

Compaq StorageWorks

SAN Switch Power Supply

Installation Guide

First Edition (September 1999)
Part Number EK-P20PS-IA / 161359-001
Compaq Computer Corporation

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About This Guide

This guide is designed to be used as step-by-step instructions for installation and as a reference for operation, troubleshooting, and future upgrades.

Text Conventions

This document uses the following conventions to distinguish elements of text:

Keys	Keys appear in boldface. A plus sign (+) between two keys indicates that they should be pressed simultaneously.
USER INPUT	User input appears in a different typeface and in uppercase.
<i>FILENAMES</i>	File names appear in uppercase italics.
Menu Options, Command Names, Dialog Box Names	These elements appear in initial capital letters.
COMMANDS, DIRECTORY NAMES, and DRIVE NAMES	These elements appear in uppercase.
Type	When you are instructed to <i>type</i> information, type the information without pressing the Enter key.
Enter	When you are instructed to <i>enter</i> information, type the information and then press the Enter key.

Symbols in Text

These symbols may be found in the text of this guide. They have the following meanings.



WARNING: Text set off in this manner indicates that failure to follow directions in the warning could result in bodily harm or loss of life.



CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

IMPORTANT: Text set off in this manner presents clarifying information or specific instructions.

NOTE: Text set off in this manner presents commentary, sidelights, or interesting points of information.

Symbols on Equipment

These icons may be located on equipment in areas where hazardous conditions may exist.



Any surface or area of the equipment marked with these symbols indicates the presence of electrical shock hazards. Enclosed area contains no operator-serviceable parts.

WARNING: To reduce the risk of injury from electrical shock hazards, do not open this enclosure.



Any RJ-45 receptacle marked with these symbols indicates a Network Interface Connection.

WARNING: To reduce the risk of electrical shock, fire, or damage to the equipment, do not plug telephone or telecommunications connectors into this receptacle.



Any surface or area of the equipment marked with these symbols indicates the presence of a hot surface or hot component. If this surface is contacted, the potential for injury exists.

WARNING: To reduce the risk of injury from a hot component, allow the surface to cool before touching.



Power Supplies or Systems marked with these symbols indicate the equipment is supplied by multiple sources of power.

WARNING: To reduce the risk of injury from electrical shock, remove all power cords to completely disconnect power from the system.

Rack Stability



WARNING: To reduce the risk of personal injury or damage to the equipment, be sure that:

- The leveling jacks are extended to the floor.
- The full weight of the rack rests on the leveling jacks.
- The stabilizing feet are attached to the rack if it is a single rack installation.
- The racks are coupled together in multiple rack installations.
- A rack may become unstable if more than one component is extended for any reason. Extend only one component at a time.

Getting Help

If you have a problem and have exhausted the information in this guide, you can get further information and other help in the following locations.

Compaq Technical Support

You are entitled to free hardware technical telephone support for your product for as long as you own the product. A technical support specialist will help you diagnose the problem or guide you to the next step in the warranty process.

In North America, call the Compaq Technical Phone Support Center at 1-800-OK-COMPAQ¹. This service is available 24 hours a day, 7 days a week.

Outside North America, call the nearest Compaq Technical Support Phone Center. Telephone numbers for worldwide Technical Support Centers are listed on the Compaq website. Access the Compaq website at <http://www.compaq.com>.

Be sure you have the following information available before calling Compaq:

- Technical support registration number (if applicable)
- Product serial numbers
- Product model names and numbers
- Applicable error messages
- Add-on boards or hardware
- Third-party hardware or software
- Operating system type and revision level
- Detailed, specific questions

Compaq Website

The Compaq website has information on this product as well as the latest drivers and Flash ROM images. You can access the Compaq at <http://www.compaq.com>.

Compaq Authorized Reseller

For the name of your nearest Compaq authorized reseller:

- In the United States, call 1-800-345-1518.
- In Canada, call 1-800-263-5868.
- Elsewhere, see the Compaq website for locations and telephone numbers.

¹ For continuous quality improvement, calls may be recorded or monitored.

Compaq StorageWorks SAN Switch Power Supply Installation Guide

Introduction

Compaq StorageWorks SAN Switches support a dual-redundant power supply configuration with hot-pluggable power supplies. If you are installing a dual-redundant power supply for the first time, go to the section “Installing the Power Supply,” in this guide.

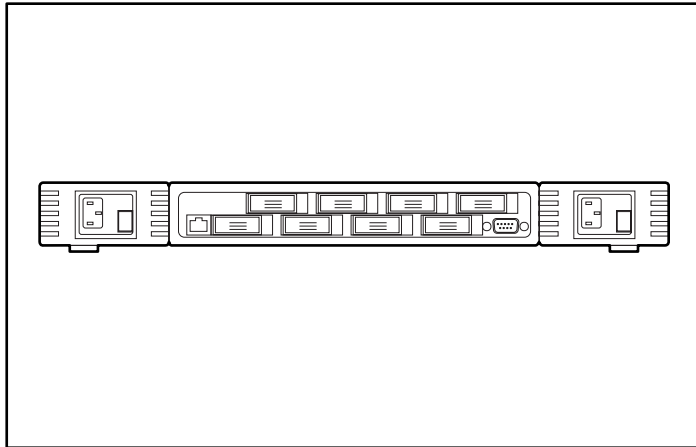


Figure 1. Dual power supplies in the Compaq StorageWorks SAN Switch 8

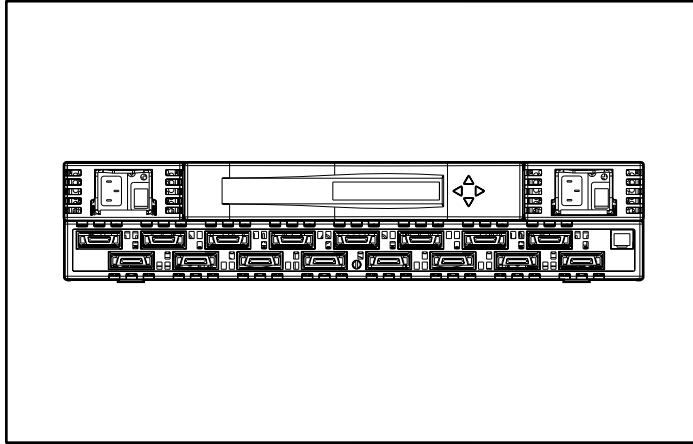


Figure 2. Dual power supplies in the Compaq StorageWorks SAN Switch 16

Replacing the Power Supply

There are no user-serviceable parts inside the power supply chassis. Opening the power supply voids its warranty and certification. The entire power supply unit must be removed according to the procedure outlined in the following section.

Removing the Power Supply

To remove the switch's power supply:

1. Turn off the power to the power supply you are removing.
2. Remove the power cord attached to the power supply.
3. Pull down the metal handle on the top of the power supply unit.
4. Gently pull out the unit.

NOTE: If you feel resistance when removing the power supply, pull the handle at an upward angle and slide the unit out.

Installing the Power Supply

To install a new power supply:

1. If you are upgrading from a single power supply to dual-redundant power supplies for the first time, remove the power supply filler from the switch's front panel.
2. Slide the new power supply unit into its slot until the unit is flush with the front panel.
3. Lock the metal handle into the power supply by pushing the handle up and locking it into place.
4. Reattach the power cord to the power supply.
5. Turn on the power to the power supply. The Power-On Self-Test (POST) automatically runs when the switch is powered up.
6. Check for error messages through Telnet. The following figure shows the Telnet error messages that are generated when a power supply is turned off, removed, replaced, and turned back on. This is normal operation.

```
(Old Power Supply turned off)
0x10fc1bb0 (tSwitch) : Mar 10 15:22:54
Error POWER-1_FAILED

(Old Power Supply removed)
0x10fc1bb0 (tSwitch) : Mar 10 15:23:08
Error POWER-OK, 4, Power OK

(New Power Supply installed)
0x10fc1bb0 (tSwitch) : Mar 10 15:23:16
Error POWER-1_FAILED, 1, Power Supply #1 failed

(New Power Supply turned on)
0x10fc1bb0 (tSwitch) : Mar 10 15:23:27
Error POWER-OK, 4, Power OK
```

Figure 3. Telnet traps generated when a power supply is replaced

Specifications

The Compaq StorageWorks SAN Switch Power Supply is a Universal Power Supply capable of functioning worldwide without voltage jumpers or switches. The supply is autoranging in terms of accommodating input voltages and line frequencies. The power supply meets the requirements outlined in the following table.

Table 1
Power Supply Requirements

Feature	Requirement
Total power	150 watts
Input voltage	85 to 265 VAC
Input line frequency	47 to 63 Hz
Inrush current	10 amps peak > 300 usec - hot/cold start
Harmonic distortion	Active power factor correction per IEC1000-3-2
Input line protection	Fused in both hot and neutral lines
Maximum dimensions	H: 1.5 in. (38.1 mm), W: 3.5 in. (88.9 mm), L: 11 in. (279.4 mm)
Redundancy	Dual power supplies - Hot-pluggable

The power supply plugs directly into the enclosure through the front panel, mating to an internal blind-mate connector. It supports a dual-redundant power supply configuration, in which the supplies are hot-pluggable.

An integral on/off switch, input filter, and power indicator are provided in the power supply.