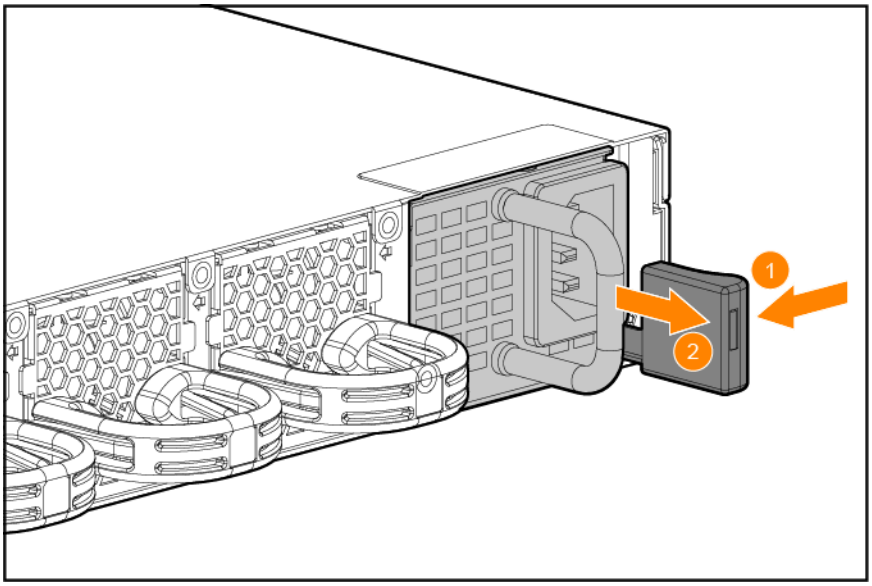
- (S0F90A) HPE Aruba Networking X3A15 12VDC 1600W 40-75VDC Back-to-Front Input Screw Terminal Power Supply Unit

- (S0F91A) HPE Aruba Networking X3A13 12VDC 1600W Front-to-Back C15 AC Power Supply Unit
- (S0F92A) HPE Aruba Networking X3A13 12VDC 1600W Back-to-Front C15 AC Power Supply Unit

To remove an AC power supply:

1. Remove the AC power cable from the power supply's connector.
2. Grasping the handle of the failed power supply, use the Release Lever to release the locking mechanism and slide the power supply out of the switch.

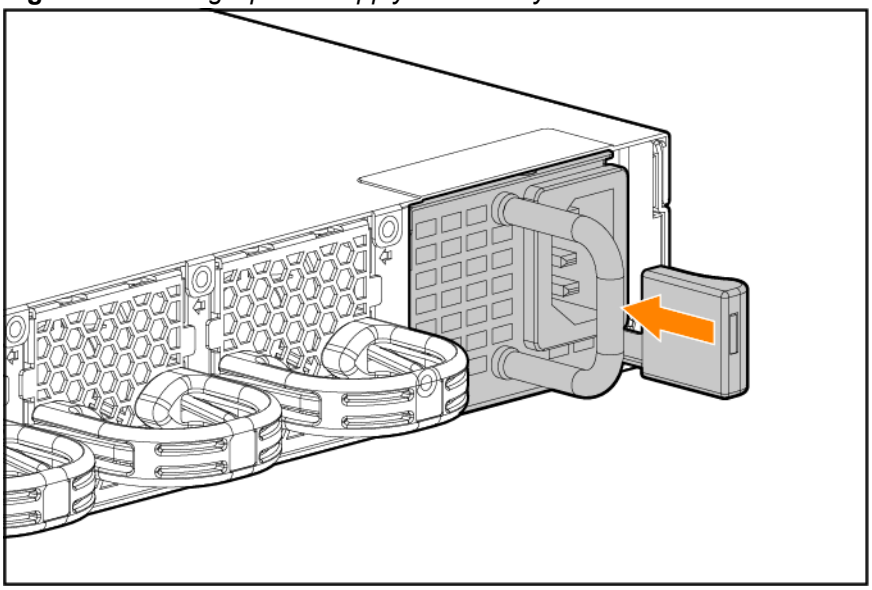
Figure 1 *Replacing a failed power supply*



Label	Description
1	Release Lever
2	Power supply pull handle

3. Insert the new power supply. Slide it all the way in until the locking mechanism clicks into place.

Figure 2 *Inserting a power supply into the bay*

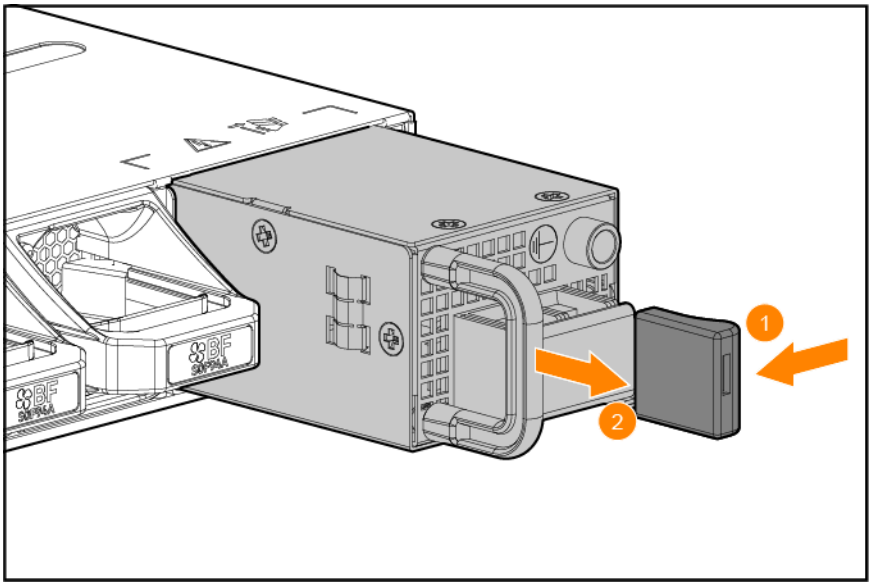


4. Connect the AC power cable to the new power supply's connector.

To remove a DC power supply:

1. Make sure that the DC power source lines are turned off or disconnected from the DC circuit.
2. Remove the DC power cable from the power supply.
3. Grasping the handle of the failed power supply, use the Release Lever to release the locking mechanism and slide the power supply out of the switch.

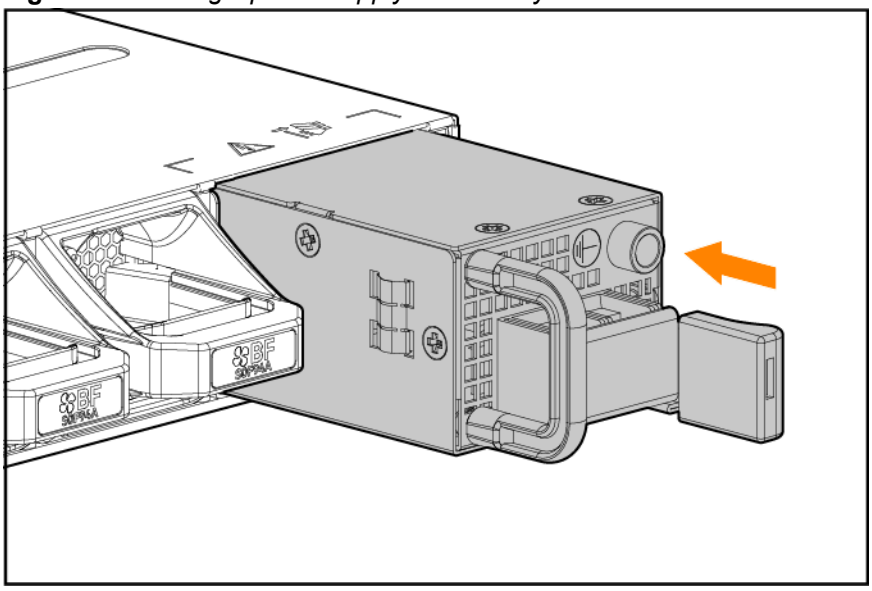
Figure 3 *Replacing a failed power supply*



Label	Description
1	Release Lever
2	Power supply pull handle

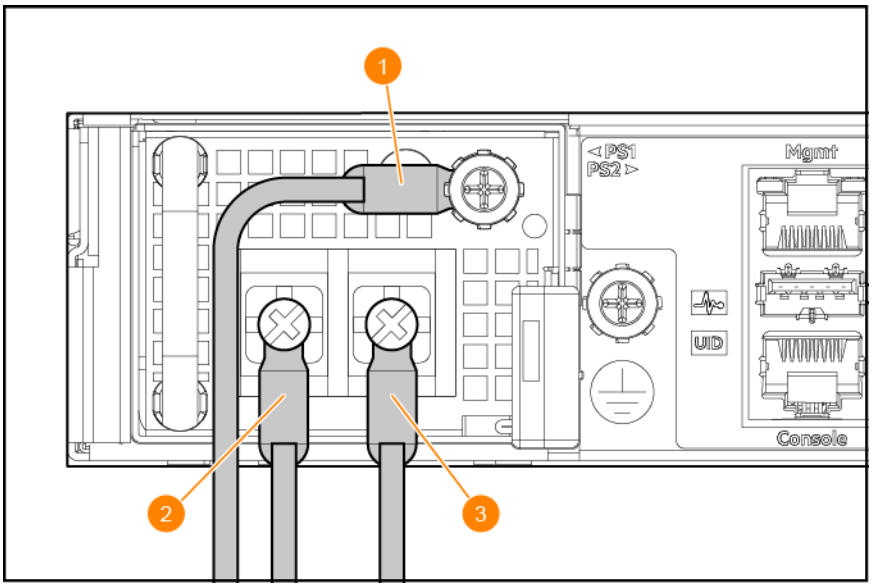
4. Insert the new power supply. Slide it all the way in until the locking mechanism clicks into place.

Figure 4 *Inserting a power supply into the bay*



5. Remove the plastic cover on the DC power connector.
6. Connect the DC cable's Ground, "+" and "-" wires to the PSU terminals (as marked on the power supply)

Figure 5 *Connecting DC Power to the Switch*



Item	Description
1	Ground Wire Terminal
2	- Wire Terminal
3	+ Wire terminal

7. Reinstall the transparent protective cover on the DC connector terminals.
8. Power up the DC power source.

Replacing a Fan Tray

The switch is equipped with six field-replaceable, hot-swappable fan trays. The switch can tolerate the failure of a single fan tray while maintaining a safe operating temperature. To maintain system redundancy, a failed fan tray should be replaced as soon as possible. The Global Status LED, Fan Status LED (9300-32D) or Back LED (9300S-32C8D), and Fan Tray LED will Flash Amber, indicating a fan tray has failed.

Ensure that a replacement fan tray has the same airflow direction as other fan trays installed in the switch.

CAUTION

- The switch is not compatible with fan trays from other HPE Aruba Networking hardware platforms.
- After removing a fan tray, wait at least five seconds before inserting a replacement fan tray in the same slot.
- Replace only one fan tray at a time. Removing more than one fan tray at a time compromises system cooling, risks damage to the hardware, and will cause the switch to reboot.
- If there are less than six fan trays installed, a two minute count down timer is triggered. If six fan trays are not present before the countdown expires, the 9300-32D switch will reboot while the 9300S-32C8D switch will power off for five minutes before rebooting and assessing the cooling capabilities. For this reason, it is not recommended to remove a failed fan tray, until you have the replacement fan tray prepared.

To replace a fan tray:

1. Identify the fan tray by its status LED. The failed fan tray LED will be Flashing Amber.
2. Remove the new fan tray from its packaging.
3. Grasping the handle of the failed fan tray, use the Release Latch to release the locking mechanism and pull the fan tray straight out to remove it from its slot.

Figure 1 ***9300-32D***

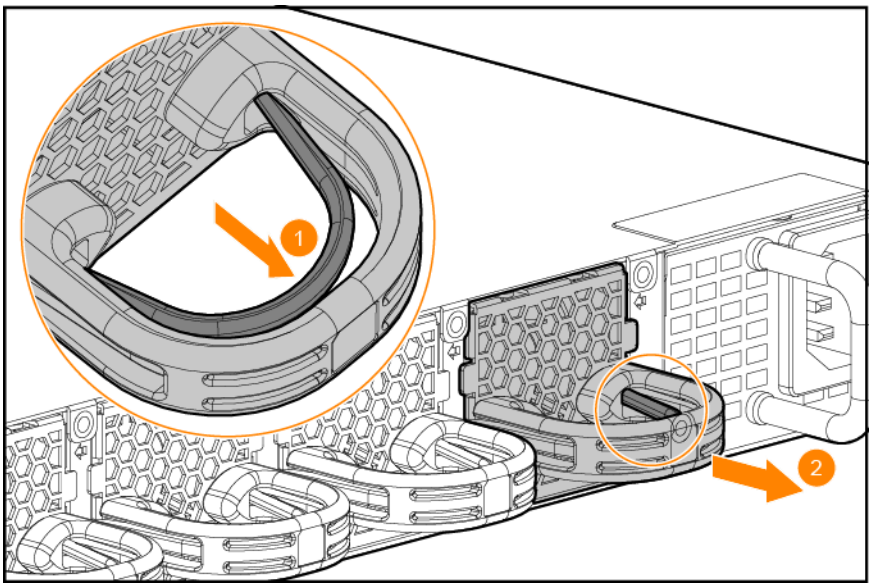
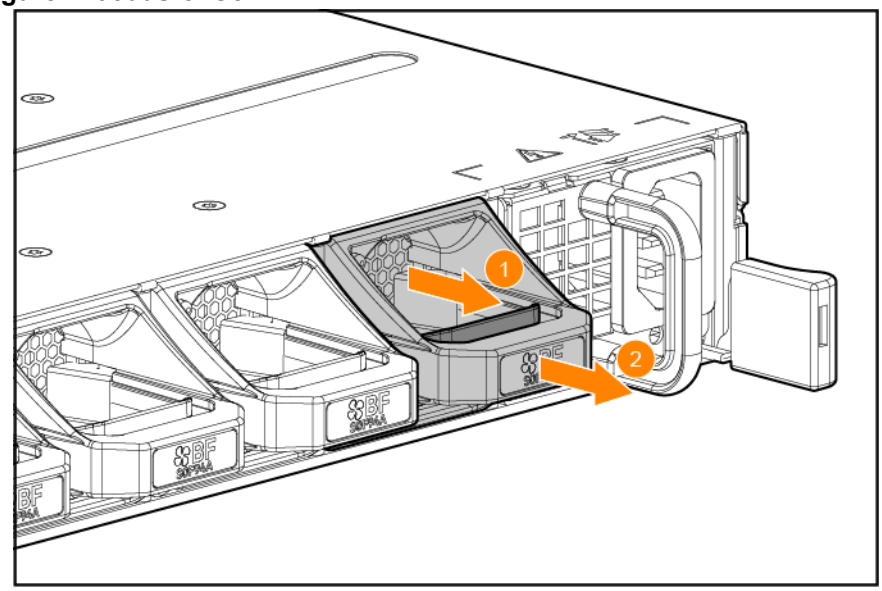


Figure 2 ***9300S-32C8D***



4. Insert the new fan tray fully into the slot so that its face plate is flush with the back face of the switch and the latch clicks. If the switch is connected to a power source, the fan tray should immediately start running.

Figure 3 ***9300-32D***

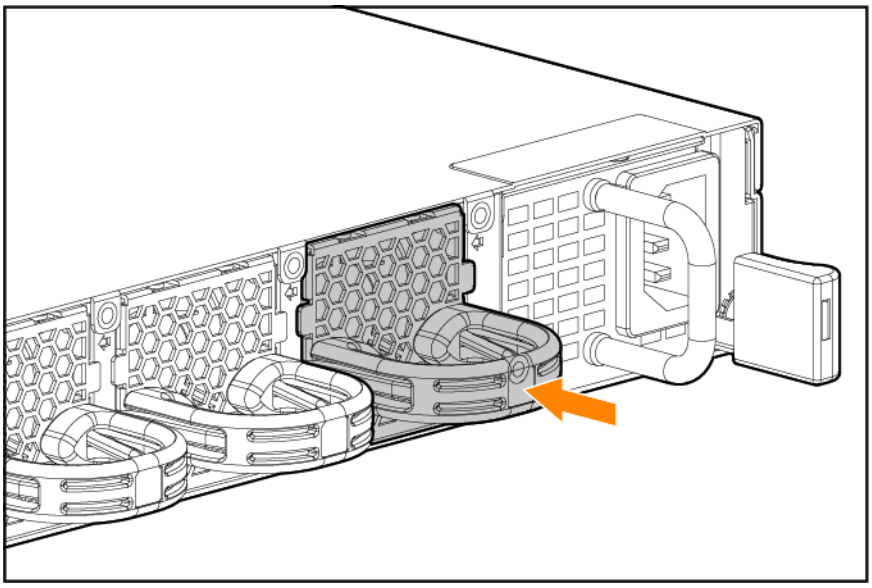
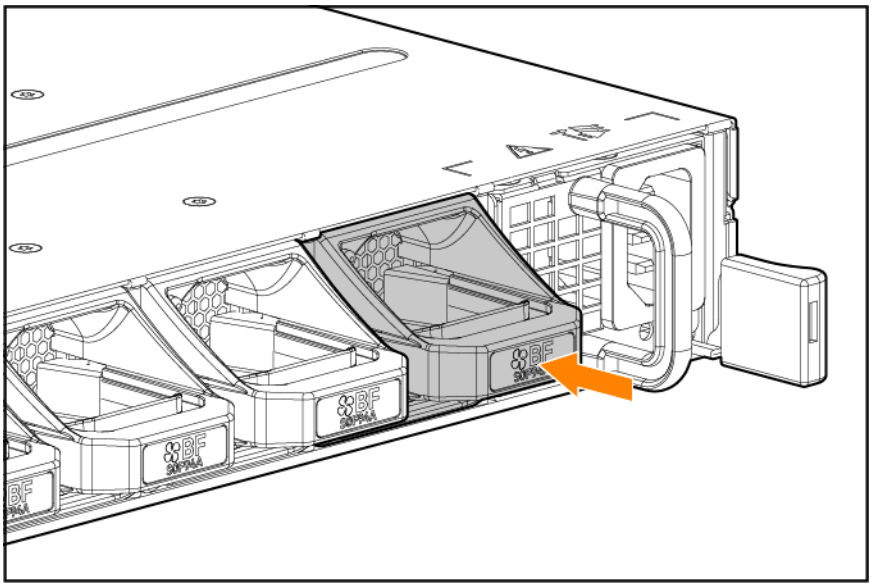


Figure 4 ***9300S-32C8D***



Chapter 6
Troubleshooting

This chapter describes how to troubleshoot your switch. This document describes troubleshooting primarily from a hardware perspective. You can perform more in-depth troubleshooting on these devices using the software tools available with the switches, including the full-featured console interface, the built-in web browser interface, Aruba Central, or Aruba AirWave.

This chapter describes the following:

- Basic Troubleshooting Tips on page 71
- Diagnosing with the LEDs on page 72
- Hardware Diagnostic Tests on page 75
- Accessing Updates on page 85
- Accessing HPE Aruba Networking Support on page 85

Basic Troubleshooting Tips

Most problems are caused by the following situations. Check for these items first when starting your troubleshooting:

- **Faulty or loose cables.** Look for loose or obviously faulty connections. If the cables appear to be OK, make sure the connections are snug. If that does not correct the problem, try a different cable.
- **Non-standard cables.** Non-standard and miswired cables may cause network collisions and other network problems, and can seriously impair network performance. Use a new correctly-wired cable.
- **Improper network topologies.** It is important to make sure you have a valid network topology. Common topology faults include excessive cable length and excessive repeater delays between end nodes. If you have network problems after recent changes to the network, change back to the previous topology. If you no longer experience the problems, the new topology is most likely at fault.

In addition, you should make sure that your network topology contains **no data path loops**. Between any two end nodes, there should be only one active cabling path at any time. Data path loops can cause broadcast storms that will severely impact your network performance.

For your switch, if you want to build redundant paths between important nodes in your network to provide some fault tolerance, you should enable **Spanning Tree Protocol** support on the switch. This ensures that only one of the redundant paths is active at any time, thus avoiding data path loops. Spanning Tree can be enabled through the switch console or the web browser interface. For more information on Spanning Tree, see the Layer 2 Bridging Guide for your switch.

By default, ports do not run selftest at boot. To enable port selftest on boot, save the **no fastboot** configuration to the switch. See AOS-CX software documentation for further detail.

Diagnosing with the LEDs

If possible, check switch Logs and status information to find more detailed information for LED error indications.

LED Patterns for General Switch Troubleshooting

1. Check in the table for the LED pattern you see on your switch.
2. Refer to the corresponding diagnostic tip on the next few pages.

Front/Rear Global Status LEDs	PS1 / PS2 Status LEDs (9300-32D)	Fan Status LED (9300-32D)	Back Status LED (9300S-32C8D)	Port LED	Power Supply Unit Status LED	Fan Tray Status LED	Diagnostic tip
-	-	-	-	-	Both PSU1 and PSU2 LEDs are Off with power cords plugged in.	-	1
Flashing amber	Flashing amber	-	Flashing amber	-	Either PSU1 or PSU2 LED is off but not both.	-	2, 3, or 4
Flashing amber	-	Flashing amber	Flashing amber	-	-	Flashing amber	5
Flashing amber	-	-	-	Flashing Amber	-	-	6
On Green	-	-	-	Off with transceiver cable connected	-	-	7
On Green	-	-	-	On Green but no port communication	-	-	8

Diagnostic Tips

Tip	Problem	Solution
1	Both switch power supplies are not plugged into an active power source.	Verify the power source works by plugging another device into the outlet, try plugging the power supplies into different outlets, or try different power cords. If the problem is still not resolved, both power supplies or the switch may be faulty.
2	The PSU with the LED Off is not receiving power.	Provide power to the PSU. Verify the power cord is plugged into an active power source and to the power supply. Make sure these connections are snug. If the LED is still not On Green, verify the power source works by plugging another device into the outlet. Or try plugging the switch into a different outlet or try a different power cord.
3	The PSU with the LED Off is not allowed to deliver power to the switch.	Fix a hardware mismatch. Verify that the PSU SKU is compatible with the switch. Verify that the PSU has the same airflow as the switch. Verify that both PSUs have the same input power type (AC or DC).
4	The PSU with the LED Off is not able to deliver power.	Try power cycling the PSU or removing and re-inserting the PSU. See Replacing a Power Supply. If the condition persists, the switch power supply has failed. Call your HPE Aruba Networking authorized network reseller, or use the electronic support services from HPE Aruba Networking to get assistance.
5	Fan tray with the flashing amber LED may have failed or uses incorrect airflow direction.	Check the airflow direction and replace with the correct fan tray if needed. Check that the fan tray SKU is compatible with this switch and replace with the correct fan tray if it is not. Otherwise, try removing the fan tray and re-inserting it. See Replacing a Fan Tray. If the condition persists, the fan tray has failed.
6	The network port for which the LED is flashing has experienced a self test, initialization failure, or unsupported transceiver.	Check the switch Event Log and `show interface` command output for indication of the fault condition. If a port failed during its selftest, contact HPE Aruba Networking support. If the port has a transceiver installed, verify the transceiver is either a supported HPE Aruba Networking transceiver, or if using an unsupported transceiver, confirm that Unsupported Transceiver mode is enabled. For a list of supported transceivers, see the ArubaOS-Switch and ArubaOS-CX Transceiver Guide . The transceivers are also tested when they are “hot-swapped”—installed or changed while the switch is powered on. To verify the transceiver has failed, remove and reinstall the transceiver without powering off the switch. If the port fault indication reoccurs, you will have to replace the transceiver. Check the event log to see why the transceiver failed. A possibility may be that the transceiver has been disabled due to lack of available power, or thermal issues or limitations.

Tip	Problem	Solution
		To get assistance, call your HPE Aruba Networking authorized network reseller, or use the electronic support services from HPE Aruba Networking.
7	The port is not able to establish link.	Try the following procedures: For the indicated port, verify that both ends of the cabling, at the switch and the connected device, are connected properly. Verify the connected device and switch are both powered on and operating correctly. Verify you have used the correct cable type for the connection: For fiber-optic connections, verify the transmit port on the switch is connected to the receive port on the connected device, and the switch receive port is connected to the transmit port on the connected device. The cable verification process must include all patch cables from any end devices, including the switch, to any patch panels in the cabling path. Verify the port has not been disabled through a switch configuration change. You can use the console interface, or, if you have configured an IP address on the switch, use the Web browser interface to determine the state of the port and re-enable the port if necessary. Verify the switch port configuration matches the configuration of the attached device. For example, if the switch port is configured as “Full-duplex”, the port on the attached device also MUST be configured as “Full-duplex”. If the configurations don’t match, the results could be a very unreliable connection, or no link at all. Run an internal selftest on the port. If the command reports a failure, contact HPE Support. There may be a hardware fault. If the other procedures don’t resolve the problem, try using a different port or a different cable.
8	The port gets link but does not forward traffic.	Use the switch console to see if the port is part of a dynamic trunk (through the LACP feature) or to see if Spanning Tree is enabled on the switch, and to see if the port may have been put into a “blocking” state by those features. The **show lacp interfaces** command displays the port status for the LACP feature; the **show spanning-tree** command displays the port status for Spanning Tree. Other switch features that may affect the port operation include VLANs, IGMP, and VSX. Use the switch console to see how the port is configured for these features. Also ensure, that the device at the other end of the connection is indicating a good link to the switch. If it is not, the problem may be with the cabling between the devices or the connectors on the cable.

Hardware Diagnostic Tests

Checking the Switch LEDs

See Diagnosing with the LEDs on page 72 for information on interpreting the LED patterns.

Testing the switch by resetting it

If you believe the switch is not operating correctly, you can reset the switch to test its circuitry and operating code. To reset a switch, either:

- Unplug and plug in the power cord (power cycling). Wait a minimum of five seconds after unplugging, before plugging the power cord back in.
- Reboot the switch through the CLI with the **boot system** command.

Power cycling the switch causes the switch to reset. The reset process also causes any network traffic counters and the System Up Time timer to reset to zero.

Checking Console Messages

Useful diagnostic messages may be displayed on the console screen when the switch is reset. Connect a PC running a VT-100 terminal emulator program to the switch's Console Port and configure it to run at 115200 baud, and with the other terminal communication settings shown in Terminal Configuration on page 61. Then, when you reset the switch, note the messages that are displayed. Additionally, you can check the switch event log, which can be accessed from the console using the `show events` command.

Testing Switch-to-Device Network Communications

You can perform the following communication tests to verify the network is operating correctly between the switch and any connected device that can respond correctly to the communication test.

- **Link Test:** a physical layer test that sends IEEE 802.2 test packets to any device identified by its MAC address.
- **Ping Test:** a network layer test used on IP networks that sends test packets to any device identified by its IP address.

These tests can be performed through the switch console interface from a terminal connected to the switch, through a Telnet connection, or from the switch's web browser interface.

Testing End-to-End Networking Communications

Both the switch and the cabling can be tested by running an end-to-end communications test–a test that sends known data from one network device to another through the switch. For example, if you have two PCs on the network that have LAN adapters between which you can run a link-level test or Ping test through the switch, you can use this test to verify that the entire communication path between the two PCs is functioning correctly. See your LAN adapter documentation for more information on running a link test or Ping test.

Physical

Item	Dimensions (W x D x H)	Weight
R9A29A	17.26" x 23.23" x 1.71 " (43.8 x 59.0 x 4.3 cm)	26.9 lb (12.2 kg)
R9A30A	17.26" x 23.23" x 1.71 " (43.8 x 59.0 x 4.3 cm)	26.9 lb (12.2 kg)
R8Z96A	17.26" x 23.23" x 1.71 " (43.8 x 59.0 x 4.3 cm)	19.8 lb (9.0 kg)
R8Z97A	2.15" x 15.59" x 1.57" (5.5 x 39.6 x 4.0 cm)	2.7 lb (1.2 kg)
R8Z98A	2.15" x 15.59" x 1.57" (5.5 x 39.6 x 4.0 cm)	2.7 lb (1.2 kg)
R8Z99A	1.61" x 5.04" x 1.61" (4.1 x 12.8 x 4.1 cm)	0.3 lb (0.14 kg)
R9A00A	1.61" x 5.04" x 1.61" (4.1 x 12.8 x 4.1 cm)	0.3 lb (0.14 kg)
S0F81A	17.4" x 24.0" x 1.73" (44.3 x 61.0 x 4.4 cm)	30.1 lb (13.6 kg)
S0F82A	17.4" x 24.0" x 1.73" (44.3 x 61.0 x 4.4 cm)	30.1 lb (13.6 kg)
S0F83A	17.4" x 24.0" x 1.73" (44.3 x 61.0 x 4.4 cm)	30.1 lb (13.6 kg)
S0F84A	17.4" x 24.0" x 1.73" (44.3 x 61.0 x 4.4 cm)	30.1 lb (13.6 kg)
S0F87A	17.4" x 24.0" x 1.73" (44.3 x 61.0 x 4.4 cm)	30.2 lb (13.7 kg)
S0F88A	17.4" x 24.0" x 1.73" (44.3 x 61.0 x 4.4 cm)	30.2 lb (13.7 kg)

Item	Dimensions (W x D x H)	Weight
S0F90A	2.15" x 15.59" x 1.57" (5.5 x 39.6 x 4.0 cm)	2.7 lb (1.2 kg)
S0F91A	2.15" x 15.59" x 1.57" (5.5 x 39.6 x 4.0 cm)	2.7 lb (1.2 kg)
S0F92A	2.15" x 15.59" x 1.57" (5.5 x 39.6 x 4.0 cm)	2.7 lb (1.2 kg)
S0F93A	1.57" x 6.06" x 1.57" (4.0 x 15.4 x 4.0 cm)	0.4 lb (0.2 kg)
S0F94A	1.57" x 6.06" x 1.57" (4.0 x 15.4 x 4.0 cm)	0.4 lb (0.2 kg)
S0F95A	17.4" x 24.0" x 1.73" (44.3 x 61.0 x 4.4 cm)	22.6 lb (10.24 kg)
S0F96A	17.4" x 24.0" x 1.73" (44.3 x 61.0 x 4.4 cm)	22.6 lb (10.24 kg)

Electrical

9300-32D Switch model	Maximum current	Nominal Voltage	Frequency range
Aruba 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Front-to-Back 6 Fans 2 AC PSU Bundle (R9A29A)	12A/8A	100-127 / 200-240 VAC*	50Hz-60Hz
Aruba 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Back-to-Front 6 Fans 2 AC PSU (R9A30A)	12A/8A	100-127 / 200-240 VAC*	50Hz-60Hz

9300S-32C8D Switch model	Maximum current	Nominal Voltage	Frequency range
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Front-to-Back 6xFan 2xAC PSU TAA Bundle (S0F81A)	12A/8A	100-127 / 220-240 VAC*	50Hz-60Hz
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Front-to-Back 6xFan 2xAC PSU	12A/8A	100-127 / 200-240 VAC*	50Hz-60Hz

9300S-32C8D Switch model	Maximum current	Nominal Voltage	Frequency range
Bundle (S0F82A)			
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xAC PSU TAA Bundle (S0F83A)	12A/8A	100-127 / 200-240 VAC*	50Hz-60Hz
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xAC PSU Bundle (S0F84A)	12A/8A	100-127 / 200-240 VAC*	50Hz-60Hz
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xDC PSU TAA Bundle (S0F87A)	40A	-48 to -60 VDC	N/A
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xDC PSU Bundle (S0F88A)	40A	-48 to -60 VDC	N/A

** AC Power supplies automatically adjust to any voltage between 100-127 & 200-240 VAC and either 50 or 60 Hz.*

Power Cords

HPE Aruba Networking includes the power cord intended for use with your HPE Aruba Networking switch and power supply. Different countries/regions may require different power cords. For a list of the power cords that apply to your switch, see Included Parts.

- Only HPE Aruba Networking approved power cords may be used with HPE Aruba Networking devices. To access power cord information for your switch, see Included Parts. Lost or damaged power cords must be replaced only with HPE Aruba Networking approved power cords. If your installation requires a different power cord than the one supplied with the switch and/or power supply, be sure that the cord is adequately sized for the current requirements of the switch. In addition, be sure to use a power cord displaying the mark of the safety agency that defines the regulations for power cords in your country/region. The mark is your assurance that the power cord can be used safely with the switch and power supply.
- Remove the power cord from the switch before mounting or unmounting the switch.
- Do not use a damaged or non-recommended power cord with your switch. Using such power cords voids the switch and power supply warranty. It can also cause serious electrical problems, including injury or death to personnel, and damage to the switch and other property. If you cannot verify that you have a power cord approved for use with your switch model, contact your authorized HPE Aruba Networking dealer or sales representative for assistance.

Power Consumption

9300-32D Switch	Power consumption*
Aruba 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Front-to-Back 6 Fans 2 AC PSU Bundle (R9A29A)	Max: 675 W Idle: 210 W
Aruba 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Back-to-Front 6 Fans 2 AC PSU Bundle (R9A30A)	Max: 688 W Idle: 221 W

** Maximum power measured with 100% IMIX traffic rates, transceivers and fans.*

Idle power measured with no transceivers or cables installed at room temperature.

9300S-32C8D Switch	Power Consumption*
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Front-to-Back 6xFan 2xAC PSU Bundle (S0F82A) HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Front-to-Back 6xFan 2xAC PSU TAA Bundle (S0F81A)	Max: 920 W Idle: 185 W Typical: 395W
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xAC PSU Bundle (S0F84A) HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xAC PSU TAA Bundle (S0F83A)	Max: 930 W Idle: 185 W Typical: 400W
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xDC PSU Bundle (S0F88A) HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xDC PSU TAA Bundle (S0F87A)	Max: 950 W Idle: 210 W Typical: 420 W

** Maximum power measured with SR Optics,100% traffic, 240VAC at 45°C.*

Idle power measured with DACs only, 0% traffic, 240VAC at 25°C.

Typical power measured with DACs only, 50% traffic, 240VAC at 25°C.

Battery statements

- Where a battery incorporated by HPE is too small to bear the CE marking, it conforms with applicable requirements.
- These switches use a lithium battery. Do not attempt to replace the battery. Return the switch to Hewlett Packard Enterprise for battery replacement.

- The only indicator of battery failure is the failure of the switch internal clock to keep the correct time across a reboot or power cycle. If a battery failure occurs, contact your authorized Hewlett Packard Enterprise representative for assistance. Batteries are not customer-serviceable and battery failures should be referred only to service personnel authorized by Hewlett Packard Enterprise.
- For important safety, environmental, and regulatory information, see *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products*, available at http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts.

ATTENTION	Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

ATTENTION	The battery supplied with this product may contain perchlorate material. Special handling may apply in California and certain other states. See http://www.dtsc.ca.gov/hazardouswaste/perchlorate Web site for more information.

A risk of explosion exists if a battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Environmental Specifications

Table 1: Environmental Specifications for all HPE Aruba Networking CX CX 9300-32D Switches

Operating temperature*	Front-to-Back airflow: 45°C 32°F to 113°F (0°C to 45°C) at sea level Derate 1°C for every 1,000 ft to 10,000 ft (300 m to 3.0 km) Back-to-Front airflow: 40°C 32°F to 104°F (0°C to 40°C) at sea level Derate 1°C for every 1,000 ft to 10,000 ft (300 m to 3.0 km)
Non-operating temperature	-40°F to 158°F up to 15,000 ft (-40°C to 70°C up to 4.6 km)
Operating relative humidity	Front-to-Back airflow: 15% to 95% @ 113°F (45°C) non-condensing Back-to-Front airflow: 15% to 95% @ 104°F (40°C) non-condensing
Non-operating storage relative humidity	15% to 90% @ 158°F (70°C) non-condensing
Max operating altitude	10,000 ft (3.0 km) Max
Max non-operating altitude	15,000 ft (4.6 km) Max

Table 2: Environmental Specifications for all HPE Aruba Networking CX 9300S-32C8D Switches

Operating temperature*	Front-to-Back airflow: 32°F to 113°F (0°C to 45°C) at sea level Derate 1°C for every 1,000 ft to 10,000 ft (300 m to 3.0 km) Back-to-Front airflow: 32°F to 104°F (0°C to 40°C) at sea level Derate 1°C for every 1,000 ft to 10,000 ft (300 m to 3.0 km)
Non-operating temperature	-40°F to 158°F up to 15,000 ft (-40°C to 70°C up to 4.6 km)
Operating relative humidity	Front-to-Back airflow 5% to 95% @ 113°F (45°C) non-condensing Back-to-Front airflow 5% to 95% @ 104°F (40°C) non-condensing
Non-operating storage relative humidity	5% to 95% @ 149°F (65°C) non-condensing
Max operating altitude	10,000 ft (3.0 km) Max
Max non-operating altitude	15,000 ft (4.6 km) Max

** Refer to the latest AOS-S and AOS-CX Transceiver Guide for Transceiver/AOC operating temperature limits.*

Acoustics

Aruba 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Switch	Acoustics
Aruba 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Front-to-Back 6 Fans 2 AC PSU Bundle (R9A29A)	LWAd = 8.1 Bel LpAm (Bystander) = 61 dB
Aruba 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Back-to-Front 6 Fans 2 AC PSU Bundle (R9A30A)	LWAd = 8.3 Bel LpAm (Bystander) = 62 dB

Acoustics measured in 23± 2°C hemi-anechoic chamber with a loading of 100% traffic on all ports. Ports populated with 400G AOC and Transceivers: 2x R9B44A, 12x R9B42A, 18x R9B41A. Measured in accordance with ECMA-74:2019. Values presented are the declared A-weighted Sound Power Level (LWAd) and mean bystander A-weighted Sound Pressure Level (LpAm).

HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Switch	Acoustics
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Front-to-Back 6xFan 2xAC TAA Bundle (S0F81A) HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Front-to-Back 6xFan 2xAC Bundle (S0F82A)	LWAd = 6.6 Bel LpAm (Bystander) = 48.3 dB
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xAC TAA Bundle (S0F83A) HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xAC Bundle (S0F84A)	LWAd = 6.4 Bel LpAm (Bystander) = 46.0 dB
HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xDC TAA Bundle (S0F87A) HPE Aruba Networking 9300S 32p QSFP28 100G 8p QSFP-DD 400G Back-to-Front 6xFan 2xDC Bundle (S0F88A)	LWAd = 6.9 Bel LpAm (Bystander) = 50.3 dB

NOTE

Acoustics measured in 23± 2°C hemi-anechoic chamber with a loading of 50% traffic on all ports. Ports populated with 100/200/400G DAC: 4x R8M44A, 4x R8M45A, 16x R5Z76A, 8x R0Z25A, 8x JL307A. Measured in accordance with ECMA-74:2019. Values presented are the declared A-weighted Sound Power Level (LWAd) and mean bystander A-weighted Sound Pressure Level (LpAm).

RoHS

EN IEC 63000:2018

Safety and Regulatory Information

NOTE

For important safety, environmental, and regulatory information, see Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts.

Safety-EU	EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 + A2:2013 EN 62368-1:2014 +A11:2017 EN 62368-1:2018+A11:2020
Safety-Worldwide	IEC 62368-1:2014 (Second Edition) IEC 62368-1:2018 (Third Edition)
North American	UL 62368-1, 3rd Ed. CAN/CSA C22.2 No. 62368-1:19, 3rd Ed
EMC	BS/EN 55032:2015/CISPR 32, Class A FCC CFR 47 Part 15: 2018, Class A ICES-003, Class A VCCI-32, Class A CNS 15936, Class A KS C 9832, Class A AS/NZS CISPR 32, Class A BS/EN 61000-3-2: 2019, Class A BS/EN 61000-3-3: 2013 BS/EN 55035, CISPR 35, KS C 9835
RoHS	EN IEC 63000:2018

NOTE

Use only an approved Laser Class 1 SFP transceiver.

Japan Power Cord Warning	製品には、同梱された電源コードをお使い下さい。 同梱された電源コードは、他の製品では使用出来ません。

Connectivity Standards

See the latest *Transceiver Guide* for your HPE Aruba Networking 9300-32D and 9300S-32C8D series switch at the HPE Support Portal.

Chapter 8
Support and other resources

Accessing HPE Aruba Networking Support

HPE Aruba Networking Support Services	https://www.arubanetworks.com/support-services/
HPE Support Portal	https://networkingsupport.hpe.com/home
North America telephone	1-800-943-4526 (US & 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 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/
HPE Aruba Networking software and documentation	https://asp.arubanetworks.com/downloads

Accessing Updates

To download product updates:

HPE Networking Support Portal

https://networkingsupport.hpe.com/home

If you are unable to find your product in the HPE 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/

NOTE:

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 HPE Support Portal account to manage subscriptions). Security notices are viewable without an 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

HPE Aruba Networking 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/.

Documentation Feedback

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