

Start Here: Installation, Safety, and Regulatory Information for the HPE Aruba Networking CX 8100 Switches and Accessories

For the latest release of hardware and software documentation for Aruba switches and accessories, including the *Installation and Getting Started Guide*, which provides detailed installation instructions, visit the Aruba Support Portal at the following link: <https://asp.arubanetworks.com/downloads>

See the rest of this guide for important pre-setup information.



There are no user-serviceable parts in this product. For switch or accessory service needs, contact an authorized Aruba representative.

EPHApplicable Products

HPE Aruba Networking CX 8100 24x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU SW Bundle (R9W86A)	HPE Aruba Networking CX 8100 24x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle (R9W87A)	HPE Aruba Networking CX 8100 24x10GBase-T 4x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU SW Bundle (R9W88A)
HPE Aruba Networking CX 8100 24x10GBase-T 4x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle (R9W89A)	HPE Aruba Networking CX 8100 48x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle (R9W90A)	HPE Aruba Networking CX 8100 48x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle (R9W91A)
HPE Aruba Networking CX 8100 40x10GBase-T 8x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU SW Bundle (R9W92A)	HPE Aruba Networking CX 8100 40x10GBase-T 8x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle (R9W93A)	HPE Aruba Networking CX 8100 24x10GSFP+ 4x40/100G QSFP28 Switch (R9W94A)
HPE Aruba Networking CX 8100 24x10GBase-T 4x10GSFP+ 4x40/100G QSFP28 Switch (R9W95A)	HPE Aruba Networking CX 8100 48x10GSFP+ 4x40/100G QSFP28 Switch (R9W96A)	HPE Aruba Networking CX 8100 40x10GBase-T 8x10GSFP+ 4x40/100G QSFP28 Switch (R9W97A)
Aruba X391 550W Prt2Pwr AC PSU (JL600A)	Aruba X391 550W Pwr2Prt AC PSU (JL712A)	Aruba X412 1U Universal 2-post RM Kit (JL602A)
Aruba X414 1U Universal 4-post RM Kit (J9583B)	Aruba X544 Universal 4-post Duct Kit (JL716A)	Aruba X741 Prt2Pwr Fan (JL714A)
Aruba X742 Pwr2Prt Fan (JL715A)		

Overview


The HPE Aruba Networking CX 8100 Switch Series is a family of premium networking switches, ideal for enterprise data centers, network aggregation and core. They provide the foundation for high-performance networks supporting IoT, mobile, and cloud applications.

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

Installation Precautions and Guidelines


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

WARNING:

- 
- Do not mount the switch on a wall, under a table, or under any other horizontal surface.
 - Mount devices installed in a rack or cabinet as low as possible. Put the heaviest devices at the bottom and progressively lighter devices positioned higher.
 - To prevent the rack or cabinet from becoming unstable and/or falling over, ensure that it is adequately secured.

This section provides precautions and guidelines to observe when installing your switch. For full installation instructions, see the *HPE Aruba Networking CX8100 Switch Series Installation and Getting Started Guide*.

CAUTION:

- 
- Do not ship any switch in a rack without checking for restrictions in the latest *HPE Aruba Networking CX8100 Switches Installation and Getting Started Guide*. Otherwise, you may void the switch warranty.
 - Ensure the power source circuits are properly grounded. Then connect the switch to the power source by using the power cord supplied with the switch. For more information on power cords, see [Power Cords on page 3](#).
 - When installing the switch, the AC outlet should be near the switch and be easily accessible in case the switch must be powered off.
 - Ensure that the power cord and network cables at the switch mounting location do not create a tripping hazard.
 - Do not install the switch in an environment where the operating ambient temperature exceeds its specification. See the environmental operating temperature information in the latest *HPE Aruba Networking CX8100 Switches Installation and Getting Started Guide*.
 - Ensure that the switch does not overload the power circuits, wiring, and over-current protection. To determine the possibility of overloading the supply circuits, add the ampere ratings of all devices installed on the same circuit as the switch. Then compare the total with the rating limit for the circuit. The maximum ampere ratings for a device are usually printed near the device AC power connectors.
 - Do not block any ventilation openings on the front or rear of the switch.
 - Leave a minimum of 6 inches (15.24 cm) for cooling at the front and back of the switch. For the air flow direction, see the latest *HPE Aruba Networking CX8100 Switches Installation and Getting Started Guide*.
 - If a power supply must be removed and reinstalled, wait at least 5 seconds before reinstallation. Otherwise, damage to the switch may occur. The power supply needs this time to bleed off any retained power.
-

IMPORTANT:

- It is recommended to use only supported Aruba transceivers. However, HPE Aruba CX switches do support an unsupported transceiver mode which can be used by customers at their own risk. For more information, see the latest version of the [ArubaOS-S and AOS-CX Transceiver Guide](#).
 - The 8100 switch port side transceiver slots support SFP, SFP+, QSFP+ and QSFP28 transceivers.
 - For more information, see the latest version of the following two guides:
 - *Installation and Getting Started Guide*
 - *Transceiver Guide*
-

Power Cords

Aruba includes the power cord intended for use with your Aruba switch and power supply. Different countries/regions may require different power cords. For a list of the power cords that apply to your switch, see the section that lists power cords in the latest edition of the *Installation and Getting Started Guide* for your switch.

CAUTION: Only Aruba-approved power cords may be used with Aruba devices. To access power cord information for your switch, see the latest edition of the *Installation and Getting Started Guide* for your switch and power supply. 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.

WARNING: Do not use a damaged or non-recommended power cord with your switch. Using such power cords voids the switch and power supply warranty. It can also cause serious electrical problems, including injury or death to personnel, and damage to the switch and other property. If you cannot verify that you have a power cord approved for use with your switch model, contact your authorized Aruba dealer or sales representative for assistance.

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

Environmental Specifications

Table 1: *Environmental Specifications for all CX 8100 Switch Models*

	Front to Back airflow (FB)	Back to Front airflow (BF)
Operating temperature	32°F to 113°F (0°C to 45°C) ¹	32°F to 104°F (0°C to 40°C) ²
Non-operating temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Operating relative humidity	15% to 95% ³	15% to 95% ⁴
Non-operating storage relative humidity	15% to 95% ⁵	15% to 95% ⁶
Max operating altitude	10000 ft (3km)	10000 ft (3km)
Max non-operating altitude	15000 ft (4.5km)	15000 ft (4.5km)

¹ Up to 5000 ft. Derate -1°C for every 1000 ft from 5000 ft to 10000 ft

² Up to 5000 ft. Derate -1°C for every 1000 ft from 5000 ft to 10000 ft

³ At 113°F (45°C), non-condensing

⁴ At 104°F (40°C), non-condensing

⁵ At 149°F (70°C), non-condensing

⁶ At 149°F (70°C), non-condensing

Table 2: Dimensions and weights for CX 8100 switch models

Switch	Width	Depth	Height	Weight
HPE Aruba Networking CX 8100 24x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU SW Bundle (R9W86A)	44.25 cm (17.4 in)	43.52 cm (17.1 in)	4.4 cm (1.73 in)	18 lb (8.16 kg)
HPE Aruba Networking CX 8100 24x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle (R9W87A)				
HPE Aruba Networking CX 8100 24x10GBase-T 4x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU SW Bundle (R9W88A)	44.25 cm (17.4 in)	43.52 cm (17.1 in)	4.4 cm (1.73 in)	18.3 lb (8.3 kg)
HPE Aruba Networking CX 8100 24x10GBase-T 4x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle (R9W89A)				
HPE Aruba Networking CX 8100 48x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU SW Bundle (R9W90A)	44.25 cm (17.4 in)	43.52 cm (17.1 in)	4.4 cm (1.73 in)	18.5 lb (8.39 kg)
HPE Aruba Networking CX 8100 48x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle (R9W91A)				
HPE Aruba Networking CX 8100 40x10GBase-T 8x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU SW Bundle (R9W92A)	44.25 cm (17.4 in)	43.52 cm (17.1 in)	4.4 cm (1.73 in)	18.9 lb (8.57 kg)
HPE Aruba Networking CX 8100 40x10GBase-T 8x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle (R9W93A)				
HPE Aruba Networking CX 8100 40x10GBase-T 8x10GSFP+ 4x40/100G	44.25 cm (17.4 in)	40.64 cm (16.0 in)	4.4 cm (1.73 in)	14.15 lb (6.57 kg)

Switch	Width	Depth	Height	Weight
QSFP28 Switch (R9W97A)				
HPE Aruba Networking CX8100 24x10GSFP+ 4x40/100G QSFP28 Switch (R9W94A)	44.25 cm (17.4 in)	40.64 cm (16.0 in)	4.4 cm (1.73 in)	13.2 lb (5.98 kg)
HPE Aruba Networking CX 8100 24x10GBase-T 4x10GSFP+ 4x40/100G QSFP28 Switch (R9W95A)	44.25 cm (17.4 in)	40.64 cm (16.0 in)	4.4 cm (1.73 in)	13.55 lb (6.14 kg)
HPE Aruba Networking CX 8100 48x10GSFP+ 4x40/100G QSFP28 Switch (R9W96A)	44.25 cm (17.4 in)	40.64 cm (16.0 in)	4.4 cm (1.73 in)	13.7 lb (6.21 kg)

Safety and Regulatory Information



IMPORTANT: 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>.

Table 1: Electrical Information for CX 8100 Modular Power Supplies

Switch Model	Power Supplies	Maximum Current	AC Voltage	Frequency range
HPE Aruba Networking CX 8100 24x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU SW Bundle (R9W86A)	Aruba X391 550W Prt2Pwr AC PSU (JL600A)	7.1A for 100-127VAC 3.4A for 200-240VAC	100-127 / 200-240	47-63Hz
HPE Aruba Networking CX 8100 24x10GBase-T 4x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU SW Bundle (R9W88A)				
HPE Aruba Networking CX 8100 48x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU SW Bundle (R9W90A)				
HPE Aruba Networking CX 8100 40x10GBase-T				

Switch Model	Power Supplies	Maximum Current	AC Voltage	Frequency range
8x10GSFP+ 4x40/100G QSFP28 FB 3Fan 2ACPSU SW Bundle (R9W92A)				
HPE Aruba Networking CX 8100 24x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle (R9W87A)	Aruba X391 550W Pwr2Prt AC PSU (JL712A)	7.1A for 100- 127VAC 3.4A for 200- 240VAC	100-127 / 200-240	47-63 Hz
HPE Aruba Networking CX 8100 24x10GBase-T 4x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle (R9W89A)				
HPE Aruba Networking CX 8100 48x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle (R9W91A)				
HPE Aruba Networking CX 8100 40x10GBase-T 8x10GSFP+ 4x40/100G QSFP28 BF 3Fan 2ACPSU SW Bundle (R9W93A)				

Table 2: *Safety and regulatory information for all Aruba CX 8100 switch models*

Safety-EU	EN62368-1, Ed.3:2020; EN62368-1, Ed.2:2014
Safety-Worldwide	IEC 62368-1:2014; IEC 62368-1:2018
North American	UL/CUL 62368-1 3rd Edition; CAN/CSA C22.2 No. 62368-1:19
Lasers	EN60825-1:2014 / IEC 60825-1: 2014 Class 1 Laser Products / Laser Klasse 1
EMC	EN 55032:2015/CISPR32 Class A EN55035:2017/CISPR35 EN 61000-3-2:2014, Class A EN 61000-3-3:2013 FCC CFR 47 Part 15:2010 Class A ICES-003 Class A VCCI Class A CNS 13438 Class A
RoHS	EN IEC 63000:2018



IMPORTANT: Environmental and other switch specifications, such as acoustics data, are included in the latest version of the *Installation and Getting Started Guide*.

IMPORTANT:



- Use only supported Aruba supported Aruba transceivers with your switch. For more on transceivers, see the latest edition of the Transceiver Guide.
- When selecting a fiber SFP device, make sure it can function at a temperature below the recommended maximum operational temperature of the product.
When selecting a fiber SFP device, make sure the device has the same (or better) operating temperature range as the switch.
- Use only an approved Laser Class 1 SFP transceiver.

Japan Power Cord Warning

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

Power Supply Instructions



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



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



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



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

Brazil Statement

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

Battery Statements



CAUTION: This switch uses a lithium battery. Do not attempt to replace the battery.



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.



CAUTION: 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> website for more information.



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.



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. If a battery failure occurs, contact your authorized Aruba representative for assistance. Batteries are not customer-serviceable and battery failures should be referred only 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>

Japan VCCI Class A Statement

この装置は、クラスA機器です。この装置を住宅環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI — A

Korea EMC Class A Statement

사용자 안내문

이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

FCC Class A Statement

This equipment has been tested and found to comply with the limits for a class A Digital device, pursuant to part 15 of the FCC Rules.

European Union Class A Statement

Warning: This product is compliant with Class A of EN 55032. This product may cause interference if used in residential areas. Such use must be avoided unless the user takes special measures to reduce electromagnetic emissions to prevent interference to the reception of radio and television broadcasts.

European Community

The product herewith complies with the requirements of Directive 2014/35/EU relating to electrical equipment designed for use within certain voltage limits, Directive 2014/30/EU relating to electromagnetic compatibility, Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment, and carries the CE marking accordingly.



For Conducted and Radiated Immunity in accordance with EN55035, the Aruba CX 8100 switch products are limited to Performance Criteria A with shielded cable for HPE Smart Rate ports.

Preview of Installing an HPE Aruba Networking CX 8100 Switch



This section previews the steps for installing the HPE Aruba Networking CX 8100 switches. To find detailed switch installation steps, information on configuration tools, and other instructions and information, see the latest *Installation and Getting Started Guide* for your switch.

1. Prepare the installation site.
2. Unpack the switch and verify that you have received the correct parts.
3. Verify that the airflow for the power supplies and fans is correct for your application.



Port to Power (Front to Back) fans and power supplies are color coded red.
Power to Port (Back to Front) fans and power supplies are color coded blue.

4. Connect power to the switch and observe the switch self-test, then remove power from the switch.
5. Mount the switch.



WARNING: Do not mount the switch on a wall, under a table, or under another horizontal surface.

6. Connect the switch to a power source.
7. (Optional) Install transceivers.
8. Connect the network cables.
9. Configure the switch for network operation.

Documentation Feedback

Send any errors, suggestions, or comments to Documentation Feedback (docsfeedback-switching@hpe.com).