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Santa Clara, CA 95054

Installing the Passport 8002PS DC Power Supply

NORTTEL
NETWORKS™

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USA Requirements Only

Federal Communications Commission (FCC) Compliance Notice: Radio Frequency Notice

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 generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to take whatever measures may be necessary to correct the interference at their own expense.

European Requirements Only

EN 55 022 Declaration of Conformance

This is to certify that the Nortel Networks Passport 8002PS DC Power Supply is shielded against the generation of radio interference in accordance with the application of Council Directive 89/336/EEC, Article 4a. Conformity is declared by the application of EN 55 022 Class A (CISPR 22).

Caution: 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 appropriate measures.

Achtung: Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten, in welchen Fällen der Benutzer für entsprechende Gegenmaßnahmen verantwortlich ist.

Attention: Ceci est un produit de Classe A. Dans un environnement domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilisateur de prendre les mesures spécifiques appropriées.

Japan/Nippon Requirements Only

Voluntary Control Council for Interference (VCCI) Statement

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。

Taiwan Requirements

Bureau of Standards, Metrology and Inspection (BSMI) Statement

警告使用者:

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾。在這種情況下，使用者會被要求採取某些適當的對策。

Canada Requirements Only

Canadian Department of Communications Radio Interference Regulations

This digital apparatus (Passport 8002PS DC Power Supply) does not exceed the Class A limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Règlement sur le brouillage radioélectrique du ministère des Communications

Cet appareil numérique (Passport 8002PS DC Power Supply) respecte les limites de bruits radioélectriques visant les appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique du ministère des Communications du Canada.

About This Guide

This guide provides the following information:

- Safety and environmental guidelines for the power supply (this page)
- Instructions for preparing cables to connect to the power supply ([page 2](#))
- Operational notes about the power supply ([page 3](#))
- Instructions for installing a Passport 8002PS DC Power Supply in an unoccupied bay of a Passport 8000 Series Chassis ([page 3](#))
- Instructions for replacing an installed power supply in a Passport 8000 Series Chassis ([page 6](#))
- Specifications for the power supply ([page 8](#))

For more information about the Passport™ chassis, refer to *Installing the Passport 8010 Chassis* (part number 204518-B) and *Installing the Passport 8006 Chassis* (part number 207313-B).

Safety and Environmental Guidelines

The Passport 8002PS DC Power Supply converts ± 48 VDC or ± 60 VDC input into separate DC outputs to the chassis backplane. The input voltage range is ± 42 to ± 66 VDC with a maximum input current of 25 A (at 48 VDC) or 20 A (at 60 VDC).

For branch circuit over-current protection for the DC power source, check your national code requirements. For U.S. installations, follow NEC articles 422-28(e) and 422-30.

The Passport 8000 Series switches are designed to operate in ambient temperatures of 0° to 40° C (32° to 104° F) with a relative humidity of 10 percent to 85 percent (noncondensing).

Equipment with DC power supplies should be installed only in areas with limited access, such as dedicated equipment rooms.



Caution: The DC power input source for the Passport 8002PS DC Power Supply must be restricted to an output that is limited to Safety Extra Low Voltage (SELV) output per IEC950 Definition. This input power source must be reliably connected to ground and electrically isolated from the AC source.

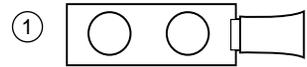
Preparing Cables

Required tools: Crimping tool for crimping lugs onto cables; heat gun

Nortel Networks does not supply the cables for connecting the Passport 8002PS DC Power Supply to the DC input power source. You can therefore select cables that comply with the electrical code of the country where you intend to use the DC power supply.

The following items are shipped with the Passport 8002PS DC Power Supply:

- Two 2-hole crimp lug terminals with attached heat-shrink tubing (1) for connecting the positive and negative power inputs
- One 1-hole crimp lug terminal with attached heat-shrink tubing (2) for connecting the ground stud
- Five lock washers for connecting all leads
- One lock washer for connecting the ground stud



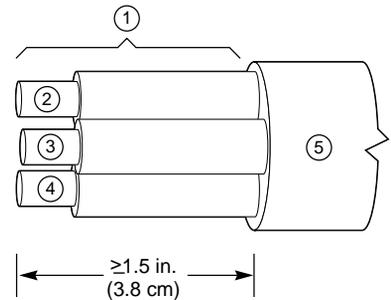
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Caution: As the installer, you have the sole responsibility to ensure that the connection cable used with the Passport 8002PS DC Power Supply is appropriate for use with the DC power source to which the power supply is connected. Consider gauge, flammability, and mechanical serviceability when determining which cables to use.

To select and prepare cables for connecting the power supply, use the following guidelines:

- Use a 6-gauge, 3-conductor cable such as an SOW-A, Type 90C or equivalent.
- Use cable that accommodates the supplied DC input and frame ground crimp lugs.
- To connect to the positive and negative terminal leads, use the two-hole lug terminals (1).
- To connect the frame ground lead, use the one-hole terminal (2).
- Strip the outer cable jacket to no less than 1 1/2 inch (3.8 cm) to expose the insulated conductor cables within.
- Strip the insulated conductor cables inside the outer jacket to 0.81 in (2.1 cm).
- Use a standard crimping tool to crimp the lugs onto the cables. Failure to properly crimp the lugs onto the cables constitutes a safety hazard.
- If necessary, use a heat gun to shrink the tubing around the cable.



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- 1 = Insulated Conductors
- 2 = Frame Ground
- 3 = Negative (-)
- 4 = Positive (+)
- 5 = Outer Insulation Jacket

Operational Notes

A Passport 8000 Series Chassis with up to five installed modules can operate with one installed power supply. For a redundant power configuration, install two power supplies.

A Passport 8010 Chassis with more than six installed modules requires a minimum of two power supplies for a nonredundant configuration. A redundant configuration for such a chassis requires three power supplies.

In a chassis with a nonredundant power supply configuration, if one power supply fails, the system may lose power and network connectivity.

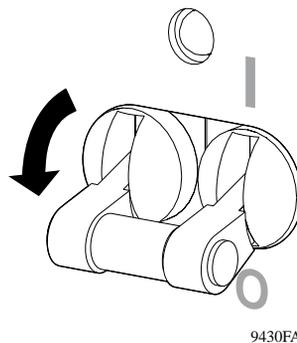
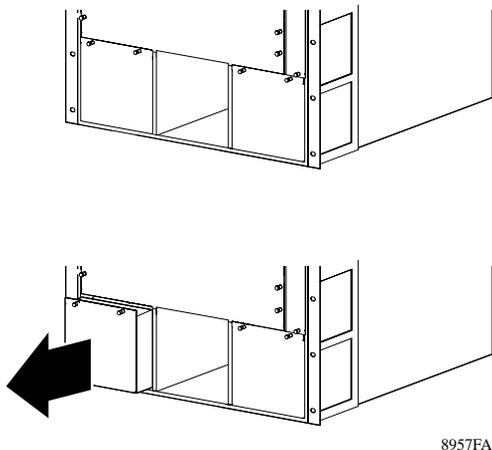
In a chassis with two installed power supplies, you can add a third power supply without powering down the chassis. The Passport 8002PS DC Power Supply is hot-swappable.

When you first install a Passport 8000 Series Chassis that requires two power supplies (nonredundant configuration), you must turn on both power supply units within 2 seconds of each other. If you wait longer to turn on the second power supply, both power supplies will shut down. To correct this condition, turn off both power supplies, wait at least 30 seconds, and then turn on both power supplies again within 2 seconds.

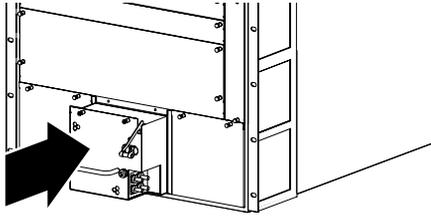
If the DC input power source is below 2400 W, you may want to have a separate input source for each power supply.

Installing a Power Supply

Required tools: Phillips screwdriver, 7/16-inch wrench



1. If necessary, remove the filler panel from a power supply bay.
2. Check to be sure the power switch is in the off position (down).



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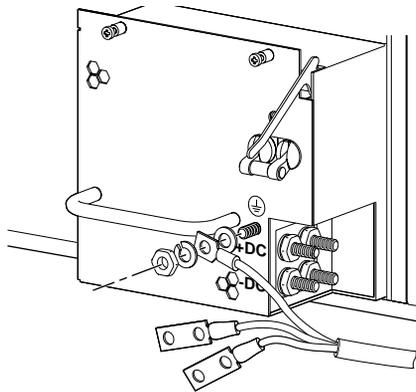
3. Push the power supply partway into the bay. Leave the terminal block at the side of the power supply exposed.



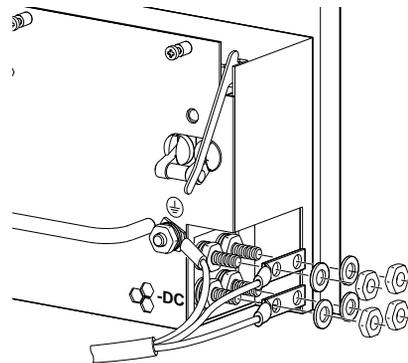
Note: If you are installing a power supply in a new chassis, be sure to remove the bag of moisture-absorbing material from the middle power supply bay.



Warning: Make sure the DC power source is off or disconnected on the remote end before you connect the terminal leads to the power supply. You may need to switch a circuit breaker or turn off the DC input power source.



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4. Attach the grounding cable to the ground lug on the power supply.

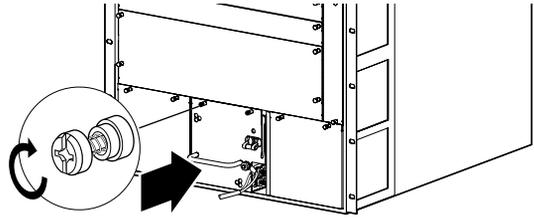
Use the washers in this order:

- Flat washer
- Crimp lug
- Lock washer
- Hex nut

5. Attach the positive and negative voltage leads to the positive and negative terminals on the power supply.

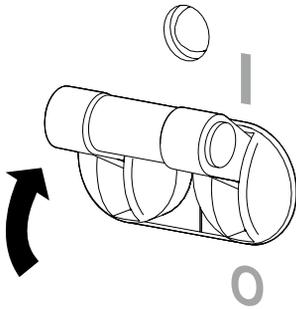
Use a lock washer between the crimp lug and each hex nut.

Use a 7/16-inch wrench to tighten the hex nut on each terminal.



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6. Attach the grounding cable to the system or rack ground for your DC input power source.
7. Firmly slide the power supply all the way into the bay and tighten the retaining screws.
8. Attach the positive and negative terminal leads to the DC input power source according to the proper safety and technical specifications for your 48-volt power distribution system.
9. Turn the DC input power source on, or reset the power source circuit breaker, to provide power to the power supply.



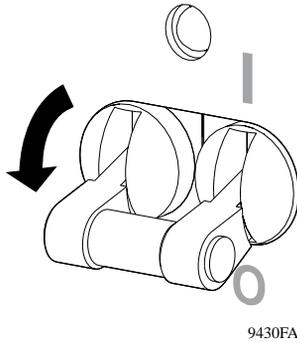
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10. Turn the power supply switch to the on position.

Removing a Power Supply

Required tools: Phillips screwdriver, 7/16-inch wrench

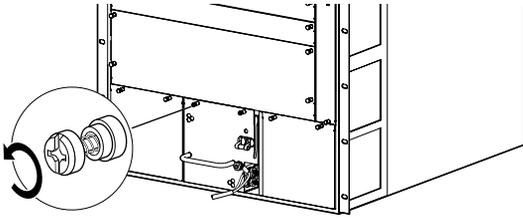
In a chassis with a redundant power supply configuration, you can replace or install a power supply without powering down the chassis.



1. Turn off the power switch on the power supply you are replacing.
2. Disable the incoming power from the DC input power source. You may need to switch a circuit breaker or turn off the DC input power source.
3. Disconnect the positive and negative terminal leads from the DC input power source.
4. Disconnect the grounding cable from the system or rack ground of your DC input power source.

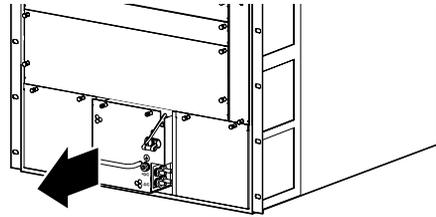


Warning: Make sure the DC power source is off or disconnected at the remote end before you remove the power supply.



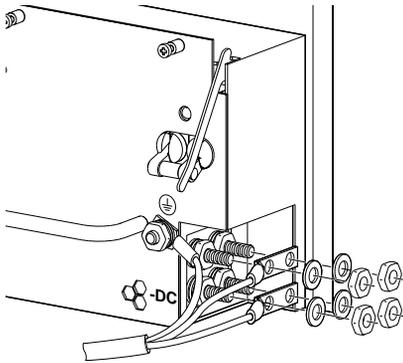
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- Loosen the retaining screws on the power supply.



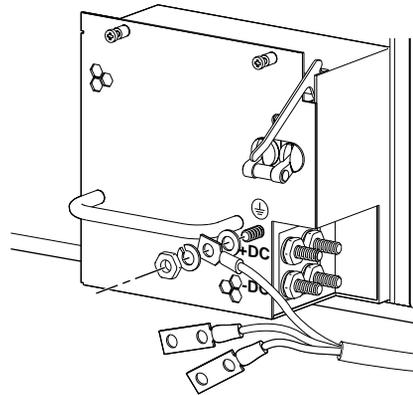
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- Lift the extractor lever to disconnect the power supply from the backplane connector.
Slide the power supply partway out of the chassis.



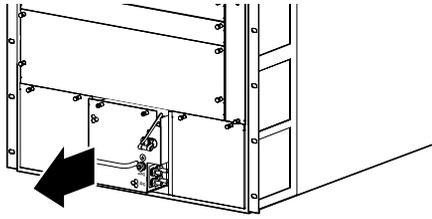
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- Disconnect the positive and negative voltage leads from the power supply terminals.



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- Disconnect the grounding cable from the ground lug on the power supply.



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9. Slide the power supply all the way out of the chassis, and set it aside.
10. Install a replacement power supply following the instructions earlier in this guide.

If you are not installing another power supply in this bay, install a filler panel over the opening.

Specifications

Power Specifications

Input current (maximum)	25 to 20 A
Input voltage	48 to 60 VDC
Power consumption	1200 W
Thermal rating	4100 BTU/hr maximum

Crimp Lug Specifications

Two-hole lug terminal	Panduit LCD6-14A-L or equivalent
One-hole terminal	Panduit LCA6-14H-L or equivalent