Aruba 8325 Switch Series Installation and Getting Started Guide

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Contents

Aruba 8325 Switch Installation and Getting Started Guide

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.
NOTE	

Applicable products

Aruba 8325-48Y8C 48p 25G SFP/+/SFP28 8p 100G QSFP+/ QSFP28 Front-to-Back 6 Fans and 2 PSU Bundle	JL624A
Aruba 8325-48Y8C 48p 25G SFP/+/SFP28 8p 100G QSFP+/ QSFP28 Back-to-Front 6 Fans and 2 PSU Bundle	JL625A
Aruba 8325-32C 32-port 100G QSFP+/QSFP28 Front-to-Back 6 Fans and 2 Power Supply Bundle	JL626A
Aruba 8325-32C 32-port 100G QSFP+/QSFP28 Back-to-Front 6 Fans and 2 Power Supply Bundle	JL627A

Related publications

- *START HERE: Installation, Safety, and Regulatory Information for the Aruba 8325 Switches*
- *ArubaOS-Switch and ArubaOS-CX Transceiver Guide*
- *Aruba 8325 Fundamentals Guide for ArubaOS-CX 10.02 (or greater)*
- *Aruba 8325 configuration manuals*

To view and download the latest version of the above publications, visit the Aruba Support Portal at **https://asp.arubanetworks.com/downloads**

Aruba 8325 Switch Installation and Getting Started Guide

Overview

The Aruba 8325 switch is a multiport switch that can be used to build high-performance switched networks. The switch is a store-and-forward device offering low latency for high-speed networking. The Aruba 8325 switch also supports full network management capabilities.

Table 1: *Switches described in this manual*

Switch	Description
Aruba 8325-48Y8C 48p 25G SFP/+/SFP28 8p 100G QSFP+/QSFP28 Front-to-Back 6 Fans and 2 PSU Bundle (JL624A)	Includes a 48-port of 1/10/25Gbps and 8-port of 40/100Gbps switch with six fans and two power supplies installed with front-to-back airflow
Aruba 8325-48Y8C 48p 25G SFP/+/SFP28 8p 100G QSFP+/QSFP28 Back-to-Front 6 Fans and 2 PSU Bundle (JL625A)	Includes a 48-port of 1/10/25Gbps and 8-port of 40/100Gbps switch with six fans and two power supplies installed with back-to-front airflow
Aruba 8325-32C 32-port 100G QSFP+/QSFP28 Front-to-Back 6 Fans and 2 Power Supply Bundle (JL626A)	Includes a 32-port of 40/100Gbps switch with six fans and two power supplies installed with front-to-back airflow
Aruba 8325-32C 32-port 100G QSFP+/QSFP28 Back-to-Front 6 Fans and 2 Power Supply Bundle (JL627A)	Includes a 32-port of 40/100Gbps switch with six fans and two power supplies installed with back-to-front airflow

Table 2: *Accessories list*

Accessories	
Power supplies*	Aruba 8325 650W 100-240VAC FB PSU (JL632A)
	Aruba 8325 650W 100-240VAC BF PSU (JL633A)
Fan assemblies*	Aruba 8325-48Y8C Front-to-Back Fan (JL628A)
	Aruba 8325-48Y8C Back-to-Front Fan (JL629A)
	Aruba 8325-32C Front-to-Back Fan (JL630A)
	Aruba 8325-32C Back-to-Front Fan (JL631A)
Chassis	Aruba 8325-48Y8C 48p 25G 8p 100G Swch (JL635A)
	Aruba 8325-32C 32p 100G Swch (JL636A)
Rack mount kits (Not included. Ordered separately.)	Aruba X472 2-Post Rack Kit (JL482B)
	Aruba X474 4-Post Rack Kit (JL483B)
* Field replaceable units (FRUs).	

This chapter describes this switch with the following information:

- Front of the switch:
  - Network ports
  - Console port
  - Out-of-band management (OOBM)
  - LEDs
  - Reset button
- Back of the switch:
  - Power supplies and connectors
  - Fan assemblies
  - LED indicators for fan assemblies and power supplies
- Switch features
  - Hardware features
  - Software features
  - Management software

Front of the switch

8325-48Y8C JL624A and JL625A switches

Figure 1: *Front of the Aruba 8325-48Y8C (JL624A and JL625A)*

Table 3: *Front of the Aruba 8325-48Y8C (JL624A and JL625A)*

Label	Description
1	Power Supply 1 and 2 (PS1/PS2), Fan, Global Status, and Unit Identification LEDs
2	SFP28 ports (these ports support SFP/SFP+/SFP28 transceivers)
3	SFP28 port LEDs. For port LED detail, see **"Port LEDs on the front of the switch" on page 17**.
4	QSFP28 port LEDs The first port lane LED (far left) acts as the main port LED in each group of four. Post boot-up/self-test, the remaining three LEDs are not used by the switch, and should remain off throughout the product's operation.
5	RJ-45 10/100/1000Base-T Out-of-Band Management Port (OOBM)
6	RJ-45 serial console port

Table 3: *Front of the Aruba 8325-48Y8C (JL624A and JL625A) (Continued)*

Label	Description
7	Switch product label. Pull the tab out to view the product label information.
8	Micro-USB serial console port
9	USB-A Port for file management and HPE-Aruba Accessories
10	QSFP28 ports (these ports support QSFP+ and QSFP28 transceivers)
11	Reset button

8325-32C JL626A and JL627A switches

Figure 2: *Front of the Aruba 8325-32C (JL626A and JL627A)*
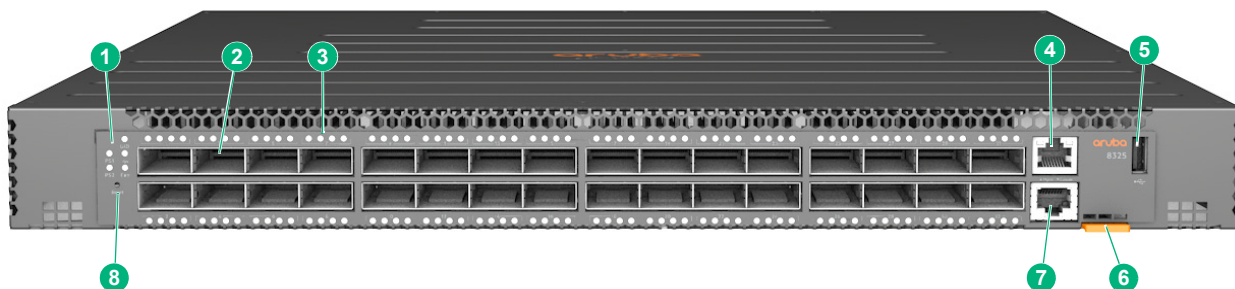
Table 4: *Front of the Aruba 8325-32C (JL626A and JL627A)*

Label	Description
1	Power Supply 1 and 2 (PS1/PS2), Unit Identification, Global Status, and Fan LEDs
2	QSFP28 ports (these ports support QSFP+ and QSFP28 transceivers)
3	QSFP28 port LEDs The first port lane LED (far left) acts as the main port LED in each group of four. Post boot-up/self-test, the remaining three LEDs are not used by the switch, and should remain off throughout the product's operation.
4	RJ-45 10/100/1000Base-T Out-of-Band Management (OOBM) Port
5	USB-A Port for file management and HPE-Aruba Accessories
6	Switch product label. Pull the tab out to view the product label information.
7	RJ-45 serial console port
8	Reset button

Network ports

Table 5: *Network ports*

Product number	Model name	SFP28 ports[1, 3]	QSFP28 ports[2]
JL624A and JL625A	Aruba 8325-48Y8C FB 6 F 2 PS Bdl	48	8
JL626A and JL627A	Aruba 8325-32C FB 6 F 2 PS Bdl	–	32
Notes:			

[1] SFP28 ports support 1G SFP, 10G SFP+, and 25G SFP28 transceivers.

[2] QSFP28 ports support 40G QSFP+ and 100G QSFP28 transceivers.

[3] For information on supported speeds, refer to **"Interface-Group operation" on page 40**.

This product also supports optional network connectivity:

Table 6: *Optional network connectivity, speeds, and technologies*

Speed	Technology	Cabling	Transceiver form-factor and connector[1]				
			SFP ("mini-GBIC") Connector	SFP+ connector	SFP28 connector	QSFP+ connector	QSFP28 connector
1 Gbps	1-Gig T[2]	Copper (twisted-pair)	–	–	–	–	–
	1-Gig SX	Fiber (multimode)	LC	–	–	–	–
	1-Gig LX	Fiber (multimode or single mode)	LC	–	–	–	–
	1-Gig LH	Fiber (single mode)	LC	–	–	–	–
10 Gbps	10-Gig Direct Attach	Copper (twinaxial)	–	–	–	–	–
	10-Gig AOC	Fiber (multimode)	–	–	–	–	–
	10-Gig BT[3, 4]	Copper (twisted-pair)[5]	–	–	–	–	–
	10-Gig SR	Fiber (multimode)	–	LC[6]	–	–	–
	10-Gig LR	Fiber (single mode)	–	LC	–	–	–
	10-Gig ER	Fiber (single mode)	–	LC	–	–	–

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Table 6: *Optional network connectivity, speeds, and technologies (Continued)*

| Speed | Technology | Cabling | Transceiver form-factor and connector[1] | | | | |
			SFP ("mini-GBIC") Connector	SFP+ connector	SFP28 connector	QSFP+ connector	QSFP28 connector
25 Gbps	25-Gig Direct Attach	Copper (twinaxial)	–	–	–	–	–
	25-Gig AOC	Fiber (multimode)	–	–	–	–	–
	25-Gig SR	Fiber (multimode)	–	–	LC	–	–
	25-Gig eSR	Fiber (multimode)	–	–	LC	–	–
	25-Gig LR	Fiber (single mode)	–	–	LC	–	–
40 Gbps	40-Gig Direct Attach	Copper (twinaxial)	–	–	–	–	–
	40-Gig AOC	Fiber (multimode)	–	–	–	–	–
	40-Gig SR4	Fiber (multimode)	–	–	–	MPO[7]	–
	40-Gig ESR4	Fiber (multimode)	–	–	–	MPO	–
	40-Gig LR4	Fiber (single mode)	–	–	–	LC	–
	40-Gig ER4	Fiber (single mode)	–	–	–	LC	–
	40-Gig Bidi	Fiber (single mode)	–	–	–	LC	–
100 Gbps	100-Gig Direct Attach	Copper (twinaxial)	–	–	–	–	–
	100-Gig AOC	Fiber (multimode)	–	–	–	–	–
	100-Gig SR4	Fiber (multimode)	–	–	–	–	MPO
	100-Gig LR4	Fiber (single mode)	–	–	–	–	LC

Table 6: *Optional network connectivity, speeds, and technologies (Continued)*

			Transceiver form-factor and connector[1]				
Speed	Technology	Cabling	SFP ("mini-GBIC") Connector	SFP+ connector	SFP28 connector	QSFP+ connector	QSFP28 connector

[1] For supported transceivers:

- Go to the Aruba Support Portal at **https://asp.arubanetworks.com/downloads**.
- Filter for (1) Product Family, (2) Product Series, (3) Document File Contents.
- Select the *ArubaOS-Switch and ArubaOS-CX Transceiver Guide* link.

For technical details of cabling and technologies, see **"Cabling and technology information" on page 63**.

[2] RJ-45 Cat 5e cable is needed for connecting this transceiver. The max link length specified is 100m.

[3] 10GBase-T transceiver limited support:
 -only supported in ports 1-2, 4-5, 7-8, 10-11, 13-14, 16-17. Use in any other port generates an "Incompatible interface" error.
 -maximum twelve 10GBase-T transceivers (both interface-groups 1 & 2 must be set for 10G operation).

[4] RJ-45 shielded Cat 6A cable is needed for connecting up this transceiver. The max link length specified is 30m.

[5] CAT6A F/FTP, S/FTP, SF/FTP highly recommended in noisy environments. Refer to *Aruba Support_Advisory_JL563A_10GBaseT_APSC-RS20180403-01* for more information.

[6] The Lucent Connector (LC) is a small form factor fiber optic connector.

[7] The Multifiber Push On (MPO) connector is a 12-fiber optical connector.

Management ports

Console port

The Aruba 8325-48Y8C and 8325-32C switches include an RJ-45 serial console port. 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.

The 8325-48Y8C switches also include an additional Micro USB serial console port. This port can be used to connect a console to the switch by using a standard Micro USB cable (not supplied). The Micro USB connector 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.

For more information on the console connection, see **"9. Set up for initial configuration" on page 44**. 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 SSH or Telnet from a remote PC or a UNIX workstation.

To use this port, see the *Aruba 8325 Fundamentals Guide for ArubaOS-CX*. For more detailed information, refer to the switch software manuals for your switch provided at the Aruba Support Portal at **https://asp.arubanetworks.com/downloads**.

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.

USB-A port

A USB-A port for file management, downloading switch software code, or use of HPE-Aruba accessories. This port uses a USB Type-A connector and complies with all USB protocols and standards.

Chassis LEDs on the front of the switch

- **Table 9 on page 16** describes the switch chassis LEDs.
- **Table 11 on page 18** describes the switch port LEDs and their different behaviors for the JL624A and JL625A.
- **Table 13 on page 20** describes the switch port LEDs and their different behaviors for the JL626A an JL627A.

Figure 3: *Chassis LEDs for the Aruba 8325-48Y8C (JL624A and JL625A)*
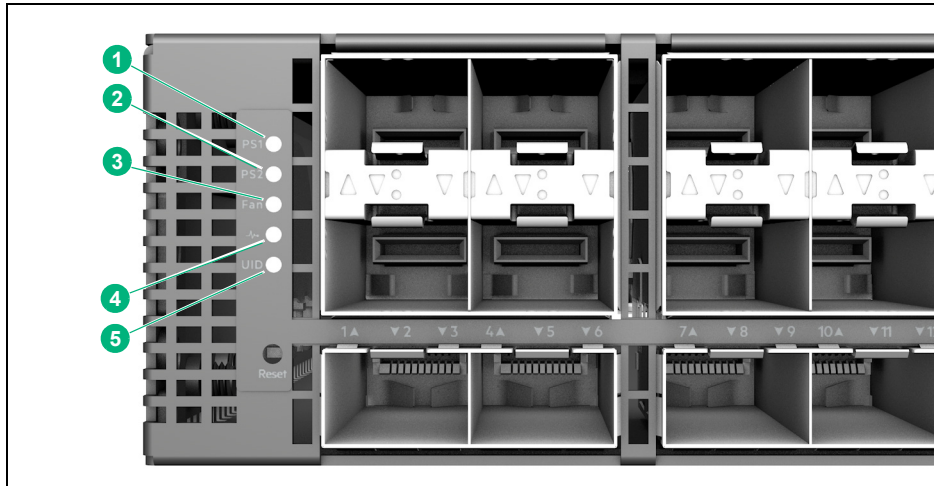
Table 7: *Chassis LED labels for the Aruba 8325-48Y8C (JL624A and JL625A)*

Label	Description
1	Power Supply 1 (PS1) LED
2	Power Supply 2 (PS2) LED
3	Fan LED
4	Global Status LED
5	Unit Identification LED

Figure 4: *Chassis LEDs for the Aruba 8325-32C (JL626A and JL627A)*

Table 8: *Chassis LED labels for the Aruba 8325-32C (JL626A and JL627A)*

Label	Description
1	Unit Identification LED
2	Global Status LED
3	Power Supply 1 (PS1) LED
4	Power Supply 2 (PS2) LED
5	Fan LED

Table 9: *Chassis LED behavior*

Chassis LEDs	Function	State	Meaning
PS1/PS2	Power supply status	On green	Power supply is installed and operating with all power supplies and fans installed and no faults are present.
		On amber	Fault detected for installed power supply, or power supply is not receiving power.
		Off	Power supply is not installed.
Fan	Fan tray status	On green	System fans are operating normally.
		On amber	One or more system fans has a fault, or the minimum number of fans are not installed.

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Table 9: *Chassis LED behavior (Continued)*

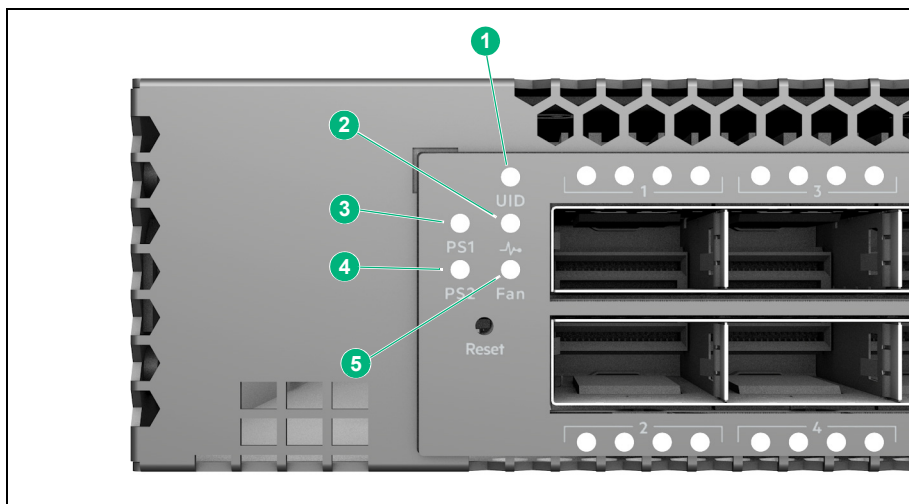| Chassis LEDs	Function	State	Meaning
Global Status	Internal power status of the switch. Self-test status Switch/port fault status	On green	The switch has passed self-test and is powered up normally with all power supplies and fans installed and no faults are present.
		Flashing amber	• The switch initialization is in progress during bootup. • A fault or initialization failure has occurred on the switch, one of the switch ports, power supplies, or a fan. The port LEDs with the fault will flash simultaneously. LEDs for power supplies and fans with a fault will be on amber. • Port-speed mismatch. A transceiver is installed in a port configured for a different speed.
		Off	The unit is not receiving power.
UID (Unit Identification)	The Unit Identification LED is used to help you to identify a particular unit in a rack or collection of products.	On blue or flashing blue	The "LED locator on" command allows you to turn on the LED. The "LED locator flashing" command will flash the LED.
		Off	The "LED locator off" command turns off the LED.

Port LEDs on the front of the switch

Figure 5: *Port LEDs for the Aruba 8325-48Y8C (JL624A and JL625A)*
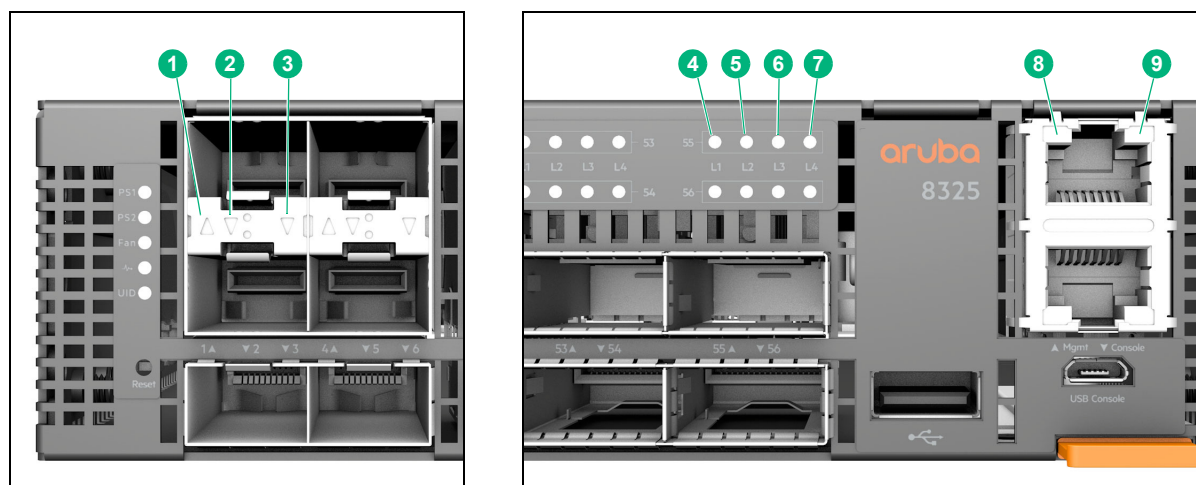
Table 10: *Port LED labels for the Aruba 8325-48Y8C (JL624A and JL625A)*

Label	Description
1	Upper SFP28 port LED
2	Middle SFP28 port LED
3	Lower SFP28 port LED
4	QSFP28 port LED and lane 1 indicator
5	QSFP28 lane 2 LED
6	QSFP28 lane 3 LED
7	QSFP28 lane 4 LED
8	Out-of-band management port Link LED
9	Out-of-band management port Act (activity) LED

Table 11: *Port LED behavior for the Aruba 8325-48Y8C (JL624A and JL625A)*

Chassis LEDs	Function	State	Meaning
SFP28 port LEDs	To display link and activity information for the port.	On/flashing green	Shows a valid link at 25/10 Gbps. • Fast flashing[1] indicates port activity at 25 Gbps. • Slow flashing[2] indicates port activity at 1 or 10 Gbps.
		Flashing amber	When the Global Status LED is simultaneously flashing amber, indicates a port-speed mismatch, an incompatible, unsupported, or faulty transceiver, or a port failure.
		Off	Port is disabled, not connected, or not receiving a link beat signal.

Chassis LEDs	Function	State	Meaning
QSFP28 port LEDs	To display link and activity information for the port.	On/flashing green	Shows a valid link at 100/40 Gbps. • Fast flashing[1] of the Lane 1 LED indicates port activity at 100 Gbps. • Slow flashing[2] of the Lane 1 LED indicates port activity at 40 Gbps.
		Flashing amber	When the Global Status LED is simultaneously flashing amber with the Lane 1 LED, indicates an unsupported or faulty transceiver, or a port failure.
		Off	Port is disabled, not connected, or not receiving a link beat signal. Lanes 2-4 are always off and are currently unused by HPE-Aruba software.
Management port Link LED	To display link information for the port.	On green	Shows a valid link.
		Off	Port is disabled, not connected, or not receiving a link beat signal.
Management port Act LED	To display activity information for the port.	Flashing yellow	Flashing indicates port activity.

[1] The fast flashing behavior is an on/off cycle once every 0.8 seconds, approximately.

[2] The slow flashing behavior is an on/off cycle once every 1.6 seconds, approximately.

Figure 6: *Port LEDs for the Aruba 8325-32C (JL626A and JL627A)*
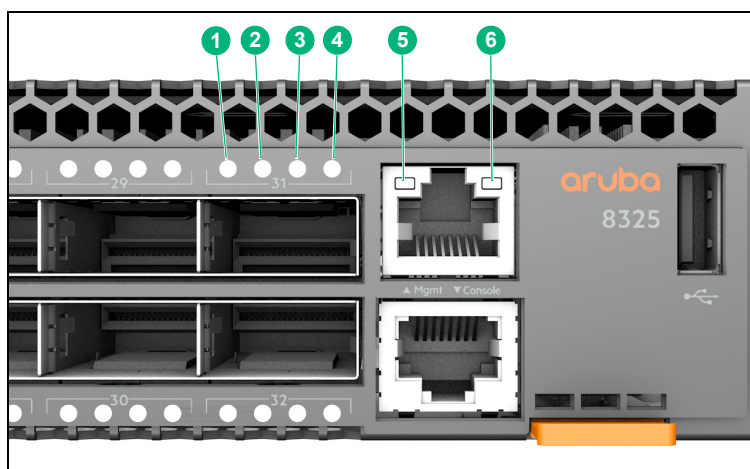
Table 12: *Port LED labels for the Aruba 8325-32C (JL626A and JL627A)*

Label	Description
1	QSFP28 port LED and lane 1 indicator
2	QSFP28 lane 2 LED (Not supported with currently released software.)
3	QSFP28 lane 3 LED (Not supported with currently released software.)
4	QSFP28 lane 4 LED (Not supported with currently released software.)
5	Unused
6	Out-of-band management port Link and Activity LED

Table 13: *Port LED behavior for the Aruba 8325-32C (JL626A and JL627A)*

| Chassis LEDs	Function	State	Meaning
QSFP28 port LEDs	To display link and activity information for the port.	On/flashing green	Shows a valid link at 100/40 Gbps. • Fast flashing[1] of the Lane 1 LED indicates port activity at 100 Gbps. • Slow flashing[2] of the Lane 1 LED indicates port activity at 40 Gbps.
		Flashing amber	When the Global Status LED is simultaneously flashing amber with the leftmost LED, indicates an unsupported or faulty transceiver, or a port failure.
		Off	Port is disabled, not connected, or not receiving a link beat signal. Lanes 2-4 are always off and are currently unused by HPE-Aruba software.
Management port Link LED	To display link information for the port.	On green	Shows a valid link.
		Off	Port is disabled, not connected, or not receiving a link beat signal.
Management port Act LED	To display activity information for the port.	Flashing green	Flashing indicates port activity.

[1] The fast flashing behavior is an on/off cycle once every 0.8 seconds, approximately.

[2] The slow flashing behavior is an on/off cycle once every 1.6 seconds, approximately.

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Reset button

The Reset button is recessed from the front panel (to protect it from being pushed accidentally) and is accessible through a small hole on the front panel. Use a pointed object, such as an unbent paper clip, to push the button.

The Reset button is used as follows:

Table 14: *Reset button*

To accomplish this:	Do this:	This will happen:
Soft Reset	Press and release the Reset button	The switch operating system is cleared gracefully (such as data transfer completion, temporary error conditions are cleared), and then reboots.
Note: The Reset button is provided for your convenience. If you are concerned with switch security, make sure that the switch is installed in a secure location, such as a locked wiring closet.		

Switch product label

The switch product label is an Aruba Orange-colored 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 on two labels affixed to the top and bottom of the product label tab.

Figure 7: *Aruba 8325 switch product label*
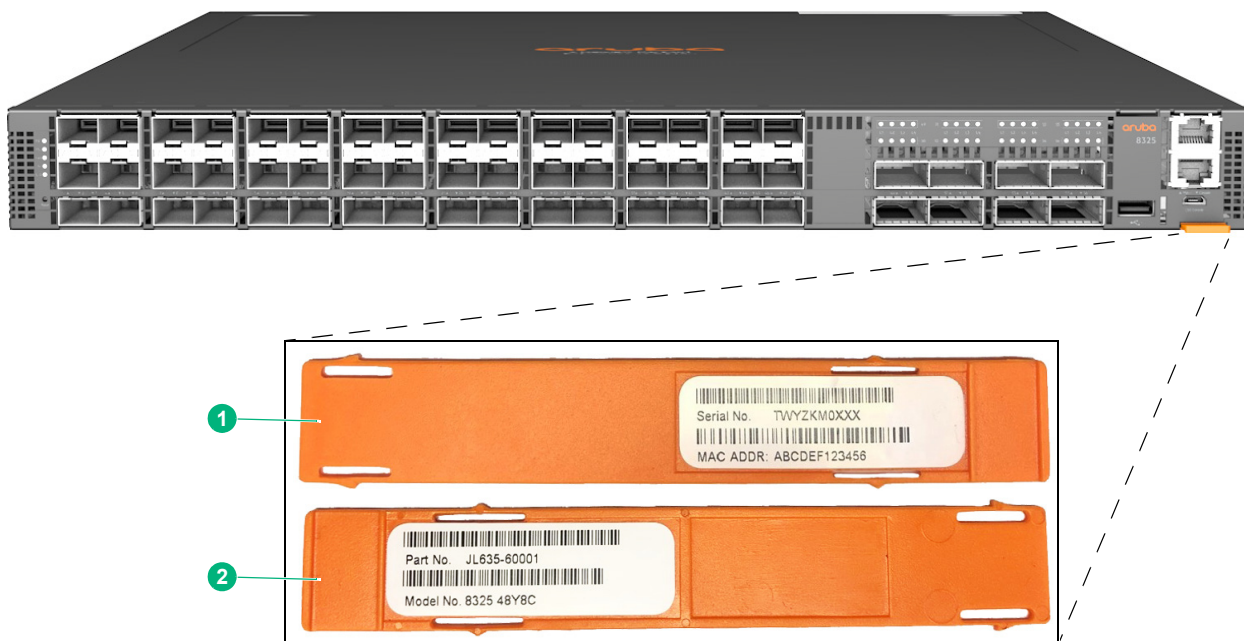
Table 15: *Aruba 8325 switch product label*

Label	Description
1	Product label top side. Information includes the serial number and MAC address.
2	Product label bottom side. Information includes the part number and model number.

Back of the switch

The back of the switch includes two power supply units and six fan assemblies.

Figure 8: *Back of the Aruba 8325-48Y8C (JL624A and JL625A)*
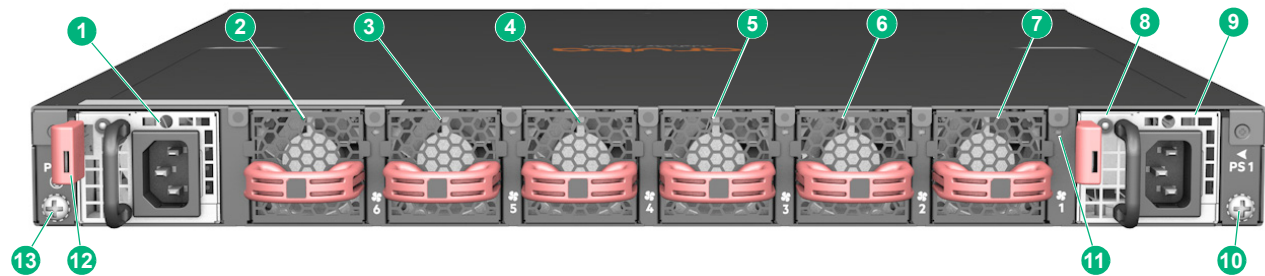
Table 16: *Back of the Aruba 8325-48Y8C (JL624A and JL625A) switch labels and descriptions*

Label	Description
1	Power supply 2
2	Fan assembly 6
3	Fan assembly 5
4	Fan assembly 4
5	Fan assembly 3
6	Fan assembly 2
7	Fan assembly 1
8	Power supply status LED
9	Power supply 1
10	Ground lug
11	Fan assembly status LED
12	Color-coded power supply release latch red = front-to-back air flow blue = back-to-front air flow
13	Ground lug

Figure 9: *Back of the Aruba 8325-32C (JL626A and JL627A)*
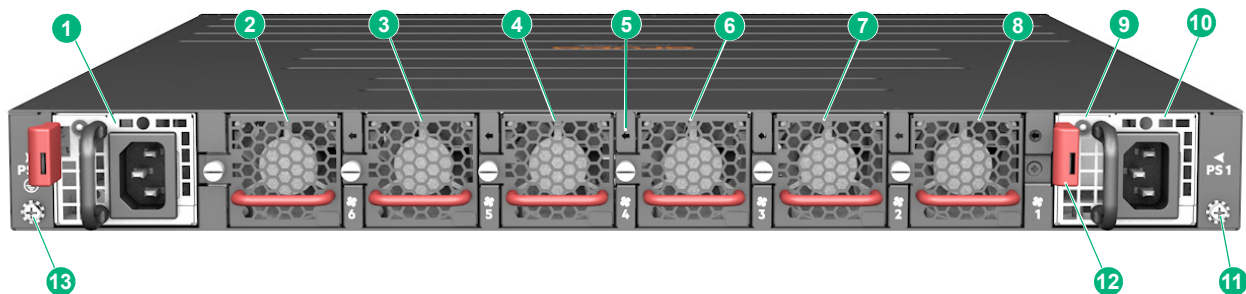
Table 17: *Back of the Aruba 8325-32C (JL626A and JL627A) labels and descriptions*

Label	Description
1	Power supply 2 [1]
2	Fan assembly 6
3	Fan assembly 5
4	Fan assembly 4
5	Fan assembly status LED
6	Fan assembly 3
7	Fan assembly 2
8	Fan assembly 1
9	Power supply status LED
10	Power supply 1 [1]
11	Ground lug
12	Color-coded power supply release latch red = front-to-back air flow blue = back-to-front air flow
13	Ground lug
[1] Color-coded power supply release latch: red = front-to-back air flow; blue = back-to-front air flow.	

Power supplies

The Aruba 8325 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.

> **CAUTION**
>
> 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 8325 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. Two 650W color-coded power supplies are available for use with Aruba 8325 switches. A red release latch indicates an FB cooling air flow. A blue release latch indicates a BF cooling air flow.

Figure 10: *Aruba 8325 power supplies*
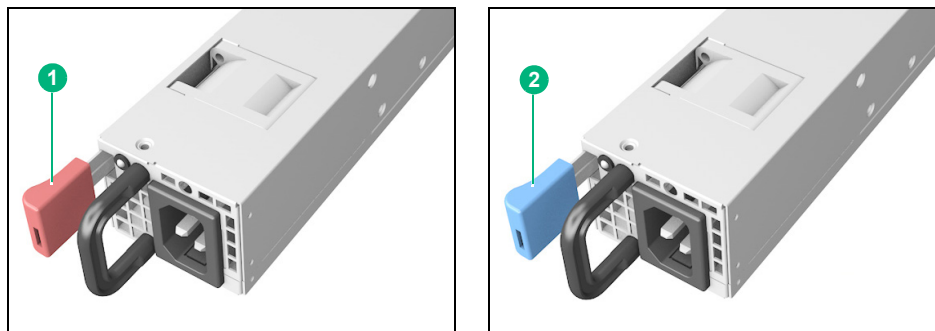
Table 18: *Aruba 8325 power supplies*

Label	Description
1	Aruba 8325 650W 100-240VAC FB PSU (JL632A)
2	Aruba 8325 650W 100-240VAC BF PSU (JL633A)

The Aruba 8325 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 operate with one active power supply.

Power supply status LED

Table 19: *Power supply LED behavior*

Power Supply LED	Function	State	Meaning
Status LED	To display power supply status.	On green	The power supply is operating normally.
		Flashing green or on red	The power supply is experiencing a fault, or has AC power but is not installed in the switch unit.
		Off	AC power is not connected to the power supply or, if AC power is connected, the power supply is in protection mode due to a voltage, current, thermal, or short-circuit condition.

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 8325 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 (fails, or is powered off or removed) the remaining power supply provides full power for the device.

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.

CAUTION	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 assemblies

The Aruba 8325 switch is equipped with six field-replaceable, hot-swappable fan assemblies. Each fan assembly features individual fans that pull air through the chassis from front to back (FB) or from back to front (BF).

CAUTION	Fans and power supplies installed in a given 8325 switch must have the same cooling air flow direction (FB or BF). Air flow direction in an 8325 switch is not controlled by software. To change the air flow direction, replace the power supplies and fans with power and fan units supporting the air flow direction you want. See **Figure 10 on page 24**, **Table 20 on page 25**, and **Figure 11 on page 26**.

CAUTION	A minimum of five fan assemblies is required for operation. The system will automatically shutdown if overheating is detected. If five or fewer fan assemblies are installed, the Fan LED will be on amber and the Global Status LED will flash amber to indicate a fan fault may exist.

CAUTION	System airflow direction (FB or BF) 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). Any Fan assembly or Power supply of conflicting airflow type will be disabled by the system. Ensure only matching Fan assemblies and power supplies are used at any given runtime.

NOTE	Fans designed for the 48-port 8325 switches are not compatible with 32-port 8325 switches and vice-versa.

Fan models are color-coded for FB or BF cooling air flow.

- Red handle indicates a front-to-back (FB) cooling air flow.
- Blue handle indicates a back-to-front (BF) cooling air flow.

See the following table for fan usage.

Table 20: *Aruba 8325 fan assemblies*

Fan assembly	Color code	48-port switches	32-port switches
Aruba 8325-48Y8C Front-to-Back Fan (JL628A)	Red	Yes	No
Aruba 8325-48Y8C Back-to-Front Fan (JL629A)	Blue	Yes	No
Aruba 8325-32C Front-to-Back Fan (JL630A)	Red	No	Yes
Aruba 8325-32C Back-to-Front Fan (JL631A)	Blue	No	Yes

Figure 11: *Aruba 8325 fan assemblies*
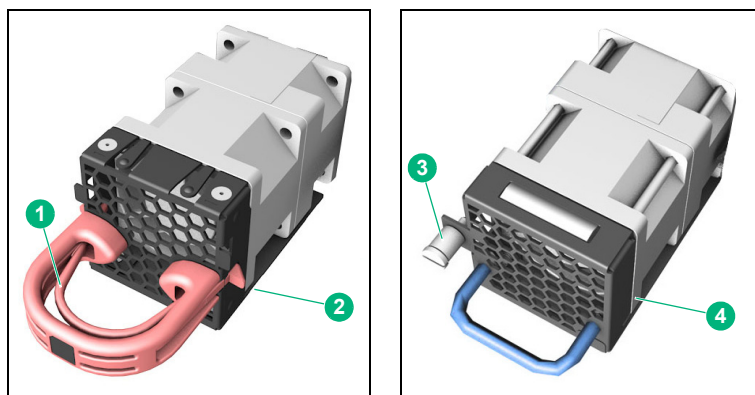
Table 21: *Aruba 8325 fan assemblies*

Label	Description
1	Fan release latch
2	Aruba 8325-48Y8C Front-to-Back Fan (JL628A)
3	Fan release screw
4	Aruba 8325-32C Back-to-Front Fan (JL631A)

The switch can tolerate the failure of a single fan assembly while maintaining a safe operating temperature. The switch may continue to operate with one failed fan assembly. If the switch reaches an overtemp condition, the switch will shut down. For best operation, the failed fan assembly should be replaced as soon as possible.

If one or more of the fan assemblies have failed, the front-panel Fan LED will be on amber and failed fan assembly LEDs will be on red.

If multiple fans have failed, the switch should be immediately powered off and the fan assemblies replaced.

> ⚠ **CAUTION** The Aruba 8325 switch is not compatible with fan assemblies from other Aruba hardware platforms.

Fan assembly status LED

Table 22: *Fan assembly LED behavior*

Fan assembly LED	Function	State	Meaning
Status LED	To display fan assembly status.	On green	The fan assembly is operating normally.
		On red	The fan assembly has been disabled by the system due to system airflow direction conflict or has failed.

Use the `show environment fan` command for fan status information. (See the *Aruba 8325 Fundamentals Guide for ArubaOS-CX 10.02* or later at **https://asp.arubanetworks.com/downloads**.)

Switch features

The features of the Aruba 8325 switch include:

- Combinations of fixed QSFP28 and SFP28 ports, as described under **Network ports**.
- For secure environment, all ports are disabled by default.
- The option to have one or two power supplies: A second power supply supports redundant system power. If one of the power supplies fails, the second power supply immediately provides the power necessary to keep the switch running.
- The QSFP28 and SFP28 ports always operate at full duplex.
- 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 the Spanning Tree Protocol to eliminate network loops.
- 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.
- To download product updates, go to either of the following:
    - Hewlett Packard Enterprise Support Center **Get connected with updates** page: **www.hpe.com/support/e-updates**
    - HPE Networking Software: **www.hpe.com/networking/software**
    - To view and update your entitlements, and to link your contracts and warranties with your profile, go to the Hewlett Packard Enterprise Support Center's **More Information on Access to Support Materials** page: **www.hpe.com/support/AccessToSupportMaterials**

Aruba 8325 Switch Installation and Getting Started Guide

This chapter shows how to install the switch. The Aruba 8325 switch requires you to order a rack mount kit that includes the brackets for mounting the switch in a standard 19-inch telco rack, or in an equipment cabinet.

Included parts

- Documentation kit
- USB Bluetooth adapter enables you to configure your switch from your mobile device. Requires the Aruba CX Mobile App. (Adapter is attached to a card in the documentation kit). For information about using the Aruba CX mobile app to configure the switch, see the *Fundamentals Guide* for your switch and software release.
- Power cord, one of the following. Part number or J-number (SKU) is orderable through Aruba purchasing systems.

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	8120-3396 J9936A	PDU NA/Japan/TW PDU Rest of World	8121-1091 J9943A 8121-1094 J9944A
NA Hi-Voltage (locking) C15 to NEMA L6-20	8121-0941 J9955A*	PDU India-only	P09371-001 JL671A
* Ordered separate from the switch. To order a switch that will use a J9955A power cord, use the "no power cord" option, #AC3, and specify the J9955A power cord as a separate line item in the order.			

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。

Parts not included

If you have not already done so, order an Aruba rack mount kit for use with your 8325 switch.

Rack mounting your Aruba 8325 switch is supported using these rack mount kits:

- JL482B, Aruba X472 2-Post Rack Kit (Not included. Ordered separately.)
- JL483B, Aruba X474 4-Post Rack Kit (Not included. Ordered separately.)

A DB9-to-RJ-45 console cable can be ordered from HPE: JL448A, Aruba X2C2 RJ45 to DB9 Console Cable.

Installation procedures

Summary

1. **Prepare the installation site (page 32).** Ensure the physical environment into which you will be installing the switch is properly prepared, including having the correct network cabling ready to connect to the switch and having an appropriate location for the switch. See **"Installation precautions" on page 31** for some guidelines on avoiding personal injury or product damage when installing your switch.

2. **Install power supplies (page 32).** Install power supplies if they are not already installed.

3. **Install fan assemblies (page 33).** Install fan assemblies if they are not already installed.

4. **Power on the switch and check LEDs (page 34).** Power-on the switch and check the LEDs for proper switch operation.

5. **Power off the switch (page 36).** Remove power from the switch.

6. **Mount the switch (page 36).** The switch can be mounted in a 19-inch telco rack or in an equipment cabinet.

7. **(Optional) Install transceivers (page 39).** The switch has slots for installing SFP+/SFP28 and QSFP+/ QSFP28 transceivers. Depending on where you install the switch, it may be easier to install the transceivers first. Transceivers can be hot swapped—they can be installed or removed while the switch is powered on.

8. **Connect power to the switch (page 43).** Once the switch is mounted, plug it into the main power source.

9. **Connect a management console to the switch (page 44).** You may want to modify the switch's configuration, so it can be managed using a Web browser or through an SSH or Telnet session. Configuration changes can be made by using a console cable to connect a PC to the switch's console port, or use the included Bluetooth adapter to configure the switch from your mobile device.

10. **Connect the network devices (page 45).** Using the appropriate network cables, connect the network devices to the switch ports.

At this point, your switch is fully installed. See the rest of this chapter if you need more detailed information on any of these installation steps.

Aruba 8325 Switch Installation and Getting Started Guide

Installation precautions

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

WARNING	• Do not mount the switch on a wall, on or under a table, or on 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 installed above. • To prevent the rack or cabinet from becoming unstable and/or falling over, ensure that it is adequately secured.
CAUTION	• 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. • If your installation requires a different power cord than the one supplied with the switch and power supply, be sure the cord is adequately sized for the switch's current requirements. 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. The mark is your assurance that the power cord can be used safely with the switch and power supply. • When installing the switch, the AC outlet should be near the switch and be easily accessible in case the switch must be powered off. • Do not install the switch in an environment where the operating ambient temperature exceeds its specification. (See the **Environmental** information on **page 60**.) • 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 are usually printed on the devices near the AC power connectors. • Ensure that the air flow around the switch is not restricted. Leave at least 3 inches (7.6 cm) for cooling. For air flow direction, determine whether your switch has front-to-back or back-to-front fans and power supply units. • All power supplies and fan assemblies installed in a 8325 switch must have the same cooling air flow direction (FB or BF). • 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.
CAUTION	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 bleed off any retained power.

1. Prepare the installation site

Cabling Infrastructure - Ensure the cabling infrastructure meets the necessary network specifications. See chapter 7, **Cabling and technology information** for more information:

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

- In the front of the switch, leave at least 3 inches (7.6 cm) of space for the twisted-pair and fiber-optic cabling.
- In the back of the switch, leave at least 3 inches (7.6 cm) of space for the power cord.
- On the sides of the switch, leave at least 3 inches (7.6 cm) for cooling.

Cooling air flow in Aruba 8325 switches is Front-to-Back (FB) or Back-to-Front (BF), depending on which power supply and fan assembly options are installed. To reverse the cooling air flow direction in an 8325 switch, you must replace the existing power supplies and fan assemblies with power supplies and fan assemblies having the opposite air flow direction. All fans and power supplies installed in an 8325 switch must have the same air flow direction. For specific model information see the **"Overview" on page 9**.

⚠️ **CAUTION**	To avoid personal injury or product damage, review **"Installation precautions" on page 31** before beginning the installation.

2. Install power supplies

Skip this step if a power supply is already installed in the switch.

If a power supply is not already installed in the switch, install at least one power supply before continuing in this guide. The Aruba 8325 switch uses any of the following power supplies:

- Aruba 8325 650W 100-240VAC FB PSU (JL632A)
- Aruba 8325 650W 100-240VAC BF PSU (JL633A)

📋 **NOTE**	A red-colored power supply release lever indicates a Front-to-Back (FB) air flow. A blue-colored power supply release lever indicates a Back-to-Front (BF) air flow.

Figure 12: *Installing a power supply*
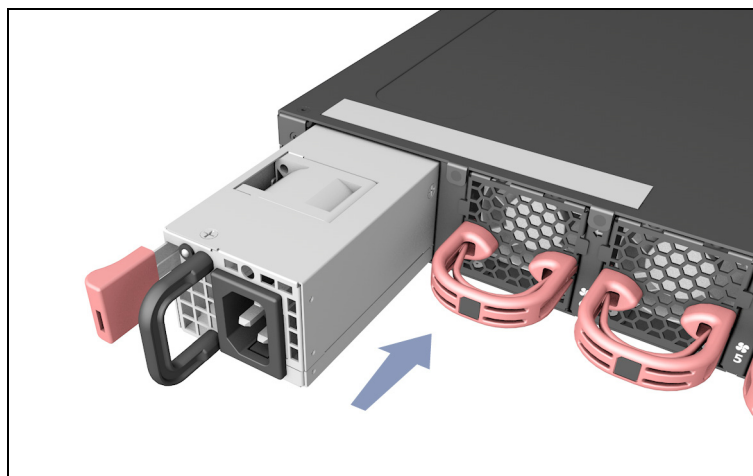
3. Install fan assemblies

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

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

NOTE	• The 48-port switches and the 32-port switches use different fan assemblies. Each fan assembly type can only be installed in the correct switch model.
	• Ensure that a replacement fan has the same airflow as other fans installed in the switch (FB or BF).
	• A red-colored fan handle indicates a Front-to-Back (FB) air flow. A blue-colored fan handle indicates a Back-to-Front (BF) air flow.

1. Remove the new fan assembly from its packaging, being careful to not touch any of the circuitry on the board.

2. Insert the new fan assembly fully into the slot so that its face plate is flush with the back face of the switch. If the switch is connected to an AC power source, the fan assembly should immediately start running.

3. For the 32-port switch fan assembly, engage the retaining screw and tighten it. Be sure to not over-tighten the screw.

Figure 13: *Installing a fan assembly*
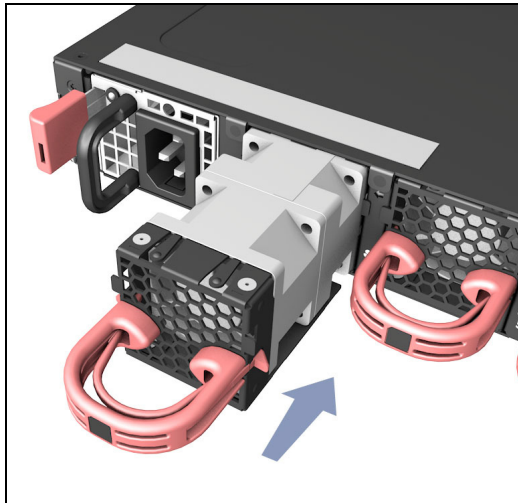
4. Power-on the switch and check LEDs

An Aruba 8325 switch does not contain a power on/off switch. It is turned on by connecting the AC power cord to the switch and to an AC power source.

Figure 14: *Connecting power to the switch*
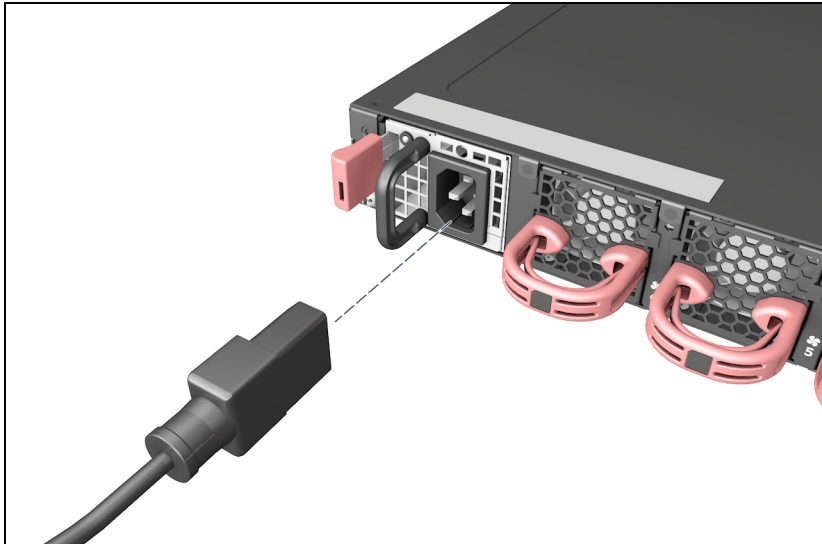
Check LEDs for proper switch operation.

Figure 15: *Chassis LEDs for the Aruba 8325-48Y8C (JL624A and JL625A)*
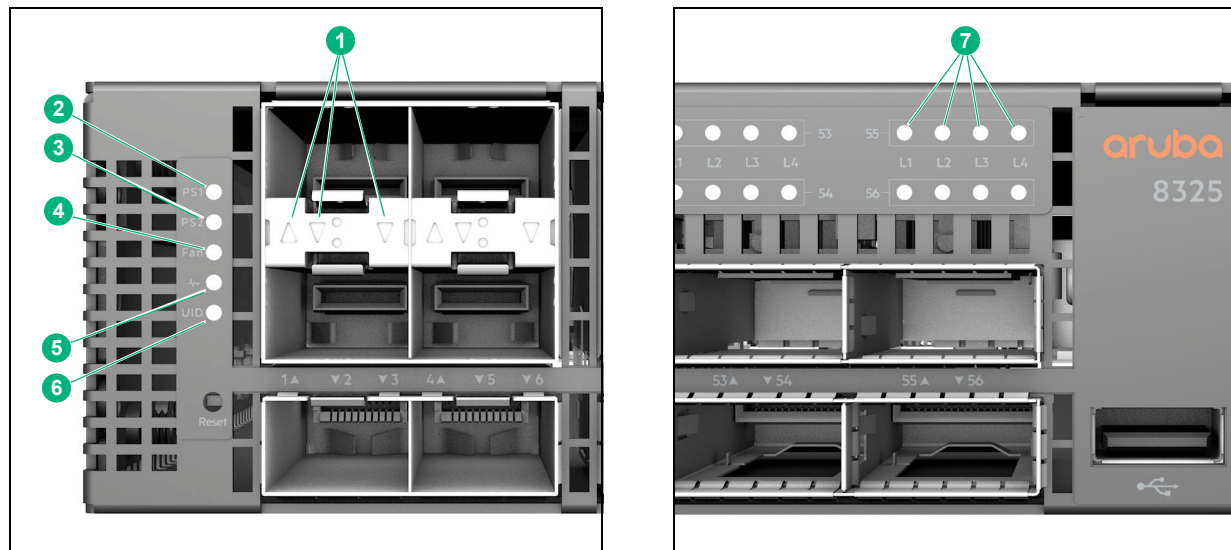
Table 23: *Chassis LED labels for the Aruba 8325-48Y8C (JL624A and JL625A)*

Label	Description
1	SFP28 Port LEDs: Off, unless a network cable is connected and the port is receiving link beat.
2	PS1 LED: Green after power on, unless the power supply is in a fault state, or not receiving power.

Label	Description
3	PS2 LED: Green after power on, unless the power supply is in a fault state, or not receiving power.
4	Fan LED: Green after power on, unless a fan on the back of the unit is in a fault state.
5	Global Status LED: Green after power on, in the default configuration. Flashes amber during bootup.
6	UID LED Locator or Unit Identification LED. Off after power on.
7	QSFP28 Port LEDs: Off, unless a network cable is connected and the port is receiving link beat.

Figure 16: *Chassis LEDs for the Aruba 8325-32C (JL626A and JL627A)*
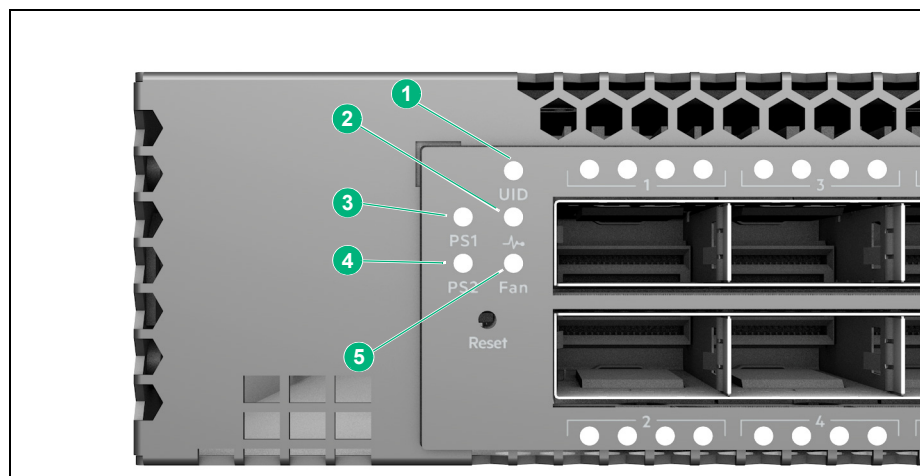
Table 24: *Chassis LED labels for the Aruba 8325-32C (JL626A and JL627A)*

Label	Description
1	UID LED Locator or Unit Identification LED. Off after power on.
2	Global Status LED: Green after power on, in the default configuration. Flashes amber during bootup.
3	PS1 LED: Green after power on, unless the power supply is in a fault state, or not receiving power.
4	PS2 LED: Green after power on, unless the power supply is in a fault state, or not receiving power.

Table 24: *Chassis LED labels for the Aruba 8325-32C (JL626A and JL627A)*

Label	Description
5	Fan LED: Green after power on, unless a fan on the back of the unit is in a fault state.

5. Power off the switch

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

6. Mount the switch

Mounting an Aruba 8325 switch

The supported mounting options for the Aruba 8325 switch include:

- Two-post rack mount (JL482B; sold separately)
- Four-post rack mount (JL483B; sold separately)

> **CAUTION**
>
> See **"Installation precautions" on page 31** before mounting your switch.

Two-post rack mount option:

The switch is designed to be mounted in any EIA-standard 19-inch telco rack or communication equipment cabinet using the Aruba X472 2-Post Rack Kit (JL482B; sold separately).

The mounting brackets must only be attached for mid-mounting the switch in a two-post rack. Secure the rack in accordance with the manufacturer's safety guidelines.

> **WARNING**
>
> For safe operation, please read the mounting precautions in **"Installation precautions" on page 31**, before mounting a switch.

> **NOTE**
>
> The 12-24 screws supplied with the switch 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 switch.
>
> Complete step 1, and plan which four holes you will be using in the cabinet and install all four clips. Then proceed to step 2.

1. Use a #1 Phillips (cross-head) screwdriver and attach the mounting brackets to the switch with the included eight 8-mm M4 screws.

   The brackets must only be attached for mid-mounting the switch in a two-post rack. Ensure the holes in the bracket are aligned with the correct holes in the switch, as per the diagram.

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Figure 17: *Attaching two-post mounting brackets to the switch*
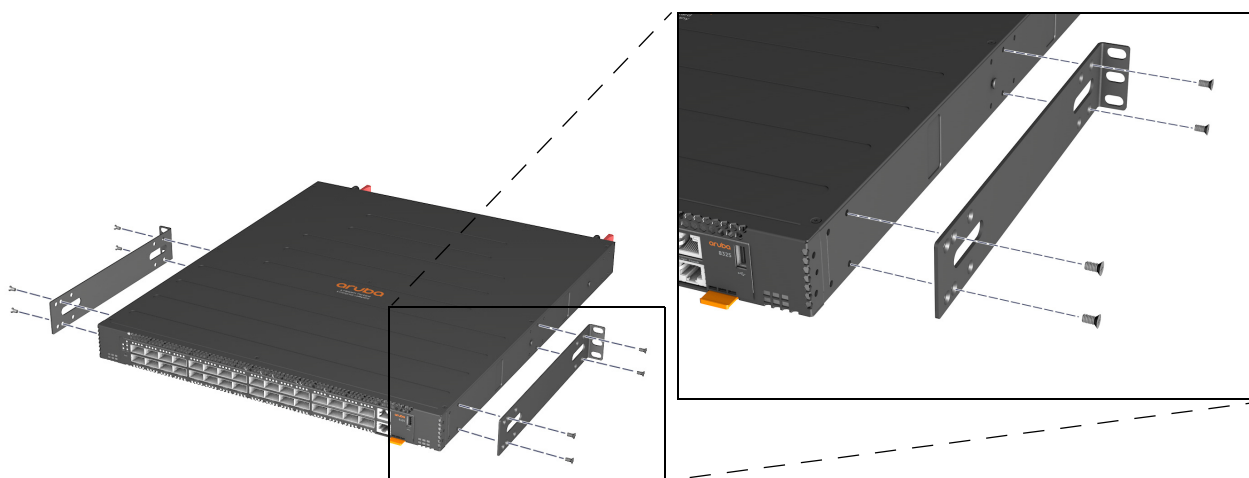
> ⚡ **WARNING**
>
> For safe, reliable installation, only use the screws provided in the accessory kit to attach the mounting brackets to the switch.

2. Hold the switch with attached brackets up to the rack, move it vertically until rack holes line up with the bracket holes, and then insert and tighten the four number 12-24 screws holding the brackets to the rack.

Figure 18: *Mounting the switch in a two-post rack*
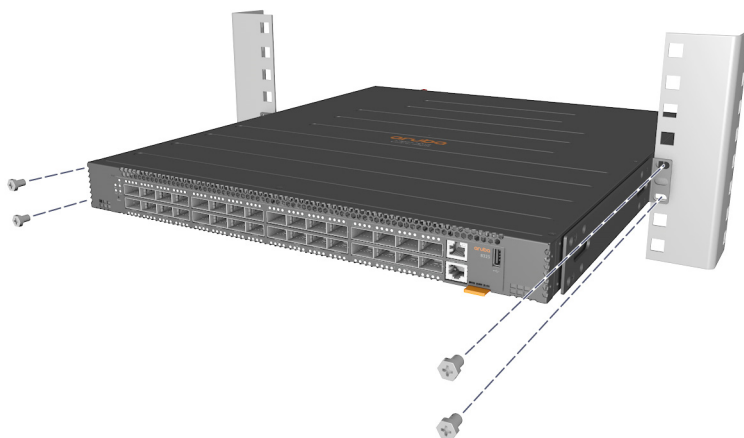
Four-post rack mount option:

The Aruba 8325 switch can be mounted in four-post racks and cabinets by using the Aruba X474 4-Post Rack Kit (JL483B); sold separately.

The JL483B Aruba X474 4-Post Rack Kit includes these items:

- two front-post brackets
- two rear-post brackets with adjustable ears
- twenty 8-mm M4 screws
- eight 5/8-inch number 12-24 screws
- two rear bracket ear position-locking screws

The brackets must only be attached for front-flush mounting the switch in a four-post rack. Secure the rack in accordance with the manufacturer's safety guidelines.

|	
WARNING	For safe operation, please read the mounting precautions in **"Installation precautions" on page 31**, before mounting a switch.

NOTE	The 12-24 screws supplied with the switch 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 switch. Complete step 1, and plan which holes you will be using in the cabinet and install all four clips. Then proceed to step 2.

1. Use a #1 Phillips (cross-head) screwdriver and attach the front- and rear-post rack mount brackets to the switch with the included 8-mm M4 screws.

Figure 19: *Attaching four-post mounting brackets to the switch*
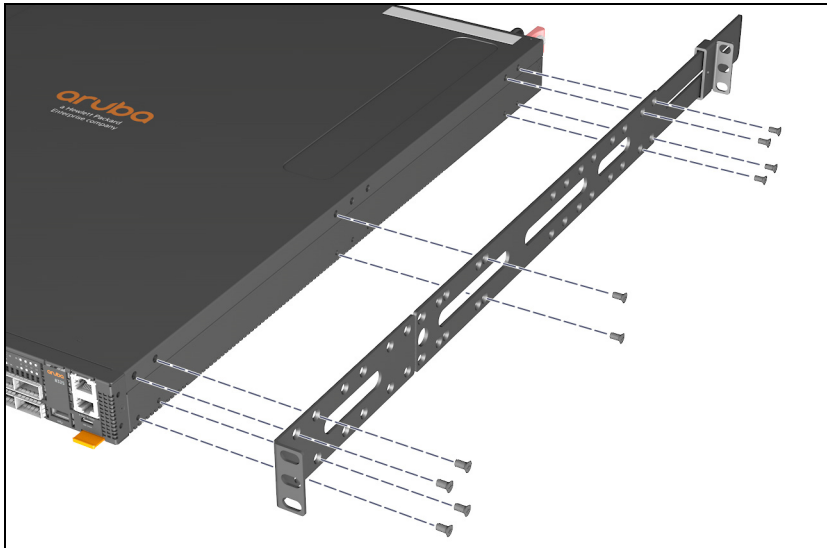
WARNING	For safe, reliable installation, only use the screws provided in the accessory kit to attach the mounting brackets to the switch.

2. For the rear-post brackets, use an additional two 8-mm M4 screws to secure the bracket at the mid-point on the side of the switch.

3. Hold the switch with attached brackets up to the rack, move it vertically until rack holes line up with the front-post bracket holes, and then insert and tighten the four number 12-24 screws holding the brackets to the rack.

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Figure 20: *Mounting the switch in a four-post rack*
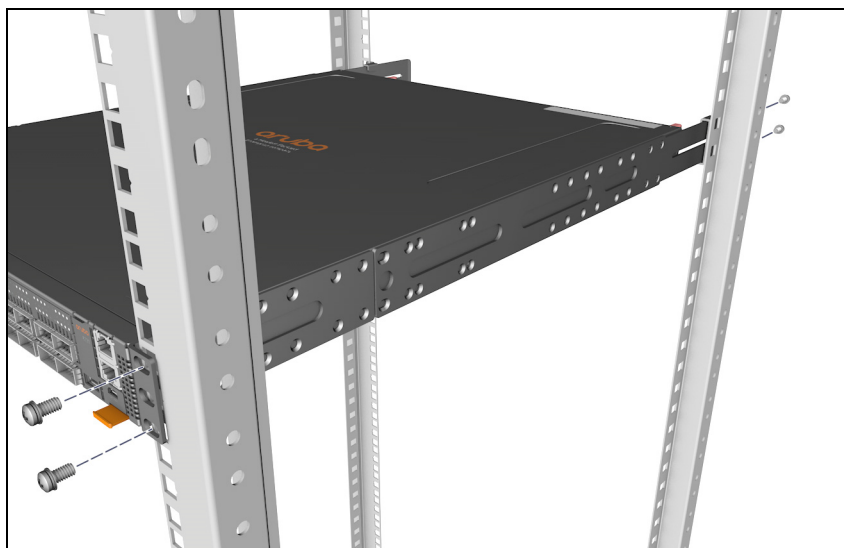
4. Adjust the rear-post bracket ears to fit the depth of the rack.

5. Secure the rear-post brackets to the rack rear posts using four number 12-24 screws.

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

Figure 21: *Locking the position of rear-post brackets*
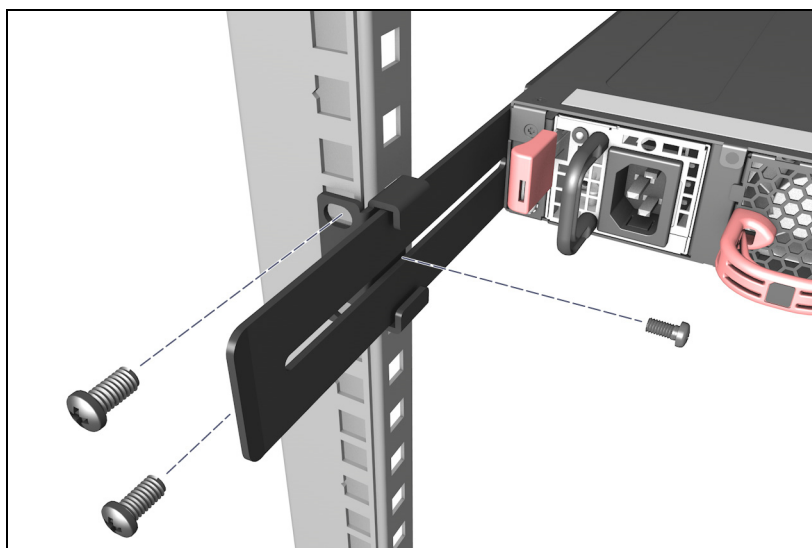
7. Install transceivers

You can install or remove a transceiver from an SFP28/QSFP28 slot without having to power off the switch.

- The transceivers operate only at full duplex. Half duplex operation is not supported.
- Ensure the network cable is NOT connected when you install or remove a transceiver.

NOTE

	Use only supported genuine Aruba SFP/SFP+/SFP28/QSFP+/QSFP28 transceivers with your switch. Non-Aruba transceivers are not supported, and their use may result in product malfunction. Should you require additional transceivers, contact your Aruba sales representative or an authorized reseller.
CAUTION	For more transceiver support information for your switch model, see the *ArubaOS-Switch and ArubaOS-CX Transceiver Guide* at **https://asp.arubanetworks.com/downloads**.

Hot swapping SFP/SFP+/SFP28/QSFP+/QSFP28 transceivers

Supported SFP/SFP+/SFP28/QSFP+/QSFP28 transceivers that you can install in your Aruba switch can be "hot swapped"– removed and installed while the switch is receiving power. However, disconnect the network cables from the SFP/SFP+/SFP28/QSFP+/QSFP28 transceivers before hot-swapping them.

When you replace an SFP/SFP+/SFP28/QSFP+/QSFP28 transceiver with another transceiver of a different type, the switch may retain selected port-specific configuration settings that were configured for the replaced unit. Be sure to validate or reconfigure port settings as required.

SFP/SFP+/SFP28/QSFP+/QSFP28 connections to devices with fixed speed/duplex configurations

When connecting a device to your switch port that contains a SFP/SFP+/SFP28/QSFP+/QSFP28 transceiver, the speed and duplex settings of the switch port and the connected device must match. Otherwise, the device may not link properly—you may not get a link. For some older network devices, the default speed/duplex settings may be predefined (for example, to 1000 Mbps/Full Duplex), or otherwise set differently from the default configuration of your switch. These setting differences may also apply to some older Hewlett Packard Enterprise devices. Because of these default speed/duplex considerations, make sure that devices connected to your SFP/SFP+/SFP28/QSFP+/QSFP28 ports are properly configured. At a minimum, make sure the configurations match.

Interface-Group operation

The SFP28 ports in the Aruba 8325-48Y8C switches (JL624A and JL625A) are organized into four groups of 12 ports each.

Figure 22: *Front of the Aruba 8325-48Y8C (JL624A and JL625A) interface-groups*
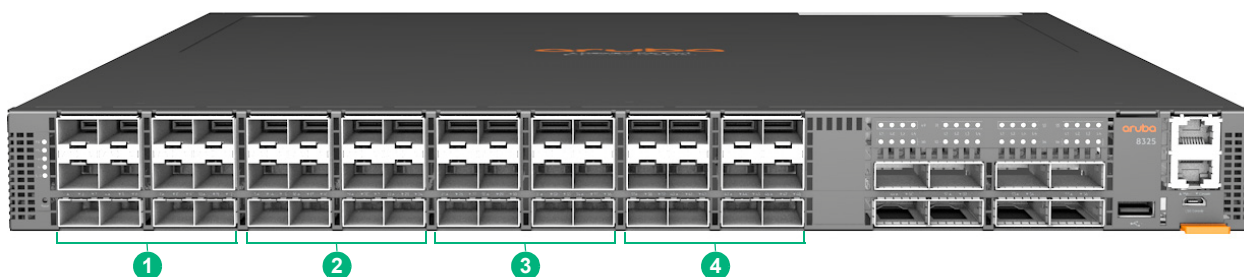
Table 25: *Aruba 8325-48Y8C (JL624A and JL625A) interface-groups*

Label	Description
1	Interface-group 1 (ports 1 to 12)
2	Interface-group 2 (ports 13 to 24)
3	Interface-group 3 (ports 25 to 36)
4	Interface-group 4 (ports 37 to 48)

The port speed configured for a given interface group determines the speed for all ports in that group. Any mismatched interfaces in the group are disabled. For example, if interface group 1 is configured for 25G (the default setting) and 10G transceivers are installed in ports 10 and 11, these two transceivers are in a mismatch

state and are disabled with the port error logged as "group speed mismatch." The port LED will flash amber to indicate an installation error was detected. All fault indications will flash in unison with the Global Status LED to alert the user.

In the default switch configuration, all four interface-groups are configured to 25 Gbps. To configure the speed for an interface-group to 10 Gbps, use the following command:

```
system interface-group <1|2|3|4> speed <10g|25g>
```

For example, to configure interface-group 1 for 10g, use this command:

```
8325(config)# system interface-group 1 speed 10g
```

Once entered, the switch will present the warning and required user response:

```
Changing the group speed will disable all member interfaces
that do not match the new speed.

Continue (y/n)? y
```

Only the 10G interface-group speed setting supports 1 Gbps transceivers. The 1 Gbps transceivers also require the user to manually configure the port to 1000-full mode, an additional configuration to ensure IEEE-compliant operation. For example, the following command is also required for 1G optics (do not use with 10G optics/DACs):

```
8325(config)# int 1/1/1 speed 1000-full
```

For more information, and to view or change the speed setting for a port group, see the *Aruba 8325 Fundamentals Guide for ArubaOS-CX 10.02* or later at **https://asp.arubanetworks.com/downloads**.

1GBase-T (J8177D) transceiver support restrictions in the 48-port 8325 switches

Beginning with software release 10.03, the Aruba 8325-48YBC switches also support 1GBase-T (J8177D) transceivers in all top row and middle row ports. The bottom row ports do not support 1GBase-T (J8177D) transceiver operation.

Figure 23: *1GBase-T transceiver support for the 48-port 8325 switches*
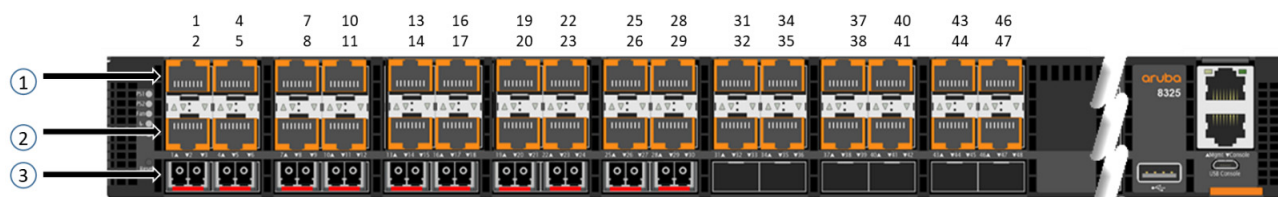
Table 26: *1GBase-T transceiver support for the 48-port 8325 switches*

Label	Description
1	All top row ports support 1GBase-T (J8177D) transceivers.
2	All middle row ports support 1GBase-T (J8177D) transceivers.
3	Bottom row ports do not support 1GBase-T (J8177D) transceivers

Continued support for optical, DAC, or AOC products in other ports not occupied by a J8177D RJ45 transceiver.

If the switch detects a 1GBase-T (J8177D) transceiver in any bottom row port, the `show interface brief` command will list an `Incompatible interface` for that port.

10GBase-T (JL563A) transceiver support restrictions in the 48-port 8325 switches

Beginning with software release 10.03, the Aruba 8325-48YBC switches also support 10GBase-T (JL563A) transceivers in the following top row and middle row ports:

Figure 24: *10GBase-T transceiver support for the 48-port 8325 switches*

Table 27: *10GBase-T transceiver support for the 48-port 8325 switches*

Label	Description
1	Top row ports 1, 4, 7, 10, 13, 16 support 10GBase-T (JL563A) transceivers.
2	Middle row ports 2, 5, 8, 11, 14, and 17 support 10GBase-T (JL563A) transceivers.
3	Bottom row ports do not support 10GBase-T (JL563A) transceivers

Continued support for optical, DAC, or AOC products in other ports not occupied by a J8177D RJ45 transceiver.

To enable use on ports 13-17, Interface-Group 2 must be set to 10G operation.

If the switch detects a 10GBase-T (JL563A) transceiver in any port that does not support it, the `show interface brief` command will list an `Incompatible interface` for that port.

> **NOTE**
>
> The switch does not support 10GBase-T (JL563A) transceivers in ports 3, 6, 9, 12, 15, 18, and 19 through 48. 10GBase-T support for ports 13-14, and 16-17 was added with software release 10.03.

Installing transceivers:

Hold the transceiver by its sides and gently insert it into either of the slots on the switch until it clicks into place. When a transceiver is inserted the switch authenticates it. This can take 1-3 seconds, with the worst case being 5 seconds. If the transceiver is removed before the authentication completes a self test failure will be reported.

> **WARNING**
>
> The fiber Aruba transceivers are Class 1 laser devices. Avoid direct eye exposure to the beam coming from the transmit port.

> **NOTE**
>
> Refer to **Table 6**, footnote 3, for ports that support 10GBase-T transceivers.

Figure 25: *Installing a transceiver*
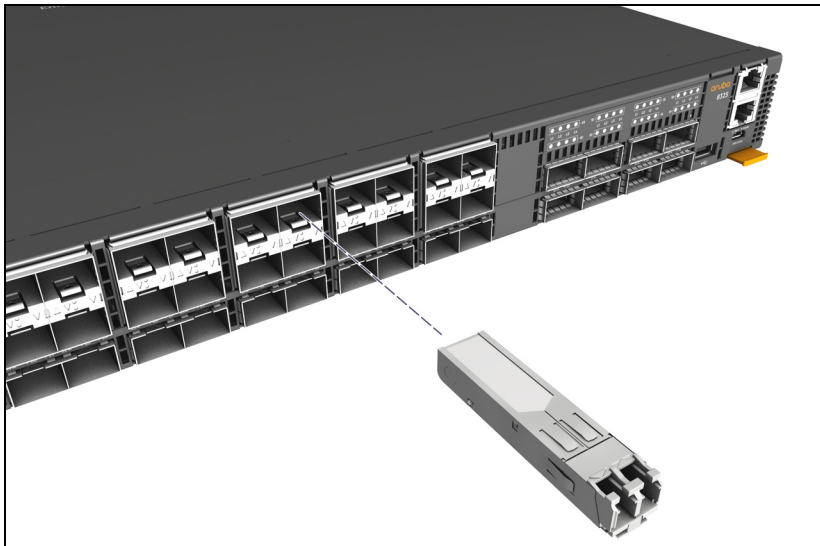
Removing transceivers:

Depending on the transceiver, it will have either of three different release mechanisms:

- A plastic tab on the bottom of the transceiver
- A plastic collar around the transceiver
- A wire bail

To remove the transceivers that have the plastic tab or plastic collar, push the tab or collar toward the switch until the transceiver releases from the switch (it will move outward slightly), then pull it from the slot.

To remove the transceivers that have the wire bail, lower the bail until it is approximately horizontal, and then using the bail, pull the transceiver from the slot.

8. Connect the switch to a power source

1. If a power supply is not already installed in the switch, install at least one power supply. (See **"2. Install power supplies" on page 32**.) The Aruba 8325 switch uses any of the following power supplies:

   - Aruba 8325 650W 100-240VAC FB PSU (JL632A)
   - Aruba 8325 650W 100-240VAC BF PSU (JL633A)

2. Plug the included power cord into the power supply's power connector and into a nearby AC power source.

Figure 26: *Connecting a power cord to the switch*
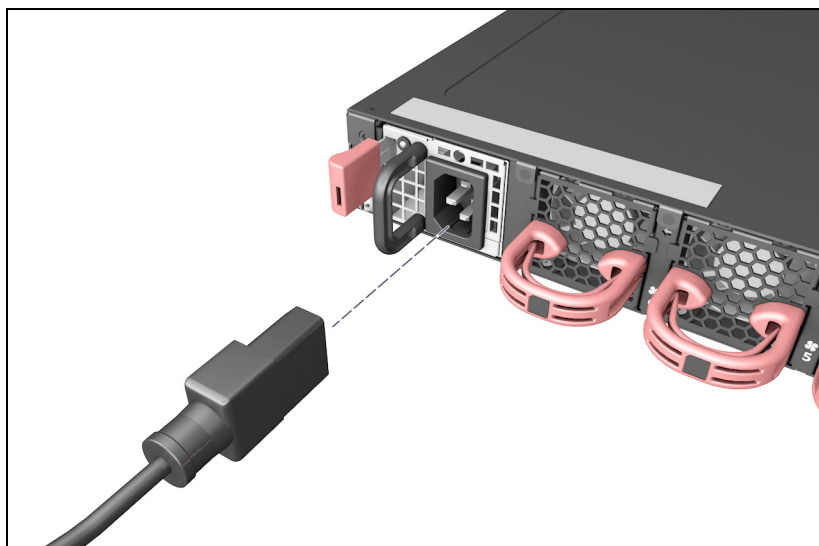
3. Check the LEDs. See **"Chassis LEDs on the front of the switch" on page 15**.

> **NOTE**
>
> One power supply 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.

9. Set up 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" on page 47**".
- **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.

10. Connect the network cables

Connect the network cables, described under "Cabling Infrastructure" (**1. Prepare the installation site**), from the network devices or your patch panels to the RJ-45 out-of-band management port on the switch or to any transceivers you have installed in the switch.

Using the 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 Link 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 Link LED does *not* go on when the network cable is connected to the port, see **"Diagnosing with the LEDs" on page 54** in the Troubleshooting chapter.

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

Figure 27: *Connecting an RJ-45*
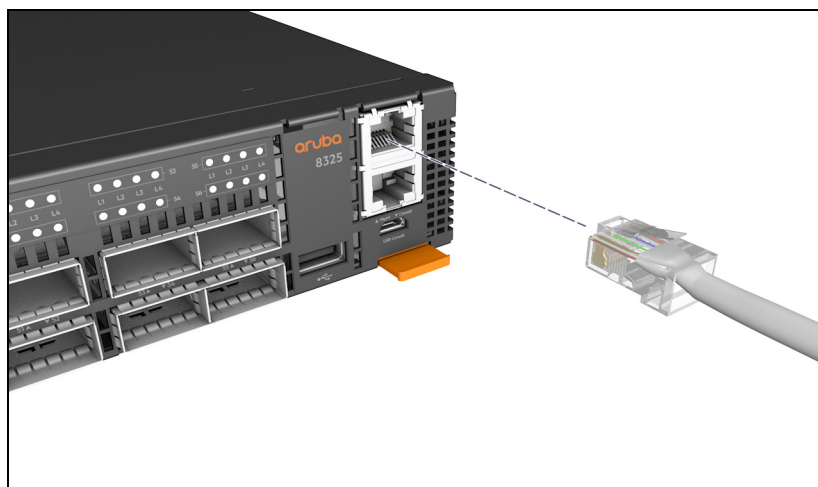
Connecting cables to transceivers

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 chapter 6, **Cabling and technology information**, for cabling 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" on page 54** in the Troubleshooting chapter.

Figure 28: *Connecting cable to a transceiver*

Aruba 8325 Switch Installation and Getting Started Guide
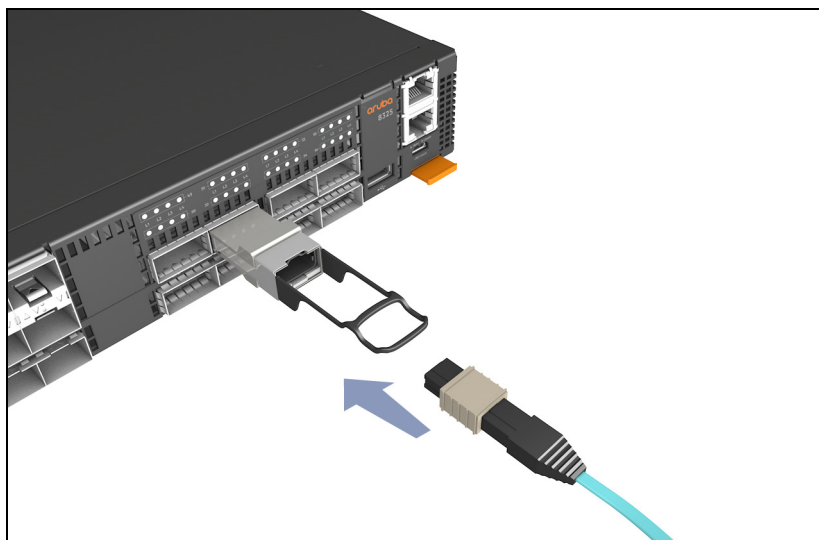
Terminal configuration

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 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).

Figure 29: *Connecting a console cable*
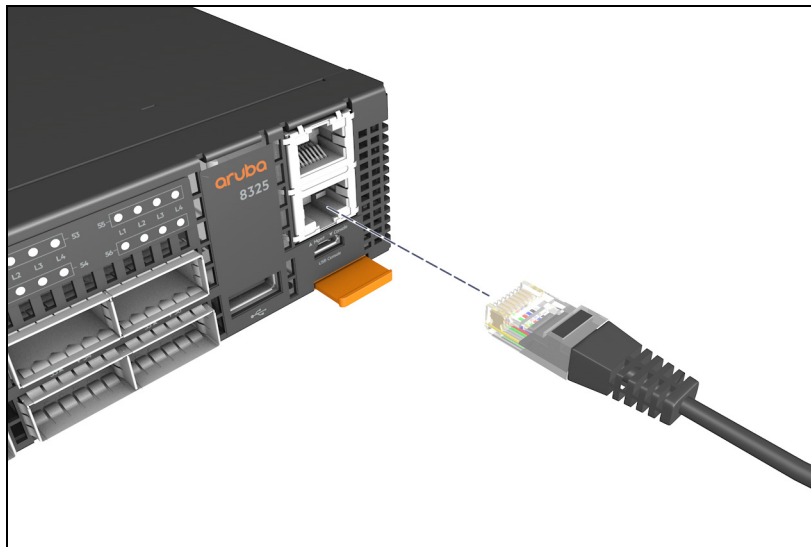
2. Turn on the terminal or PC's power and, if using a PC, start the PC terminal program.

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 *Aruba 8325 Fundamentals Guide for ArubaOS-CX* for initial configuration steps. For more detailed information, refer to the switch software manuals for your switch provided at **https://asp.arubanetworks.com/downloads**.

Console cable pinouts

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. **Table 28** describes the mapping of the RJ-45 to DB-9 pins.

Figure 30: *RJ-45 to DB-9 pinouts*
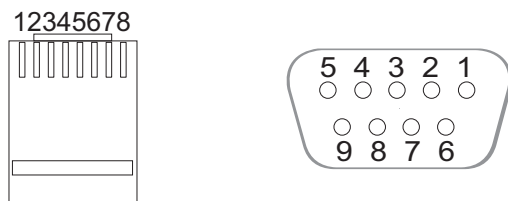
Table 28: *Mapping of RJ-45 to DB-9*

RJ-45 (Signal reference from Chassis)		DB-9 (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
–	–	9	RI

This chapter shows you how to remove and install the following components:

• Power supply
• Fan assembly

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

⚠ CAUTION	The Aruba 8325 switch and its components are sensitive to static discharge. Use an antistatic wrist strap and observe all static precautions when replacing components.

⚠ CAUTION	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 bleed off any retained power.

Replacing a power supply

⚠ CAUTION	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 8325 switch is configured with a redundant power supply, the switch will not suffer any loss of traffic or performance if a power supply fails. To maintain system redundancy, a failed power supply should be replaced as soon as possible. The PS1 or PS2 LED will be on amber, indicating a power supply has failed or is connected to AC power but is not installed in a switch.

Two power supplies are available for use with the switch:

• Aruba 8325 650W 100-240VAC FB PSU (JL632A) (Front-to-Back cooling air flow)
• Aruba 8325 650W 100-240VAC BF PSU (JL633A) (Back-to-Front cooling air flow)

⚠ CAUTION	Cooling air flow (Front-to-Back or Back-to-Front) must be the same for both the power supply and the fans installed in the switch.

To remove a power supply:

1. Remove the AC power cable from the failed power supply's connector.

2. Grasping the handle of the failed power supply, release the locking mechanism by squeezing the latch handle while removing the failed power supply.

Figure 31: *Replacing a failed power supply*
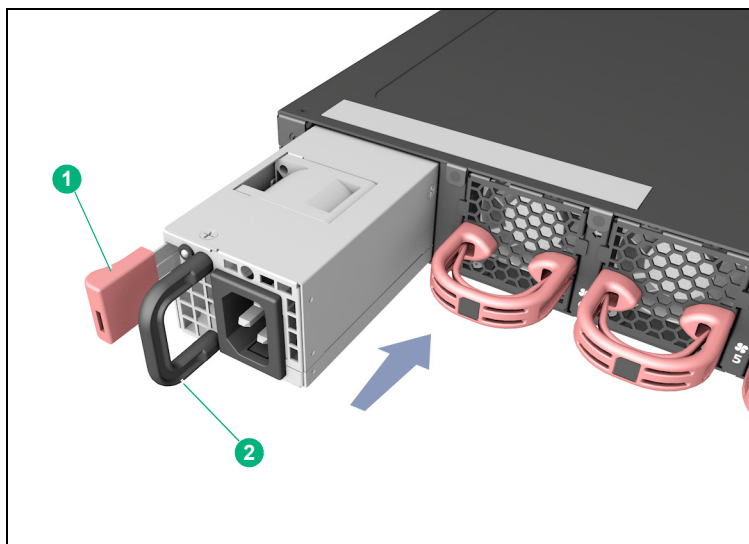
Table 29: *Replacing a failed power supply labels and descriptions*

Label	Description
1	Release latch
2	Power supply handle

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

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

Replacing a fan assembly

The Aruba 8325 switch is equipped with six field-replaceable, hot-swappable fan assemblies. The switch can tolerate the failure of a single fan assembly while maintaining a safe operating temperature. To maintain system redundancy, a failed fan assembly should be replaced as soon as possible. The Fan LED will be on amber, indicating a fan assembly has failed.

The 8325-48Y8C and 8325-32C switches use different fan assemblies. Each fan assembly type can only be installed in the correct switch model.

Two fan assemblies are available for use with the 8325-48Y8C:

*   Aruba 8325-48Y8C Front-to-Back Fan (JL628A)
*   Aruba 8325-48Y8C Back-to-Front Fan (JL629A)

Two fan assemblies are available for use with the 8325-32C:

*   Aruba 8325-32C Front-to-Back Fan (JL630A)
*   Aruba 8325-32C Back-to-Front Fan (JL631A)

> ⚠️ **CAUTION**
>
> The Aruba 8325 switch is not compatible with fan assemblies from other Aruba hardware platforms.
>
> After removing a fan assembly, wait at least five seconds before inserting a replacement fan assembly in the same slot.

Ensure that a replacement fan has the same airflow as other fans installed in the switch (FB or BF).

To replace a fan assembly:

1. Identify the failed fan assembly by its status LED. The fan assembly LED will be on red, or flashing red.

2. Remove the new fan assembly from its packaging, being careful to not touch any of the circuitry on the board.

3. Loosen the retaining screw on the fan assembly in the 8325-32C. For a fan assembly in the 8325-48Y8C, pull the release latch on the inside of the fan assembly handle.

4. Grasping the handle of the failed fan assembly, pull it straight out to remove it from its slot.

5. Insert the new fan assembly fully into the slot so that its face plate is flush with the back face of the switch. If the switch is connected to an AC power source, the fan assembly should immediately start running.

6. For the 8325-32C fan assembly, engage the retaining screw and tighten it. Be sure to not over-tighten the screw.

Figure 32: *Replacing a failed fan assembly*
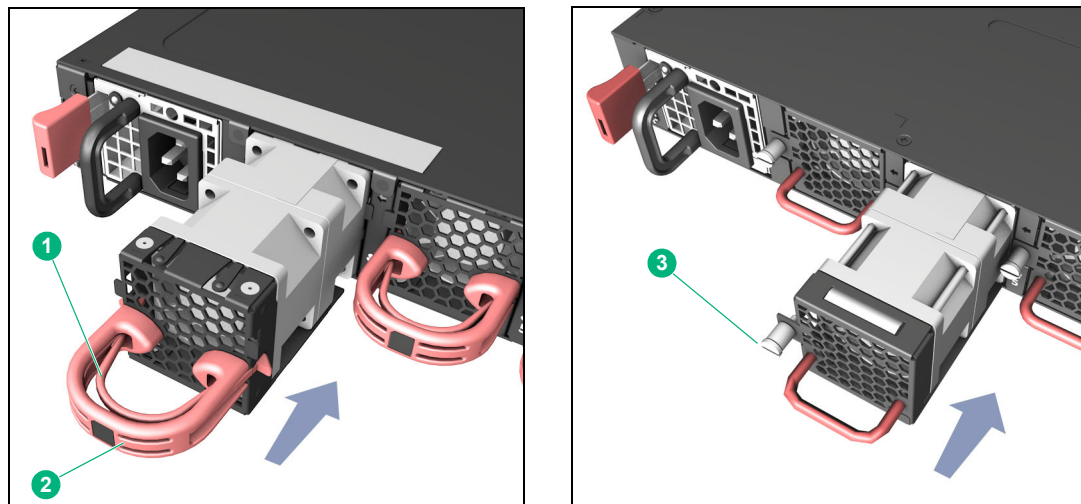
Table 30: *Replacing a failed fan assembly labels and descriptions*

Label	Description
1	Fan assembly release latch
2	Fan assembly handle
3	Fan assembly retaining screw

Aruba 8325 Switch Installation and Getting Started Guide

This chapter describes how to troubleshoot your switch. This document describes troubleshooting mostly 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, and IMC, the SNMP-based network management tool, or Aruba AirWave.

This chapter describes the following:

- Basic troubleshooting tips (see **Basic troubleshooting tips**)
- Diagnosing with the LEDs (see **Diagnosing with the LEDs**)
- Hardware diagnostic tests (see **Hardware diagnostic tests**)
- Downloading new software to the switch (see **Downloading new switch software**)
- Hewlett Packard Enterprise Customer Support Services (see **Hewlett Packard Enterprise Customer Support Services**)

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 cable in chapter 6, **Cabling and technology information** for pinouts and correct cable wiring.
- **Transceiver type not supported by port.** A 1GBase-T or 10GBase-T transceiver is installed in a port that does not support the transceiver type. Only the first two rows of ports in Aruba 48YBC switches support 1GBase-T (J8177D) transceivers. Only the first six ports in rows 1 and 2 in Aruba 48YBC switches support 10GBase-T transceivers. For more information, see:
  - **"1GBase-T (J8177D) transceiver support restrictions in the 48-port 8325 switches" on page 41**.
  - **"10GBase-T (JL563A) transceiver support restrictions in the 48-port 8325 switches" on page 41**.
- **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 probably 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 at **https://asp.arubanetworks.com/downloads**.

Diagnosing with the LEDs

Table 31 shows LED patterns on the switch that indicate problem conditions for general switch operation troubleshooting.

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.

Table 31: *LED error indicators*

	LED Pattern Indicating Problems				
PS1/PS2 LEDs	**Global Status**	**Fan**	**Port LED**		**Diagnostic Tip**
Off with power cords plugged in	–	–	–		1
On amber[1]	Flashing amber	–	–		2
On green	Flashing amber	On amber	–		3
On green	Flashing amber	–	Flashing amber		4
On green	On green	–	Off with cable connected		5
On green	On green	–	On, but the port is not communicating		6

[1] Either the PS1 or PS2 LED is on amber, but not both.

Diagnostic tips:

Table 32: *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. Or try plugging the power supplies into different outlets or try different power cords. If the problem is still not resolved, both power supplies may be faulty.
2	One of the power supplies is not plugged into an active AC power source, or the power supply may have failed.	Verify the power cord is plugged into an active power source and to the power supply. Make sure these connections are snug. Try power cycling the switch by unplugging and plugging the power cord back into the other working power supply. 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. If the power source and power cord are OK and this condition persists, the switch power supply may have failed. Call your Hewlett Packard Enterprise-authorized network reseller, or use the electronic support services from Hewlett Packard Enterprise to get assistance.

Aruba 8325 Switch Installation and Getting Started Guide

Table 32: *Diagnostic tips*

Tip	Problem	Solution
3	One of the switch fan assemblies may have failed.	Try disconnecting power from the switch and wait a few moments. Then reconnect the power to the switch and check the LEDs again. If the error indication reoccurs, one of the fan assemblies has failed. The switch may continue to operate under this condition if the ambient temperature does not exceed normal room temperature, but for best operation, the fan assembly should be replaced. Call your Hewlett Packard Enterprise-authorized network reseller, or use the electronic support services from Hewlett Packard Enterprise to get assistance.
4	The network port for which the LED is flashing has experienced a self test or initialization failure.	Try power cycling the switch. If the fault indication reoccurs: • There may be a port configuration mismatch where a 10G transceiver is installed in a port configured for 25G, or the reverse. • A 10GBase-T transceiver may be installed in an incompatible port. See **Table 6** for list of supported ports. • The transceiver may have failed. • The switch port may have failed. Check the switch Event Log and show interface command output for indication of the fault condition. If the port has an SFP+/SFP28 transceiver or QSFP+/QSFP28 transceiver installed, verify that the transceiver is supported by the switch. Unsupported or unrecognized transceivers will be identified with this fault condition. For a list of supported transceivers, see the *ArubaOS-Switch and ArubaOS-CX Transceiver Guide* at **https://asp.arubanetworks.com/downloads**. The transceivers are also tested when they are "hot-swapped"—installed or changed while the switch is powered on. To verify the port 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 Hewlett Packard Enterprise-authorized network reseller, or use the electronic support services from Hewlett Packard Enterprise.

Table 32: *Diagnostic tips*

Tip	Problem	Solution
5	The network connection is not working properly.	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.
		If the other procedures don't resolve the problem, try using a different port or a different cable.
6	The port may be improperly configured, or the port may be in a "blocking" state by the normal operation of the Spanning Tree, LACP, or IGMP features.	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.
		Also check the Port Status screen using the `show interfaces` command to see if the port has been configured as "disabled".
		Other switch features that may affect the port operation include VLANs, IGMP, and port group speed settings. Use the switch console to see how the port is configured for these features. For more on port group speed settings, see **"Interface-Group operation" on page 40**.
		Ensure also, 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.

Aruba 8325 Switch Installation and Getting Started Guide

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)
- press the Reset button on the front of the switch
- reset the switch via the management console's `boot system` command.

    Power cycling the switch and pressing the Reset button both cause the switch to reset. These reset processes also cause any network traffic counters to be reset to zero, and cause the System Up Time timer to reset to zero.

Checking the switch LEDs

See **"Diagnosing with the LEDs" on page 54** 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. As described in chapter 2 under step 6, 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 **"10. Connect the network cables" on page 45**. 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 or through a Telnet connection, or from the switch's web browser interface.

Testing end-to-end network 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.

Battery

> ⚠️ **CAUTION**
>
> This switch uses a lithium battery to maintain internal clock time across a reboot or power cycle. Do not attempt to replace the battery. Return the switch to Aruba for battery replacement.

IMPORTANT: 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. **No other switch operation is affected, and the switch does not require battery power to function properly.**

- To reset the switch internal clock, see the "Clock Commands" chapter or, for NTP (network time protocol) server operation, the "NTP commands" chapter in the latest *Command Line Interface Guide* for your switch software. To locate this guide, visit the Aruba Support Portal at **https://asp.arubanetworks.com/downloads** and filter for Product Family, Product Series, and Document File Contents.
- If the battery fails and you want to replace it, contact your authorized Aruba representative for assistance. *Batteries are not customer-serviceable. Battery failures should only be referred to service personnel authorized by Aruba.*

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.

> ⚠️ **CAUTION**
>
> A risk of explosion exists if a battery is replaced by an incorrect type. Dispose of used batteries according to the battery disposal regulations for your country or region.

Downloading new switch software

Software Updates can be downloaded to the switch through several methods. See .

Hewlett Packard Enterprise Customer Support Services

If you are still having trouble with your product, see .

Switch specifications

Physical

Table 33: *Physical specifications*

Product	Width	Depth	Height	Weight
Aruba 8325-48Y8C FB 6 F 2 PS Bdl (JL624A) Aruba 8325-48Y8C BF 6 F 2 PS Bdl (JL625A)	43.8 cm (17.26 in)	53.6 cm (21.1 in)	4.3 cm (1.69 in)	10 kg (22 lb)
Aruba 8325-32C FB 6 F 2 PS Bdl (JL626A) Aruba 8325-32C BF 6 F 2 PS Bdl (JL627A)	43.8 cm (17.26 in)	51.5 cm (20.28 in)	4.3 cm (1.69 in)	9.5 kg (21 lb)

Electrical

Table 34: *Electrical specifications*

Product	AC Voltage	Maximum current	Frequency range
Aruba 8325 650W 100-240VAC FB PSU (JL632A)[*] Aruba 8325 650W 100-240VAC BF PSU (JL633A)[*]	100-240 volts	6 A - 3 A	50-60 Hz

[*] The power supply automatically adjusts to any voltage between 100-240 volts and either 50 or 60 Hz.

Power Consumption

Table 35: *Power consumption specifications*

Product	Power consumption
Aruba 8325-48Y8C FB 6 F 2 PS Bdl (JL624A) Aruba 8325-48Y8C BF 6 F 2 PS Bdl (JL625A)	Max: 550 W, 1877 BTU/hr Idle: 209 W, 713 BTU/hr
Aruba 8325-32C FB 6 F 2 PS Bdl (JL626A) Aruba 8325-32C BF 6 F 2 PS Bdl (JL627A)	Max: 550 W, 1877 BTU/hr Idle: 143 W, 488 BTU/hr
Aruba 8325 650W 100-240VAC FB PSU (JL632A) Aruba 8325 650W 100-240VAC BF PSU (JL633A)	Max: 650 W, 2218 BTU/hr

MTBF

Table 36: *MTBF specifications*

Product	MTBF
Aruba 8325-48Y8C FB 6 F 2 PS Bdl (JL624A) Aruba 8325-48Y8C BF 6 F 2 PS Bdl (JL625A)	183165.4 hours
Aruba 8325-32C FB 6 F 2 PS Bdl (JL626A) Aruba 8325-32C BF 6 F 2 PS Bdl (JL627A)	155725.2 hours

Environmental

Table 37: *Environmental specifications*

Aruba 8325 Switch Series (JL624A, JL625A, JL626A, and JL627A)		
	Operating	**Non-Operating**
Temperature	0°C to 40°C (32°F to 104°F) up to 3.0 km (10,000 ft)	-40°C to 70°C (-40°F to 158°F) up to 4.6 km (15,000 ft)
Relative humidity (non-condensing)	5% to 95% at 40°C (104°F) non-condensing	5% to 95% at 65°C (149°F)
Maximum altitude	3.0 km (10,000 ft)*	4.6 km (15,000 ft)
* The operating maximum altitude should not exceed that of any accessory being connected to any Aruba 8325 switch.		

Acoustics

Table 38: *Acoustic specifications*

Switch Model	Acoustics
Aruba 8325-48Y8C FB 6 F 2 PS Bdl (JL624A) Aruba 8325-48Y8C BF 6 F 2 PS Bdl (JL625A)	Sound Pressure (LpAm) (Bystander) 90.8 dB Sound Pressure (LpAm) (Bystander) 88.3 dB
Aruba 8325-32C FB 6 F 2 PS Bdl (JL626A) Aruba 8325-32C BF 6 F 2 PS Bdl (JL627A)	Sound Pressure (LpAm) (Bystander) 87.4 dB Sound Pressure (LpAm) (Bystander) 85.1 dB

RoHS

EN 50581:2012

Standards

Table 39: *Technology standards and safety compliance*

Technology	Compatible with these IEEE standards	Laser safety information	
		EN/IEC standard compliance	Lasers
1000BASE-T	IEEE 802.3ab 1000BASE-T	–	–
1000BASE-SX	IEEE 802.3z 1000BASE-SX	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
1000BASE-LX	IEEE 802.3z 1000BASE-LX	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
1000BASE-LH	(not an IEEE standard)	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
10GBASE-T	IEEE 802.3an 10GBASE-T	–	–
10GBASE-SR	IEEE 802.3ae 10GBASE-SR	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
10GBASE-LR	IEEE 802.3ae 10GBASE-LR	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
10GBASE-ER	IEEE 802.3ae 10GBASE-ER	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
25GBASE-SR	IEEE 802.3by 25GBASE-SR	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
25GBASE-eSR	(not an IEEE standard)	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
25GBASE-LR	IEEE 802.3cc 25GBASE-LR	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
40GBASE-SR4	IEEE 802.3ba 40GBASE-SR4	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
40GBASE-eSR4	(not an IEEE standard)	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
40GBASE-LR4	IEEE 802.3ba 40GBASE-LR4	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
40GBASE-ER4	IEEE 802.3bm 40GBASE-ER4	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1

Table 39: *Technology standards and safety compliance (Continued)*

| Technology | Compatible with these IEEE standards | Laser safety information | |
		EN/IEC standard compliance	Lasers
40GBASE-Bidi	(not an IEEE standard)	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
100GBASE-SR4	IEEE 802.3bm 100GBASE-SR4	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
100GBASE-LR4	IEEE 802.3ba 100GBASE-LR4	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1

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

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

Cabling specifications

Table 40: *Cabling specifications*

Twisted-pair copper	1000 Mbps Operation	Category 5, 100-ohm 4-pair UTP or STP cable, complying with IEEE 802.3ab 1000BASE-T specifications—Category 5e or better is recommended. See **"Note on 1000BASE-T cable requirements" on page 63**.
	10 Gbps Operation	Category 6 or 6A, 100-ohm 4-pair UTP cable, or Category 6A or 7, 100-ohm 4-pair STP cable, complying with IEEE 802.3an 10GBASE-T specifications. See **Note on 10GBASE-T cable requirements** below, and see **"Technology distance specifications" on page 64** for distances supported with each cable type. CAT6A F/FTP, S/FTP, SF/FTP highly recommended in noisy environments. Refer to *Aruba Support_Advisory_JL563A_10GBaseT_APSC-RS20180403-01* for more information.
Twinaxial copper	Direct attach cables	One-piece devices consisting of a cable with SFP+ connectors permanently attached to each end, complying with SFF 8431 SFP+ specifications.
Multimode fiber		62.5/125 μm or 50/125 μm (core/cladding) diameter, low metal content, graded index fiber-optic cables, complying with the ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a standards respectively.
Single mode fiber		9/125 μm (core/cladding) diameter, low metal content fiber-optic cables, complying with the ITU-T G.652 and ISO/IEC 793-2 Type B1 standards.

Note on 1000BASE-T cable requirements

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

Because of the increased speed provided by 1000BASE-T (Gigabit-T), network cable quality is more important than for either 10BASE-T or 100BASE-TX. Cabling plants being used to carry 1000BASE-T networking must

comply with the IEEE 802.3ab standards. In particular, the cabling must pass tests for Attenuation, Near-End Crosstalk (NEXT), and Far-End Crosstalk (FEXT). Additionally, unlike the cables for 100BASE-TX, the 1000BASE-T cables must pass tests for Equal-Level Far-End Crosstalk (ELFEXT) and Return Loss.

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

Note on 10GBASE-T cable requirements

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

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

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

When testing your cabling, be sure to include the patch cables that connect the switch and other end devices to the patch panels on your site. The patch cables are frequently overlooked when testing cable and they must also comply with the cabling standards. For 10GBASE-T, Category 6 patch cables are sensitive to movement once link has been established, and could cause link to drop if moved. Therefore, Hewlett Packard Enterprise recommends using Category 6A patch cables, or using cable management options to tie down (dress) the Category 6 patch cables so they cannot move.

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

Technology distance specifications

Table 41: *Technology distance specifications*

Technology	Supported cable type	Multimode fiber modal bandwidth	Supported distances
1000BASE-T	twisted-pair copper	N/A	up to 100 meters
1000BASE-SX	multimode fiber	160 MHz*km 200 MHz*km 400 MHz*km 500 MHz*km	2 - 220 meters 2 - 275 meters 2 - 500 meters 2 - 550 meters
1000BASE-LX	single mode fiber	N/A	2 - 10,000 meters
1000BASE-LH	single mode fiber	N/A	2 - 70,000 meters[2]
10GBASE-T [1]	twisted-pair copper	N/A	Cat 6A unshielded - up to 100 meters Cat 6A shielded - up to 100 meters Cat 7 shielded - up to 100 meters

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Table 41: *Technology distance specifications (Continued)*

Technology	Supported cable type	Multimode fiber modal bandwidth	Supported distances
10GBASE-CR (Direct Attach)	twinaxial copper	N/A	(various lengths offered)
10GBASE-SR	multimode fiber	160 MHz*km 200 MHz*km 400 MHz*km 500 MHz*km 2000 MHz*km	2 - 26 meters 2 - 33 meters 2 - 66 meters 2 - 82 meters 2 - 300 meters
10GBASE-LR	single mode fiber	N/A	2 - 10,000 meters
10GBASE-ER	single mode fiber	N/A	2 - 40,000 meters[2]
25GBASE-CR	twinaxial copper	N/A	(various lengths offered)
25GBASE-SR	multimode fiber	1500 MHz*km 3500 MHz*km	2 - 70 meters 2 - 100 meters
25GBASE-eSR	multimode fiber	1500 MHz*km 3500 MHz*km	2 - 200 meters 2 - 400 meters
25GBASE-LR	single mode fiber	N/A	2 - 10,000 meters
40GBASE-CR4	twinaxial copper	N/A	(various lengths offered)
40GBASE-SR4	multimode fiber	1500 MHz*km 3500 MHz*km	2 - 100 meters 2 - 150 meters
40GBASE-eSR4	multimode fiber	1500 MHz*km 3500 MHz*km	2 - 330 meters 2 - 550 meters
40GBASE-LR4	single mode fiber	N/A	2 - 10,000 meters
40GBASE-ER4	single mode fiber	N/A	2 - 40,000 meters[2]
40GBASE-BiDi	multimode fiber	1500 MHz*km 3500 MHz*km	2 - 100 meters 2 - 150 meters
100GBASE-CR4	twinaxial copper	N/A	(various lengths offered)
100GBASE-SR4	multimode fiber	1500 MHz*km 3500 MHz*km	2 - 100 meters 2 - 150 meters
100GBASE-LR4	single mode fiber	N/A	2 - 10,000 meters

[1] Refer to **Table 6**, footnote 3, for ports that support 10GBase-T transceivers.

[2] For distances less than 20km, a 10dB attenuator must be used. For distances between 20km and 40km, a 5dB attenuator must be used. Attenuators can be purchased from most cable vendors.

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Accessing Hewlett Packard Enterprise support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide Support website: **www.hpe.com/assistance**

- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website: **www.hpe.com/support/hpesc**

Information to collect

- 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

Hewlett Packard Enterprise offers support 24 hours a day, seven days a week through the use of a number of automated electronic services. Hewlett Packard Enterprise provides up-to-date customer care, support and warranty information at **http://www.hpe.com/networking/support**. Additionally, your Hewlett Packard Enterprise authorized network reseller can provide you with assistance, both with services that they offer and with services offered by Hewlett Packard Enterprise.

Before calling support

To make most efficient use of the support process, you must retrieve the following information before calling your authorized network reseller or Hewlett Packard Enterprise Support.

Table 42: *Information before calling support*

Information item	Information location
• Product identification, including SFP/SFP+/SFP28/QSFP+/QSFP28 transceivers	The front of the switch and on labels on the SFP/SFP+/SFP28/QSFP+/QSFP28 transceivers
• Details about the switch's status including the software (OS) version, a copy of the switch configuration, a copy of the switch Event Log, and a copy of the switch status and counters information	Switch console: `show tech` command
• Copy of your network topology map, including network addresses assigned to the relevant devices	Your network records

Accessing updates

- To download product updates, go to either of the following:
  - ◦ Hewlett Packard Enterprise Support Center's **Subscription Service/Support Alerts** page:
    www.hpe.com/support/e-updates
  - ◦ To view and update your entitlements, and to link your contracts, Care Packs, and warranties with your profile, go to the Hewlett Packard Enterprise Support Center **More Information on Access to HP Support Materials** page:
    www.hpe.com/support/AccessToSupportMaterials

> **IMPORTANT:** Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have a Hewlett Packard Enterprise Passport set up with relevant entitlements.

- Software updates can be downloaded to the switch through several methods. Switch software updates are available at **http://www.hpe.com/networking/software**.
- For information on methods for downloading and installing software, see the appropriate manuals for your switch in the Aruba Support Portal at **https://asp.arubanetworks.com/downloads**.

Websites

Aruba Support Portal

　https://asp.arubanetworks.com/downloads

Hewlett Packard Enterprise Networking Software

　www.hpe.com/networking/software

Hewlett Packard Enterprise Networking website

　www.hpe.com/info/networking

Hewlett Packard Enterprise My Networking website

　www.hpe.com/networking/support

Hewlett Packard Enterprise My Networking Portal

　www.hpe.com/networking/mynetworking

Hewlett Packard Enterprise Networking Warranty

　www.hpe.com/networking/warranty

Customer self repair

Hewlett Packard Enterprise customer self repair (CSR) programs allow you to repair your product. If a CSR part needs to be replaced, it will be shipped directly to you so that you can install it at your convenience. Some parts do not qualify for CSR. Your Hewlett Packard Enterprise authorized service provider will determine whether a repair can be accomplished by CSR.

For more information about CSR, contact your local service provider or go to the CSR website:

www.hpe.com/support/selfrepair

Remote support

Remote support is available with supported devices as part of your warranty, Care Pack Service, or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution based on your product's service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

For more information and device support details, go to the following website:

www.hpe.com/info/insightremotesupport/docs

Documentation feedback

Hewlett Packard Enterprise is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to DocumentationFeedback (**docsfeedback@hpe.com**). When submitting your feedback, include the document title, part number, edition, and publication date located on the front cover of the document. For online help content, include the product name, product version, help edition, and publication date located on the legal notices page.