Aruba Instant On 1430 Installation and Getting Started Guide

aruba
Instant On

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Contents

Chapter 1
About this Document

This document is intended for network administrators and support personnel.

The switch and accessory drawings in this document are for illustration only, and may not match your particular switch and accessory products.

Applicable Products

Aruba Instant On 1430 5G Switch (R8R44A)	Applicable AC Power Adapters ■ 12W NA Power Adapter (5300-1687) ■ 12W EU Power Adapter (5300-1686) ■ 12W WW Power Adapter (5300-1692)
Aruba Instant On 1430 8G Switch (R8R45A)	
Aruba Instant On 1430 8G Class4 PoE 64W Switch (R8R46A)	90W Power Adapter (5300-1685)
Aruba Instant On 1430 16G Switch (R8R47A)	
Aruba Instant On 1430 16G Class4 PoE 124W Switch (R8R48A)	
Aruba Instant On 1430 24G Switch (R8R49A)	
Aruba Instant On 1430 26G 2SFP Switch (R8R50A)	

All other Aruba Instant On 1430 switches operate with internal power supplies.

Related Publications

- Aruba Instant On 1430 Switch Series Quick Setup Guide and Safety/Regulatory Information

To access the above publications, visit https://community.arubainstanton.com/.

Chapter 2
Overview

The Aruba Instant On 1430 Switch series are designed to meet the needs of small business network environments - simple to setup and manage, secure and reliable.

These switches are intended for indoor use only. The switches comply with the safety standard IEC 60950-1, 2nd Edition and IEC 62368-1 2nd Edition. A tool is required to remove the top cover; however, the product is not considered serviceable by an operator. These switches can be directly connected to computers, printers, and servers to provide dedicated bandwidth to those devices, and you can build a switched network infrastructure by connecting the switch to hubs, other switches, or routers.

Switch Hardware Features

Figure 1 *R8R44A front*

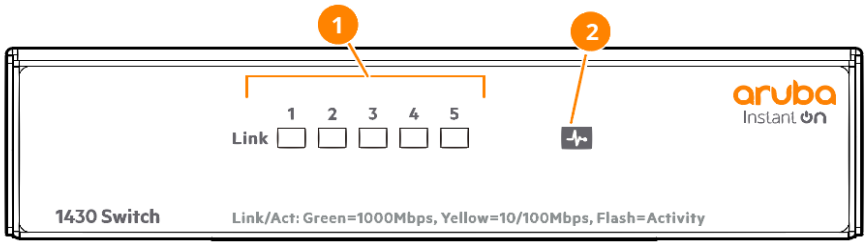
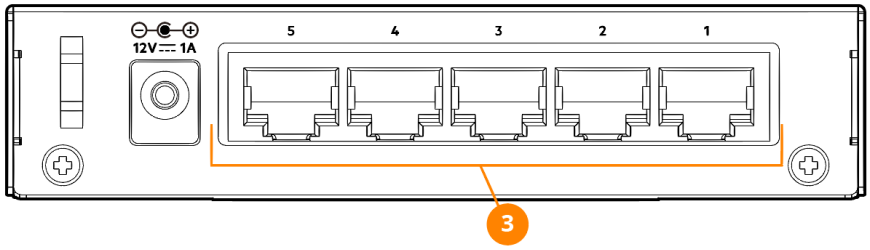


Figure 2 *R8R44A rear*



Item	Description
1	1GbE RJ45 ports Link/Status LED per port
2	Global Status LED
3	5 x 1GbE RJ45 ports

Figure 3 *R8R45A*

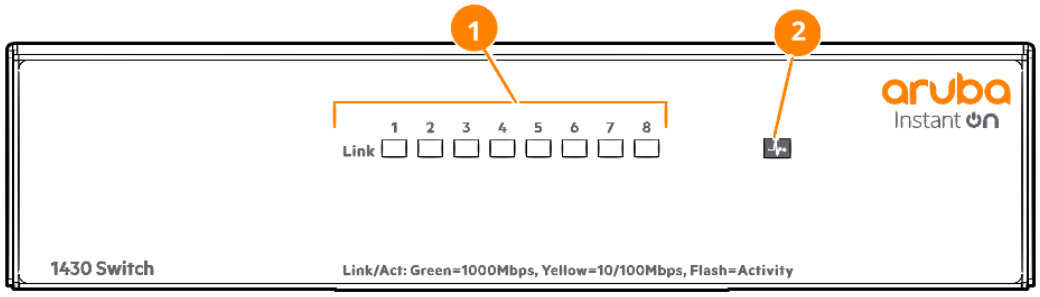
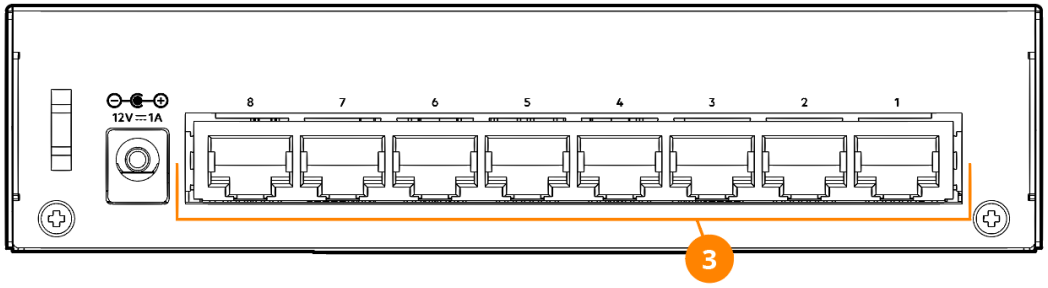


Figure 4 *R8R45A rear*



Item	Description
1	1GbE RJ45 ports Link/Status LED per port
2	Global Status LED
3	8 x 1GbE RJ45 Ports

Figure 5 *R8R46A front*

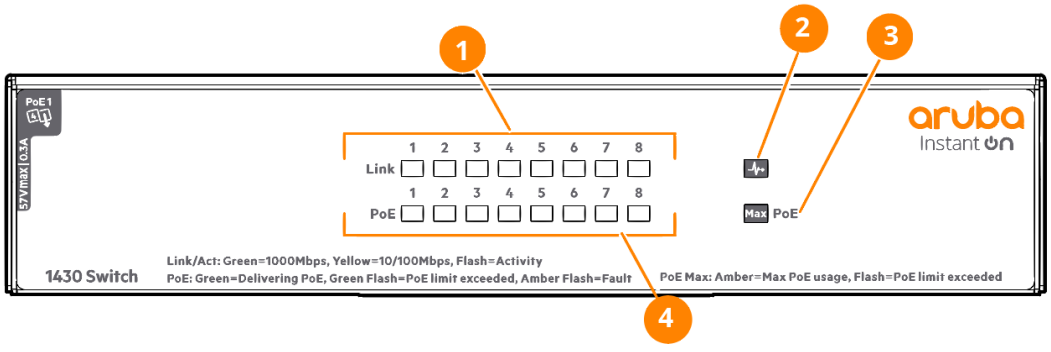
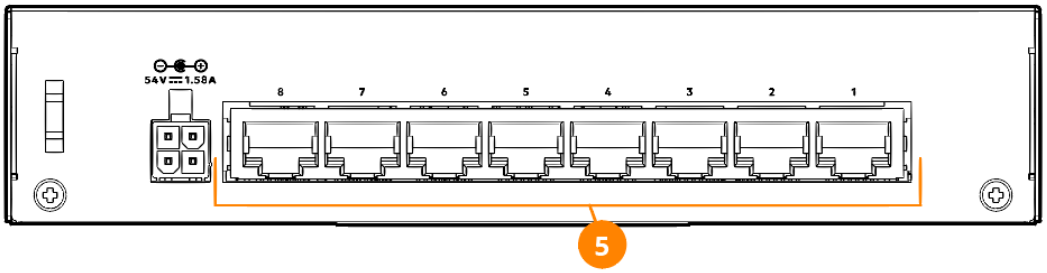
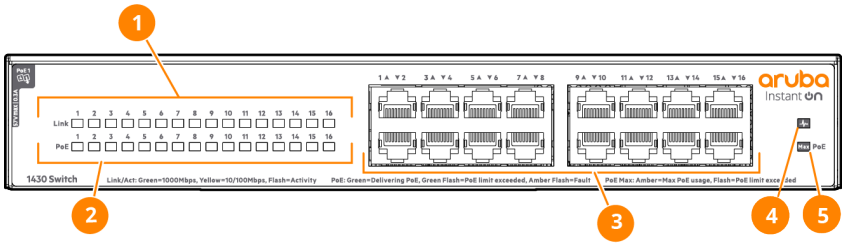


Figure 6 *R8R46A rear*



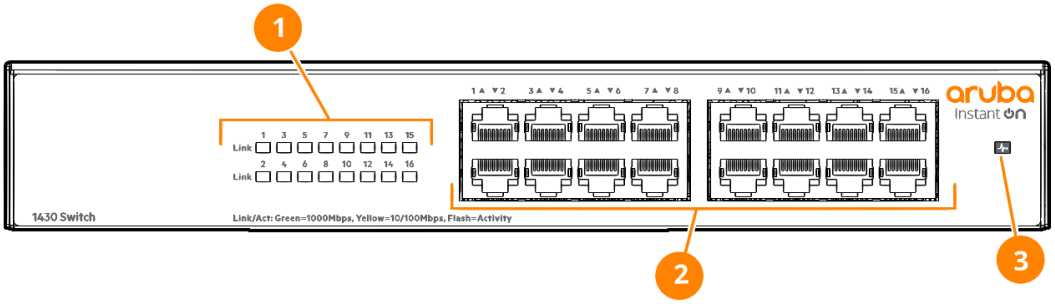
Item	Description
1	1GbE RJ45 ports Link/Status LED per port
2	Global Status LED
3	PoE Max LED
4	PoE Status LED per port
5	8 x 1GbE RJ45 & PoE ports

Figure 7 *R8R47A*



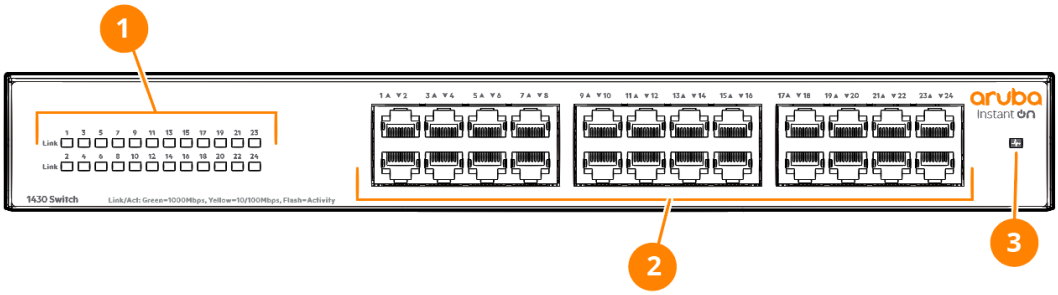
Item	Description
1	PoE & 1GbE RJ45 ports Link/Status LED per port
2	PoE Status LED per port
3	16 x 1GbE RJ45 & PoE ports
4	Global Status LED
5	PoE Max LED

Figure 8 *R8R48A*



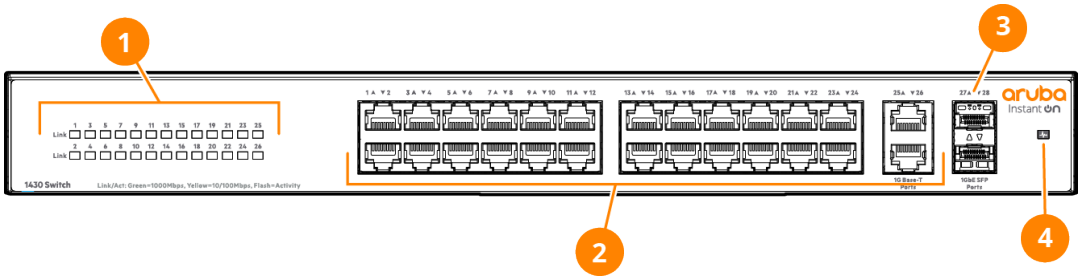
Item	Description
1	1GbE RJ45 ports Link/Status LED per port
2	16 x 1GbE RJ45 ports
3	Global Status LED

Figure 9 *R8R49A*



Item	Description
1	1GbE RJ45 ports Link/Status LED per port
2	24 x 1GbE RJ45 ports
3	Global Status LED

Figure 10 *R8R50A*



Item	Description
1	1GbE RJ45 ports Link/Status LED per port
2	26 x 1GbE RJ45 ports
3	2 x 1GbE SFP ports with Link/Status LED per port
4	Global Status LED

Network Ports

- Auto-sensing 10/100/1000BASE-T ports:
  These ports have the "Auto-MDIX" feature, which means that you can use either straight-through or crossover twisted-pair cables to connect any network devices to the switch.
- Power-over-Ethernet (PoE) ports:
  The 1430 PoE Class 4 switches support the IEEE 802.3at standard, which allows IP telephones, wireless LAN Access Points, and other appliances to receive power as well as data over existing LAN cabling. For further information regarding PoE power, see the Hewlett Packard Enterprise Web site at http://www.hpe.com/networking/ResourceFinder.

Transceivers not on the 1430 approved list are used at your own risk and may void support and warranty.

			Transceiver Form-Factor and Connector
Speed	**Technology**	**Cabling**	**SFP Connector**
1 Gbps	1000-SX	Fiber (multimode)	LC
	1000-LX	Fiber (multimode or single mode)	LC

PoE Power

1430 Switch Series PoE Power Delivery

Power Over Ethernet (PoE) functionality is supported on certain 1430 models, known as power source equipment (PSE) ports which provide power to connected devices. The devices receiving power through PoE are referred to as powered devices (PDs). The switch automatically detects the presence of a PD on a PSE port, and the switch uses physical layer classification to assign initial power to the PD. The PoE software supports Usage mode to allocate power. The default Usage mode reclaims unused power for use by new PD connections or increased power demand by existing powered PDs.

When more power is requested than is available on the switch, the switch provides power to the lowest port number first. The 1430 Class 4 PoE switches support the IEEE 802.3at™ standards, providing 30W of power for Class 4 PD connections while maintaining backwards compatibility with IEEE 802.3af™ standards providing 15.4W of power to Class 3 PD connections. All PoE Class 4 switch ports are capable of delivering 30W per PSE port up to the maximum power supply budget.

1430 PoE Model	Maximum PoE Power	PoE Port Count	Maximum Ports delivering at 15.4W	Maximum Ports delivering at 30W[1]	EA Certified
Aruba Instant On 1430 8G Class4 PoE 64W Switch (R8R46A)	64W	Ports 1 - 8	4	2	4
Aruba Instant On 1430 16G Class4 PoE 124W Switch (R8R48A)	124W	Ports 1 - 16	8	4	4

Ethernet Alliance PoE Certified

Certified Aruba PoE power sourcing equipment (PSE) has been verified for IEEE 802.3™ PoE interoperability by passing the Ethernet Alliance (Gen 1 or Gen 2) PoE Certified program test plan, minimizing interoperability issues between PoE products.

The Ethernet Alliance PoE Certification Program provides thorough testing of PoE devices for interoperability with IEEE 802.3™ PoE standard devices. Certified products will be easily recognizable by the logos below, which also identify the amount of power available or required. User experience will be enhanced by minimizing confusion between standards-based PoE from proprietary powering solutions.

Gen 1 EA PoE Certified Logo

EA Certified™

Gen 2 EA PoE Certified Logo

EA Certified 2.0™

For more information on EA PoE Certification, visit the Ethernet Alliance website.

LEDs

The front panel of the switch provides status LEDs for system monitoring. The following table details the functions of the various indicators.

LED	State	Meaning
Global Status (Power, Self-test, Status, On, Off)	On solid (green)	The switch is receiving power.
	Off	The switch is NOT receiving power.
Port	On solid / slow-flash (green)	▪ **Link** ◦ On solid green indicates activity at 1000Mbps speed. ◦ Fast flash/flicker indicates successful link with activity. ▪ **PoE** ◦ Slow flash green indicates port denied power, or power revoked.
	On solid (yellow)	▪ **Link/Act** ◦ Solid yellow indicates activity at 10/100Mbps speed. ◦ Fast flash/flicker indicates successful link with activity.
	Slow flash (orange)	▪ **PoE** ◦ slow-flash orange - port powered with faults, or port has detect/class errors.
	Off	Port is disabled, not connected, not receiving link beat (not Linked), or not providing PoE power.
PoE Max	On solid (orange)	▪ **Mode (Link/Act)** ◦ Power threshold reached. ▪ **Mode (Spd)** ◦ On solid green - Speed Mode is selected. Port LEDs indicate port speed.
	Slow flash (orange)	One or more ports denied power, or power revoked.

Power Connector

1430 switches do not have a power switch. They are powered on when connected to an active power source.

Switches powered on when connected to an active AC power source[1]

- Aruba Instant On 1430 16G Switch (R8R47A)
- Aruba Instant On 1430 24G 16G Class4 PoE 124W Switch (R8R48A)
- Aruba Instant On 1430 24G Switch (R8R49A)
- Aruba Instant On 1430 26G 2SFP Switch (R8R50A)

These switches 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.

1 These switches 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.

Switches powered on when the external AC/DC power adapter is connected to the switch and to an active power source[1]

- Aruba Instant On 1430 5G Switch (R8R44A)
- Aruba Instant On 1430 8G Switch (R8R45A)
- Aruba Instant On 1430 8G Class4 PoE 64W Switch (R8R46A)

The external AC/DC power adapter supplies 12 volts DC to the R8R44A and R8R45A switches and automatically adjusts to any AC voltage between 100-240 volts and either 50 or 60 Hz. No voltage range settings are required.

Switch Features

The features of the 1430 switches include:

- 5, 8, 16, 24, or 26 auto-sensing 10/100/1000BASE-T RJ-45 ports
- 2 SFP ports for 26G
- plug-and-play networking—all ports are enabled—just connect the network cables to active network devices and your switched network is operational
- IEEE 802.3ab Auto MDI /MDI-X on all twisted-pair ports, meaning that all connections can be made using straight-through twisted-pair cables. Cross-over cables are not required, although they will also work. The pin operation of each port is automatically adjusted for the attached device. If the switch detects that a 10/100/1000 Mbps switch or hub is connected to the port, it configures the port as MDI. If the switch detects that a 10/100/1000 Mbps end-node device is connected to the port, it configures the port as MDI-X
- all switches support IEEE 802.3az Energy Efficient Ethernet (EEE) features that reduce power consumption when connected with EEE-compliant client devices
- automatic learning of MAC addresses in each switch's 8K-address (5,8,16,24-port switches) or 16K-address (26-port switches) forwarding table
- automatically negotiated full-duplex operation for all 10/100/1000BASE-T RJ-45 ports when connected to other auto-negotiating devices

[1]The external AC/DC power adapter supplies 12 volts DC to the switch and automatically adjusts to any AC voltage between 100-240 volts and either 50 or 60 Hz. No voltage range settings are required.

Chapter 3
Site Preparation and Switch Installation Precautions

Safety Recommendations

Before installing an Aruba Instant On 1430 switch, and to avoid possible bodily injury and equipment damage, carefully read these information sources before installation:

- START HERE: Setup, Safety, and Regulatory Information for the Aruba Instant On 1430 Switch Series (shipped with the switch and also available online.
- All documentation shipped with the switch.
- All safety recommendations included in this guide.

The recommendations in the documentation for the Aruba Instant On 1430 switches do not cover every possible hazardous condition.

Additional regulatory and safety information

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

Installation Precautions and Guidelines

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

- To prevent the rack or cabinet from becoming unstable, tilting, and/or falling over, ensure that it is adequately secured.
- Mount devices installed in a rack or cabinet as low as possible. Put the heaviest devices at the bottom, and progressively lighter devices positioned higher. Note, however, that the preferred position for the fanless Aruba Instant On 1430 switches is at the base of the rack or cabinet (for optimal cooling) or below as many of the other products as can be accommodated.
- If you wall-mount the switch, the network ports must face upward or downward (that is, toward or away from the floor). Do **not** wall-mount the switch with the side ventilation holes facing up or down.
This section provides precautions and guidelines to observe when installing your switch.

- All Aruba Instant On 1430 Switches support table-top mounting.
- All Aruba Instant On 1430 Switches support rack-mounting except R8R44A and R8R45A.
- All Aruba Instant On 1430 Switches support wall-mounting with ports facing either up or down.
- All Aruba Instant On 1430 Switches support under-table mounting.
  - R8R44A, R8R45A, and R8R46A must be mounted upsided down using the base surface mounting holes.
  - R8R47A, R8R48A, R8R49A, and R8R50A must be mounted top surface up using the brackets provided.
    - To prevent possible impact to long-term reliability, product should not be mounted upside-down.

Use only Aruba-supported transceivers.

- Ensure that the power source circuits are properly grounded. Then connect the switch to the AC power source by using the power cord supplied with the switch.
- Ensure that the power cord and network cables at the switch mounting location do not create a tripping hazard.
- Do not use a damaged or non-recommended power cord or AC/DC power supply with your switch. Using such power cords or AC/DC power supplies voids the switch and power supply warranty. It can also cause serious electrical problems, including risk of injury, death, or damage to the switch and other property. If you cannot verify that you have a power cord or AC/DC power supply approved for use with your switch model, contact Aruba customer service for assistance.
- Only Aruba-approved power cords may be used with Aruba devices. To access power cord information for your switch, see Included Parts. Lost or damaged power cords must be replaced only with Aruba-approved power cords. If your installation requires a different power cord than the one supplied with the switch and/or power supply, be sure that the cord is adequately sized for the current requirements of the switch. In addition, be sure to use a power cord displaying the mark of the safety agency that defines the regulations for power cords in your country/region. The mark is your assurance that the power cord can be used safely with the switch and power supply.
- When installing the switch, the AC outlet must be near the switch and easily accessible in case the switch must be powered off.
- Ensure that the switch does not overload the power circuits, wiring, and over-current protection. To determine the possibility of overloading the supply circuits:
  1. Add the ampere ratings of all devices installed on the same circuit as the switch.
  2. 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.
- Avoid blocking any ventilation openings on the top, sides, rear, or front of the switch.
- Ensure that the air flow around the switch is not restricted. Leave at least 7.6 cm (3 inches) for cooling.
- Do not install the switch in an environment where the operating ambient temperature exceeds its specification. See environmental and physical specifications for more information.

Prepare the Installation Site

Make sure 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.

- Verify that copper and fiber cabling meets the requirements of the Cabling and Technology Information Specifications.
- Protect the switch from radio frequency interference emissions.
- Use electrical surge suppression.
- Use safe connections with no damaged cables, connectors, or shields.

Ensure that you understand and observe the two preceding sections before proceeding with switch installation.

Mounting options

Select one of the following mounting methods for an 8PoE, 16-port/16PoE, 24-port, or 26-port 1430 switch:

- 19-inch Telco rack and/or equipment cabinet
- Wall attach
- Under a table
- On a horizontal surface

Select one of the following mounting methods for a 5-port or 8-port 1430 switch:

- Equipment cabinet
- Wall attach
- Under a table
- On a horizontal surface

Installation Space Requirements

Switch Orientation	Clearance Requirements
Front	At least 7.6 cm (3 inches) of space for the twisted-pair and fiber-optic cabling.
Back	At least 3.8 cm (1 1/2 inches) of space for the power cord and switch cooling.
Sides	At least 7.6 cm (3 inches) for cooling, except if the switch is installed in an open EIA/TIA rack.

Chapter 4
Installation Overview

If you have not already done so, carefully read Site Preparation and Switch Installation Precautions.

The switches are easy to install. They ship with an accessory kit containing brackets for mounting the switches in a standard 19-inch Telco rack or in an equipment cabinet. Included also are rubber feet for securely locating the switch on a horizontal surface. The brackets are designed to allow mounting of the switches in a variety of locations and orientations. This chapter shows how to install the switches.

Included Parts

The following components ship with a 1430 Switch:

- Documentation kit
  - Aruba Instant On 1430 Start Here: Installation, Safety, and Regulatory Information
  - Aruba Instant On 1430 Quick Card
  - Additional safety and regulatory information

For the latest version of documentation for your switch model, visit the Aruba Instant On Support site at https://community.arubainstanton.com/.

- Software License, Warranty, and Support information
- Power cord and/or AC/DC power adapter, depending on the switch model.
- One of the following accessory kits:

R8R44A and R8R45A
Kit number 5300-1031 ▪ 4 rubber feet ▪ 1 screw kit

R8R46A
Kit number 5300-1810 ▪ 4 rubber feet ▪ 1 screw kit ▪ mounting screws ▪ 2 rack mount brackets

R8R47A and R8R48A

Kit number 5300-1807

- 4 rubber feet
- 2 wall/table mounting screws
- rack screws
- 1 tie strap
- 2 rack mount brackets

R8R49A

Kit number 5300-1808

- 4 rubber feet
- 2 wall/table mounting screws
- rack screws
- 1 tie strap
- 2 rack mount brackets

R8R50A

Kit number 5300-1809

- 4 rubber feet
- 2 wall/table mounting screws
- rack screws
- 1 tie strap
- 2 rack mount brackets

Japan Power Cord Warning

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

Installation Procedure

These steps summarize switch installation. The rest of this chapter provides details on these steps.

Procedure

1. **Prepare the installation site**. If you have not already done so, carefully read the chapter describing Site Preparation and Switch Installation Precautions
2. **Verify that the switch passes self-test**.
3. **Mount the switch**.
4. **Connect power to the switch**.
5. **Connect the network devices**.

6. **(Optional) Install SFP transceivers**. Depending on where you install the switch, it may be easier to install the SFPs first. SFPs can be hot-swapped—they can be installed or removed while the switch is powered on.

> Use only Aruba transceivers in 1430 switches. Using any other transceivers is done at your own risk and may void support and warranty.

1. Prepare the Installation Site

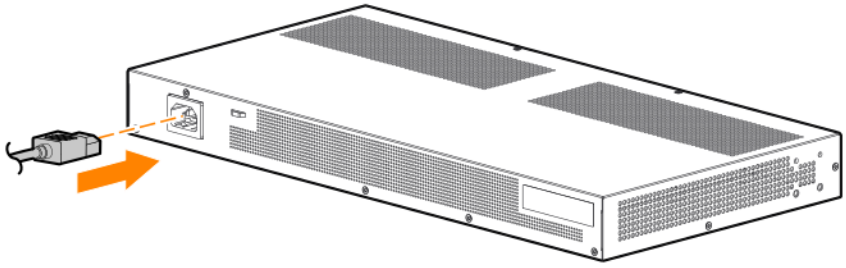
If you have not already done so, carefully read Site Preparation and Switch Installation Precautions. Be sure to follow the provided guidelines to ensure proper operation when installing the switch into a network:

2. Verify the Switch Powers On

Before mounting the switch, verify it is working properly by plugging it into a power source and confirming that it powers on.

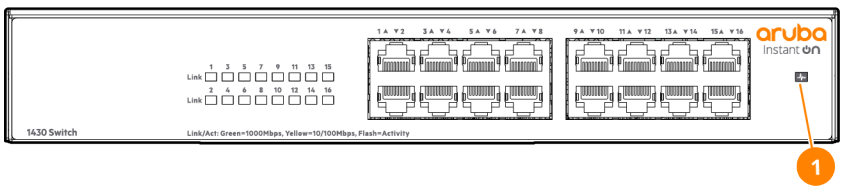
Procedure

1. **For 1430 switches,** connect the power cord supplied with the switch to the power connector on the back of the switch, and then into a properly grounded electrical outlet.

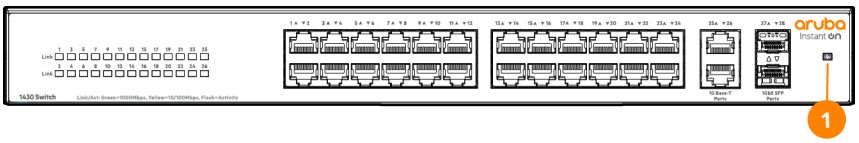


> The 1430 switches do not have a power switch. They are powered on when the power cord is connected to the switch and to a power source. For safety, locate the switch installation near the power outlet.
> The switches automatically adjust to any voltage between 100-127 or 200-240 volts and either 50 or 60 Hz. There are no voltage range settings required.

2. Check the LEDs on the switch as described below.



1	Global Status LED



1	Global Status LED

When the switch is powered on, the behavior of the LEDs is as follows:

- The **Global Status** LED remains on.

3. Remove power to the switch before mounting.

3. Mount the Switch

Unplug the AC or DC power from the switch before mounting it.

The switch can be mounted in these ways:

- in a rack or cabinet
- on a wall
- under a table
- on a horizontal surface

- All Aruba Instant On 1430 Switches support table-top mounting.
- All Aruba Instant On 1430 Switches support rack-mounting except R8R44A and R8R45A.
- All Aruba Instant On 1430 Switches support wall-mounting with ports facing either up or down.
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  - R8R44A, R8R45A, and R8R46A must be mounted upsided down using the base surface mounting holes.
  - R8R47A, R8R48A, R8R49A, and R8R50A must be mounted top surface up using the brackets provided.
    - To prevent possible impact to long-term reliability, product should not be mounted upside-down.

Use only Aruba-supported transceivers.

Rack or Cabinet Mounting

All switches, except the Aruba Instant On 1430 5G Switch (R8R44A) and Aruba Instant On 1430 8G Switch (R8R45A), can be mounted in a rack. The switches are designed to be mounted in any EIA-standard 19-inch Telco rack or communication equipment cabinet.

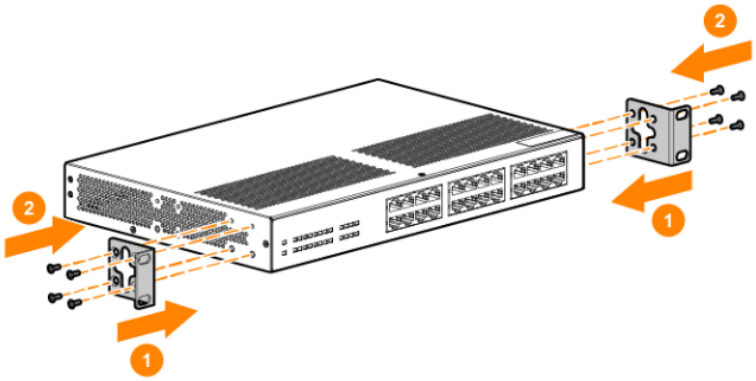
For safe operation, please read Installation Precautions and Guidelines before mounting the switch.

For rack mounting, do not physically stack equipment on top of another. Ensure an air gap of at least 3 inches.

The screws supplied with the switch are the correct threading for standard EIA/TIA open 19-inch racks. If you are 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 screws that are supplied with the switch.
Complete the following step 1 to attach brackets to the switch. Then, plan which four holes you will be using in the cabinet and install all four clips. Then proceed to step 2 to install the switch in the cabinet.

Procedure

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

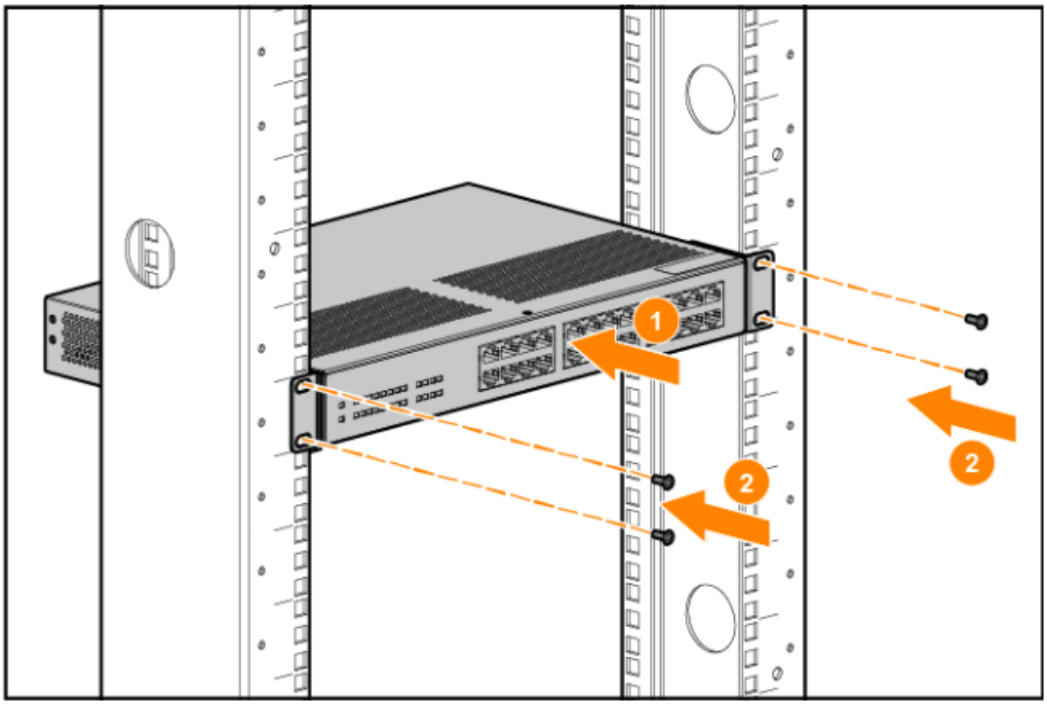


For safe, reliable installation, only use the screws provided in the accessory kit to attach the mounting brackets to the switch.

The mounting brackets have multiple mounting holes and can be rotated allowing for a variety of mounting options. These include mounting the switch so its front face is flush with the face of the rack, as shown in the illustration.

2. Hold the switch with attached brackets in the rack and move it vertically until rack holes line up with

the bracket holes, then insert and tighten the four 12-24 screws holding the brackets to the rack.



Wall Mounting

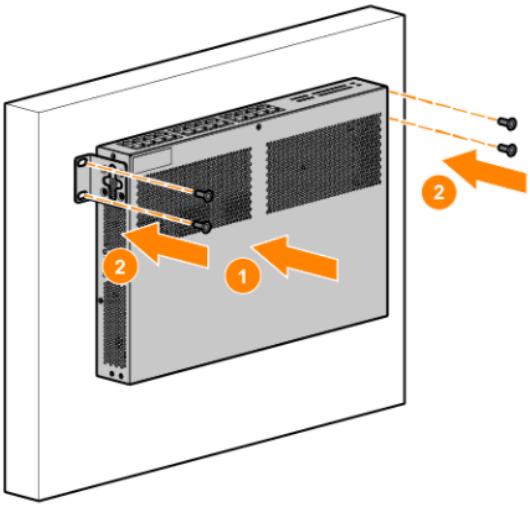
You can mount all switches on a wall with either the front or rear panel facing up.

For safe operation, please read Installation Precautions and Guidelines before mounting the switch. Wall mount the switch with the network ports facing up or down.

The switch should be mounted only to a wall or wood surface that is at least 1/2-inch (12.7 mm) plywood or its equivalent.

To mount the 16PoE, 16-, 24- and 26-port switches, follow these steps:

1. Use a #1 Phillips (cross-head) screwdriver and attach the mounting brackets to the switch with the included 8-mm M4 screws.
2. Attach the switch to the wall or wood surface with two 5/8-inch number 12 wood screws (not included).


2
2
1

To mount the 5- and 8-port switches, follow these steps:

1. In the required location, mark the position for the mounting screws. Refer to the diagrams below for the ports-down mounting hole locations of R8R44A, R8R45A, and R8R46A.

Figure 11 *R8R44A*

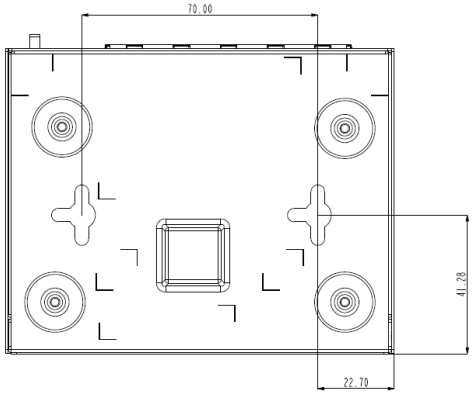


Figure 12 *R8R45A*

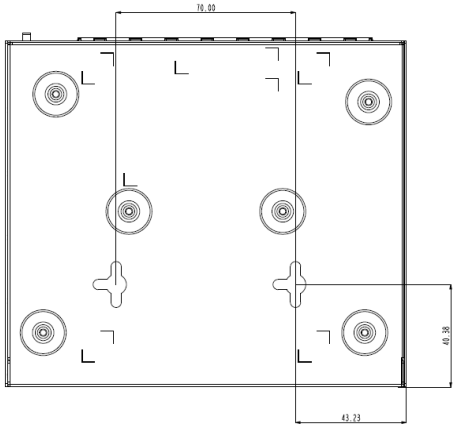
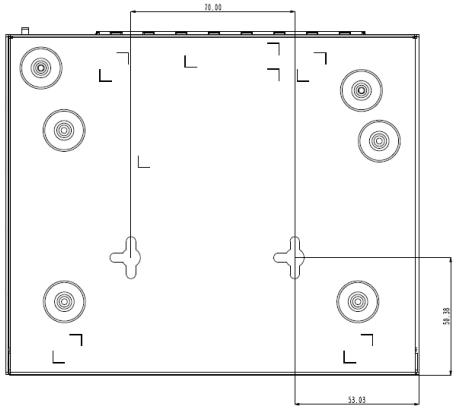
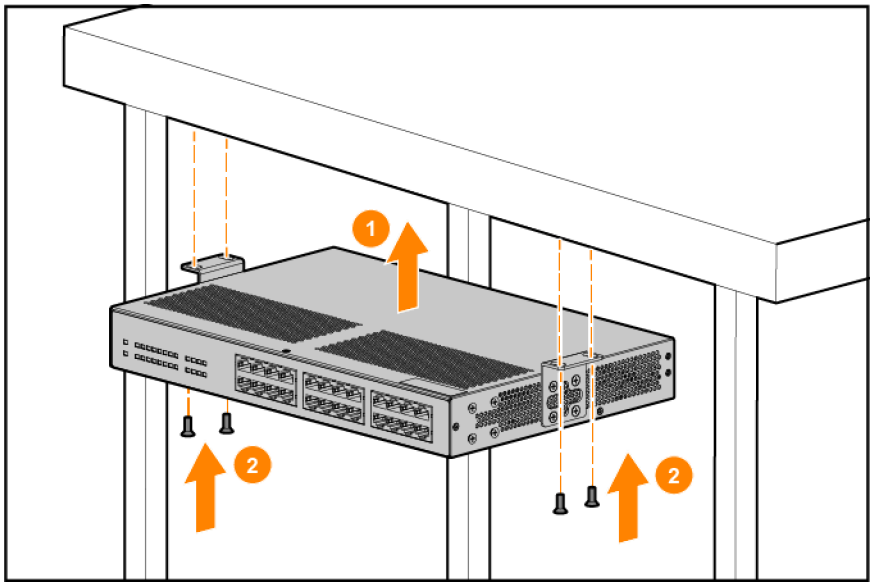


Figure 13 *R8R46A*



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

Wall anchors are included in the accessory kit for use with plastered brick or concrete walls.



A third 20-mm M4 tap screw can be placed against one surface of the switch to secure it.

Under-Table Mounting

All switches can be mounted beneath a table.

For under-table mounting, a third 20-mm M4 tap screw can be placed against one side of the switch to secure it in place.

For safe operation, please read Installation Precautions and Guidelines before mounting the switch. R8R47A, R8R48A, R8R49A, and R8R50A must be mounted top surface up using the brackets provided.

The switch should be mounted only to a wall or wood surface that is at least 1/2-inch (12.7 mm) plywood or its equivalent.

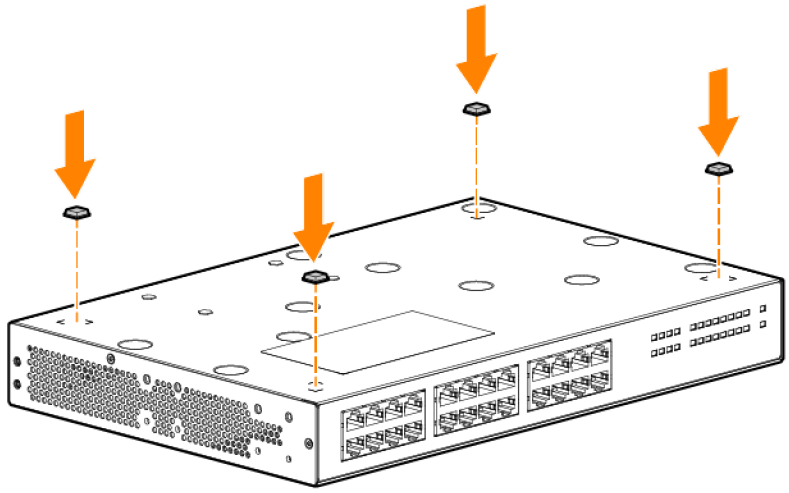
To mount the switch, follow the same steps listed for Wall Mounting, using screws only. No anchors are necessary for installation.

Horizontal Surface Mounting

All 1430 switches can be mounted on a horizontal surface.

Place the switch on a table or other horizontal surface. The switch comes with rubber feet in the accessory kit that can be used to help keep the switch from sliding on the surface.

Attach the rubber feet to the four corners on the bottom of the switch within the embossed angled lines. Use a sturdy surface in an uncluttered area. You may want to secure the networking cables and switch power cord to the table leg or other part of the surface structure to help prevent tripping over the cords.



Nothing should be placed on top of the switch, nor should additional units be stacked above. Adequate spacing on all sides needs to be maintained for ventilation.

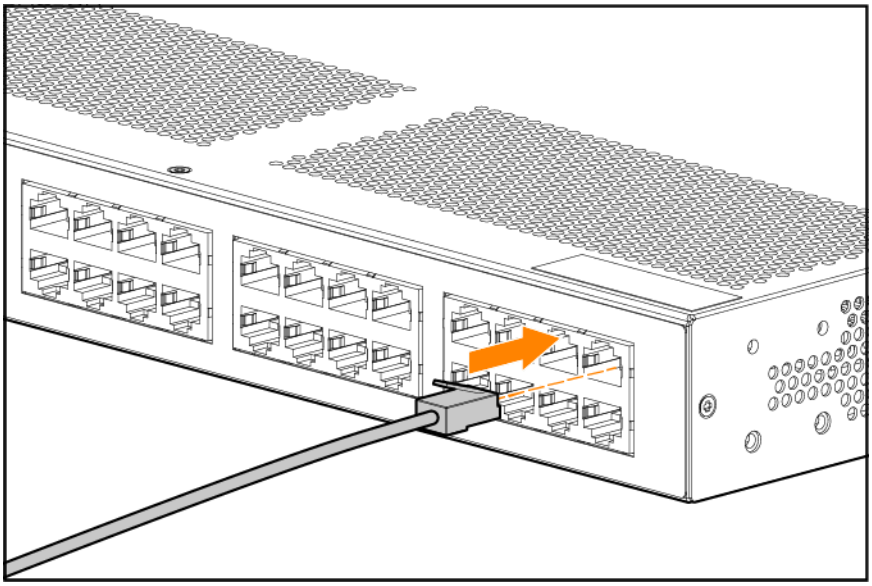
4. Connect the Switch to a Power Source

Procedure

1. Connect the power cord supplied with the switch to the power connector on the back of the switch, and then into a properly grounded electrical outlet, as shown in the *Verify the Switch Passes Self Test* section.
2. Use the included cable tie to secure the power cord to the switch.

5. Connect the Network Cables

Connect the network cables, from the network devices or your patch panels, to the fixed RJ-45 ports on the switch or to any SFP transceivers you have installed in the switch.



100–ohm unshielded or shielded twisted pair cable:

- Category 3, 4, or 5 for 10 Mbps ports
- Category 5 only for 100 Mbps ports
- Category 5, 5e, or 6 for 1000 Mbps ports

Maximum distance: 100 meters

When a network cable from an active network device is connected to the port, the port LEDs for that port should go on. If the port LEDs do not go on when the network cable is connected to the port, see Diagnosing with the LEDs.

6. Installing or Removing SFPs

You can install or remove an SFP from an SFP slot without having to power off the switch.

Hot swapping transceivers is supported. You can install or remove a transceiver with the switch powered on, a reset will not occur. However, rapid hotswaps are not recommended. Wait a few seconds for the Mode LED to turn on (during initialization), and then turn off.

Ensure the network cable is NOT connected when you install or remove an SFP.

Supported Transceivers

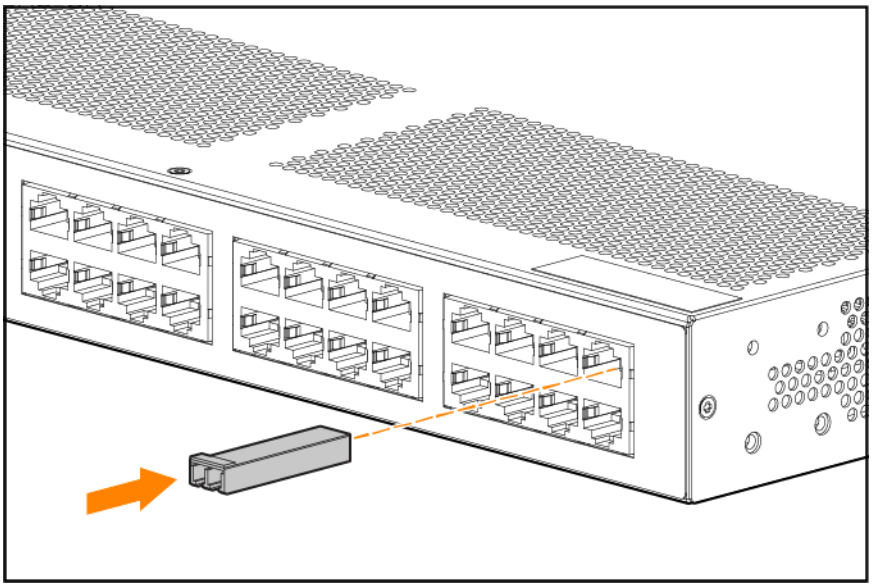
Aruba 1430 switches do not support 100FX transceivers.

Aruba Instant On 1430 26G 2SFP Switch
R8R50A
Aruba 1G SFP LC LX 10km SMF (J4859D)
Aruba Instant On SFP LC SX 500M MMF XCVR (R9D16A)

Installing the SFPs

Remove the protective plastic cover and retain it for later use. Hold the SFP by its sides and gently insert it into any of the slots on the switch until the SFP clicks into place.

The Aruba SFPs are Class 1 laser devices. Avoid direct eye exposure to the beam coming from the transmit port.



Removing the SFPs

You should disconnect the network cable from the SFP before removing it from the switch.

To remove the SFPs that have the plastic tab or plastic collar, push the tab or collar toward the switch until you see the SFP release from the switch (you can see it move outward slightly), and then pull it from the slot.

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

Replace the protective plastic cover on the SFP.

Connecting Cables to SFPs

If you have any SFPs installed in the switch, the type of network connections you will need to use depends on the type of SFPs you have installed. See the table in Network ports, and appendix A, Cabling and Technology Information Specifications, for the SFP cabling information.

For SFP ports, and in general for all the switch ports, when a network cable from an active network device is connected to the port, the port Link LED for that port should go on. If the port Link LED does not go on when the network cable is connected to the port, see Diagnosing with the LEDs.

SFP Installation Notes

When selecting a fiber SFP device, make sure it can function at a maximum temperature that is not less than the recommended maximum operational temperature of the product. Use only an approved Laser Class 1 SFP transceiver.
To ensure proper operation of your switch, use only the Aruba SFP transceivers supported by your switch.

Use only supported Aruba SFP transceivers. Non-Aruba SFP transceivers are not supported. Use of supported Aruba products ensures that your network maintains optimal performance and reliability. If you require additional transceivers, contact an HPE Aruba sales representative or an authorized reseller.

Hot Swapping SFP transceivers. Disconnect the network cables from the SFP transceivers before hot-swapping them.

SFP Connections to Devices with Fixed Speed When connecting a device to your switch port that contains an SFP transceiver, the speed and duplex settings of the switch port and the connected device must match. If the settings do not match, 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.

Chapter 5
Troubleshooting

Troubleshooting Overview

This section describes how to troubleshoot the switch. For more information, see Aruba Instant On 1430 5G/8G/16G/24G/26G Switch Series Management and Configuration Guide.

This chapter describes the following:

- basic troubleshooting tips – Basic Troubleshooting Tips
- diagnosing with the LEDs – Diagnosing with the LEDs
- Aruba Instant On Support Services

Basic Troubleshooting Tips

Common problems and their solutions are listed in the following table.

Problem	Resolution
Link light does not light when a cable is connected.	Look for loose or obviously faulty connections. If they appear to be OK, make sure the connections are snug. If that does not correct the problem, try a different cable.

LED Patterns for General Switch Troubleshooting

Procedure

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

Power is identified by the Global Status LED. See LEDs for more information.

LED Pattern Indicating Problems		Diagnostic Tips
Power	Port LED	
Off with power cord plugged in	*	❶
On	*	❷
On		❸

LED Pattern Indicating Problems		Diagnostic Tips
Power	Port LED	
	Blinking†	
On	Off with cable connected	❹
* This LED is not important for the diagnosis. † The blinking behavior is an on/off cycle once every 1.6 seconds, approximately.		

Diagnostic Tips

Tip	Problem	Solution
❶	The switch is not plugged into an active AC power source, the switch's power adapter may have failed.	1. Verify the power cord is plugged into an active power source and to the switch. Make sure these connections are snug. 2. Try power cycling the switch by unplugging and plugging the power cord back in. 3. If the Power LED is still not on, verify that 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 Aruba authorized network reseller, or use the electronic support services from Aruba to get assistance.
❷	The network port for which the Link LED is blinking has experienced a self test or initialization failure.	Try power cycling the switch. If the fault indication reoccurs, the switch port may have failed. To confirm, try a different port that appears to be good. Call your Aruba authorized network reseller, or use the electronic support services from Aruba to get assistance. To verify that the port has failed, try removing and reinstalling the SFP without having to power off the switch. If the port fault indication reoccurs, you will have to replace the SFP.
❸	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 secure. ■ Verify the connected device and switch are both powered on and operating correctly. ■ Verify that the connected devices comply with the appropriate IEEE 802.3 standard, including transmission of the Link signal. ■ If the other procedures do not resolve the problem, try using a different port or a different cable.

LED Patterns for PoE Troubleshooting

The following tables identify the specific problems that are shown by the LEDs.

Procedure

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

LED Pattern Indicating Problems			Diagnostic Tips (see table below)
PoE Max	Port Link	Port PoE	
On solid (orange)	N/A	N/A	❶
Slow flash (orange)	N/A	Slow flash (green)	❷
N/A	N/A	Slow flash (orange)	❸

Diagnostic Tips:

Tip	Problem	Solution
❶	Switch power threshold reached.	Not enough power available to power all devices. Flashing PoE port LED indicates devices that have been disconnected based on port priority, where the lowest numbered ports have the highest priority (i.e. 1 > 2 > 3).
❷	Port denied, or power revoked.	Less than 15W of PoE Power budget remains for existing new devices. Port priority hard defined as follows: lowest ports have highest priority. For example, Port 1>, Port 2>, etc.
❸	Port powered with faults or port has detect/class.	Inspect installation and cabling, verify the device is 802.3af^{tm} or 802.3at^{tm} compliant. Replace the connected device and move to a new port. If port fault persists, the port may be damaged and the switch must be replaced.

Chapter 6
Specifications

Environmental Specifications

Table 1: *Environmental Specifications for all 1430 Switch Models*

Requirement	Value
Operating temperature	32°F to 104°F (0°C to 40°C)
Operating relative humidity	15% to 95%
Non-operating temperature	-40°F to 158°F (-40°C to 70°C) up to 15000 ft
Storage relative humidity	15% to 95%
Max operating altitude	10000 feet (3 km) Max
Max non-operating altitude	17000 feet (5 km) Max

Table 2: *1430 Switch Dimensions and Weights*

Switch	Dimensions (L x W x H)	Weight
Aruba Instant On 1430 5G Switch (R8R44A)	3.57 x 4.54 x 1.02 in	0.64 lbs (0.29 kg)
Aruba Instant On 1430 8G Switch (R8R45A)	5.35 x 6.16 x 1.46 in	1.27 lbs (0.57 kg)
Aruba Instant On 1430 8G Class4 PoE 64W Switch (R8R46A)	5.74 x 6.95 x 1.46 in	1.71 lbs (0.77 kg)
Aruba Instant On 1430 16G Switch (R8R47A)	10.00 x 10.79 x 1.73 in	3.75 lbs (1.70 kg)
Aruba Instant On 1430 16G Class4 PoE 124W Switch (R8R48A)	10.2 x 10.8 x 1.73 in	4.6 lbs (2.09 kg)
Aruba Instant On 1430 24G Switch (R8R49A)	8.72 x 13.30 x 1.73 in	4.18 lbs (1.89 kg)
Aruba Instant On 1430 26G 2SFP Switch (R8R50A)	8.72 x 15.20 x 1.73	4.97 lbs (2.25 kg)

Acoustics

Table 3: *Noise Emissions per Switch Model*

Switch Model	Noise Emission
Aruba Instant On 1430 5G Switch (R8R44A)	Power/Pressure: 0 dB (no fan)
Aruba Instant On 1430 8G Switch (R8R45A)	Power/Pressure: 0 dB (no fan)
Aruba Instant On 1430 8G Class4 PoE 64W Switch (R8R46A)	Power/Pressure: 0 dB (no fan)
Aruba Instant On 1430 16G Switch (R8R47A)	Power/Pressure: 0 dB (no fan)
Aruba Instant On 1430 16G Class4 PoE 124W Switch (R8R48A)	Power/Pressure: 0 dB (no fan)
Aruba Instant On 1430 24G Switch (R8R49A)	Power/Pressure: 0 dB (no fan)
Aruba Instant On 1430 26G 2SFP Switch (R8R50A)	Power/Pressure: 0 dB (no fan)

Standards

		Laser Safety Information	
Technology	Compatible with these IEEE Standards	EN/IEC Standard Compliance	SFP Lasers
10-T 100-TX 1000-T	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab 1000BASE-T		
1000-SX	IEEE 802.3z 1000BASE-SX	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1
1000-LX	IEEE 802.3z 1000BASE-LX	EN/IEC 60825	Class 1 Laser Product Laser Klasse 1

Cabling and Technology Information Specifications

Table 4: *Cable Information*

Cable Type	OperationMode	Description
Twisted-pair copper	10 Mbps Operation	Category 3, 4 or 5, 100-ohm unshielded twisted-pair (UTP) or shielded twisted-pair (STP) cable, complying with IEEE 802.3 10BASE-T specifications.
	100 Mbps Operation	Category 5, 100-ohm UTP or STP cable, complying with IEEE 802.3u 100BASE-TX specifications.
	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 below.

Cable Type	OperationMode	Description
Multimode fiber		62.5/125 µm or 50/125 µm (core/cladding) diameter, low metal content, graded index fiber-optic cables, complying with theITU-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.

*A mode conditioning patch cord may be needed for some Gigabit-LX installations.

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.

Table 5: *Technology Distance Specifications*

Technology	Supported Cable Type	Multimode Fibermodal Bandwidth	Supported Distances
1000-T	twisted-pair copper	N/A	up to 100 meters
1000-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
1000-LX	multimode fiber	400 MHz*km 500 MHz*km	2 - 550 meters 2 - 550 meters
	single mode fiber	N/A	2 - 10,000 meters

Chapter 7
Support Information

Main Instant On site

https://www.arubainstanton.com/

Support

https://support.arubainstanton.com/

Instant On social forums and knowledge base

https://community.arubainstanton.com/

Security bulletins

https://www.arubanetworks.com/support-services/security-bulletins/

End-user license agreement

https://www.arubainstanton.com/eula/

Support contact numbers

https://www.arubainstanton.com/contact-support/