

EX Series Redundant Power System



Product Overview

The Juniper Networks EX Series Ethernet Switches redundant power system (RPS) acts as a backup device that provides redundant power to up to six connected Juniper Networks EX2200 and EX3300 Ethernet Switches, with or without Power over Ethernet (PoE). The RPS ensures operational continuity following a main power supply or power feed failure, and can be easily managed and configured from the command-line interface of any connected EX Series switch.

Product Description

The Juniper Networks® EX Series Ethernet Switches redundant power system (RPS) provides backup power to connected Juniper Networks EX2200 and EX3300 Ethernet Switches, ensuring operational continuity in the event of a main power supply or power feed failure.

Features and Benefits

The EX Series RPS supports a number of key features, including the following:

- **Connects to up to six switches:** The EX Series RPS can be connected to a maximum of six switches (any combination of EX2200 and EX3300s) using RPS switch connectors.
- **Supports three power supplies:** An EX Series RPS can accommodate up to three hot-insertable, hot-removable, field-replaceable power supplies. All three power supplies must be the same type, and currently only the EX-PWR3-930-AC power supply is supported. Mixing different types of power supplies is not supported.
- **Provides backup power to three switches simultaneously:** The EX Series RPS can power up to three switches simultaneously (out of a total of six switches connected to the RPS) when all three power supplies are installed.
- **Protection:** The EX Series RPS provides integral protection against high-voltage input and output, as well as against short circuits.
- **Configurable switch priority:** The EX Series RPS operates in parallel with the main power supplies of the connected switches, providing backup power based on the connected switches' configured priority and port number. By default, all switches share the same priority and precedence is based on connector position. Switch priorities can be reconfigured from the switch command-line interface (CLI) to supersede priority based on connector position. In the event of a power feed failure on a connected switch, the EX Series RPS automatically senses the switch's power needs (PoE or non-PoE) and delivers adequate uninterrupted power to the switch with no switch reboot required. When the switch's internal power is restored, the EX Series RPS stops supplying power to that switch and instead delivers power to any other switches that require backup power, based on their configured priority.
- **Multi-backup capability:** A single power supply in the EX Series RPS can actively power up to two non-PoE switches or one PoE-enabled switch.
- **19-inch mounting:** The EX Series RPS can be mounted on a 19-inch equipment rack or cabinet using mounting brackets. The EX Series RPS can also be mounted in the same rack or cabinet as the supported switches.
- **Easy management:** The EX Series RPS is managed and configured from the CLI of any connected EX Series switch.

Deployment with EX3300 Switch with Virtual Chassis Technology

The EX3300 Ethernet Switch supports Juniper Networks Virtual Chassis technology, which enables up to six EX3300 switches to be interconnected using Virtual Chassis Extensions (VCEs) over uplink ports. With Virtual Chassis technology, the interconnected switches behave like a single, logical device, delivering a scalable, pay-as-you-grow solution for expanding network environments.

The EX Series RPS can be used along with other redundant power systems to provide redundant power to an entire EX3300 Virtual Chassis configuration with six members.

The EX Series RPS offers flexible rack mounting options and can be deployed facing either the power supplies or the front-panel ports of the connected switches.

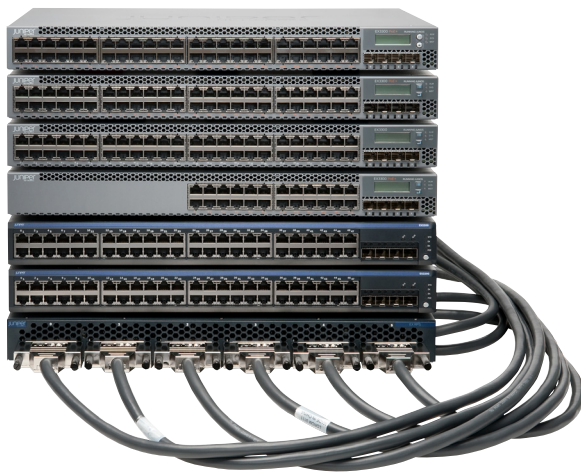


Figure 2: EX Series RPS deployed with EX3300 and EX2200 switches

Deployment Scenarios

EX3300 switches can be deployed either with a single power feed providing electricity to both the switch and the EX Series RPS, or with a dual power feed. In the second case, one power feed is connected to the switch and a separate power feed is connected to the EX Series RPS. If the EX3300 switch and the EX Series RPS have separate power feeds, the EX Series RPS will supply power in two ways. If the built-in power supply fails, the EX Series RPS will provide power until the switch can be replaced. If the electricity fails, the EX Series RPS will provide power until electricity is restored to the switch and the switch once again uses its internal power supply.

When the EX Series RPS is used for EX2200 backup, the switch and RPS can be deployed only with a single power feed (source of electricity). If the built-in power supply fails, the EX Series RPS will provide power until the switch can be replaced.



Power Supply Side

Product Options

Table 1: EX Series RPS Configurations

Model Number	Description
EX-RPS-PWR-930-AC	External redundant power system (RPS) for power supply redundancy. Includes one RPS cable, two power slot blank covers, and one 930 W power supply (shipped separately).
EX-CBL-RPS	EX Series RPS 1.5 m cable for EX2200 and EX3300 switches.
EX-PWR-RPS-BLANK	Blank for RPS PSU slot (spare).
EX-PWR3-930-AC	930 W AC power supply with PoE+ capability (power cord needs to be ordered separately).

EX Series RPS Specifications

Dimensions (W x H x D)

- 17.4 x 1.7 x 17.5 in (44.2 x 4.3 x 41.7 cm)

Weight Lbs (Kg)

- 10.8 lbs (4.9 kg) (without power supply)
- 14.2 lbs (6.4 kg) (with one power supply)

Environmental Ranges

- Operating temperature: 32° to 113° F (0° to 45° C)
- Storage temperature: -40° to 158° F (-40° to 70° C)
- Operating altitude: up to 10,000 ft (3,049 m)
- Non-operating altitude: up to 16,000 ft (4,877 m)
- Relative humidity operating: 10% to 85% (noncondensing)
- Relative humidity non-operating: 0% to 95% (noncondensing)

Troubleshooting

- Debugging: CLI via connected EX Series switch console (management port solely for image download)

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Switch Connector Side

Ordering Information

Model Number	Description
RPS	
EX-RPS-PWR	External redundant power system (RPS) for power supply redundancy. Includes one RPS cable and two power supply slot blank covers (power supply ordered separately)
EX-RPS-PWR-930-AC	External redundant power system (RPS) for power supply redundancy. Includes one RPS cable, two power slot blank covers, and one 930 W power supply (shipped separately)

Accessories

EX-RPS-CBL	EX Series RPS 1.5 m cable for EX2200 and EX3300 switches
EX-PWR-RPS-BLNC	Blank for RPS PSU slot (spare)
EX-PWR3-930-AC	930 W AC power supply with PoE+ capability (power cord needs to be ordered separately)
EX-RMK	Rack-mount kit for EX2200, EX3200, EX3300, EX4200, and EX-RPS-PWR-930-AC
EX-4PST-RMK	Adjustable 4-post rack-mount kit for EX2200, EX3200, EX3300, EX4200, and EX-RPS-PWR-930-AC

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