Aruba 9300-32D Switch Series

Installation and Getting Started Guide

a Hewlett Packard
Enterprise company

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Contents

Chapter 2
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

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

Related Publications

- Start Here: Installation, Safety, and Regulatory Information for the Aruba 9300-32D Switches
- ArubaOS-Switch and ArubaOS-CX Transceiver Guide
- ArubaOS-CX software manuals

To view and download these publications, visit the Aruba Support Portal at https://asp.arubanetworks.com/downloads.

The Aruba CX 9300 Switch Series is a next-generation 25.6Tbps, 1U fixed configuration switch supporting 32-ports of 100/200/400GbE. The switch is an ideal solution for flexible, cost-effective, high-density 400GbE connectivity server, storage, and intra-fabric connectivity.

This chapter describes these switches with the following information:

Front of switches:

- Network ports
- Management ports
- Chassis and Port LEDs
- LED behavior
- Switch product label (Pull tab)

Back of switches:

- Chassis grounding location
- Power supplies
- Fan trays

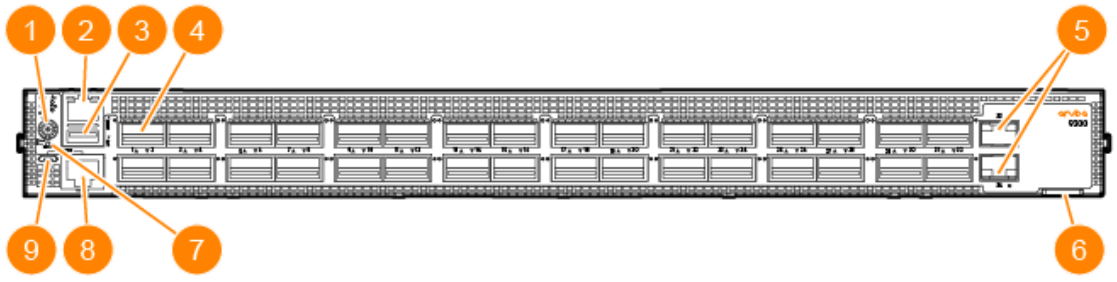
Overview

The Aruba 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.

Front of the Switches

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



Label	Description
1	Clock output connector
2	Out-of-Band Management port
3	USB Type-A auxiliary port
4	QSFP56-DD ports
5	SFP+ ports
6	Switch product label. Pull the tab out to view the product label information.
7	Reset button
8	RJ-45 console port
9	Micro USB console port

Network Ports

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

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

Split Mode (QSFP-DD)

QSFP-DD ports on the Aruba 9300-32D switch series are capable of operating as "`split port`" 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
4	100G	R9B48A Aruba 400G Q-DD to 4xQSFP56 100G 7m AOC R9B42A Aruba 400G Q-DD MPO12 eDR4 2km SMF XCVR * R9B63A ARUBA 100G QSFP28 LC FR1 2KM SMF XCVR
2	200G	R9B53A Aruba 400G Q-DD to 2xQSFP56 200G 7m AOC * connect to HPE Server Adapters that are 200G QSFP56
2	100G	R9B58A 200G QDD to 2xQSFP28 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
4	25G	R0Z27A Aruba 100G QSFP28 to QSFP28 7m AOC JL309A Aruba 100G QSFP28 MPO SR4 MMF XCVR * JL309A Aruba 100G QSFP28 MPO SR4 100m MMF XCVR
4	10G	(845420-B21) HPE QSFP28 to 4x25G SFP28 7m AOC {HPE Server product} * connect to ports that are 10G SFP capable JH233A HPE X142 40G QSFP+ MPO eSR4 300M XCVR * J9150D Aruba 10G SFP+ LC SR 300m MMF XCVR

The 400G to 400G products do not need the "`split`" command.

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

Aruba 9300-32D switches include an RJ-45 serial console port on the front of the switch. This port is used to connect a console to the switch by using an RJ-45 serial cable (not supplied). A DB9-to-RJ-45 console cable can be ordered from HPE: JL448A, Aruba X2C2 RJ45 to DB9 Console Cable or R9G48A Aruba USB-A to RJ45 PC-to-Switch Cable; R9J32A Aruba USB-A to USB-C PC-to-Switch Cable ; R9J33A Aruba USB-C to USB-C PC-to-Switch Cable.

The 9300-32D switches 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. If both cables are plugged in, the console output is echoed to both the RJ-45 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.
- USB driver available from Aruba: https://support.arubanetworks.com/ToolsResources/tabid/76/DMXModule/514/Default.aspx?EntryId=7512

For more information on the console connection, see Setup for Initial Configuration on page 32. The console can be a PC or workstation running a VT-100 terminal emulator, or a VT-100 terminal.

The Aruba CX mobile app and the Aruba USB Bluetooth adapter 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.

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/Bootp 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.

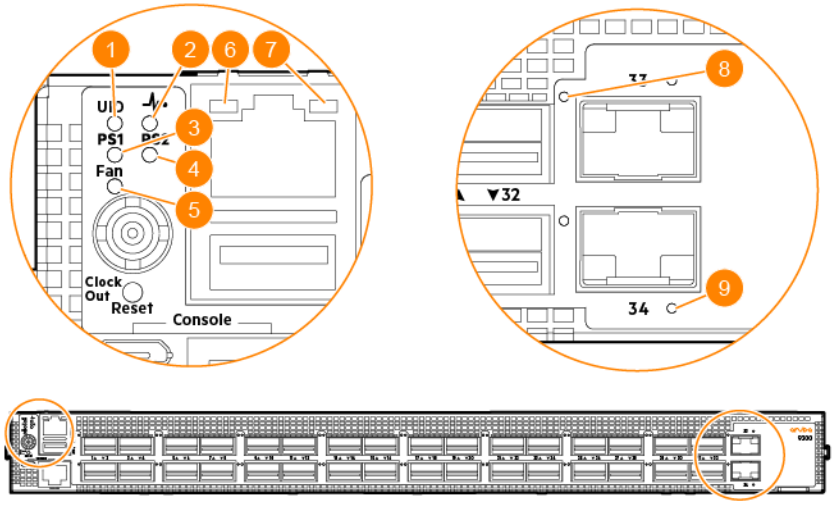
For more information, see the Fundamentals Guide for your switch.

USB-A Aux Port

The USB-A port is used for file management, downloading switch software or use of Aruba accessories. This port uses a USB Type-A connector.

Chassis and Port LEDs on the front of the switch

Figure 1 *Chassis and Port LEDs for the Aruba 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

LED Behavior

LEDs	Function	Switch Behavior	LED State	Meaning
QSFP-DD port indicator	Displays Link information for the port.	Startup	On Green	OS-CX: Default SVOS: Default
		Normal	OFF	No valid link
		Normal	On Green	Valid link indication
		Fault	FLASH Amber blinks with Global Status LED.	Fault
QSFP-DD port indicator in split mode, all lanes correspond to the single LED	Displays Link information for the port.	Startup	On Green	OS-CX: Default SVOS: Default
		Normal	OFF	No valid link
			On Green	Valid link indication on one or more lanes.
		Fault	OFF	No fault
			FLASH Amber blinks with Global Status LED.	Fault on one or more lanes
Out-Of-Band-Management Link/Activity	Displays Link and Activity information for the OOBM port.	Normal	OFF	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
Global Status Indicator	Displays overall health status for the unit.	Startup	Flash Green	OS-CX: ArubaOS loading
			FLASH Green	SVOS: Self test in progress
		Normal	ON Green	OS-CX: Self test PASS, Fans and

LEDs	Function	Switch Behavior	LED State	Meaning
				PSUs OK
		Fault	FLASH Amber	OS-CX: Fault Indicates Power supply, Fan tray or Port fault by FLASHING with faulted device. Can also blink alone to indicate thermal or endurance issues. See Event Logs for more detail on all faults. SVOS: Self test failure
Unit Identification/Locator	Customer selectable through CLI to help ID/Locate unit.	Normal	Off	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	Indicates status of modular PSUs on the back of the switch.	Normal	On Green	Normal operation
		Fault	FLASH 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.
Fan Health Status	Indicates status of modular fans on the back of the switch.	Normal	On Green	Normal Operation
		Fault	Flash Amber with Global Status LED	Fan fault by missing fan tray, fan tray with misconfiguration of air flow, or faulty fan.
Fan tray indicator	Indicates status of the fan tray.	Normal	On Green	Normal operation

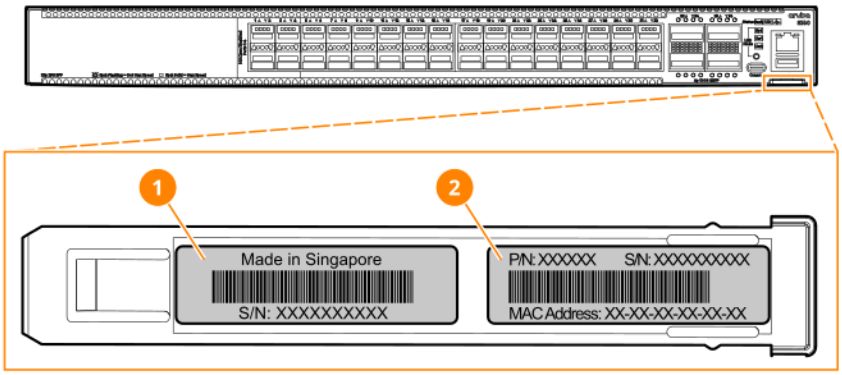
LEDs	Function	Switch Behavior	LED State	Meaning
		Fault	Flash Amber	Fan fault, fan has misconfiguration of air flow, or fan is missing.
PSU Module indicator	Indicates status of PSU module.	Normal operation	On Green	Normal operation
		Fault	Flash Green	PSU FW upgrade in progress.
			Off	PSU fan faults, no AC to both PSU, PSU in protection mode or system did not send PSOK.

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.

The product label information includes the part number, model number, serial number, and MAC address. The information and bar codes are duplicated on the top and bottom of the product label tab.

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

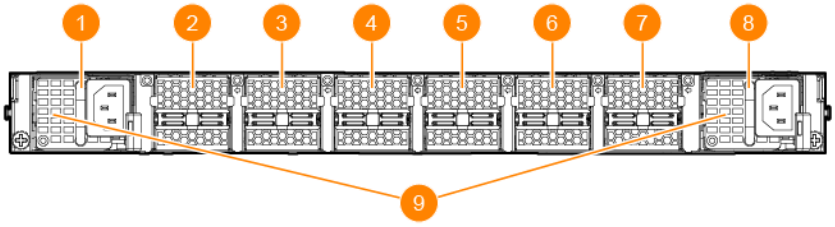


Label	Description
1	Country of origin and Serial number
2	Part number, Serial number and MAC address

Back of the Switch

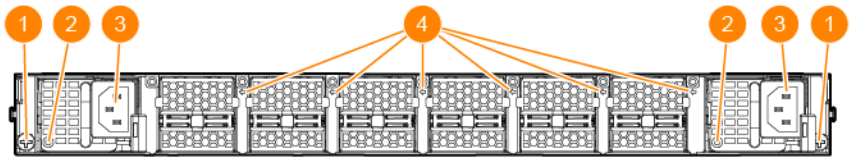
The back of 9300-32D switches include two power supply units and six fan trays.

Figure 1 *Fans and power supplies on the back of the 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
9	Power Supply vents

Figure 2 *LEDs and components on the back of the switch*



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

Power Supplies

The Aruba 9300-32D switch does not have a power switch; it is powered on when at least one installed power supply is connected to an active AC power source. The 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.

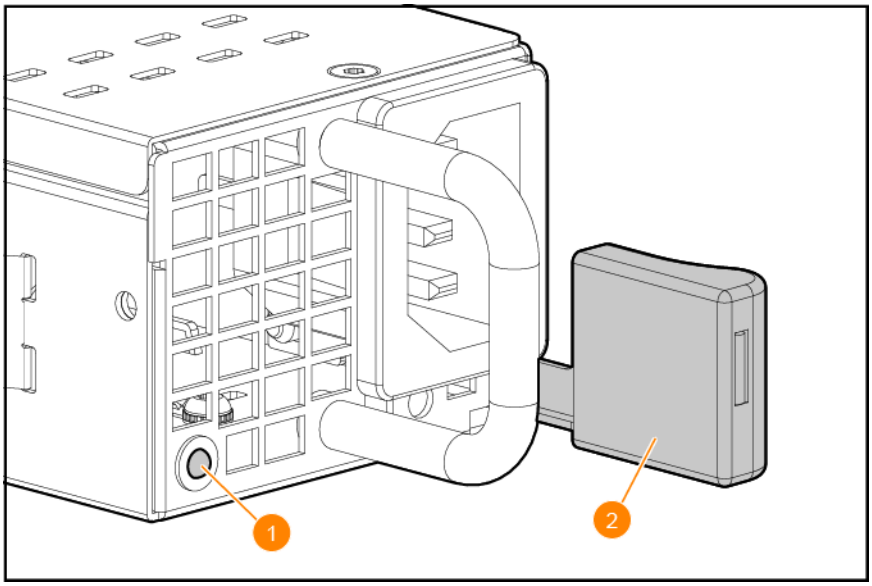
WARNING: 9300-32D PSUs can use High Line or Low Line. However, using a Low Line source limits the supported optical QSFP-DD transceivers only to 8. Attempting to use more than 8 QSFP-DD transceivers can cause the 9300-32D to reboot, after getting in a brown-out condition. The 9300-32D may continue to experience a reboot loop until adequate power is provided to its PSUs, or when the PSU uses High Line. For production environment, the 9300-32D requires High Line to ensure proper operations.

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 Aruba 9300-32D switch 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 absent or faulted). 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.

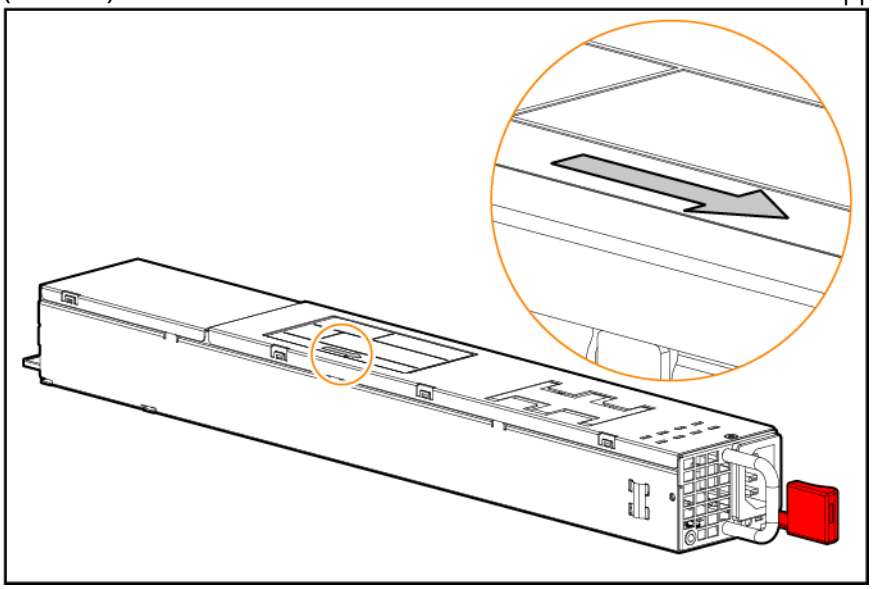
Figure 1 *Aruba 9300-32D power supplies*



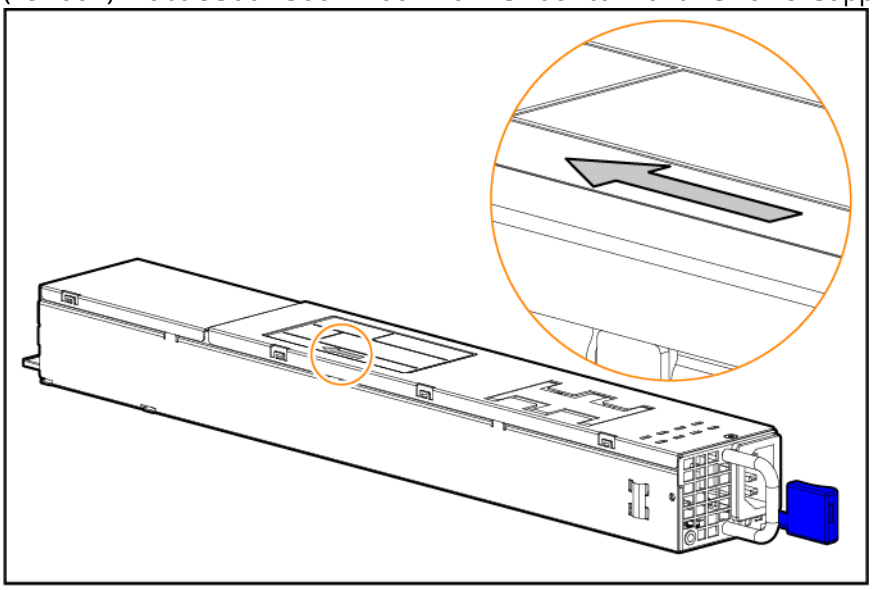
Label	Description
1	Power Supply status LED
2	Release Latch

The Aruba 9300-32D switch is shipped with two hot-swappable, field-replaceable, AC power supplies. Each power supply has a country-specific power cord for connection to an AC power outlet. The switch can continue to operate with one active power supply if the other one fails, however, two power supplies are recommended for redundancy, fault tolerance, and cooling. Depending on your configuration, the switch is compatible with one of the following power supplies:

- (R8Z99A) Aruba 9300 1500W 100-240VAC Front-to-Back AC Power Supply



- (R9A00A) Aruba 9300 1500W 100-240VAC Back-to-Front AC Power Supply



Power Supply Instructions

For indoor use only. The switch, AC power cord and all connected cables are not designed for outdoor use.

During installation, ensure that the AC power cord is NOT connected to the power supply being installed.

Shock hazard. To completely remove power from the switch, disconnect all power cords.

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

Chassis LEDs	Function	State	Meaning
Status LED	Displays power supply status	ON green	The power supply is operating normally.
		FLASH green	PSU FW upgrade in progress.
		OFF	PSU fan faults, no AC to both PSU, PSU in protection mode or system did not send PSOK.

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 among both power supplies.

Redundancy

With power redundancy, the Aruba 9300 switch 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 and PS1/PS2 LEDs will blink in Amber to notify user that there is a fault on either PS1/PS2.

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.

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.

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.

- (R8Z99A) Aruba 9300 Front-to-Back Fan
- (R9A00A) Aruba 9300 Back-to-Front Fan

In the event of a single fan tray missing, misconfigured airflow direction, and/or faulted fans, the switch will try to maintain adequate cooling by increasing fan speeds and/or disabling misconfigured devices. If adequate cooling cannot be maintained, the switch will reboot and assess cooling capabilities.

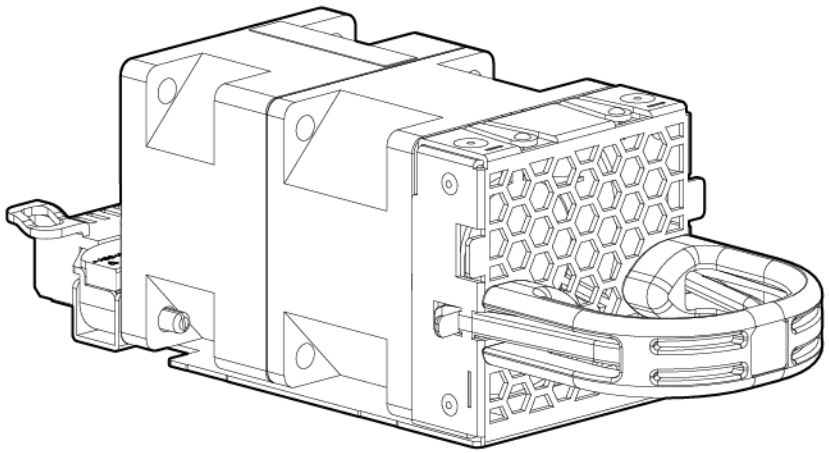
Fan trays and power supplies installed in a 9300-32D switch must have the same cooling air flow direction. Air flow direction in an 9300-32D switch is not controlled by software. To change the air flow direction, replace the power supplies and fan trays with power supplies and fan tray units supporting the air flow direction you require.

The system will automatically shut down if overheating is detected. If fewer than 6 working fan trays are detected, the Global status and fan LEDs on the front of the switch and the corresponding Fan tray LEDs will FLASH amber.

If one fan tray is missing for more than two minutes the system will shut down. If two or more fan trays are missing, faulted and/or misconfigured the system will reboot to reassess 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 absent or faulted). 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 *Aruba 9300-32D fan trays*



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. If the switch reaches a critical temperature condition, the switch will shut down. For best operation, the failed fan tray should be replaced as soon as possible.

If one fan tray has failed, the Global status, Failed Fan tray LED and the Fan LED on the front of the switch will FLASH amber.

If multiple fan trays have failed, the switch will reboot and reassess cooling capabilities.

The Aruba 9300-32D switch is not compatible with fan trays from other Aruba hardware platforms.

Fan Tray Status LED

Fan tray LED	Function	State	Meaning
Status LED	To display fan tray status.	ON green	The fan tray is operating normally
		FLASH amber (OS-CX)	The fan tray is faulted by the system due to a failed fan, insertion of an illegal fan tray or other fault. All fault events that occur in OS-CX will correspond to a warning available in the Event Log.

Use the **show environment fan** command for fan tray status information. (See the *Fundamentals Guide* for your switch).

Switch Features

The features of the 9300-32D switches include:

- QSFP-DD, QSFP28, SFP28, SFP+.
  - 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. The Global Status LED and PS1/PS2 LED flashes Amber when 1 PSU at fault state.
- 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 Aruba Support Portal.

The following sections show how to install the switch. For mounting options, see Mount the Switch on page 23 or contact your Aruba representative or Aruba authorized reseller.

Included Parts

The 9300-32D switch is shipped with the following components:

- Documentation kit
- JL482C, Aruba Universal 2-Post Rack Mount Kit
- USB Bluetooth adapter: Enables you to configure your switch from a mobile device. Requires the Aruba CX Mobile App. For information about using the Aruba CX mobile app to configure the switch, see the Fundamentals Guide for your switch and software release.

  The USB Bluetooth adapter is attached to a card in the documentation kit.

- Power cord: The following (part number or J-number/SKU) are orderable through Aruba purchasing. Two power cords are required per switch.

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		

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 Procedures for 9300-32D Switches

1. Prepare the Installation Site on page 21
2. Install Power Supplies on page 21
3. Install Fan Trays on page 22
4. Power-on the switch and check LEDs on page 23
5. Power off the switch on page 23
6. Mount the Switch on page 23
7. Install Transceivers on page 31 (optional)
8. Connect the Switch to a Power Source on page 32
9. Setup for Initial Configuration on page 32

Installation Precautions and Guidelines

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

- **CAUTION**
- Do not mount the switch on a wall, under a table, or under any other horizontal surface.
- Mount devices installed in a rack or cabinet as low as possible. 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.

- **WARNING**
- Do not ship any switch in a rack without checking for restrictions in the latest Aruba 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 cord supplied with the switch. For more information on power cords, see Power Cords on page 47.
- When installing the switch, the AC outlet should be near the switch and be easily accessible in case the switch must be powered off.
- Ensure that the power cord 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 47 section of this guide.
- 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 AC power connectors.
- Do not block any ventilation openings on the front or rear of the switch.
- Leave a minimum of 6 inches (15.24 cm) for cooling at the front and back of the switch. For the air flow direction, see the Fan Trays on page 16 section of this guide.
- 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.

- **NOTE**
- The transceiver slots support SFP, SFP+, QSFP+, QSFP28, and QSFP-DD transceivers.
- For more information, see the latest version of this guide and the ArubaOS-Switch and ArubaOS-CX Transceiver Guide.

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 twisted-pair 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.

Cooling air flow in Aruba 9300-32D switches is front-to-back or back-to-front, depending on configuration. All fan trays and power supplies installed in an 9300-32D 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 20 before starting installation.

Install Power Supplies

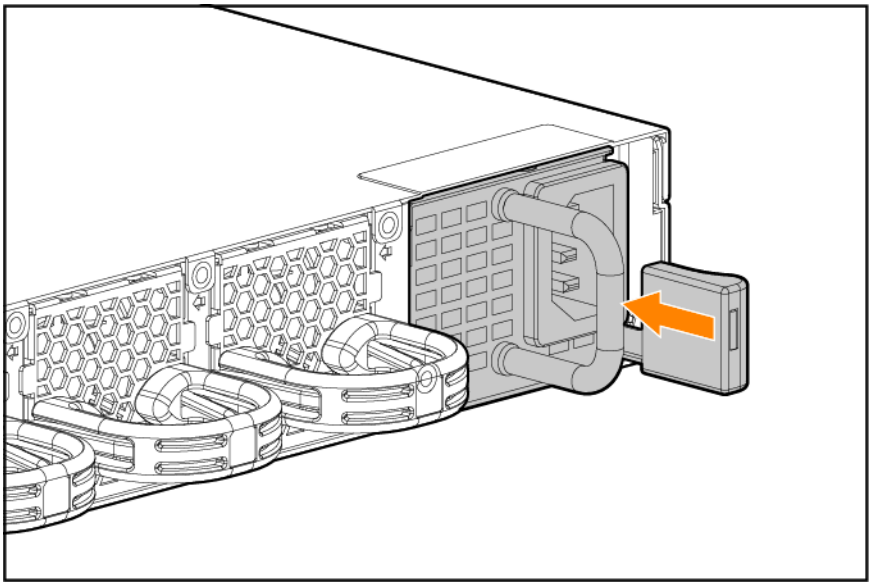
Skip this step if two power supplies are already installed in the switch

If two power supplies are not already installed in the switch, install power supplies in both slots before proceeding.

- Air flow direction for all power supplies and fans must match

1. Insert the power supply until the latch clicks into place.

Figure 1 *Installing a power supply*



Install Fan Trays

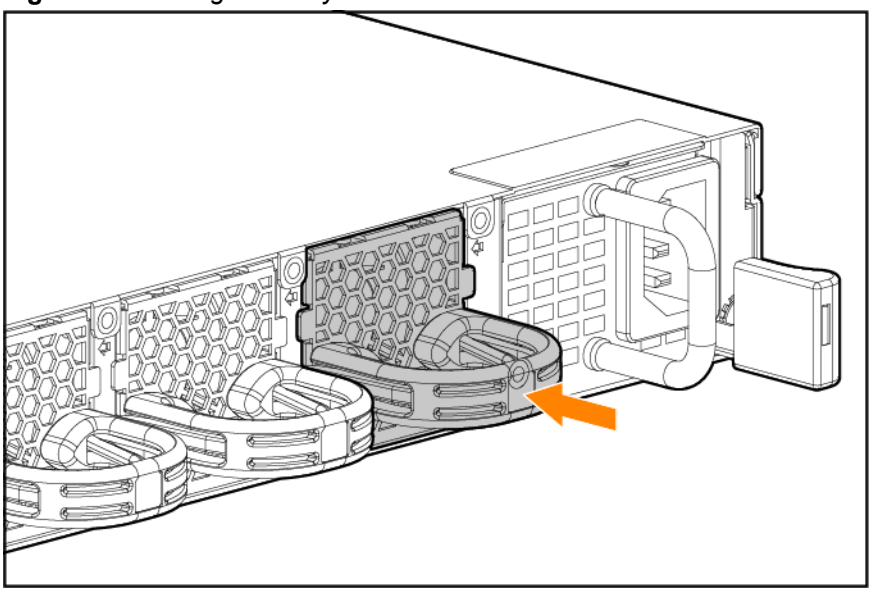
Skip this step if all six fan tray slots are already populated with fan trays.

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

- 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, being careful to not touch any of the circuitry on the board.
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*



Power-on the switch and check LEDs

Prerequisites

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

Check LEDs for proper switch operation. For further detail see Checking the Switch LEDs on page 45

Power off the switch

Prerequisites

Remove the power cord from the switch and from the power source.

Mount the Switch

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

Aruba X472 2-post Rack Kit (JL482C)

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

See Installation Precautions and Guidelines on page 20 before mounting your switch.

NOTE: 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.

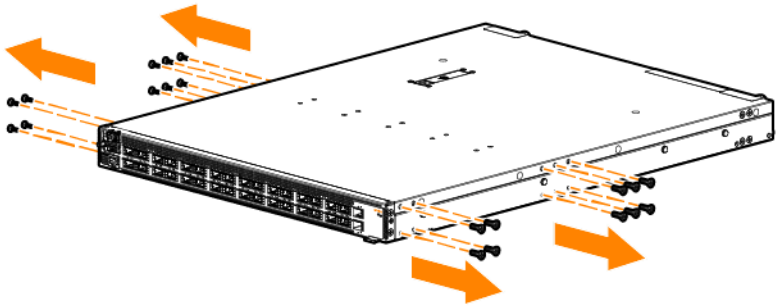
Two-post Rack Mount Option

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

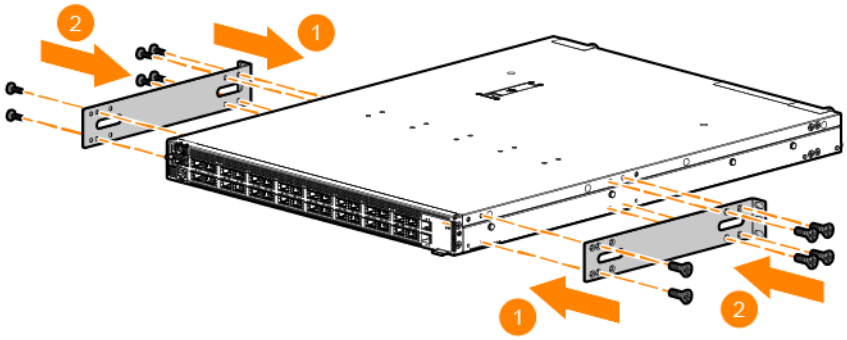
For safe operation, please review the mounting precautions in Installation Precautions and Guidelines, before mounting a switch.

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.

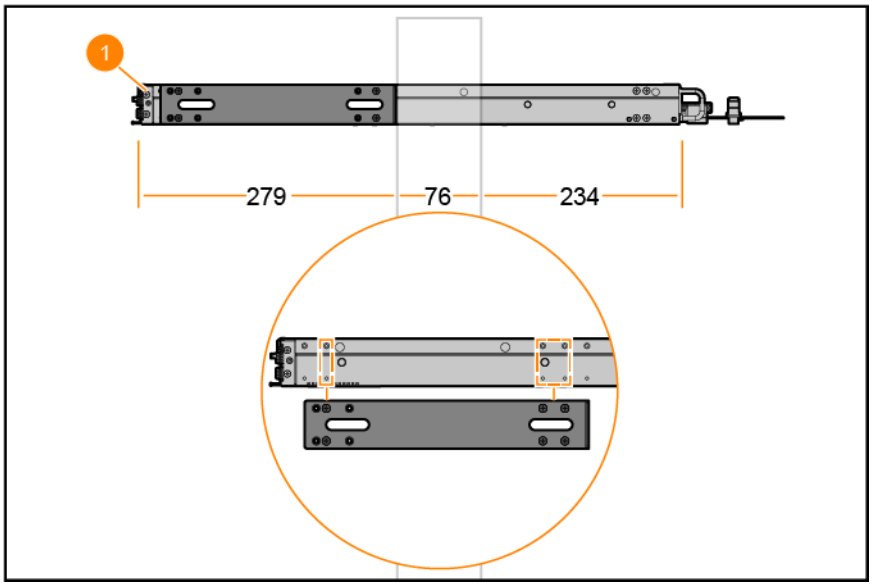
1. Use a Philips screwdriver to remove ten 6-mm M4 screws shown below and retain the screws for the following step.



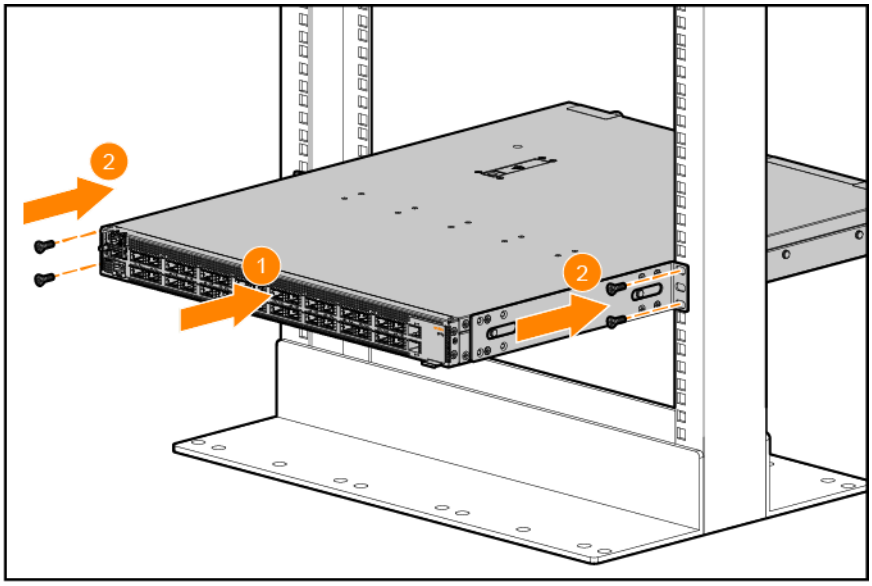
2. Attach the mounting brackets to the switch and secure using six of the removed screws.



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.



For safe reliable installation, only use the screws provided in the accessory kit to attach the mounting brackets to the switch.

A two person install may be required.

Middle Mounted position is the only supported position in 2-post racks as shown in the image above.

Four-Post Rack Mount Option

The Aruba 9300-32D switch can be mounted in four-post racks and cabinets by using the Aruba 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.

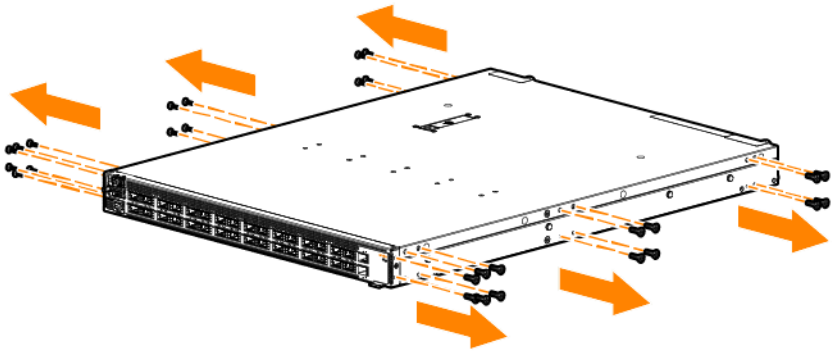
For safe operation, please read the mounting precautions in Installation Precautions and Guidelines on page 20, before mounting a switch.

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.

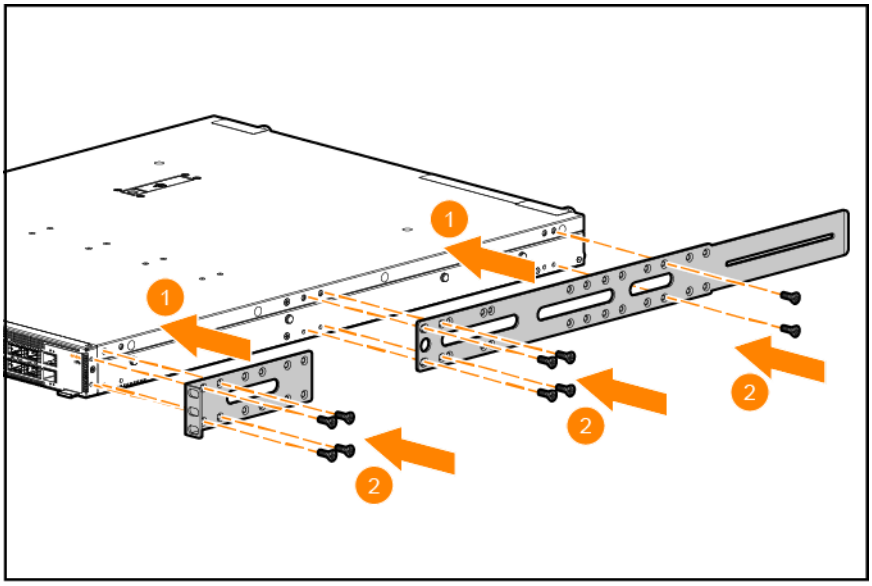
If installing the switch in an equipment cabinet such as a server cabinet, use the clips and screws that came with the cabinet in place of the 12-24 screws that are supplied with four-post rack mount kit (JL483C).

Front-to-Back Airflow configuration

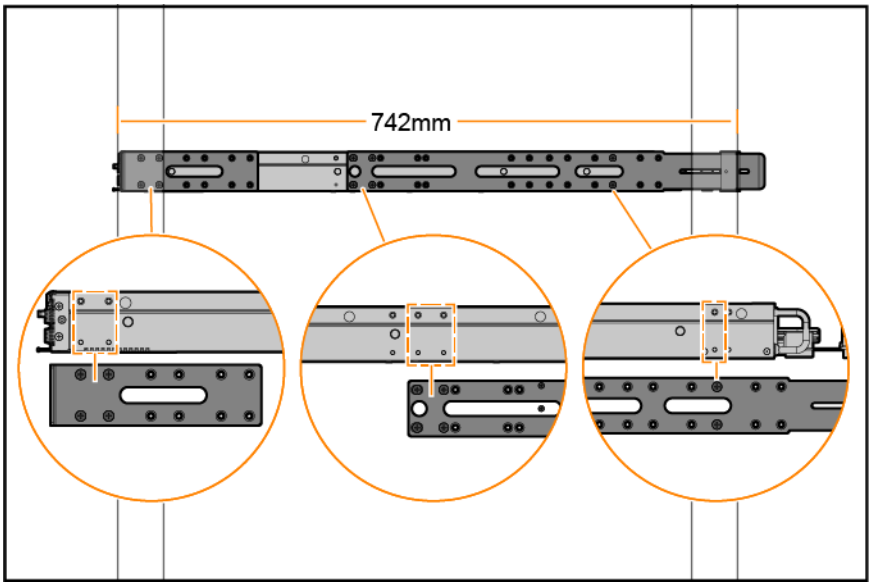
1. Use a Philips screwdriver to remove fourteen 6-mm M4 screws shown below and retain the screws for the following step.



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

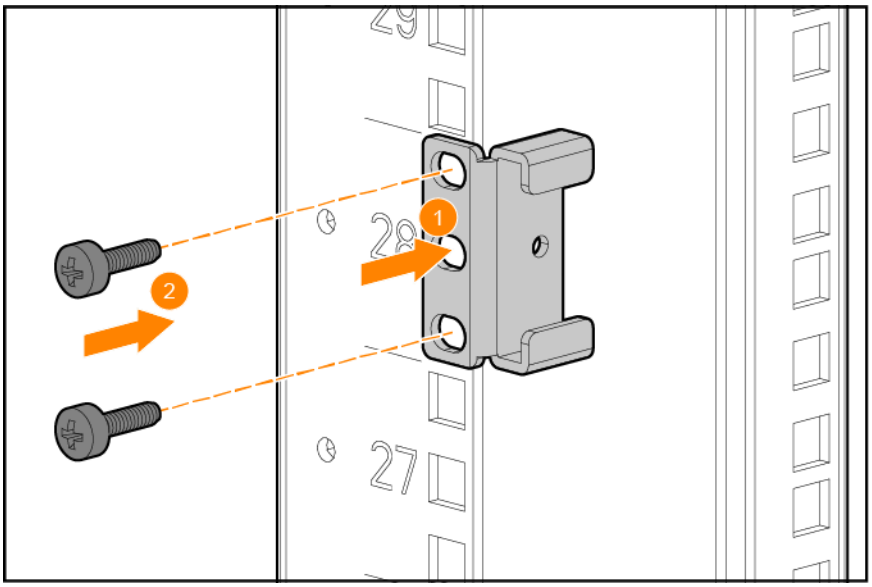


3. Ensure the brackets are mounted in the position shown below.

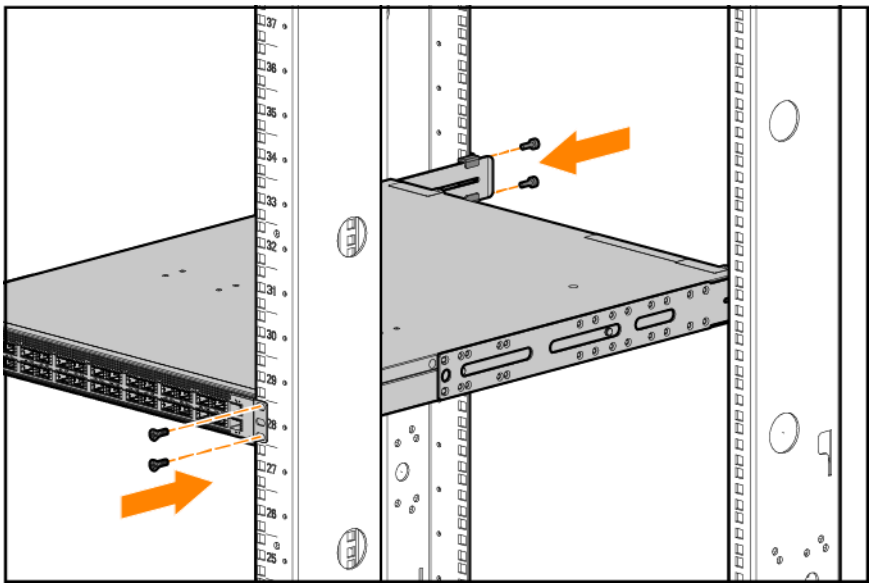


For safe, reliable installation, only use the screws provided in the accessory kit to attach the mounting brackets to the switch.

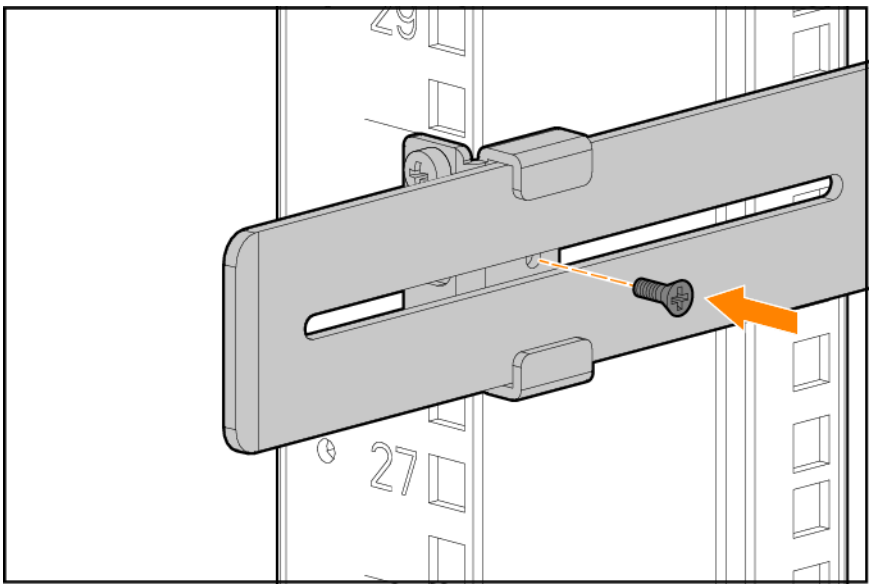
4. Using eight mounting clips supplied with the rack, install two clips onto each rack column in the selected rack unit position.
5. Secure the two rear brackets to the rear column using four screws supplied with the rack.



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

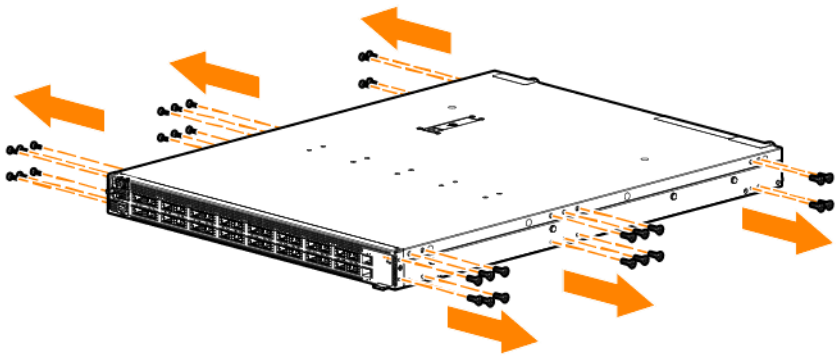


7. Lock the position of the rear post bracket ears using the included position-locking screws.

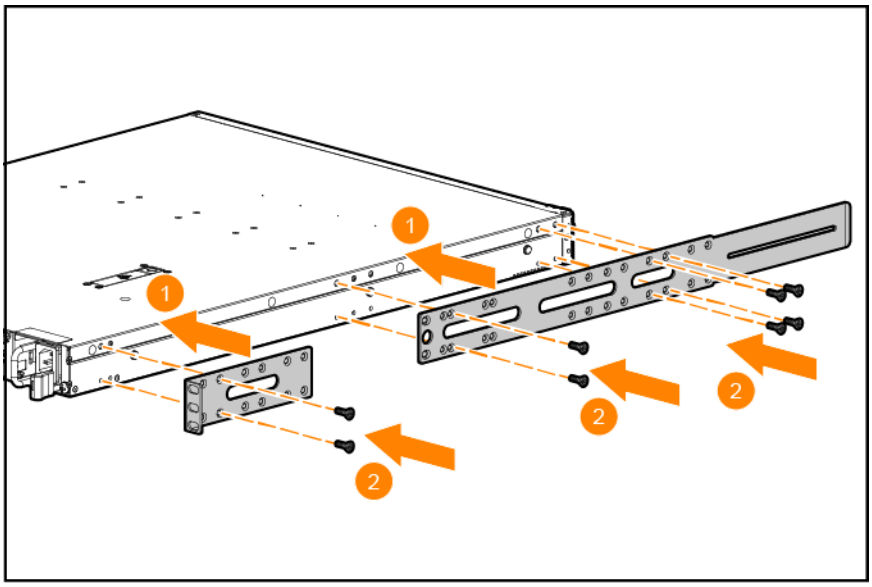


Back-to-Front Airflow configuration

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

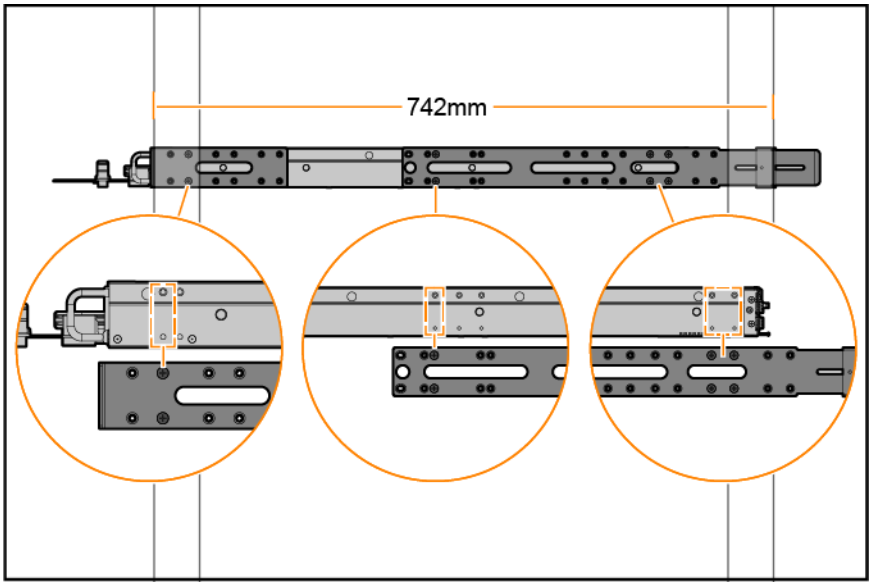


2. Attach the front-post and rear-post rack mount brackets to the switch with eight of the removed screws.

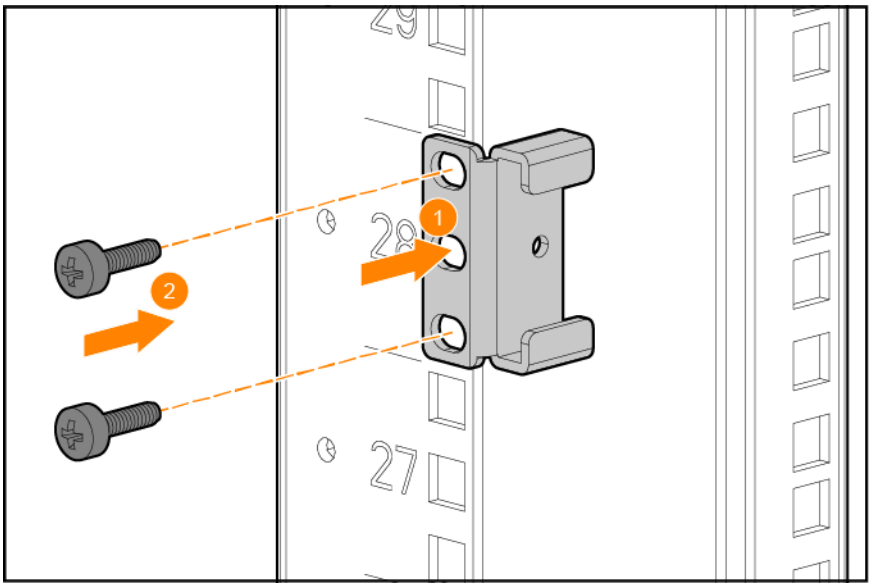


For safe, reliable installation, only use the screws provided in the accessory kit to attach the mounting brackets to the switch.

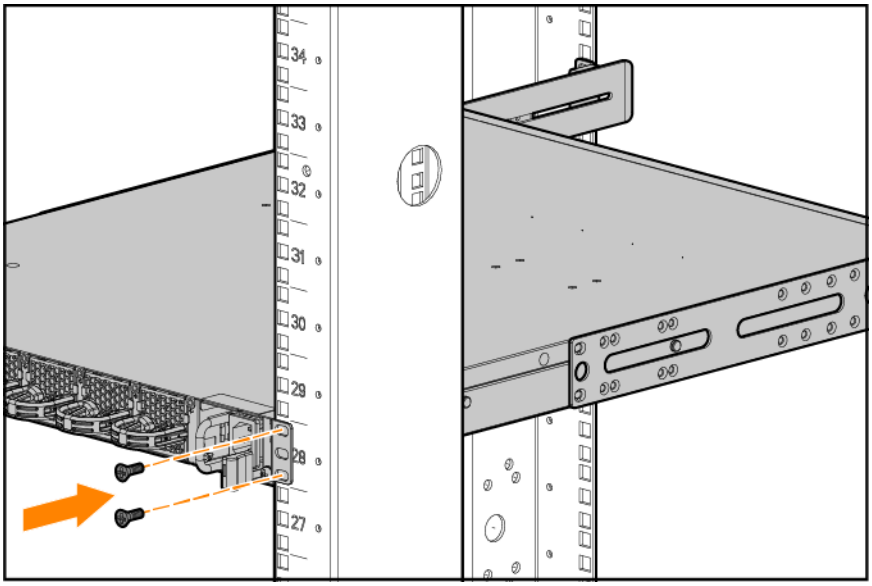
3. Ensure the brackets are mounted in the position shown below.



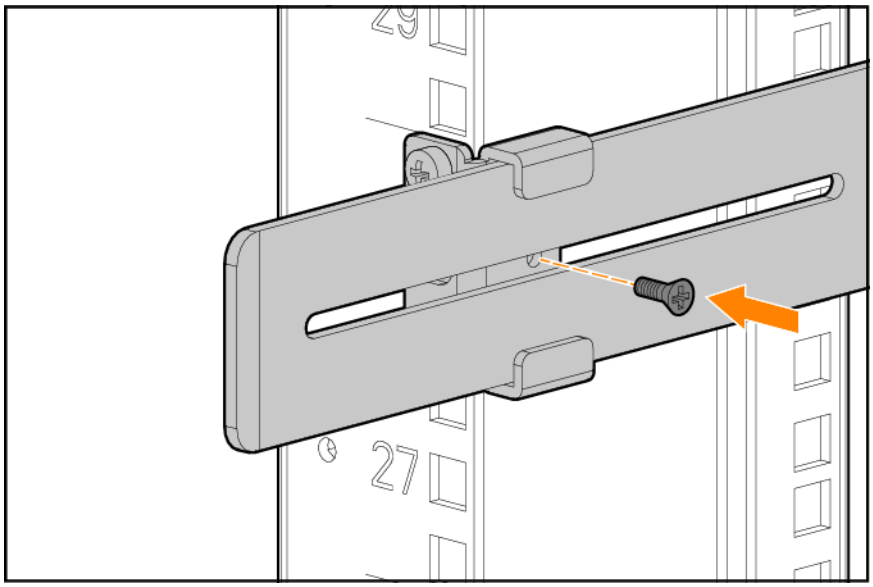
4. Using eight mounting clips supplied with the rack, install two clips onto each rack column in the selected rack unit position.
5. Secure the two rear brackets to the rear column using four screws supplied with the rack.



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.



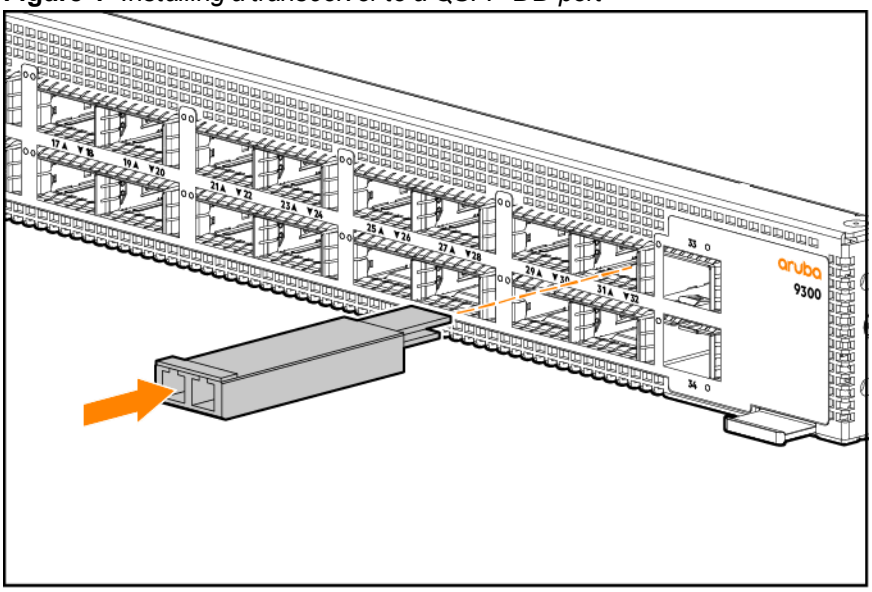
Install Transceivers

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.

- The Aruba 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.
- Use of supported genuine Aruba transceivers is always recommended. Non-Aruba SFP/SFP28//SFP+/QSFP+/QSFP28 transceivers can be used in unsupported transceiver mode, but no support or warranty will be provided. Should you require additional transceivers, contact your Aruba 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 an SFP/QSFP 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 .

Figure 1 *Installing a transceiver to a QSFP-DD port*



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 21.
2. Plug the included power cord into the power supply's power connector and into a nearby AC power source.
3. Check the LEDs. See Chassis and Port LEDs on the front of the switch on page 9.

WARNING: 9300-32D PSUs can use High Line or Low Line. However, using a Low Line source limits the supported optical QSFP-DD transceivers only to 8. Attempting to use more than 8 QSFP-DD optical transceivers can cause the 9300-32D to reboot, after getting in a brown-out condition. The 9300-32D may continue to experience a reboot loop until transceiver power load is reduced, or until the PSU uses High Line. For production environment, the 9300-32D requires High Line to ensure proper operations.

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 AC power sources, redundant power can be supplied in case of loss of one of the AC power sources.

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 Aruba CX mobile app:** The Aruba CX mobile app can connect to the switch through the USB Bluetooth adapter. For information about using the Aruba 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, Aruba 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.

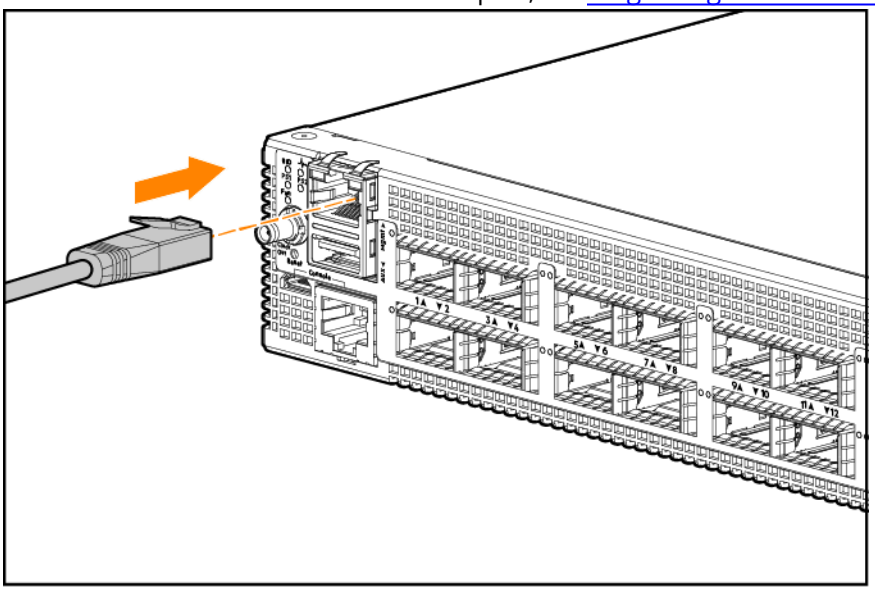
Using RJ-45 Out-of-band Management Port

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 power is on for the switch and for the connected device, the LED for the port should light to confirm a powered-on device (for example, an end node) is at the other end of the cable.

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:

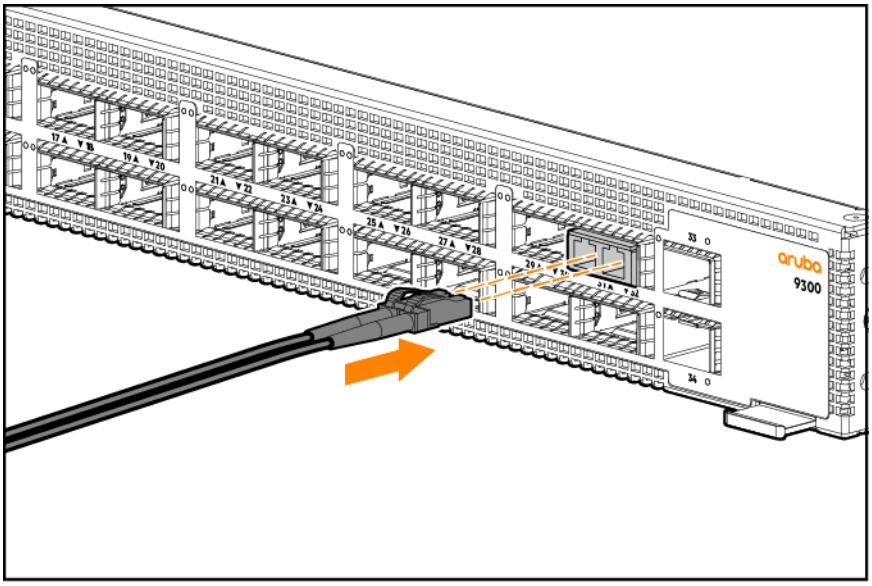
Press the small tab on the plug and pull the plug out of the port.

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. See Cabling and Technology Information.

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.

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.

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:

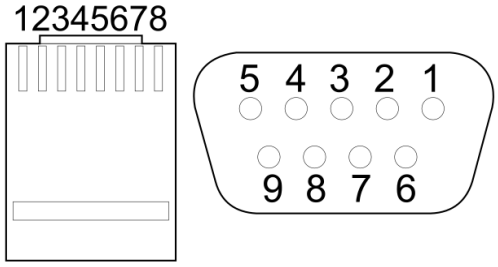
```
login as: admin
Password:

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.

Console Cable Pinout

The Aruba 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
Reserved	4	1	DCD
GND	5	5	GND
RXD	6	3	TXD
Reserved	7	4	DTR
Reserved	8	7	RTS
No connection	-	9	RI

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.

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.

If the Aruba 9300-32D 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 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 switch:

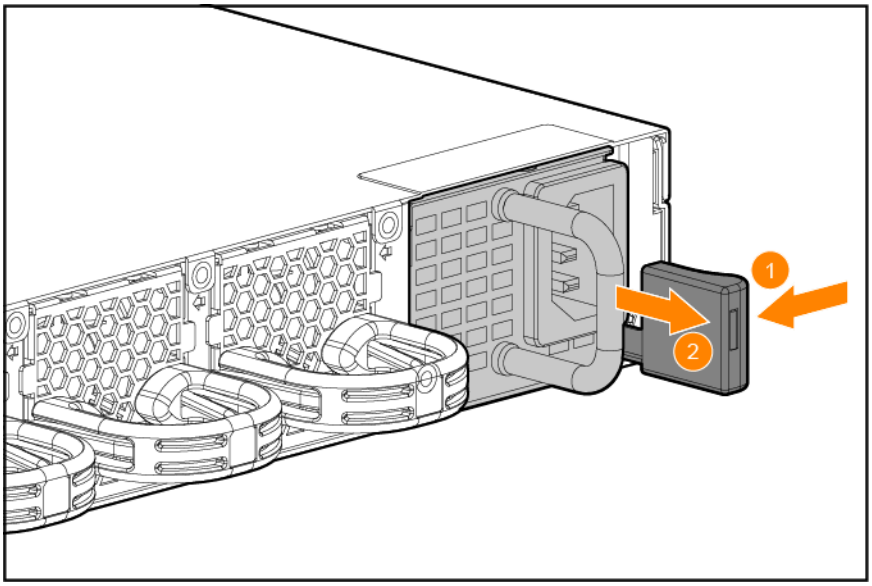
- (R8Z99A) Aruba Front-to-back airflow power supply
- (R9A00A) Aruba Back-to-front airflow power supply

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

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.

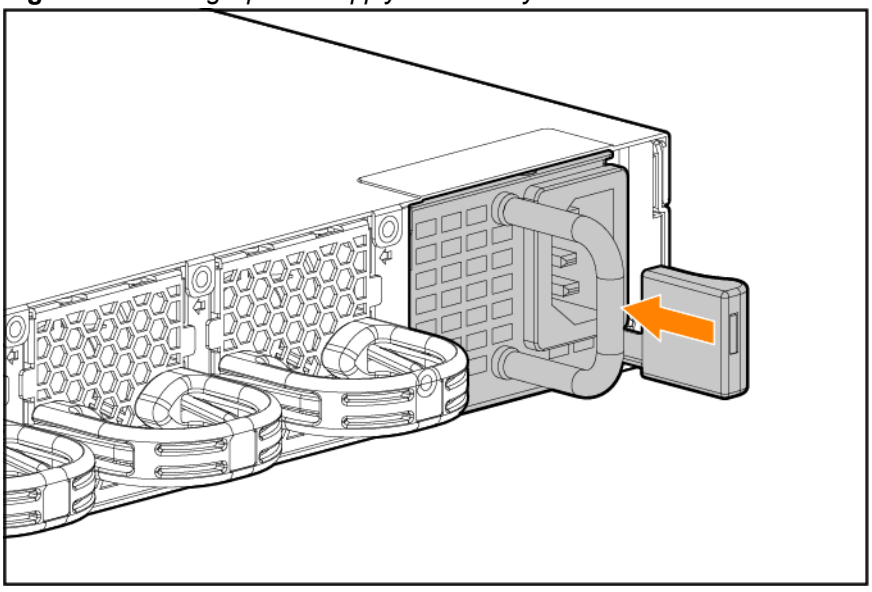
Figure 1 *Replacing a failed power supply*



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.

Replacing a Fan Tray

The Aruba 9300-32D 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

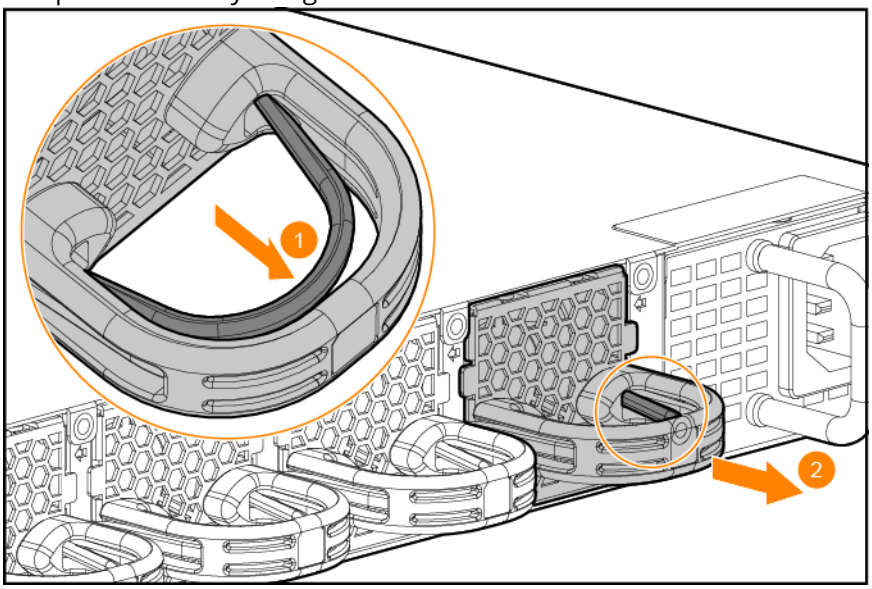
redundancy, a failed fan tray should be replaced as soon as possible. The Fan LED, Global Status LED and Fan tray LED will FLASH amber, indicating a fan tray has failed.

- The Aruba 9300-32D switch is not compatible with fan trays from other Aruba 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 can cause the switch to shut down abruptly.
- 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 switch will automatically power down and reboot. For this reason, it is not recommended to remove a failed fan tray, until you have the replacement fan tray prepared.

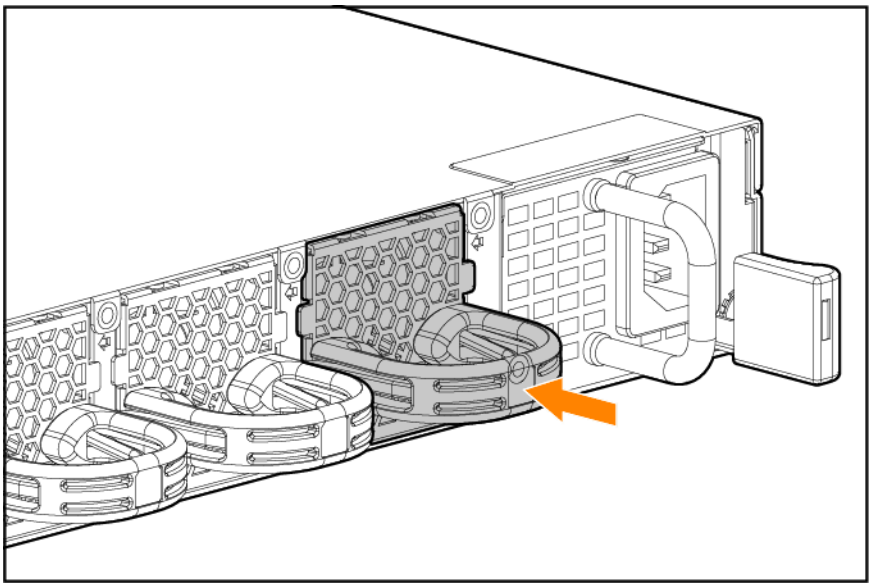
Ensure that a replacement fan tray has the same airflow direction as other fan trays installed in the switch.

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.



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 an AC power source, the fan tray should immediately start running.



Chapter 5
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

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 or compare your cable to the Cabling Specifications.
- **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

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.

PSU1/PSU2 LEDs	Global Status LED	PS1, PS2, Fan LED	Fan tray LED	Port LED	Diagnostic tip
Off with power cords plugged in	-	-	-	-	1
Off either the PSU1 or PSU2 LED is off but not both.	Flashing amber	Flashing amber	-	-	2
On green or flashing amber Either the PSU1 or PSU2 LED is on green/flashing amber, but not both.	Flashing amber	Flashing amber	-	-	3
Flashing green Either the PSU1 or PSU2 LED is on/flashing green, but not both.	Flashing amber	Flashing amber	-	-	4
On green	Flashing amber	Flashing amber	Flashing amber	-	5
On green	Flashing amber	-	-	Flashing amber	6
On green	On green	-	-	Off with cable connected	7
On green	On green	-	-	On, but the port is not communicating	8

Diagnostic Tips

Tip	Problem	Solution
1	Both switch power supplies are not plugged into an active AC power source.	Verify the AC power source works by plugging another device into the outlet, try plugging the power supplies in different outlets, or try different power cords. If the problem is still not resolved, both power supplies may be faulty.
2	The PSU with the LED off is not plugged into an active AC power source or has failed.	Verify the power cord is plugged into an active power source and to the power supply. Make sure these connections are snug. If the PS1/PS2 LED is still not on, verify the AC 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.

Tip	Problem	Solution
		If the PS1/PS2 LED is still not on, verify the AC power source works by plugging another device into the outlet, try plugging the switch into a different outlet, or try a different power cord.
3	The PSU with the LED off has faulted.	Try power cycling the PSU or removing and re-inserting the PSU. See Replacing a Power Supply on page 37. If the condition persists, the switch power supply has failed. Call your Aruba authorized network reseller, or use the electronic support services from Aruba to get assistance.
4	The PSU with the LED off has been disabled by software.	This occurs when the power supply does not match the defined system airflow direction. In this case the PSU release tab will be a different color than the other supply and the fan trays. Replace the power supply with one with the correct airflow. See Replacing a Power Supply on page 37.
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. 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 Aruba support. If the port has a transceiver installed, verify the transceiver is either a supported Aruba SFP28/QSFP+/QSFP28 transceiver, or if using an unsupported SFP/SFP+ 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. To get assistance, call your Aruba authorized network reseller, or use the electronic support services from Aruba.
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.

Tip	Problem	Solution
		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 Aruba 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

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 the Switch LEDs

See Diagnosing with the LEDs on page 41 for information on interpreting the LED patterns.

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 35. 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 Aruba 9300-32D 32 100/200/400G QSFP-DD 2p 10G SFP+ Front-to-Back 6 Fan 2 AC PSU Bundle	17.26 x 23.23 x 1.71 in (43.84 x 59.0 x 4.35 cm)	26.12 lb (11.85 kg)
R9A30A Aruba 9300-32D 32 100/200/400G QSFP-DD 2p 10G SFP+ Back-to-Front 6 Fans 2 AC PSU Bundle	17.26 x 23.23 x 1.71 in (43.84 x 59.0 x 4.35 cm)	26.12 lb (11.85 kg)
R8Z96A Aruba 9300-32D 32 100/200/400G QSFP-DD 2p 10G Switch	17.26 x 23.23 x 1.71 in (43.84 x 59.0 x 4.35 cm)	18.9 lb (8.57 kg)
R8Z97A Aruba 9300 1500W 100-240VA Front-to-Back AC Power Supply	2.2 x 14.3 x 1.6 in (5.45 x 36.42 x 4.0 cm)	2.7 lb (1.22 kg)
R8Z98A Aruba 9300 1500W 100-240VAC Back-to-Front AC Power Supply	2.2 x 14.3 x 1.6 in (5.45 x 36.42 x 4.0 cm)	2.7 lb (1.22 kg)
R8Z99A Aruba 9300 Front-to-Back Fan	1.6 x 5.0 x 1.6 in (4.09 x 12.79 x 4.09 cm)	0.3 lb (0.14 kg)
R9A00A Aruba 9300 Back-to-Front Fan	1.6 x 5.0 x 1.6 in (4.09 x 12.79 x 4.09 cm)	0.3 lb (0.14 kg)

Electrical

Switch model	Maximum current	AC Voltage	Frequency range
R9A29A Aruba 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Front-to-Back 6 Fans 2 AC PSU Bundle	12A/8A	100-127 / 220-240 VAC	50Hz-60Hz
R9A30A Aruba 9300-32D 32p 100/200/400G QSFP-DD 2p 10G SFP+ Back-to-Front 6 Fans 2 AC PSU Bundle	12A/8A	100-127 / 220-240 VAC	50Hz-60Hz

Power supplies automatically adjust to any voltage between 100-240 volts and either 50 or 60 Hz.

Power Cords

Aruba includes the power cord intended for use with your Aruba 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 Aruba-approved power cords may be used with Aruba devices. To access power cord information for your switch, see Included Parts. Lost or damaged power cords must be replaced only with Aruba-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.

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 Aruba dealer or sales representative for assistance.

Remove the power cord from the switch before mounting or dismounting the switch.

Power Consumption

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

- 100% traffic measured with IMIX traffic rates, transceivers and fans.
- Idle power measured with no transceivers or cables installed at room temperature.

Environmental Specifications

	Specifications
Operating temperature	**R9A29A** 32°F to 113°F (0°C to 45°C) at sea level. Derate -1 degree C for every 1,000 ft to 10,000 ft (3.0 km) **R9A30A** 32°F to 95°F (0°C to 35°C) at sea level. Derate -1 degree C for every 1,000 ft to 10,000 ft (3.0 km)
Non-Operating / Storage Temperature	-40°C to 70°C (-40°F to 158°F) up to 15,000 ft (4.6 km)
Operating relative humidity	**R9A29A** 15% to 95% @ 113°F (45°C) non-condensing **R9A30A** 15% to 95% @ 95°F (35°C) non-condensing
Non-Operating / Storage relative humidity	15% to 90% @ 158°F (70°C) non-condensing
Max operating altitude	Up to 10,000 ft (3.0 km)
Max non-operating altitude	Up to 15,000 ft (4.6 km)

Acoustics

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).

RoHS

EN IEC 63000:2018

Safety and Regulatory Information

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 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2: 2013 IEC 62368-1:2014 (Second Edition) IEC 62368-1:2018 (Third Edition)
North American	UL 62368-1 2nd Ed. CAN/CSA-C22.2 No. 62368-1-14
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 13438, 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

- When selecting a fiber SFP or QSFP device, make sure the device has the same (or better) operating temperature range as the switch.
- 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 Aruba 9300-32D series switch at the Aruba Support Portal.

Accessing Aruba Support

Aruba Support Services	https://www.arubanetworks.com/support-services/
Aruba Support Portal	https://asp.arubanetworks.com/
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/
Aruba software and documentation	https://asp.arubanetworks.com/downloads

Accessing Updates

To download product updates:

Aruba Support Portal

https://asp.arubanetworks.com/downloads

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

My Networking

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

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

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

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

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

To subscribe to eNewsletters and alerts:

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

Warranty Information

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

Regulatory Information

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

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

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