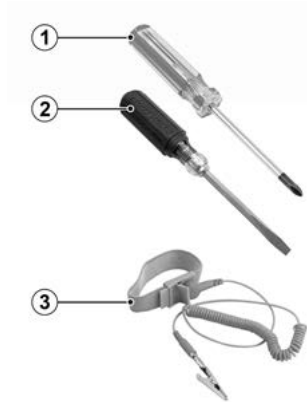# X465 Series Switches Quick Reference

Follow these steps to get your switch up and running.

For complete installation instructions see the *ExtremeSwitching: Hardware Installation Guide* at www.extremenetworks.com/documentation
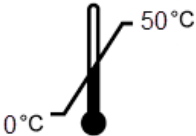
Tools You'll Need

1 #2 Phillips screwdriver (magnetic screwdriver recommended)
2 Flat-head screwdriver
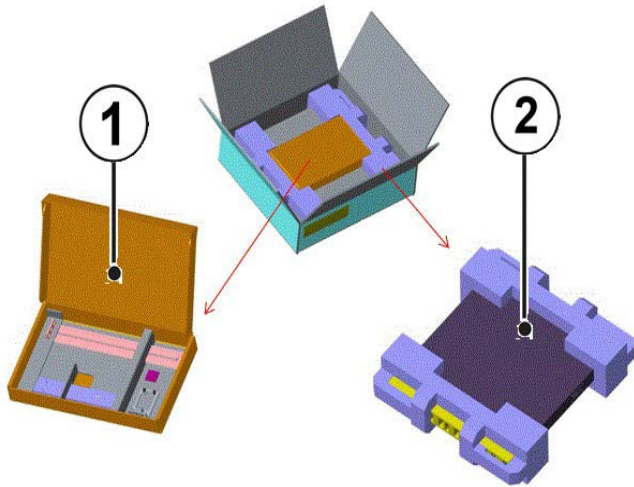**3** ESD-protective wrist strap

1 Prepare the Site

The installation site must meet the following requirements:

- Appropriate grounded power receptacles located within 1.8 m (6 ft.)
- A readily accessible device for disconnecting power, such as a breaker or master switch
- Network cabling within reach
- At least of 7.6 cm (3.0 in.) on all sides, for proper ventilation
- Temperature between 0°C (32°F) and 50°C (122°F) with fluctuations of less than 10°C (18°F) per hour

2 Unpack the Box

Remove the packing material. Break the tape seal on the non-conductive bag and remove the switch.

1 Four-post rack mount kit
2 Switch

If the switch appears to be damaged, contact Extreme Networks. See "Getting Help" for more information.

Extreme Networks does not include power input cords with this product. To purchase the correct power cord for your country, refer to www.extremenetworks.com/product/powercords/. This page lists details for purchasing a power cord from Extreme Networks or from your local supplier.
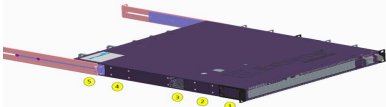
3 Install the Switch

You can install any X465 Series switch in a standard 19-inch equipment rack.

There are several options for mounting the switch in a rack: Two options are described here. For details about all of the options, see the *Hardware Installation Guide.*

Four-Post Mount, Front Mount

This procedure uses the four-post mounting kit (XN-4P-RKMT-001), which is included with your switch.
1 Attach a front bracket to one side of the switch, screwing it into the holes so that the flange (ear) is flush with the front of the switch.
2 Attach the other front bracket to the other side.
3 Attach the extension brackets to both sides of the switch, using the screws provided.
4 Attach the front brackets to the front rack posts, using the screws provided.
5 Slide the rear brackets into the extension brackets on both sides, and adjust them to the rack depth as shown.

6 Attach the rear brackets to the rear rack posts, using the screws provided.

Note: It is recommended to install the long rack ear in position -4 or -5. Do not install the long rack ear in position -2 or -3, as it will block the air openings.

Two-Post, Mid-Mount

This procedure uses the two-post mounting kit (XN-2P-RMKIT-001), which accommodates rack posts 3 inches or 6 inches wide and which can be ordered separately.

1 Attach a front bracket to one side of the switch, screwing it into the holes so that the flange (ear) is near the middle of the switch.
2 Attach the other front bracket to the other side.
3 Attach the front brackets to the front rack posts, using the screws provided.
4 Attach the rear brackets to the rack posts, using the screws provided. Select the right bracket length such that the rear end of the bracket is flush with the rear of the switch,
5 Attach both rear brackets to the side of the switch, as shown.

4 Install VIMs, Transceivers, and SSDs

(**Optional**) Versatile Interface Modules (VIMs) provide dedicated high-speed ports. Your X465 Series switch accommodates one VIM5 module, using a slot on the front of the switch.

Transceivers send and receive data over optical fiber rather than through electrical wires. Insert transceivers into any of the switch's data ports.

(**Optional**) Solid-state drives (SSDs) provide modular storage support. Your X465 Series switch accommodates one SSD module using a reserved slot on the rear of the switch, and is supported on EXOS release 30.3 and later.

See *ExtremeSwitching: Hardware Installation Guide* for details on compatible switches and SSD modules.

VIMs, transceivers, and SSDs are ordered separately.

Warning: To prevent damage to the switch or VIM, the switch must be powered OFF when removing or installing VIMs or SSD modules.

To install a VIM5 module:
1 Attach the ESD wrist strap to your wrist and connect the metal end to an appropriate ground point on the rack.
2 Ensure that the switch is completely powered down.
3 Remove the cover plate from the VIM slot (#2 Phillips screwdriver required).
4 Remove the VIM5 module from its packaging.
5 Carefully slide the VIM5 module into the slot until it is firmly in place.
6 Secure the VIM5 module using the screws provided.

To install a transceiver:

Note: Transceivers are Class 1 or Class 1M laser devices.

1 Attach the ESD wrist strap to your wrist and connect the metal end to an appropriate ground point on the rack.
2 Remove the transceiver from its packaging.
3 If applicable, remove the protective dust cover from the connector.
4 Hold the transceiver so that the connector will seat properly.
5 Carefully align the transceiver with the port slot.
6 Push the transceiver into the port slot until it clicks into place.

To install an SSD module:
1 Attach the ESD wrist strap to your wrist and connect the metal end to an appropriate ground point on the rack.
2 Ensure that the switch is completely powered down.
3 Remove the cover plate from the SSD slot (#2 Phillips screwdriver required).
4 Remove the SSD module from its packaging.
5 Carefully slide the SSD module into the slot on the rear panel until it is firmly in place.
6 Secure the SSD module using the screws provided.

5 Connect Power

X465 Series switches run on AC power.
Connect the switch to a primary power source.

Note: Installing the system as described in this guide meets the protective earth grounding requirements of the National Electrical Code (NEC), UL/CSA/IEC/EN 60950-1 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 grounding lug on the chassis and a nearby building ground point.

Connecting to the Primary Power Source

To attach your X465 Series switch to a power source, do the following:
1 Connect the AC power cord to the AC power input socket on the power supply and an AC power outlet.
2 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.

6 Update and Configure the Switch

To connect to the network, upgrade the operating-system software to the appropriate version, and configure the switch for use, follow the steps in www.extrconfig.com/exos.

Operating Conditions

Operating Temperature:
0°C (32°F) to 50°C (122°F)
Temperature restrictions apply for some models at high altitudes.
See *Hardware Installation Guide* for details.
Storage Temperature:
-40°C to 70°C (-40°F to 158°F)
Operating Relative Humidity:
5% to 95% (non-condensing)

Safety Notices

Caution! Shock hazard!
Disconnect all power inputs before servicing.

Attention! Danger de choc!
Déconnecter toutes les sources d'énergie.

Electrical Hazard: Only qualified personnel should perform installation procedures.
Risques d'électrocution: Seul un personnel qualifié doit effectuer les procédures d'installation.
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: Before mounting the device, ensure that the rack can support it without compromising stability. Otherwise, personal injury and/or equipment damage may result.
Warning: Follow appropriate ESD procedures when unpacking and handling the switch. These include unpacking the switch in an ESD-safe environment and wearing appropriate ESD protective gear, such as ESD-safe footwear and ESD wrist straps where appropriate.
Warning: This unit must be installed indoors. The unit, AC power adapter, and its cables are not designed for outdoor use.
Warning: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
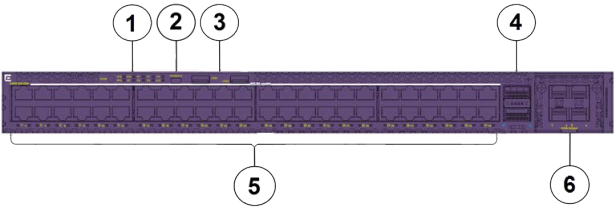**Warning:** Do not use optical instruments to view the laser output. The use of optical instruments to view laser output increases eye hazard. Use only UL/CSA, IEC/EN60825-1/-2 recognized pluggable devices.
Avertissement: Ne pas utiliser d'instruments optiques pour voir la sortie du laser. L'utilisation de instruments optiques pour afficher la sortie laser augmente les risques oculaires. Utilisez uniquement UL/CSA, IEC/EN60825-1 /-2 reconnu modules enfichables.
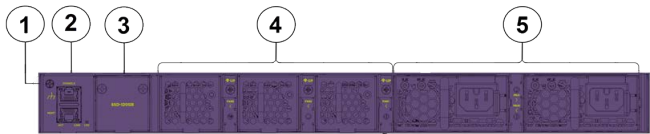
Hardware Components

Figure 1 X465 Series Switch: Front Panel (48-port model shown)

1 Mode Button and System LEDs
2 USB micro B console port
3 USB A ports
4 Stacking ports
5 Access Ports
6 VIM slot, shown with VIM installed

Figure 2 X465 Series Switch: Rear Panel

1 Grounding lug
2 RJ-45 console and management ports
3 SSD slot (reserved)
4 Fan modules
5 Power supplies

For component details, see the *Hardware Installation Guide*.

Interfaces

Each X465 Series switch includes a USB micro B console port, an RJ-45 management port, an RJ-45 console port, 2 stacking ports, 2 USB A ports for connecting to memory, and 1 unpopulated VIM5 slot. Each switch also includes an EXOS Advanced Edge license.

Additional interfaces include:

X465-48T	48 10/100/1000Mb full/half duplex MACsec capable ports, 3 fan modules, 2 unpopulated PSU slots
X465-48P	48 10/100/1000Mb full/half duplex MACsec capable ports with 802.3at Type 2 PoE (30 W), 3 fan modules, 2 unpopulated PSU slots
X465-48W	48 10/100/1000Mb full/half duplex MACsec capable ports with 802.3bt Type 4 PoE (90 W), 3 fan modules, 2 unpopulated PSU slots
X465-24MU	24 100Mb/1/2.5/5Gb ports with 802.3bt Type 3 PoE (60 W), 2 fan modules, 2 unpopulated PSU slots
X465-24MU-24W	24 100Mb/1/2.5/5Gb ports with 802.3bt Type 3 PoE (60 W) and 24 10/100/1000Mb full/half duplex MACsec capable ports with 802.3bt Type 4 PoE (90 W), 3 fan modules, 2 unpopulated PSU slots
X465-24W	24 10/100/1000Mb full/half duplex MACsec capable ports with 802.3bt Type 4 PoE (90W), 2 fan modules, 2 unpopulated PSU slots
X465-24S	24 100Mb/1Gbps SFP ports, 3 fan modules, 2 unpopulated PSU slots
X465-24XE	24 1/10GbE SFP+ MACsec and LRM capable ports, 3 fan modules, 2 unpopulated PSU slots
X465i-48W	48 10/100/1000Mb full/half duplex MACsec capable ports with 802.3bt Type 4 PoE (90 W), 3 fan modules, 2 unpopulated PSU slots

Power Supply and Fan Options

350W AC power supply (10953 & XN-ACPWR-350W-FB)	Compatible with X465-48T, X465-24S, and X465-24XE Front-to-back airflow
715W AC PoE power supply (10951 & XN-ACPWR-715W-FB)	Compatible with X465-48P, X465-48W, X465-24MU, X465-24MU-24W, X465-24W, X465i-48W Front-to-back airflow
1100W AC PoE power supply (10941 & XN-ACPWR-1100W-FB)	Compatible with X465-48P, X465-48W, X465-24MU, X465-24MU-24W, X465-24W, X465i-48W Front-to-back airflow
2000W AC PoE power supply (XN-ACPWR-2000W-F & XN-ACPWR-2000W-FB)	Compatible with X465-48P, X465-48W, X465-24MU, X465-24MU-24W, X465-24W, X465i-48W Front-to-back airflow
Spare fan module (XN-FAN-002-F)	Spare fan module, front-to-back airflow

Note: XN-ACPWR-xxx-FB power supply units cannot be used with 10941, 10951, 10953, or XN-ACPWR-2000W-F power supplies on the same switch.

Available VIM5 Modules

VIM5-4X	Versatile Interface Module with 4 10GbE (SFP+) ports
VIM5-4XE	Versatile Interface Module with 4 10GbE (SFP+) ports supporting MACsec and LRM
VIM5-4YE	Versatile Interface Module with 4 25GbE (SFP28) ports supporting MACsec
VIM5-2Q	Versatile Interface Module with 2 40GbE (QSFP) ports

Available SSD Module

XN-SSD-001-120	Modular 120GB SSD

Available Rack-Mount Kits

XN-4P-RKMT-001	Four-post fixed rack mount kit (included)
XN-2P-RMKIT-001	Two-post fixed rack mount kit (separately orderable)

Getting Help

For additional support related to X465 Series switches or this document, contact Extreme Networks using one of the following methods:

Product Documentation	https://www.extremenetworks.com/documentation/
Global Technical Assistance Center (GTAC)	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: http://www.extremenetworks.com/support/contact/
GTAC Knowledge	Get on-demand and tested resolutions from the GTAC Knowledgebase, or create a help case if you need more guidance. Visit: https://gtacknowledge.extremenetworks.com/
The Hub	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: https://community.extremenetworks.com
Support Portal	Manage cases, downloads, service contracts, product licensing, and training and certifications. Visit: http://support.extremenetworks.com/

Notice

Legal Notices

Extreme Networks, Inc. reserves the right to make changes in specifications and other information contained in this document and its website without prior notice. The reader should in all cases consult representatives of Extreme Networks to determine whether any such changes have been made.
The hardware, firmware, software or any specifications described or referred to in this document are subject to change without notice.

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All other names (including any product names) mentioned in this document are the property of their respective owners and may be trademarks or registered trademarks of their respective companies/owners.
For additional information on Extreme Networks trademarks, please see: www.extremenetworks.com/company/legal/trademarks/

Warranty

Warranty information for X465 Series series switches is located online at: www.extremenetworks.com/support/policies/

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-003(A)/NMB-003(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 classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Equipment Intended for Installation in Information Technology Equipment Rooms

Suitable for installation in Information Technology Rooms in accordance with Article 645 of the National Electrical Code and NFPA 75.

Peut être installé dans des salles de matériel de traitement de l'information conformément à l'article 645 du National Electrical Code et à la NFPA 75.

Class A ITE Notice

WARNING: This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.

Product Safety

This product complies with the following international safety standards:

- UL 62368-1 2nd Ed, 2014-12-01
- UL 60950-1 2nd edition, A2:2014
- CAN/CSA-C22.2 No.62368-1-14 2nd Ed.
- IEC/EN 62368-1, IEC/EN 60950-1
- EN 62368-1:2014/A11:2017
- EN IEC 62368-1:2020+A11:2020
- 2014/35/EU
- CNS 14336-1
- GB 4943.1

⚠ CAUTION Hot surface Do not touch

Warning: The X465 switch may be hot to the touch during normal operation.

Attention: Le X465 peut être chaude au toucher pendant le fonctionnement normal.

⚠ **Warning:** The X465 switch is designed for installation in restricted access locations.

⚠ **Attention:** Le X465 est conçus 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
- IEC/EN 60825-1:2014, IEC/EN 60825-2:2004+A1+A2 or later, European Standard

Korea EMC Statement

이 기기는 업무용 환경에서 사용할 목적으로 적
합성평가를 받은 기기로서 가정용 환경에서 사
용하는 경우 전파간섭의 우려가 있습니다.

Australia (RCM)

WARNING: This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.

Electromagnetic Compatibility (EMC)

This product complies with the following: FCC 47 CFR Part 15 Subpart B Class A (US), ICES-003 (Canada), EN55011 (CISPR Emissions), EN 55032 (ITE Emissions), EN 55035 (ITE Immunity), EN 61000-3-2 (Harmonics), EN 61000-3-3 (Flicker), EN61000-6-2 (Immunity), EN61000-6-4 (Emissions), 2014/30/EU (EMC Directive), EN 300 386 (Telecom), RCM (Australia), VCCI (Japan), MSIP KCC (Korea), BSMI (Taiwan), ANATEL (Brazil), CQC (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

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.

Taiwan BSMI 報關義務人

申請人: 香港商極進網路有限公司台灣分公司

地址: 臺北市松山區復勢里南京東路 4 段 126 號 5 樓

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。

此为A级产品，在生活环境中，该产品可能会造成无线电干扰。

在这种情况下，可能需要用户对干扰采取切实可行的措施。

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.
Avertissement: 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/
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 X465 Series Switches

Quick Reference

X465-48T
X465-48P
X465-48W
X465-24MU
X465-24MU-24W
X465-24W
X465-24S
X465-24XE
X465i-48W

◆ Extreme®