C H A P T E R 1
Introduction

The Dell™ PowerEdge™ 350 system is an ultra-slim, rack-mounted server. This system is a full-featured system which provides a robust, reliable, rack-optimized platform on which both large and small customers can deploy Internet infrastructure applications.

This chapter describes the system's major hardware and software features, provides information about the indicators and controls on the system's front panel, and discusses connecting external devices.

NOTE: The PowerEdge 350 system is a "headless" system that operates without keyboard, monitor or mouse. While it is possible to connect these peripherals to the system, it is generally not necessary unless troubleshooting the system.

System Features

PowerEdge 350 systems contain the following major features:

- An Intel® Celeron™ microprocessor with 128 kilobytes (KB) of level 2 (L2) cache memory and a minimum operating speed of 600 megahertz (MHz).

    or

    An Intel Pentium® III microprocessor with 256 KB of L2 cache memory and an operating speed of 750 MHz.

- Up to 1 gigabyte (GB) of system memory.

- Two 1-inch integrated drive electronics (IDE) hard-disk drives.

- A single, 1.44-megabyte (MB) 3.5-inch diskette drive.

- An IDE CD-ROM drive.

- A video graphics array (VGA)-compatible video controller card.

- Two integrated Intel PRO/100+ network interface controllers (NICs), which provide two Ethernet interfaces.

- A Personal System/2 (PS/2)-style keyboard port and mouse port, two serial ports, and two Universal Serial Bus (USB) connectors.

- The System Setup program, which can be accessed at system boot for quickly viewing and changing the system configuration information for your system. For more information about the System Setup program, see Chapter 3, "Using the System Setup Program."

- The Dell OpenManage™ software. For information on this software, see the software documentation provided with your system.

- Diagnostics for evaluating your system's components and devices. For information on using the system diagnostics, see "Running the Dell Diagnostics" in your *Installation and Troubleshooting Guide*.

Supported Operating Systems

Dell supports the following network operating systems for use on PowerEdge 350 systems:

- Microsoft® Windows® 2000 Server

- Microsoft Windows NT® Server 4.0

- Red Hat Linux 7.*x*

NOTE: Installation service and support for other operating systems are available through DellPlus™. For more information, see "Getting Help" in your Installation and Troubleshooting Guide.

System Orientation

The front panel of your system contains switches, indicator lights, and diskette and CD-ROM drives. To view the front panel, you must remove the optional front bezel from the system.

Removing the Optional Front Bezel

To remove the optional front bezel, press the tab on each end of the bezel and lift the bezel from the chassis (see Figure 1-1).
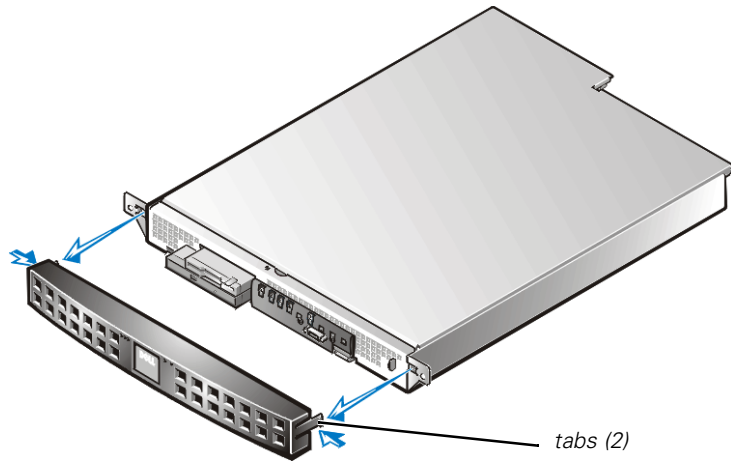
tabs (2)

Figure 1-1. Removing the Optional Front Bezel

Front-Panel Features

Figure 1-2 shows the main features on the system front panel.

diskette drive

CD-ROM drive

system indicators (5)
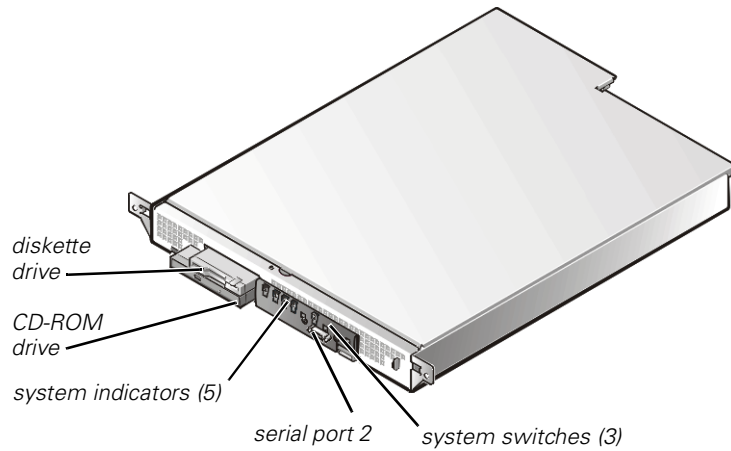
serial port 2

system switches (3)

Figure 1-2. Front-Panel Features

System Indicators

While troubleshooting your system, you may need to check the status of the indicators on the system's front panel, shown in Figure 1-3 and Figure 1-4.
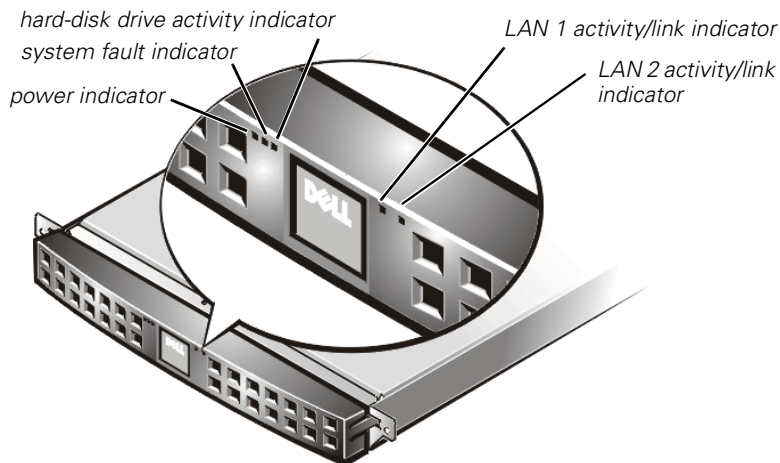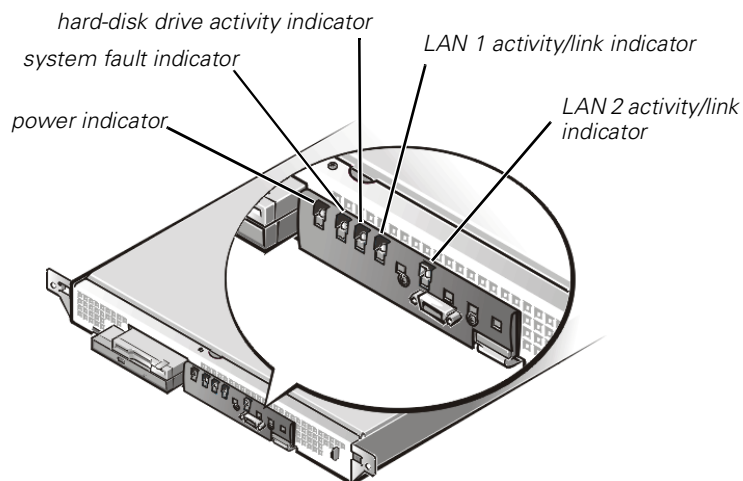

Figure 1-3. Front-Panel Indicators

Figure 1-4. Front-Panel Indicators (Bezel Removed)

Table 1-1 describes the appearance and function of the front-panel indicators.

Table 1-1. Front-Panel Indicators

Indicator	Color	Function
Power	Green	Lights up when the system is connected to an AC power source; blinks when the system is in sleep mode
System fault	Amber	Blinks during system startup, or when a system fault is detected
Hard-disk drive activity	Green	Blinks when hard-disk drive activity occurs
LAN 1 activity/link	Amber	Lights up when the LAN 1 connector is linked to an Ethernet port; blinks when activity occurs on this channel
LAN 2 activity/link	Amber	Lights up when the LAN 2 connector is linked to an Ethernet port; blinks when activity occurs on this channel

System Switches

Figure 1-5 shows the location of the three switches on the system front panel. To activate a switch, press the corresponding icon on the front panel as shown in Figure 1-5.

NOTICE: To prevent accidental system lockup, system reset, or false error messages, do not press areas of the front panel other than the three switch locations shown in Figure 1-5. Reserved test switches are located in other areas of the front panel.
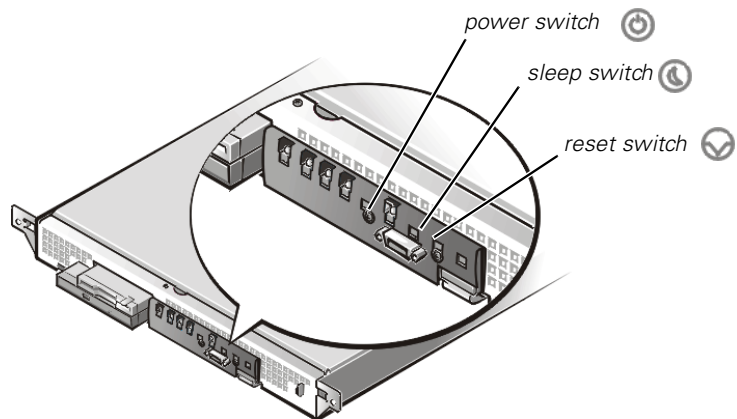

Figure 1-5. Front-Panel Switches

Table 1-2 describes the function of the three front-panel switches.

Table 1-2. Front-Panel Switches

Switch	Function
Power switch	Turns power to the system board on or off. *NOTE: To turn system power off, press and hold this switch for at least 4 seconds.*
Sleep switch	Places the system in sleep mode.
Reset switch	Reboots the system. If the system locks up and you cannot shut down the system using the operating system, press the reset switch.

Connecting External Devices

You can connect various external devices, such as a mouse or network connection, to the input/output (I/O) ports and connectors on the system's back panel. Figure 1-6 shows the back-panel connections on your system.
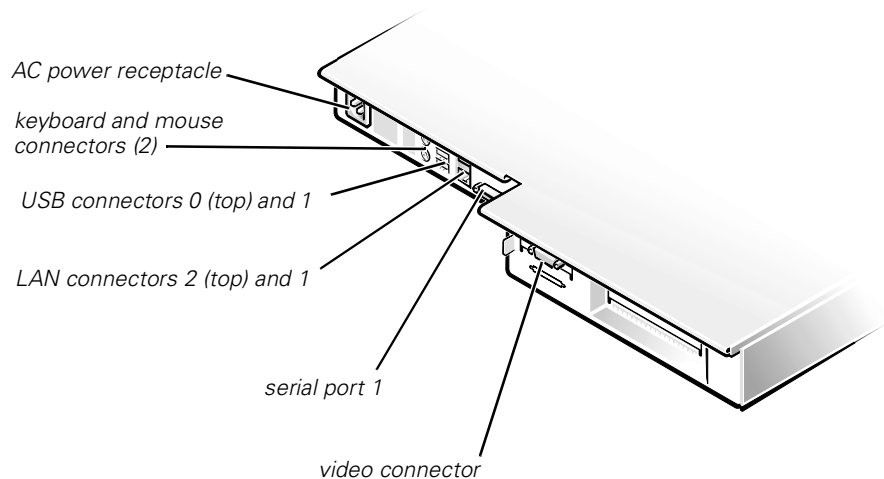

AC power receptacle

keyboard and mouse connectors (2)

USB connectors 0 (top) and 1

LAN connectors 2 (top) and 1

serial port 1

video connector

Figure 1-6. Back-Panel Connections

The system basic input/output system (BIOS) detects the presence of external devices when you boot or reboot your system. When you connect external devices to your system, follow these guidelines:

- Check the documentation that accompanied the device for specific installation and configuration instructions.

- Always attach external devices while your system is turned off. Turn on any external devices before turning on the system unless the documentation for the device specifies otherwise. (If the system does not seem to recognize the device, try turning on the system before turning on the device.)

Power Protection Devices

A number of devices are available that protect your system against power problems such as power surges, transients, and power failures. The following subsections describe some of these devices.

Surge Protectors

Surge protectors are available in a variety of types and usually provide a level of protection commensurate with the cost of the device. Surge protectors prevent voltage spikes, such as those caused during an electrical storm, from entering a system through the electrical outlet. Surge protectors, however, do not offer protection against brownouts, which occur when the voltage drops more than 20 percent below the normal AC line voltage level.

Line Conditioners

Line conditioners go beyond the overvoltage protection of surge protectors. Line conditioners keep a system's AC power source voltage at a fairly constant level and, therefore, can handle brownouts. Because of this added protection, line conditioners cost more than surge protectors—up to several hundred dollars. However, these devices cannot protect against a complete loss of power.

Uninterruptible Power Supplies

Uninterruptible power supply (UPS) systems offer the most complete protection against variations in power because they use battery power to keep the system running when AC power is lost. The battery is charged by the AC power while it is available, so once AC power is lost, the battery can provide power to the system for a limited amount of time—from 15 minutes to an hour or so—depending on the UPS system.

UPS systems range in price from a few hundred dollars to several thousand dollars, with the more expensive units allowing you to run larger systems for a longer period of time when AC power is lost. UPS systems that provide only 5 minutes of battery power let you conduct an orderly shutdown of the system, but are not intended to provide continued operation. Surge protectors should be used with all UPS systems, and the UPS system should be Underwriters Laboratories (UL) safety-approved.

Getting Help

If at any time you do not understand a procedure described in this guide, or if your system does not perform as expected, Dell provides a number of tools to help you. For more information on these help tools, see "Getting Help" in your *Installation and Troubleshooting Guide.*

Safety, Regulatory, and Warranty Information

For safety, regulatory, and warranty information for your system, see the *System Information* document included with your system.