

## X870 series Switch Quick Reference



**Electrical Hazard:** Only qualified personnel should perform installation procedures.

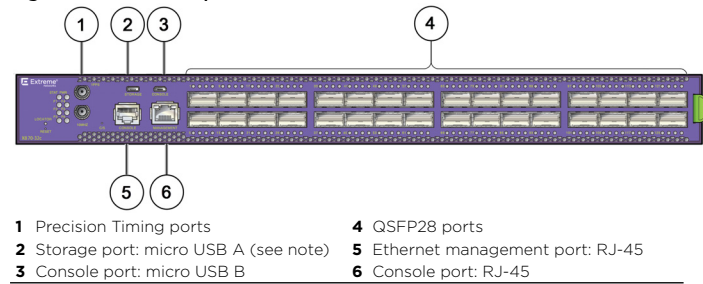
**Risques d'électrocution:** Seul un personnel qualifié doit effectuer les procédures d'installation.

For complete installation instructions see the *ExtremeSwitching and Summit Switches: Hardware Installation Guide* at [www.extremenetworks.com/documentation](http://www.extremenetworks.com/documentation)

### Hardware Components

The following figures display the front and rear panel ports, LEDs, and hardware components on a typical X870 switch. See the *Hardware Installation Guide* for component details

Figure 1 X870 Sample Front Panel

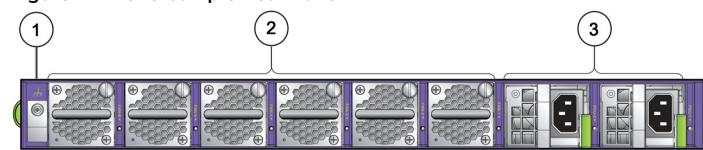


- |  |                                   |
|--|-----------------------------------|
| 1 Precision Timing ports               | 4 QSFP28 ports                    |
| 2 Storage port: micro USB A (see note) | 5 Ethernet management port: RJ-45 |
| 3 Console port: micro USB B            | 6 Console port: RJ-45             |



**Note:** The storage port supports USB endpoint devices only. It does not support USB host devices.

Figure 2 X870 Sample Rear Panel



- |                     |
|---------------------|
| 1 Grounding lug     |
| 2 Fan modules       |
| 3 AC power supplies |

## Installation Site Requirements

The installation site must be within reach of the network cabling and meet the following requirements:

- Appropriate grounded power receptacles must be located within six feet of the site.
- A temperature of between 0°C (32°F) and 45°C (113°F) with fluctuations of less than 10°C (18°F) per hour must be maintained at the installation site with fluctuations of less than 10°C (18°F) per hour



**Caution:** To ensure proper ventilation and prevent overheating, leave a minimum clearance space of 7.6 cm (3.0 in) on all sides of the device.

**Attention:** Pour assurer une bonne ventilation et éviter une surchauffe, laissez un espace de dégagement minimum de 7,6 cm (3,0 po) Des tous les côtés de l'appareil.



**Warning:** A readily accessible disconnect device shall be incorporated in the building installation wiring.

**Avertissement:** Un dispositif de déconnexion facilement accessible doit être incorporé dans l'installation électrique du bâtiment.

## Handling the Switch



**Caution:** The switch can be damaged by electrostatic discharge.

To prevent electrostatic damage, attach an electrostatic discharge (ESD) wrist strap to your wrist before handling the switch.

Unpack the switch as follows:

- Remove the packing material protecting the switch.
- Remove the tape seal on the non-conductive bag to remove the switch.
- Perform a visual inspection of the switch for any signs of physical damage. Contact Extreme Networks if there are any signs of damage. See "Getting Help" for more information on contacting Extreme Networks.

## Installing the X870 Series Switch

You can install an X870 series switch in a rack. There are four possible rack mounting configurations, depending upon whether:

- The switch I/O ports or the device's power supply side face front.
- The device is mounted flush with the rack posts or mid-mounted.

### Securing the Switch to the Rack



**Caution:** Before rack-mounting the device, ensure that the rack can support it without compromising stability. Otherwise, personal injury and/or equipment damage may result.



**Note:** The rack mounting brackets provide two holes for securing the X870 Series switches to the rack. Use two screws or fasteners appropriate to your rack on each side when securing the X870 Series switch to the rack.

To secure an X870 series switch to a rack:

- Attach the mounting brackets to the sides of the switch using six screws for each bracket.
- Align the rack mount ear holes with the front rack post holes.
- Secure the switch to each rack post with two screws or fasteners appropriate to the rack.

### Installing Optical Transceivers



**Warning:** LASER RADIATION  
Fiber-optic ports use Class 1 or Class 1M lasers.  
DO NOT EXPOSE USERS OF TELESCOPIC OPTICS  
Do not use optical instruments to view the laser output. The use of optical instruments to view laser output increases eye hazard. Use only UL/CSA, EN60825-1/-2 recognized pluggable modules.  
**Avertissements:** RAYONNEMENT LASER  
Ports de fibres optiques utilisent des lasers de classe 1 ou de classe 1M.  
NE PAS exposer les utilisateurs de télescopique OPTIQUE.  
Ne pas utiliser d'instruments optiques pour voir la sortie du laser.  
L'utilisation de instruments optiques pour afficher la sortie laser augmente les risques oculaires. Utilisez uniquement UL / CSA, EN60825-1 /-2 reconnu modules enfichables.

This installation procedure applies to all optical transceivers. To install a transceiver in an X870 series switch:

- Attach the ESD wrist strap to your wrist and connect the metal end to an appropriate ground point on the rack.
- Remove the optical transceiver from its packaging.
- If there is a protective dust cover on the connector, remove it at this time.
- Hold the optical transceiver so that the connector will seat properly.
- Carefully align the optical transceiver with the port slot.
- Push the optical transceiver into the port slot until the transceiver clicks and locks into place.

### Connecting Power to the Switch



**Warning:** Extreme Networks power supplies do not have switches for turning the unit on and off. Before servicing, disconnect all power cords to remove power from the device. Make sure that these connections are easily accessible.  
**Avertissement:** Extreme Networks alimentations ne sont pas des interrupteurs pour allumer l'appareil et en dehors. Avant l'entretien, débranchez tous les cordons d'alimentation pour couper l'alimentation de l'appareil. Assurez-vous que ces connexions sont facilement accessibles.



**Warning:** A dedicated Listed circuit breaker rated at 15A is to be used for each power supply connection.



**Avertissement:** Un disjoncteur cotée dédiée évalué à 15A doit être utilisée pour chaque connexion d'alimentation.  
**Warning:** Always make sure that the DC circuit is de-energized before connecting or disconnecting DC power cables.

**Avertissement:** Assurez-vous toujours que le circuit DC est hors tension avant de brancher ou de débrancher les câbles d'alimentation DC.

You can connect to a single, primary source of power, or to two sources of power for redundancy.



**Note:** Installing the system as described in this guide meets the protective earth grounding requirements of the National Electrical Code (NEC) UL 60950 and IEC 60950 standards. However, in some cases, it may be necessary to use an alternative grounding method. In these cases, a 14 AWG wire can be connected between the ground lug on the chassis and a nearby building ground point.

To power up your X870 series switch, do the following:

- Connect the AC power cord to the AC power input socket on the power supply and an AC power outlet.
- For DC powered supplies, verify that the DC circuit is de-energized and then do the following:
  - Identify the grounding stud on the DC power supply. The grounding stud is next to the DC input connector, identified by the international symbol for earth ground.
  - Using the nut and washer provided, connect the ring terminal end of the ground wire to the grounding stud on the DC power supply. Use green and yellow stranded copper wire, sized at least 14 AWG.
  - Connect the other end of the ground wire to a reliable earth ground.
  - Connect the DC power input cables to the DC input connector provided. Use copper wires rated for at least 60°C and sized between 14 AWG and 8 AWG.
  - Energize the circuit.
- When power is connected, verify that the switch's PWR LED turns green. If the PWR LED does not turn green, refer to the *Hardware Installation Guide* for troubleshooting information.

### Selection of Power Cords

Extreme Networks does not include any power input cords. To purchase the correct power cord for your specific country, refer to [www.extremenetworks.com/product/powercords/](http://www.extremenetworks.com/product/powercords/). This page lists power cord details for purchasing a cord from Extreme Networks or your local supplier.

## Initial Network Connection and Configuration

When you have connected power to the switch and verified LED activity, complete the setup process as follows:

- Connect a management station to the console port using either an Ethernet to serial adapter or a DB-9 serial cable.
- Verify that the system LEDs are on (solid green or blinking green).
- Using PuTTY, TeraTerm, or another terminal emulator, connect to the switch using the serial port connection. Be sure that your serial connection is set properly:
  - Baud rate: 115200 bps
  - Data bits: 8
  - Stop bit: 1
  - Parity: none
  - Flow control: none
- Using the console session, perform the following:
  - At the password prompt, press **ENTER (RETURN)** twice.
  - Enter user: admin
  - For the initial password, simply press **ENTER**.
  - Follow the screen prompts for initial configuration.
  - Enter the show version command. Record the switch serial number. The following example output shows the serial number in bold:

```
Transit.3 # show version
Switch : 800444-00-05 0723G-01234 Rev 5.0 BootROM:
```
- Go to Extreme Networks eSupport at <https://esupport.extremenetworks.com>
- After logging in, go to the [product registration page](#).
- Enter the switch's serial number.
- Download the software to your PC from the [software download page](#):
- Connect back to the switch using the console port and connect an Ethernet cable from the switch's management port to your PC.
- You might need to reset your PC's IP address to another address — for example, 10.10.10.10 255.255.255.0 — to avoid IP conflict.
- At the switch, set the IP address of the switch, for example:

```
configure vlan mgmt ipaddress 10.10.10.9/24
```
- Enter save config to save your configuration.
- Start a TFTP session using a program such as TFTP64. Point the TFTP server to your PC IP address and the ExtremeXOS image file saved on your PC.
- At the switch, download the new software to the switch.  
Example: download image 10.10.10.10 *EXOS level.xos*.
- After the software loads, install it by entering Y when prompted.
- When the download and install finishes, reboot the switch when prompted: enter reboot.

### Optional CLI Commands

When logged into the switch you can create new VLANs by issuing the following two commands:

- create vlan *vlan\_name*
- configure vlan *vlan\_name* tag *nnnn* (replace *nnnn* with the VLAN tag number - options are 1-4094)

These two commands will create a VLAN, give it a logical name, and assign a tag number.

To configure a default gateway in the Extreme Networks CLI, enter:

- configure iproute add default *IP\_Address*

### Port Configuration CLI Commands

For additional port configuration CLI commands, refer to the *ExtremeXOS Command Reference Guide* at: [www.extremenetworks.com/documentation](http://www.extremenetworks.com/documentation).

## Specifications

**Operating Temperature:**  
0°C (32°F) to 45°C (113°F)

**Storage Temperature:**  
-40°C to 70°C (-40°F to 158°F)

**Operating Relative Humidity:**  
10% to 95% (non-condensing)

### Switch Dimensions

X870-32c	Unpackaged 4.45 cm (1.75 in) H x 43.18 cm (17.00 in) W x 48.26 cm (19.00 in) L Weight: 6.90 kg (15.21 lb) Packaged 17.00 cm (6.69 in) H x 56.00 cm (22.05 in) W x 59.50 cm (23.43 in) L Weight: 9.22 kg (20.33 lb)
X870-96x-8c	Unpackaged 4.45 cm (1.75 in) H x 43.18 cm (17.00 in) W x 48.26 cm (19.00 in) L Weight: 6.90 kg (15.21 lb) Packaged 17.00 cm (6.69 in) H x 56.00 cm (22.05 in) W x 59.50 cm (23.43 in) L Weight: 9.22 kg (20.33 lb)

## Power Specifications

X870-32c (Part no. 17800)	AC Input: 100-127 V AC, 5.3 A max. per PSU, 50/60 Hz AC Input: 200-240 V AC, 2.7 A max. per PSU, 50/60 Hz DC Input: -48V DC, 11 A max. per PSU
X870-96x-8c (Part no. 17810)	AC Input: 100-127 V AC, 5.3 A max. per PSU, 50/60 Hz AC Input: 200-240 V AC, 2.7 A max. per PSU, 50/60 Hz DC Input: -48V DC, 11 A max. per PSU

## Power Supply Options

X870-32c X870-96x-8c	
Part no. 10960	770W AC power supply, Front-to-Back airflow
Part no. 10961	770W AC power supply, Back-to-Front airflow
Part no. 10962	1100W DC power supply, Front-to-Back airflow
Part no. 10963	1100W DC power supply, Back-to-Front airflow
Part no. 17115	X870 Fan Module, Front-to-Back airflow
Part no. 17116	X870 Fan Module, Back-to-Front airflow

## Interfaces

Each X870 Series switch has a USB, management, and console port. The following table lists the specific interfaces for each switch.

X870-32c (Part no. 17800)	X870-32c Base unit, 32 10Gb/25Gb/40Gb/50Gb/100Gb QSFP28 ports, unpopulated, ExtremeXOS Advanced Edge License, 2 unpopulated power supply slots, 6 unpopulated fan module
X870-96x-8c (Part no. 17810)	X870-96x-8c Base unit, 96 10Gb ports on 24 QSFP28 ports, unpopulated, 8 10Gb/25Gb/40Gb/50Gb/100Gb QSFP28 ports, unpopulated, ExtremeXOS Advanced Edge License, 2 unpopulated power supply slots, 6 unpopulated fan module slots

## Getting Help

For additional support related to X870 series switches or this document, contact Extreme Networks using one of the following methods:

<b>Product Documentation</b>	<a href="https://www.extremenetworks.com/documentation/">https://www.extremenetworks.com/documentation/</a>
<b>Global Technical Assistance Center (GTAC)</b>	Phone: 1-800-998-2408 (toll-free in U.S. and Canada) or +1-408-579-2826. For the support phone number in your country, visit: <a href="http://www.extremenetworks.com/support/contact/">http://www.extremenetworks.com/support/contact/</a>
<b>GTAC Knowledge</b>	Get on-demand and tested resolutions from the GTAC Knowledgebase, or create a help case if you need more guidance. Visit: <a href="https://gtacknowledge.extremenetworks.com/">https://gtacknowledge.extremenetworks.com/</a>
<b>The Hub</b>	A forum for Extreme customers to connect with one another, get questions answered, share ideas and feedback, and get problems solved. The community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC. Visit: <a href="https://community.extremenetworks.com">https://community.extremenetworks.com</a>
<b>Support Portal</b>	Manage cases, downloads, service contracts, product licensing, and training and certifications. Visit: <a href="http://support.extremenetworks.com/">http://support.extremenetworks.com/</a>

## Notice

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### Warranty

Warranty information for X870 series switches is located online at: [www.extremenetworks.com/go/warranty](http://www.extremenetworks.com/go/warranty)

## Regulatory and Compliance Information

### Federal Communications Commission (FCC) Notice

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**NOTE:** 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. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment uses, generates, and can radiate radio frequency energy and if not installed in accordance with the operator's manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at his own expense.

**WARNING:** Changes or modifications made to this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### Industry Canada Notice CAN ICES-3 (A)/NMB-3(A)

This digital apparatus does not exceed the class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

### Class A ITE Notice

**WARNING:** This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

### Product Safety

This product complies with the following international safety standards:

- UL 60950-1 2nd edition, A2:2014
- CAN/CSA-C22.2 No.60950-1-07 2nd Ed. 2014-10
- IEC 60950-1:2005 2nd+A1:2009+A2:2013
- EN 60950-1:2006+A11+A1+A12+A2
- 2014/35/EU
- CNS 14336-1



**Warning:** The X870 switch may be hot to touch during normal operation.

**Attention:** Le X870 peut être chaude au toucher pendant le fonctionnement normal.



**Warning:** The X870 switch is designed for installation in restricted access locations.



**Attention:** Le X870 est conçu pour une installation dans des endroits à accès restreint.

### Optical Module Compliance

Extreme Networks pluggable optical modules and direct-attach cables meet the following regulatory requirements:

- UL and/or CSA registered component for North America
- Class 1 or Class 1M Laser Product
- FCC 21 CFR Chapter 1, Sub-chapter J in accordance with FDA & CDRH requirements
- EN 60825-1:2007, EN 60825-2:2004+A1+A2 or later, European Standard
- Application of CE Mark in accordance with 2014/30/EU EMC Directive and 2014/35/EU Low Voltage Directive
- 47 CFR Part 15, Class A when installed into Extreme products

### Korea EMC Statement (KCC)

이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

### Australia (RCM)

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may require to take adequate measures.

### Electromagnetic Compatibility (EMC)

This product complies with the following: FCC 47 CFR Part 15 Subpart B Class A (US), ICES-003 (Canada), EN 55022 (ITE Emissions), EN 55024 (ITE Immunity), EN 61000-3-2 (Harmonics), EN 61000-3-3 (Flicker), 2014/30/EU (EMC Directive), EN 300 386 (Telecom), EN 50121-1 (Railroad), EN 55011 (ISM), EN 61000-6-2 (Ind. Immunity), EN 61000-6-4 (Ind. Emissions), RCM (Australia), VCCI (Japan), MSIP KCC (Korea), BSMI (Taiwan), ANATEL (Brazil), CCC (China).

### VCCI Notice

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

この装置は、クラスA情報技術装置です。この装置を家庭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

### BSMI EMC Statement — Taiwan

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

警告使用者：  
此為甲類資訊技術設備，於居住環境中使用時，可能會造成射頻擾動，在此種情況下，使用者會被要求採取某些適當的對策。

警告：此為 A 級產品，在生活環境中，該產品可能會造成無線電干擾。在這種情況下，可能需要用戶對干擾採取切實可行的措施。

### Battery Warning — Taiwan

#### 警告

如果更換不正確之電池型式會有爆炸的風險

請依製造商說明書處理用過之電池



### Battery Notice

**Warning:** This product contains a battery used to maintain product information. If the battery should need replacement it must be replaced by Service Personnel. Please contact Technical Support for assistance. Risk of explosion if battery is replaced by an incorrect type. Dispose of expended battery in accordance with local disposal regulations. **Avertissements:** Ce produit renferme une pile servant à conserver les renseignements sur le produit. Le cas échéant, faites remplacer la pile par le personnel du service de réparation. Veuillez communiquer avec l'assistance technique pour du soutien. Il y a risque d'explosion si la pile est remplacée par un type de pile incorrect. Éliminez les piles usées en conformité aux règlements locaux d'élimination des piles.

### Hazardous Substances- China and Taiwan BSMI RoHS

Guidance concerning the China and Taiwan BSMI RoHS (Restriction of Hazardous Substances) directive for this Extreme Networks® product can be found on the following web page:

[www.extremenetworks.com/support/documentation/restriction-hazardous-substances/](http://www.extremenetworks.com/support/documentation/restriction-hazardous-substances/)

The page contains tables detailing the presence of 10 substances defined by the RoHS directive.

### Hazardous Substances- EU

This product complies with the requirements of Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

### European Waste Electrical and Electronic Equipment (WEEE) Notice



In accordance with Directive 2012/19/EU of the European Parliament on waste electrical and electronic equipment (WEEE):

- 1 The symbol above indicates that separate collection of electrical and electronic equipment is required.
- 2 When this product has reached the end of its serviceable life, it cannot be disposed of as unsorted municipal waste. It must be collected and treated separately.
- 3 It has been determined by the European Parliament that there are potential negative effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment.
- 4 It is the users' responsibility to utilize the available collection system to ensure WEEE is properly treated. For information about the available collection system, please contact Extreme Customer Support at +353 61 705500 (Ireland).

# Extreme Networks

## ExtremeSwitching X870 Series Switches

### Quick Reference

### X870-32c

### X870-96x-8c