



NETGEAR[®]

8800 Series 100-240VAC PSU XCM88PS1 Hardware Installation Guide

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100-240VAC PSU XCM88PS1

Installation Note

This installation note provides important safety information, specifications, and instructions for installing and removing the NETGEAR 8800 Series 100-240VAC PSU XCM88PS1. This power supply unit can be installed only in NETGEAR 8800 Series switches.

This note applies only to the 8800 Series 100-240VAC PSU. For detailed information about NETGEAR switches and all of their compatible PSUs, see the product data sheets available online at www.netgear.com.

Overview

NETGEAR 8800 Series 100-240VAC PSUs are fully fault tolerant and load-sharing in an N+1 configuration. After the system is properly configured, should one PSU fail, the others will provide sufficient power to operate a fully loaded switch. The power supply bay can accommodate up to six hot-swappable 8800 Series 100-240VAC PSUs. See the *NETGEAR 8800 Series Chassis Switch User Manual* for information on configuring your switch.

The front panel on each 8800 Series 100-240VAC PSU contains two cooling fans. Airflow enters from the front vents on the PSU and exits to the rear vents of the switch. Airflow through the 8800 Series 100-240VAC PSU AC is independent from the airflow that exists through the rest of the switch.

The AC input is located on the switch directly in back of each power supply bay. The front of the 8800 Series 100-240VAC PSU has a handle with a lever mechanism for both insertion and removal.

Safety Information

Only trained service personnel should perform service to switches and their components. Trained service personnel have read all related installation manuals, have the technical training and experience necessary to be aware of the hazards to which they are exposed in performing a task, and are aware of measures to minimize the danger to themselves or other persons.

Before installing an 8800 Series 100-240VAC PSU into your network:

- Read the latest installation and safety information provided in the hardware installation guide that describes your switch.
- See Appendix A of the hardware installation guide that describes your switch for additional information regarding regulatory compliance certifications.

You can download hardware installation guides from www.netgear.com.

Note: Die deutsche Version der für dieses Produkt von NETGEAR relevanten Sicherheitshinweise finden sich im Abschnitt "Sicherheitshinweise" im Hardware-Installierungsführer des Switch. Dieses Installationshandbuch steht auf der folgenden Webseite zum Download zur Verfügung: www.netgear.com.



WARNING!

NETGEAR 8800 Series 100-240VAC PSUs do not have switches for turning the unit on and off. Remove the wall plug from the electrical outlet to disconnect the power to an 8800 Series 100-240VAC PSU. Ensure that this connection is easily accessible.

Do not connect the power supply into an electrical outlet when the power supply is outside the chassis; doing so would expose a hazardous energy and poses a potential shock and fire hazard.



WARNING!

NETGEAR 100-240VAC PSU XCM88PS1 Netzteile haben keinen An- Aus Schalter. Die Stromzufuhr zu einem 100-240VAC PSU XCM88PS1 Netzteil wird durch das Ziehen des Netzkabels unterbrochen. Es ist sicherzustellen das diese Verbindung leicht zugänglich ist.

Das Netzteil nicht ausserhalb von dem Gehäuse an das Netz anschliessen da hierdurch gefährliche Spannungen zugänglich werden sowie die Gefahr von einem elektrischem Schlag und/ oder Feuergefahr besteht.

Power Supply Cords

The following power supply cords are provided in the package with the PSU:

Table 1. Power supply cords

Model	Product Name	Region
10041	Power cord, 10A, NEMA 5-15P, IEC320-C13, Right Angle	North America
10042	Power cord, 12A, JISC8303, IEC320-C13, Right Angle	Japan
10043	Power cord, 10A, CEE 7/7, IEC320-C13, Right Angle	Europe
10044	Power cord, 10A, BS1363, IEC320-C13, Right Angle	Great Britain
10046	Power cord, 10A, NAS3112, IEC320-C13, Right Angle	Australia

Each power cord is enclosed in a plastic wrapper with its model number and product name on it. Locate the correct cord based on your region.

If you use a 110 V AC power supply cord, the maximum DC output power of the PSU is 700 W. If you use a 220V AC power supply cord the maximum DC output power of the PSU is 1200 W.

All power supply cords must meet the following requirements:

- The power supply cord must be agency-certified for country of use, and rated at 10A by in-country regulatory authority.
- The power supply cord must have an IEC 320 C13, 90-degree angle plug to connect to the IEC320 C14 connector on the power supply.
- The power supply cord must have an appropriately rated and approved wall plug applicable to the country of installation.
- For cords up to 6 feet (2 m) long, the wire size must be 18 AWG (.75 mm²) minimum; over 6 feet, the minimum wire size is 16 AWG (1.0 mm²).



WARNING!

Make sure that the source outlet is properly grounded before plugging the AC power cord into the 8800 Series 100-240VAC PSU.

Pre-Installation Requirements

You need the following tools and equipment to install or remove a 8800 Series 100-240VAC PSU:

- ESD-preventive wrist strap
- Power supply cord
- Thermal protective gloves (required for removal; PSU may be hot to touch)

Installing an 8800 Series 100-240VAC PSU



CAUTION:

Make sure that the PSU circuit is not overloaded. Use proper over-current protection, such as a circuit-breaker, to prevent over-current conditions.

To install an 8800 Series 100-240VAC PSU:

1. Attach an ESD-preventive wrist strap to your bare wrist and connect the metal end to the ground receptacle, at the top left corner of the switch front panel.
2. Verify that the PSU is right side up and the locking handle is open as shown in the following figure:

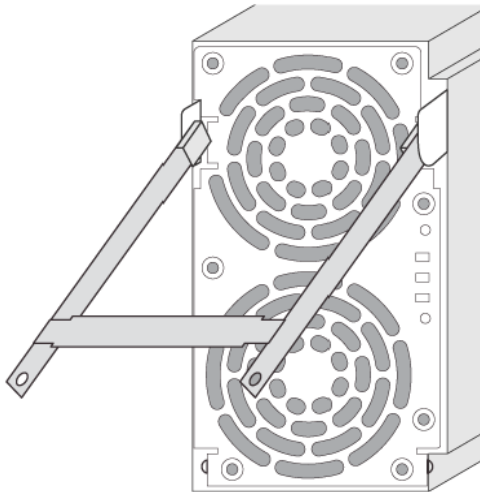


Figure 1. 8800 Series 100-240VAC PSU with locking handle open

3. Carefully slide the 8800 Series 100-240VAC PSU all the way into the power supply bay (see the following figure).



CAUTION:

Do not slam the 8800 Series 100-240VAC PSU into the switch backplane. Use the locking handle to secure the 8800 Series 100-240VAC PSU into the switch.

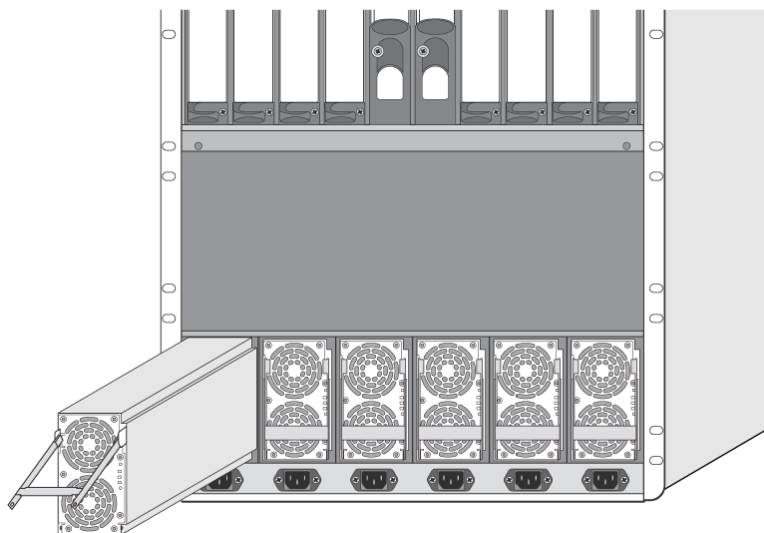


Figure 2. Installing a 8800 Series 100-240VAC PSU

4. Secure the PSU by pushing down on the locking handle until it clicks into place.
5. If you are replacing a power supply, you do not need to unplug the AC power cord. For a newly installed power supply, connect an appropriate AC power cord as follows:
 - a. If necessary, remove the power cord retaining bracket as described in the hardware installation guide for your switch.
 - b. Connect the new AC power cord to the AC input on the front of the switch to the wall outlet on the other end. after the cord is connected, re-install the power cord retainer.
 - c. Attach the power cord retaining bracket as described in the hardware installation guide for your switch.

Note: Leave the ESD strap permanently connected to the switch so that it is always available when you need to handle ESD-sensitive components.

To install additional 8800 Series 100-240VAC PSUs, repeat steps **step 2** through **step 5**.

Removing an 8800 Series 100-240VAC PSU



CAUTION:

An operating AC PSU may be hot to the touch; use thermal protective gloves when handling the 8800 Series 100-240VAC PSU during removal.

To remove a PSU:

1. Attach an ESD-preventive wrist strap to your wrist. If it is not already attached, connect the metal end to the ground receptacle at the top-left corner of the switch front panel.
2. For the AC power cord:
 - If you are replacing only the power supply and you will use the existing AC power cord for the new PSU, you do not need to unplug the AC power cord.
 - If you are removing and replacing an AC power cord:
 - a. Remove the power cord retainer as described in the hardware installation guide for your switch.
 - b. Completely disconnect and remove the old power cord.
 - c. Connect the new AC power cord to the AC input on the front of the switch and then connect the opposite end of the AC power cord to the wall outlet.
 - d. After the cord is connected, re-install the power cord retainer.

Note: For information about power cord requirements, see *Power Supply Cords* on page 6.




3. Lift the handle on the PSU.
4. Pull the handle of the PSU to disconnect the PSU from the power connector at the back of the power supply bay. Slide the PSU partway out of the bay.
5. Wearing thermal protective gloves, place both hands under the PSU to support the weight as it is pulled out from the switch.
6. To install a replacement PSU, follow the instructions in the previous section, *Installing an 8800 Series 100-240VAC PSU* on page 7.

Note: Leave the ESD strap permanently connected to the switch so that it is always available when you need to handle ESD-sensitive components.

Front Panel LEDs

The front panel of the 8800 Series 100-240VAC PSU provides status LEDs. The following table describes the operation of these LEDs.

Table 2. 8800 Series 100-240VAC PSU Front Panel LEDs

PSU Condition	 Power Green	 Predictive Fail Amber	 Fail Amber
Power supply AC outputs working normally	On	Off	Off
AC input power present/standby output on	Blinking	Off	Off
Current limit on 48 VDC output	On	Off	Blinking
Predictive failure	On	Blinking	Off
No input power to this PSU only	Off	Off	On
No input power to any PSU	Off	Off	Off
Power supply failure	Off	Off	On

Fuse

The 8800 Series 100-240VAC PSU line and neutral legs are both fused. Power to the switch may still be live if the neutral fuse is open. This is not a field operator replaceable fuse. In the event of failure, immediately return the 8800 Series 100-240VAC PSU for a complete replacement.



WARNING!

Field operators must not attempt to configure or replace fuses within 8800 Series 100-240VAC PSUs! In the event of failure, immediately return the defective PSU for a complete replacement.

Specifications

The 8800 Series 100-240VAC PSU functions from 90 V to 264 V and 47 Hz to 63 Hz AC Input. Each PSU provides 700 W to the system if the AC input is in the 110 V low-line output power range and 1200 W to the system if the AC input is in the 220 V high-line output power range.

More PSUs are needed to support the load if the low-line power range is used to power the switch. The software determines the maximum available power required for the switch and enables the modules accordingly.

The following table lists the specifications for the 8800 Series 100-240VAC PSU.

Table 3. 8800 Series 100-240VAC PSU Power Supply Specifications

Characteristic	Specification
Nominal Input	100-240 V~, 60/50 Hz, 10 A max
AC Voltage Input Range	90-264 V~
Maximum Input Amperages	7 A @ 200 V~ (high-line) 10 A @ 90 V~ (low-line)
AC Line Frequency	47 to 63 Hz
AC Power Supply Input Socket	IEC 320 C14
Minimum Wire Size	16 AWG (1.0mm ²) copper stranded (pre-approved cord set for county of use)
Output	
DC Output	48 V $\overline{\text{---}}$, 24 A / 12 V $\overline{\text{---}}$, 4 A (high-line) 48 V $\overline{\text{---}}$, 13.5 A / 12 V $\overline{\text{---}}$, 4 A (low-line)
DC Output Power (W)	700 / 1200 W
Operating Conditions	
Operating temperature	0°C to 40°C
Storage temperature	-40°C to 70°C
Operating humidity	10% to 95% relative humidity, non-condensing
Operational shock	30 m/s ² (3g)