

NX-7500 Series Integrated Services Platform

Installation Guide

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Preface

Text Conventions

The following tables list text conventions that are used throughout this guide.

Table 1: Notice lo	cons	
Icon	Notice Type	Alerts you to
(General Notice	Helpful tips and notices for using the product.
•	Note	Important features or instructions.
	Caution	Risk of personal injury, system damage, or loss of data.
	Warning	Risk of severe personal injury.
New	New	This command or section is new for this release.

Table 2: Text Conventions

Convention	Description		
Screen displays	This typeface indicates command syntax, or represents information as it appears on the screen.		
The words enter and type	When you see the word "enter" in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says "type."		
[Key] names	Key names are written with brackets, such as [Return] or [Esc] . If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press [Ctrl]+[Alt]+[Del]		
Words in italicized type	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles.		

Platform-Dependent Conventions

Unless otherwise noted, all information applies to all platforms supported by ExtremeXOS[®] software, which are the following:

- ExtremeSwitching[®] switches
- Summit[®] switches
- SummitStack[™]



When a feature or feature implementation applies to specific platforms, the specific platform is noted in the heading for the section describing that implementation in the ExtremeXOS command documentation (see the Extreme Documentation page at http://documentation.extremenetworks.com). In many cases, although the command is available on all

platforms, each platform uses specific keywords. These keywords specific to each platform are shown in the Syntax Description and discussed in the Usage Guidelines sections.

Providing Feedback to Us

We are always striving to improve our documentation and help you work better, so we want to hear from you! We welcome all feedback but especially want to know about:

- Content errors or confusing or conflicting information.
- Ideas for improvements to our documentation so you can find the information you need faster.
- Broken links or usability issues.

If you would like to provide feedback to the Extreme Networks Information Development team about this document, please contact us using our short online feedback form. You can also email us directly at internalinfodev@extremenetworks.com.

Getting Help

If you require assistance, contact Extreme Networks using one of the following methods:

- GTAC (Global Technical Assistance Center) for Immediate Support
 - **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: www.extremenetworks.com/support/contact
 - Email: support@extremenetworks.com. To expedite your message, enter the product name or model number in the subject line.
- Extreme Portal Search the GTAC knowledgebase, manage support cases and service contracts, download software, and obtain product licensing, training, and certifications.
- The Hub A forum for Extreme customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

Before contacting Extreme Networks for technical support, have the following information ready:

- Your Extreme Networks service contract number and/or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any action(s) already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers



Extreme Networks Documentation

To find Extreme Networks product guides, visit our documentation pages at:

Current Product Documentation	www.extremenetworks.com/documentation/
Archived Documentation (for earlier versions and legacy products)	www.extremenetworks.com/support/documentation-archives/
Release Notes	www.extremenetworks.com/support/release-notes

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1 Overview

Package Contents Accessories Power Supplies Power Supply Status LEDs Power Protection

The NX-7500 Series Integrated Services Platform lets you centrally administer networks of up to 2,048 WLAN Access Points geographically dispersed over small or medium sized enterprise locations. WiNG Access Points intelligently handle the traffic flows, quality of service and security at remotely distributed locations, while the NX-7500 series integrated services platforms provide a single point for configuration, policy setting, and remote troubleshooting.

Hotspot configuration, security policy management, and statistics aggregation are all done by one integrated services platform. This efficient WLAN architecture makes controlling the network easier, and reduces the hardware expense required to support large networks.

Package Contents

An NX-7500 series Integrated Services Platform ships with the following:

- NX-7500 series Integrated Services Platform
- Console cable
- Rack mount brackets
- NX-7510/NX-7520/NX-7530 Integrated Services Platform Installation Guide (this document)

Accessories

The following accessories are available for NX-7500 series Integrated Services Platform:

- 2 port 10Gb Network Mezzanine Card (NMC) module for use with 10Gb SFP+ transceivers
- 10GbPS short range 850nm multi-mode SFP+ transceiver for use with 10Gb NMC
- 10GbPS long range 10km single-mode SFP+ transceiver for use with 10Gb NMC
- 4 port 10Gb NMC Module for use with 1Gb SFP transceivers
- 1GbPS short range SFP transceiver for use with 1Gb NMC
- 1GbPS long range SFP transceiver for use with 1Gb NMC
- Spare AC power supply for NX-7510 or NX-7530
- Spare DC power supply for NX-7510 or NX-7530
- Mounting kit with sliding rails
- Spare 500GB hard drive for NX-7530

Additional Recommended Equipment:

• Standard, grounded 100-240 VAC 50/60 Hz connection



- Standard 19-inch 1U height equipment rack
- Depending on the power supply, an AC or DC Uninterruptible Power Supply (UPS) is recommended

Power Supplies

NX-7510 and NX-7530 integrated services platforms are initially configured with a single AC power supply. An NX-7520 integrated services platform is initially configured with two DC power supplies. Installation of an Uninterruptible Power Supply (UPS) is recommended if a second power supply is installed in an NX-7510 or NX-7530. To replace a failed power supply or install a new power supply, see NX-7500 Series Integrated Services Platform Power Supply Installation on page 12

Power Supply Status LEDs

Each NX-7500 AC or DC power supply module has a single bi-color LED to indicate power supply status. The LED is visible on the rear panel of each installed power supply.

State	Description
Off	No power to all power supplies.
Flashing red	No input power.
Flashing blue or green	Power present. Only standby output on.
Blue or green	Power supply on. Normal operation.
Red	Power supply failure.
Flashing red/blue or Flashing red/green	Power supply warning. Reaching end or life or exceeding limits.

The LED functionality for the power supplies is listed in the following table:

Power Protection

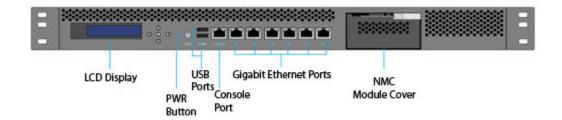
- If possible, use a circuit dedicated to data processing equipment. Commercial electrical contractors are familiar with wiring for data processing equipment and can help with the load balancing of these circuits.
- Install surge protection. Be sure to use a surge protection device between the electricity source and the NX-7500 series integrated services platform.
- Install an Uninterruptible Power Supply (UPS). A UPS provides continuous power during a power outage. Some UPS devices have integral surge protection. UPS equipment requires periodic maintenance to ensure reliability. A UPS of the proper capacity for the data processing equipment must be purchased.



2 Hardware Installation

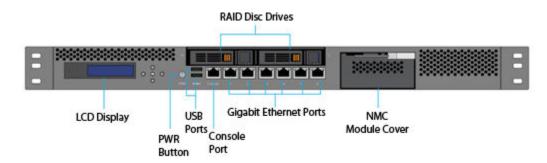
Warnings Cautionary Statements Site Preparation Safety Instructions for Rack Mount Installations Installing the NX-7500 Series Integrated Services Platform NX-7500 Series Integrated Services Platform Power Supply Installation NX-7500 Series Integrated Services Platform NMC Installation NX-7500 Series Integrated Services Platform SFP Installation NX-7530 Integrated Services Platform Disc Drive Assembly Replacement NX-7510/NX-7520/NX-7530 Series Slide Rail Kit Installation Instructions

The following sections describe the hardware installation for the NX-7500 series integrated services platform.



The following figure represents the front of the NX-7510 and NX-7520 models:

The following figure represents the front of the NX-7530 model:



To prepare for the installation:

- 1 Match the model number on the purchase order with the model numbers in the packing list and on the integrated services platform.
- 2 Verify the contents of the box include the intended NX-7500 series integrated services platform and the included hardware matches the package contents.



Part Number	Description
NX-7510-100R0-WR	NX-7510 base server appliance with single AC power supply
NX-7520-100R0-WR	NX-7520 base server appliance with dual DC power supply
NX-7530-100R0-WR	NX-7530 single AC power supply server appliance with RAID

Warnings

- Read all installation instructions and site survey reports, and verify correct equipment installation before connecting the appliance to its power source.
- Remove jewelry and watches before installing this equipment.
- Verify the unit is grounded before connecting it to the power source.
- Verify any device connected to this unit is properly wired and grounded.
- Connect all power cords to a properly wired and grounded electrical circuit.
- Verify the electrical circuits have appropriate overload protection.
- Attach only approved power cords to the device.
- Verify the power connector and socket are accessible at all times during the operation of the equipment.
- Do not install this equipment or work with its power circuits during thunderstorms or other weather conditions that could cause a power surge.
- Verify there is adequate ventilation around the device, and ambient temperatures meet equipment operation specifications.

Cautionary Statements



Caution

There are no user-serviceable components inside the NX-7500 series integrated services platform. Opening the chassis will void the warranty.



Caution

Caution

BIOS settings on the NX-7500 series integrated services platform should not be changed. Changing any settings in the BIOS will void the warranty on the integrated services platform.

A

To prevent the integrated services platformfrom overheating, never install in an enclosed area not properly ventilated or cooled. For proper airflow, keep the front and back sides of the integrated services platform clear of obstructions and away from the exhaust of other equipment.



The recommended operating temperature is 32°F to 104°F/0°C to 40°C. Installation in a closed or multi-rack assembly may raise the immediate ambient temperature above the average room temperature. Exercise due caution.



Caution

Caution

Ensure the electrical circuit through which the integrated services platform is powered can safely accommodate a 300 Watt power supply.

Caution



It is recommended you connect the NX-7500 series integrated services platform to an Uninterruptible Power Supply (UPS). There are instances in which the system software could become corrupt and un-recoverable in the event of power loss, for example, during a system upgrade, database backup or database restore operation.

Site Preparation

- Consult your site survey and network analysis reports to determine specific equipment placement, power drops, and so on.
- Assign installation responsibility to the appropriate personnel.
- Identify and document where all installed components are located.
- Provide a sufficient number of power drops for your equipment.
- Ensure adequate, dust-free ventilation to all installed equipment.
- Identify and prepare Ethernet and console port connections.
- Verify cable lengths are within the maximum allowable distances for optimal signal transmission.

Safety Instructions for Rack Mount Installations

Rack Mount Brackets	Do not lift the NX-7500 series integrated services platform using the rack mount brackets.
Rack Mount Rails	Use only industry-standard mounting kits when installing the NX-7500 series integrated services platforms, as improper mounting may result in hardware failure and hazardous conditions. It is recommended to use the mounting rails included with the integrated services platform.
Elevated Operating Ambient	If installing the NX-7500 series integrated services platform in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than the room ambient temperature. Consideration should be given to installing the appliance in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.
Reduced Air Flow	Installation of the NX-7500 integrated services platform in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
Mechanical Loading	Mounting the NX-7500 integrated services platform in a rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
Circuit Overloading	Consideration should be given when connecting the NX-7500 series integrated services platform to the supply circuit sothat protection is provided to the NX-7500 series integrated services platfrom and supply wiring to avoid circuit overloads. Carefully review the equipment nameplate ratings when addressing this concern.



Reliable Earthing Reliable earthing of the rack mounted NX-7500 integrated services platform should be maintained.

Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

Installing the NX-7500 Series Integrated Services Platform

- 1 Follow the instructions supplied with the rail kit to mount the NX-7500 series integrated services platform in an equipment rack.
- 2 Connect the power cords for all power supplies.

The following figure represents the back of the NX-7510 model with a single AC power supply:



The following figure represents the back of the NX-7520 model with two DC power supplies:



The following figure represents the back of the NX-7530 model with a single power supply:



NX-7500 Series Integrated Services Platform Power Supply Installation



Warning

Power down the the integrated services platform and disconnect all power cords prior to installing or replacing a power supply.



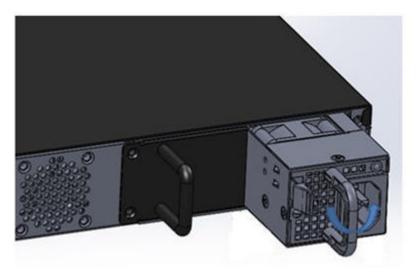
Caution

Ensure that the connectors at on the back of the power supply do not come into contact with your hands or the packing material as you unpack the power supply. Avoid damaging the connectors as you insert the power supply into the integrated services platform.

To remove a power supply and install a replacement power supply:

- 1 Remove the power cord from the power supply to be replaced.
- 2 Push the locking latch to the right and remove the power supply.

- 3 Unpack the AC or DC power supply module and carefully insert it into the NX-7500 integrated services platform.
- 4 Press the locking latch to lock the power supply in place.
- 5 Observe that the power supply light is illuminated to verify that the power supply is operating properly.



Installing an Additional Power Supply for NX-7510 or NX-7530 Integrated Services Platform

To install an additional power supply for an NX-7510 or NX-7530 integrated services platform:

- 1 Unpack the AC or DC power supply module and carefully insert it into the NX-7510 or NX-7530 integrated services platform.
- 2 When installing a second power supply in an NX-7510 or NX-7530 integrated services platform, remove the blank cover from the back.
- 3 Press the locking latch to lock the power supply in place.
- 4 Plug the power cord into the power supply.
- 5 Observe that the power supply light is illuminated to verify that the power supply is operating properly.

Note

When two power supplies are installed, both power supplies should be properly connected to a power source and powered up. An audible beep and display of a red LED indicates that a power supply is not properly connected to a power source.

NX-7500 Series Integrated Services Platform NMC Installation



Warning

Power down the integrated services platform and disconnect all power cords prior to installing or replacing the Network Mezzanine Card (NMC).



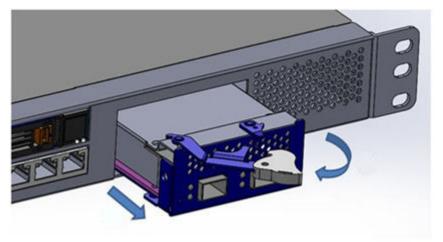


The NMC module uses lasers. The lasers are compliant with the requirements for a Class 1 laser product and are inherently eye safe in normal operation. However, you should never look directly at any visible laser when the module is operational.

To install an NMC:

Caution

- 1 If the integrated services platform is running, perform a shutdown.
- 2 Wait until the LCD panel is no longer illuminated to confirm that the integrated services platform has successfully shut down.
- 3 Disconnect all power cords from the integrated services platform.
- 4 Unlock the mounting latch on the blank NMC unit or functional NMC and pull the lever to remove.



Caution

Ensure that the connectors on the back of the NMC do not come into contact with your hands or the packing material as you unpack the NMC. Avoid damaging the connectors as you insert the NMC into the integrated services platform.

- 5 Remove the new NMC from the packing.
- 6 Carefully align and insert the NMC into the NX-7500.
- 7 Press the locking latch to lock the NMC in place.
- 8 Reconnect all power cords to the integrated services platform.
- 9 Apply power to the integrated services platform.
- 10 Verify that the integrated services platform LCD panel is illuminated.
- 11 Login in to the Management Interface and verify that the replacement NMC is operational.

NX-7500 Series Integrated Services Platform SFP Installation

The NX-7500 series integrated services platform supports use of SFP transceivers.

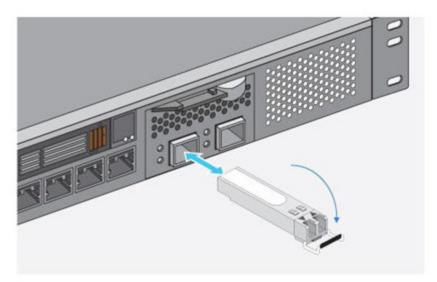


SPF transceivers are keyed so that they can only be installed with the correct orientation.

To install a SFP transceiver:



1 Insert the SFP into the integrated services platform with the optical connector facing out and the slot connector facing down.



2 Press the transceiver into the slot until it clicks into place.



Only install 10Gb SPF+ transceivers in 10Gb NMC modules and 1Gb SPF transceivers in 1Gb NMC modules.

NX-7530 Integrated Services Platform Disc Drive Assembly Replacement



Warning

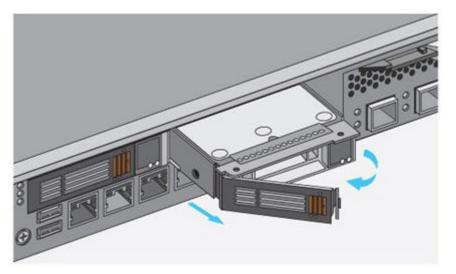
Power down the integrated services platform and disconnect all power cords prior to installing or replacing the disc drive.

The NX-7530 integrated services platform configuration includes a hard drive disc assembly and Redundant Array of Independent Disks (RAID).

To replace a disc drive assembly:

- 1 Remove power from the integrated services platform.
- 2 Press the release button on the right side of the disc drive assembly to release the assembly lock.

3 Pull the hard drive handle to the left and remove the hard drive from the drive bay.



- 4 Firmly insert the new disc drive assembly into the drive bay.
- 5 Push on the disc drive assembly until the lever locks in place.
- 6 Apply power to the integrated services platform.

When the new disc drive assembly is properly installed, the system rebuild will launch automatically. This process may take up to two hours. To monitor the progress of the system rebuild, login to the Command Line Interface (CLI) and enter the show raid command to display the current status.

NX-7510/NX-7520/NX-7530 Series Slide Rail Kit Installation Instructions

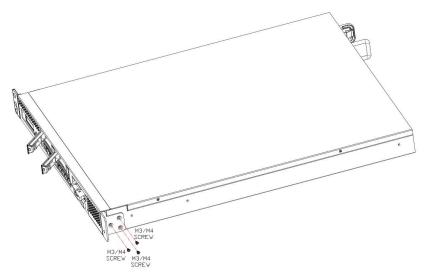
Follow this procedure to install the slide rail for an NX-7500 series platform:

1 Using a Phillips head screwdriver, remove the mounting bracket screws from both sides of unit.

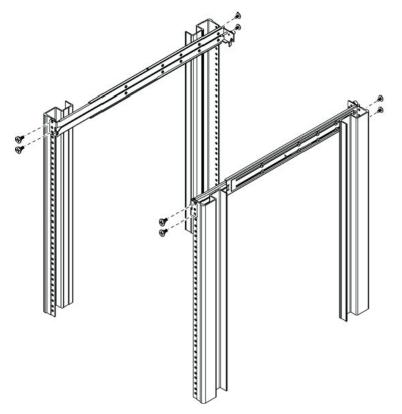


Put the screws aside to be used when attaching the brackets for the slide rail.

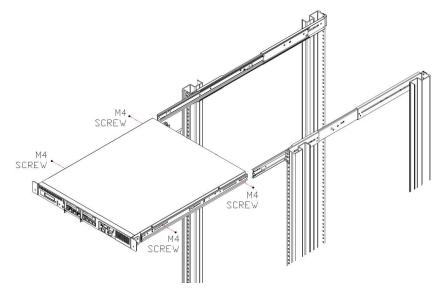
2 Position the slide rail brackets so that the single hole at the front of the bracket is closest to the bottom of the unit. Attach the slide rail brackets using the mounting bracket screws removed.



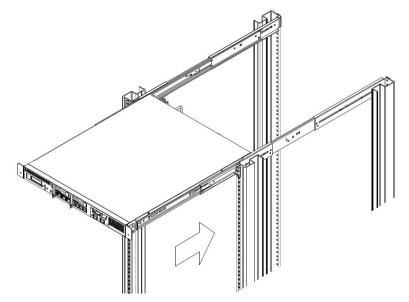
3 Refer to the instructions included with the slide rail kit to separate each slide rail into two pieces and secure the outer slide rails to the rack using two screws on either end.



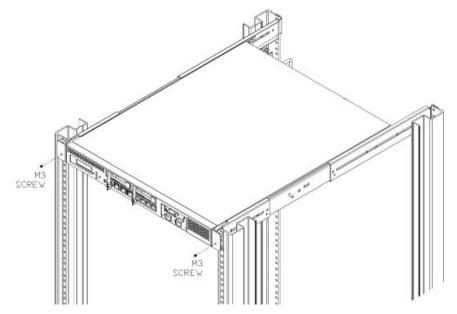
4 Using the four M4 screws supplied with the kit, attach the inner slide rails to the sides of the unit.



5 Align the inner and outer slide rails and carefully insert the unit into the rack.



6 When the front of the unit is flush against the rack, securely attach the unit using the two M3 screws supplied with the kit.



3 NX-7500 Series Specifications

Physical Specifications

Dimensions	 1U, rack mountable 17.2 in W x 1.76 in. H x 21.28 in. D 430 mm W x 42 mm H x 532 mm D
Weight (with 1 power supply)	 NX-7510 -19 lb./8.62 kg NX-7520 - 20 lb./9.07 kg NX-7530 - 21 lb./9.52 kg

Environmental Specifications

Operating Temperature	32°F to 104°F/0°C to 40°C
Storage Temperature	-4°F to 167°F/-20°C to 70°C
Operating Humidity	5% to 85% RH at 104° F/40° C (non-condensing)
Storage Humidity	5% to 95% RH (non-condensing)

Power Specifications

Power Supply	 NX-7510/ NX-7530 - 300 Watts, 100-240V AC PSU @ 50Hz-60Hz NX-7520 - 300 Watts, -48V DC
Typical Power Consumption	110 Watts

4 Regulatory Information

Radio Frequency Interference Requirements - FCC Radio Frequency Interference Requirements - Canada CE Marking and European Area (EEA) Statement of Compliance Japan (VCCI) - Voluntary Control Council for Interference Class A ITE Korea Warning Statement for Class A ITE Chinese Warning Statement for Class A ITE Waste Electrical and Electronic Equipment Turkish WEEE Statement of Compliance End-User Software License Agreement China RoHS Compliance

This guide applies to the following Model Numbers: NX-7510, NX-7520, NX-7530 devices.

All Extreme Networks devices are designed to be compliant with rules and regulations in locations they are sold and will be labeled as required. Local language translations are available at the following Website: www.extremenetworks.com/documentation/

Any changes or modifications to Extreme Networks equipment, not expressly approved by Extreme Networks could void the user's authority to operate the equipment. Extreme Networks devices are professionally installed, the Radio Frequency Output Power will not exceed the maximum allowable limit for the country of operation.



Warning

This product is designed and approved for indoor deployments only and is not intended to be connected to exposed (outdoor) networks.

Radio Frequency Interference Requirements - FCC

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 commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Radio Frequency Interference Requirements - Canada

CAN ICES-3 (A)/NMB-3(A).

CE Marking and European Area (EEA)



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.

Statement of Compliance

Extreme Networks hereby declares that this radio equipment is in compliance with all applicable Directives, 2014/30/EU, 2006/95/EC, and 2011/65/EU. A Declaration of Conformity may be obtained from www.extremenetworks.com.

Japan (VCCI) - Voluntary Control Council for Interference Class A ITE

この装置は、情報処理装置等電波障害自主規制協議会 (VCCI) の基準に基づくクラス 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。

Korea Warning Statement for Class A ITE

기 종 별	사용 자 안 내 문
A급 기기	이 기기는 업무용(A급) 전자파적합기기로서 판매자
(업무용 방송통신기자재	또는 사용자는 이 점을 주의하시기 바라며,
	가정외의 지역에서 사용하는 것을 목적으로
	합니다.

Chinese Warning Statement for Class A ITE

<u> 薯告</u>

<u>此为A级产品,在生活环境中,该产品可能会造成无形电干扰。在这种情况下,可能需要用户对干扰采取切</u> <u>实可行的措施。</u>

Waste Electrical and Electronic Equipment



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 Environmental Compliance at Green@extremenetworks.com.

Turkish WEEE Statement of Compliance

EEE Yönetmeliğine Uygundur

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部件名称 (Parts)	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
金属部件 (Metal Parts)	Х	0	0	0	0	0
电路模块 (Circuit Modules)	Х	0	0	0	0	0
电缆及电缆组件 (Cables and Cable Assemblies)	0	0	0	0	0	0
塑料和聚合物部件 (Plastic and Polymeric Parts)	0	0	0	0	0	0
光学和光学组件 (Optics and Optical Components)	0	0	0	0	0	0
电池 (Batteries)	0	0	0	0	0	0

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