

Gateway



**8400 Server
System Manual**

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Preface

Conventions used in this manual

Throughout this manual, you will see the following conventions:

Convention	Description
ENTER	Keyboard key names are printed in small capitals.
CTRL+ALT+DEL	A plus sign means to press the keys at the same time.
Setup	Commands to be entered, options to select, and messages that appear on your monitor are printed in bold.
<i>User's Guide</i>	Names of publications are printed in italic.
Viewpoint	All references to front, rear, left, or right on the computer are based on the computer being in a normal, upright position, as viewed from the front.

Important



A note labeled important informs you of special circumstances.

Caution



A caution warns you of possible damage to equipment or loss of data.

Warning



A warning indicates the possibility of personal injury.

Getting additional information

Log on to the technical support area of www.gatewayatwork.com to find information about your system or other Gateway products. Some types of information you can access are:

- Hardware driver and program updates
- Technical tips
- Service agreement information
- Technical documents and component information
- Frequently asked questions (FAQs)
- Documentation for peripherals or optional components
- Online technical support

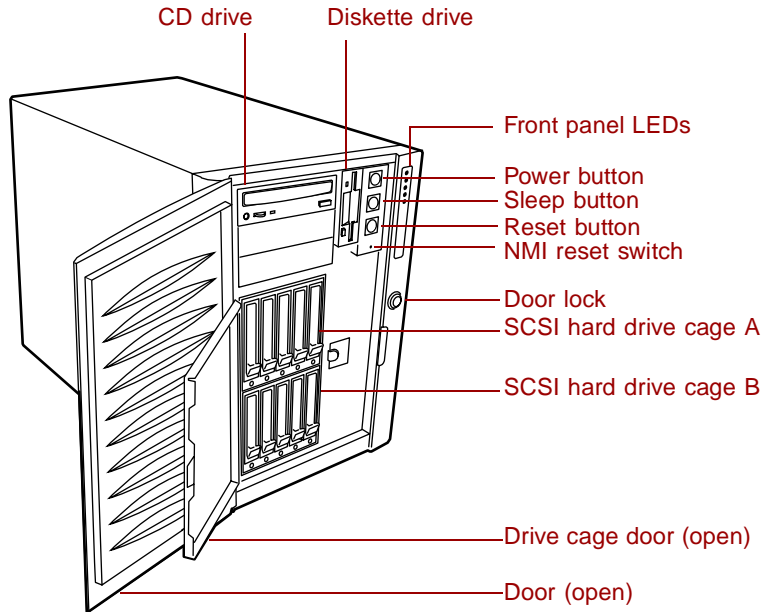
System Features

1

Standard features

- As many as four Intel® Pentium III® Xeon™ processors with 100 MHz Front Side Bus (FSB) in Slot 2 processor sockets
- Sixteen Dual Inline Memory Module (DIMM) sockets on a memory riser card, that support as many as 16 GB of PC100 Synchronous Dynamic Random Access Memory (SDRAM)
- ServerWorks ServerSet™ IIIHE chipset
- PCI hot-plug controller
- Integrated Intel 82559 Fast Ethernet controller
- Integrated Adaptec AIC-7899 Dual-Channel Ultra/Ultra II/Ultra 160 (Ultra 3) SCSI controller
- Integrated Adaptec AIC-7880 narrow/wide Ultra SCSI controller
- Integrated ATI Rage IIC video controller with 2 MB of SDRAM
- Six full-length, hot-pluggable PCI slots and two half-length PCI slots
- Baseboard Management Controller (BMC) hardware management
- ATX form factor system board and pedestal chassis (convertable to rackmount)
- One 3.5 inch 1.44 MB diskette drive and one CD drive
- Keyboard port (PS/2), mouse port (PS/2), 2 serial ports, parallel port, RJ-45 LAN port, video port, and two Universal Serial Bus (USB) ports

Front panel



CD drive reads data or audio CDs.

Diskette drive writes to and reads from 3.5-inch, 1.44 MB diskettes.

Door protects the external controls of the computer and the externally accessible drives.

Door Lock controls access to the external controls and externally accessible drives.

Drive cage door protects the hard drive cages from tampering.

Front panel LEDs indicate the following when lit:

- Top LED - Power (steady Green when power is on, flashing Green in sleep mode).
- 2nd LED - LAN Activity (Green when LAN connection is active).
- 3rd LED - HDD Activity (Green when hard drive is active).
- 4th LED - Power Fault (blinking yellow when power supply fault occurs).
- 5th LED - Fan Fault (steady yellow when system has a critical, non-recoverable cooling problem, and blinking yellow when system has a non-critical, over-temperature or low-fan-speed condition).

Hard drive cages hold five, 1-inch hot-swappable SCSI hard drives each.

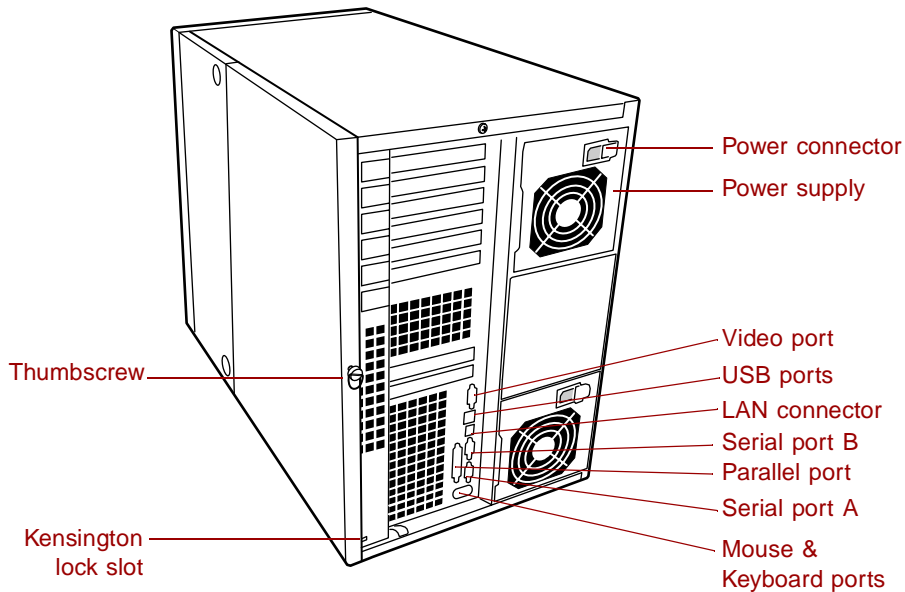
NMI (Non-Masking Interrupt) reset switch is used by technicians to debug a server having problems.

Power button turns the computer on and off. It also enables sleep-mode in some operating systems.

Reset button restarts a system that has become non-responsive.

Sleep button initiates sleep mode to conserve power.

Back panel



Kensington lock slot lets you use a cable lock to secure the system and prevent the rear access panel from being removed.

Keyboard port connects a PS/2[®]-compatible keyboard.

LAN connector lets you connect to an ethernet network. The adjacent indicator LEDs show LAN activity (yellow) and 100 Mbit speed (green).

Mouse port connects a PS/2-compatible mouse.

Parallel (printer) port connects a printer or other parallel device.

Power connector connects the computer power cord. The other end of the power cord plugs into an AC outlet or power strip.

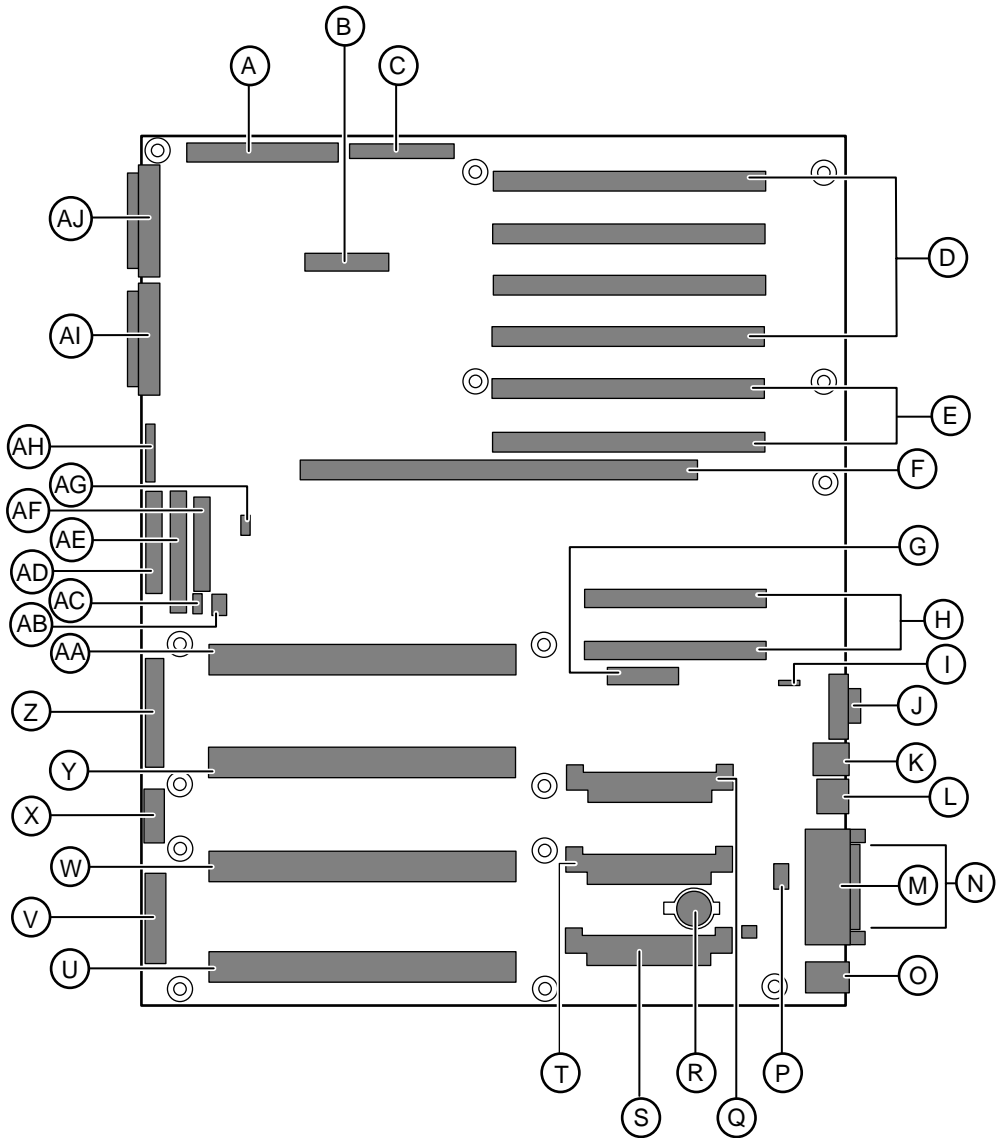
Serial ports connect to serial devices.

Thumbscrew must be loosened to remove the back access panel from the system.

USB ports connect external Plug-and-Play devices that are automatically configured when they are plugged into the computer through one of these ports. USB keyboards and mice are not supported, use only PS/2 versions.

Video port connects the monitor interface cable.

System board



A Legacy Narrow SCSI connector

B SMM (Server Monitor Module) connector

- C** Legacy Wide SCSI connector
- D** 64-bit/33 MHz PCI slots (4)
- E** 64-bit/66 MHz PCI slots (2)
- F** Memory Module connector
- G** HPIB (Hot Plug Indicator Board) connector
- H** 32-bit/33 MHz half-length PCI slots (2)
- I** ICMB (Intelligent Chassis Management Bus) connector
- J** Video connector
- K** External USB ports (2)
- L** RJ-45 Ethernet LAN connector
- M** Parallel connector
- N** Serial connectors
- O** Keyboard and PS/2 Mouse connectors
- P** Internal USB connector
- Q** Processor 2 VRM slot
- R** Battery
- S** Processor 4 VRM slot
- T** Processor 3 VRM slot
- U** Processor 4 slot
- V** Main ATX Power 1 connector
- W** Processor 3 slot
- X** Auxiliary Power connector
- Y** Processor 2 slot
- Z** Main ATX Power 2 connector
- AA** Processor 1 slot
- AB** HDD Activity connector

- AC** SMBus connector
- AD** Floppy Drive connector
- AE** IDE connector
- AF** Front Panel connector
- AG** IMB (Intra Module Bus) connector
- AH** Configuration Jumper J9F2 (Pins 1-3 CMOS Clear, Pins 5-7 Password Clear, Pins 9-11 Boot Option)
- AI** Ultra 160 SCSI A connector
- AJ** Ultra 160 SCSI B connector

System Setup

2

Setting up your system

Use the instructions on the Quick Guide poster that came with your system to assemble your system.

You can prepare a safer working environment before assembling your system by following these guidelines:

- Use a clean, flat, and stable surface for your system. Allow at least 12 inches at the rear of the computer for cabling and air circulation.
- Obtain a grounded (three-prong) AC surge-protected power strip. A surge-protected power strip helps protect against AC power fluctuations.
- Protect your system from extreme temperature and humidity. Do not expose your system to direct sunlight, heater ducts, or other heat-generating objects.
- Keep your computer away from equipment that generates magnetic fields, such as unshielded stereo speakers. Even a telephone placed too close to the computer may cause interference.
- Plug the computer into a wall outlet or power strip that is easily accessible.

Important



Keep the computer boxes and packing material in case you need to send the computer to Gateway for repairs. If you return your computer in different packaging, your warranty may be voided.

Starting your system

Before you start your system for the first time:

- Make sure all cables are firmly connected to the proper ports on the back panel of the computer.

Caution



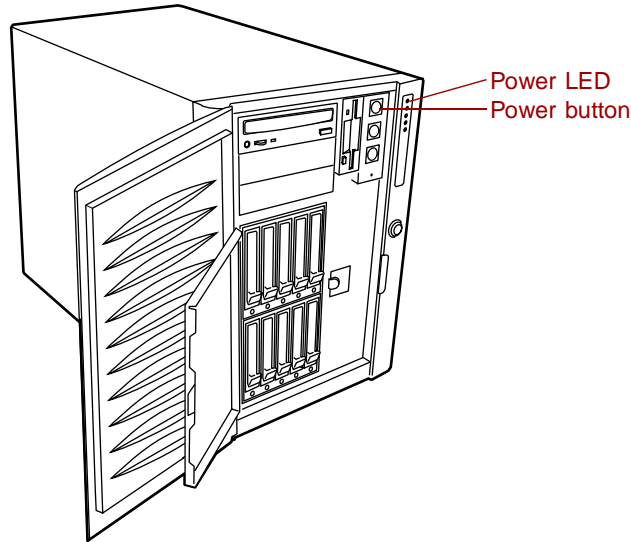
Make sure your computer and peripherals are turned off and unplugged from the power outlet when you connect peripherals to the computer, or you might damage the computer or the peripherals.

- Make sure the computer and monitor are plugged into an AC outlet or power strip and that the power strip is turned on.

To start the system:

- 1 If you have connected the system components to a power strip, make sure all the system components are turned off, then turn on the power strip.
- 2 Turn on the monitor.

- 3 Turn on the computer. The top light-emitting diode (LED) at the right side of the bezel is lit when the power is on.



- 4 Turn on any other components connected to the computer, such as speakers, a printer, or a scanner.

If nothing happens when you turn on the system:

- Make sure the power cables are securely plugged in and that your power strip (if you are using one) is plugged in and turned on.
- Make sure the monitor is connected to the computer, plugged into the power strip or AC outlet, and turned on. You may also need to adjust the brightness and contrast controls on the monitor.

Understanding the Power-On Self-Test

When you turn on your computer, the power-on self-test (POST) routine checks the system memory and components. If POST finds any problems, the system displays error messages. Write down any error messages that you see. If you continue to have problems, these error messages may help technical support diagnose the cause.

Setting up the operating system

The first time you start your computer, the operating system takes a few minutes to set up.

Refer to your operating system documentation for specific questions regarding the operating system.

To complete the operating system setup for Windows NT:

- 1 After the computer starts, the start-up wizard opens. Continue by clicking **Next**.
- 2 Type the requested information in the appropriate text boxes. When you have finished typing the information, continue by clicking **Next**.
- 3 Continue following the instructions and selecting options in the start-up wizard dialog boxes, clicking **Next** to move through the dialog boxes, until the wizard tells you to restart your computer.

If you need to return to the previous dialog box to change any of your entries, click **Back**.

- 4 Restart your system. The setup is complete.

Important



For other operating systems, such as Windows® 2000 or Novell® NetWare, refer to the appropriate operating system software manual.

Turning off your system

Every time you turn off your system, shut down the operating system first. You may lose data if you do not follow the proper procedure.

To turn off your system in Windows NT:

- 1 Click **Start**, then select **Shut down the computer?**, then **Shut Down**.
- 2 Click **OK**. The computer turns off. If you see a message saying **It is now safe to turn off your computer**, turn off the computer by pressing the power button.
- 3 Turn off the monitor and peripherals.

Warning



When you turn the computer off by pressing the power button, some electric current still flows through the computer. Before opening the computer case or connecting or removing any peripherals, turn off the computer, then unplug the power cord and modem cord (if installed) or you may get an electric shock.

Important



For other operating systems, such as Windows® 2000 or Novell® NetWare, refer to the appropriate operating system software manual.

Resetting your system

If your computer does not respond to keyboard or mouse input, you may have to close programs that are not responding. If closing unresponsive programs does not restore your computer to normal operation, you may have to reset the system.

➔ To close unresponsive programs and reset your system in Windows NT:

- 1 Press CTRL+ALT+DEL. A window opens that lets you to close a program that is not responding.
- 2 Click **Task Manager**, then select the program that is not responding.
- 3 Close the program by clicking **End Task**.
- 4 If the computer does not respond, press the reset button to restart the computer.

As a part of the regular startup process, a program to check the disk status runs automatically. When the checks are finished, Windows starts.

Important



For other operating systems, such as Windows 2000 or Novell NetWare, refer to the appropriate operating system software manual.

3

Case Access

Preventing static electricity discharge

Before opening the computer case, read and follow these precautions to prevent damage from static electricity. When opening your computer case, always perform the following procedure.

Caution



Static electricity can permanently damage electronic components in your computer. Prevent electrostatic damage to your computer by following static electricity precautions every time you open your computer case.

➔ To prevent static electricity discharge:

- 1 Wear a grounding wrist strap (available at most electronics stores).
- 2 Turn off the computer power.
- 3 Touch a bare metal surface on the back of the computer.
- 4 Unplug all power cords from AC outlets and disconnect the modem cable (if installed).

Also follow these static electricity precautions:

- Avoid static-causing surfaces and items such as plastic and packing foam in your work area.
- Remove the parts from their antistatic bags or containers only when you are ready to use them. Do not lay parts on the outside of an antistatic bag or container because only the inside provides antistatic protection.
- Always hold cards by their edges and their metal mounting brackets. Avoid touching components on the cards and the edge connectors that connect to expansion slots. Never slide cards or other parts over any surface.

Opening the case

Important



All references to front, rear, left, or right on the computer are based on the computer being in a normal, upright position, as viewed from the front.

To work on the internal components of the computer, you must open the case. To do this, you must first unlock and open the bezel door, then remove the two right side cover panels that permit access to the interior of the case.

Because the components inside your computer are extremely sensitive to static electricity, make sure to follow the precautions at the beginning of this chapter for avoiding static electricity damage.

Only qualified personnel should open the system for maintenance. If you are qualified to maintain the system yourself, make sure you are properly grounded before opening the system chassis.

Warning

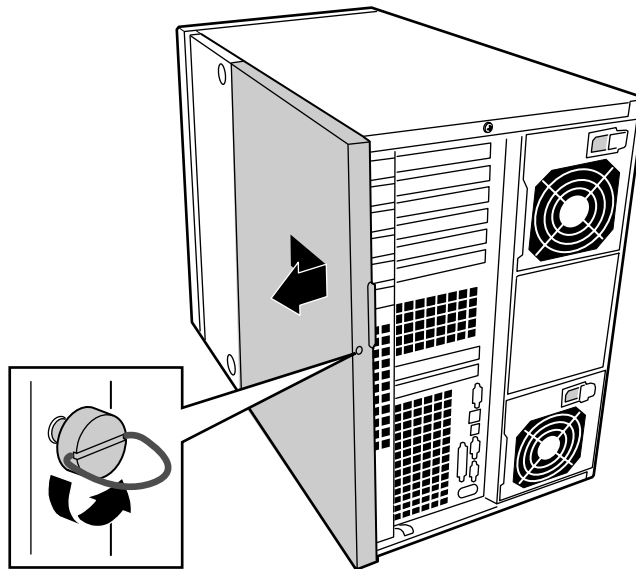


Avoid exposure to dangerous electrical voltages and moving parts, by turning off your computer and unplugging the power cord(s) and modem cable (if installed) before removing the chassis cover.

Removing the side panels

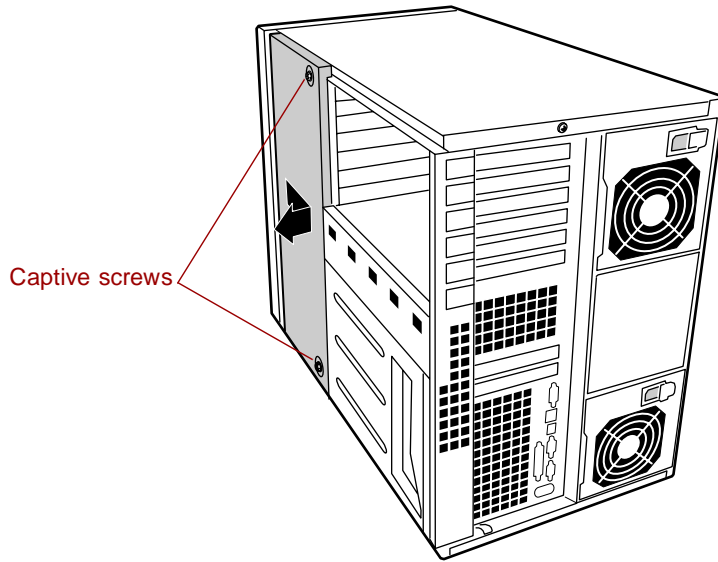
➤ To remove the right side access panels:

- 1 Turn off the computer and disconnect all power cords.
- 2 Loosen the thumbscrew (captive) on the back of the back access panel and unlock the chassis lock (if applicable).
- 3 Slide the back access panel approximately 3/4-inch toward the back of the system, disengaging the retaining tabs on the top and bottom edges of the panel from the slots on the chassis.



- 4 Grasping the front and back edges of the panel, pull the panel out and away from the chassis.

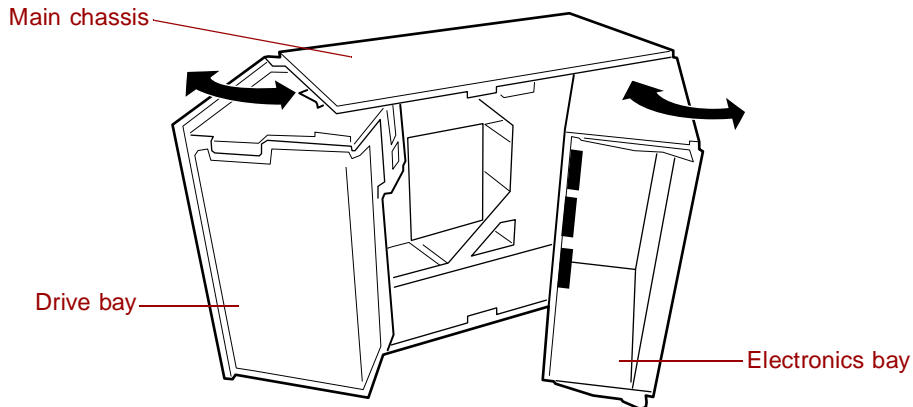
- 5 Loosen the two captive screws securing the front access panel to the chassis.



- 6 Slide the front access panel to the back and pull outward to remove.

Opening the chassis bays

The chassis is comprised of three parts: the main chassis, a swing-out drive bay at the front, and a swing-out electronics bay at the back. To access components, in some instances, you must remove the foam covers and swing away or completely remove these bays.



To open the drive and electronics bays, you must first remove the right side access covers. The drive bay is prevented from accidentally closing by a safety release tilt latch.

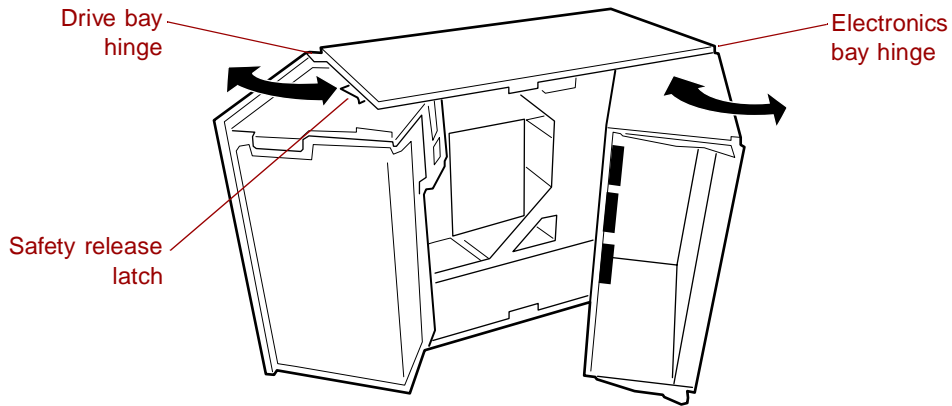
Important



Do not discard the foam bay cover or the plastic security curtains. These items are required for proper cooling or to prevent electrical damage to sensitive equipment.

➔ To open the drive and electronics bays:

- 1 Observe the safety and ESD precautions in “Preventing static electricity discharge” on page 15.
- 2 Turn off all peripheral devices connected to the system.
- 3 Turn off the system power by using the power on/off switch on the front panel and unplugging all AC power cords.
- 4 Label and disconnect all peripheral cables attached to the I/O panel on the back of the system.
- 5 Remove the access panels (see “Opening the case” on page 17).



- 6 Using the edges of the drive bay as handles, rotate the bay left, away from the main chassis, until the safety release tilt latch clicks into place.
- 7 Disconnect all cabling to the electronics bay.

Caution



You must disconnect all cabling to the electronics bay before rotating/removing the bays. Failure to do so can result in serious damage to system components.

- 8 Using the vertical edge of the electronics bay as a handle, rotate the bay right, away from the main chassis, until it stops.
- 9 If necessary, completely remove the drive bay and electronics bay by rotating the bays outward until the two pins that function as hinges for the bays slide out of their slots. Set the bays aside.

Closing the case

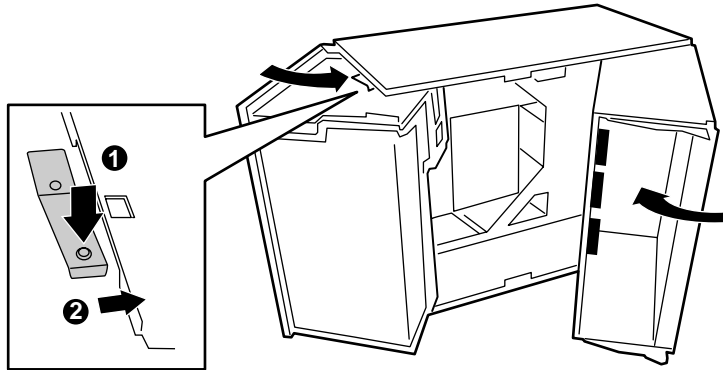
Replace the chassis cover as soon as you finish installing or removing components so that dust and dirt do not collect inside the computer.

Closing the chassis bays

As you close the drive and electronics bays, carefully observe the internal components to ensure that you do not pinch or twist any of the cables or components.

➔ To close the drive and electronics bays:

- 1 Verify that all internal components are fully installed and secured.
- 2 Swing the electronics bay closed.
- 3 Attach any cables to the electronics bay components.
- 4 Press down on the tab on the top of the drive bay to release it and swing it closed.

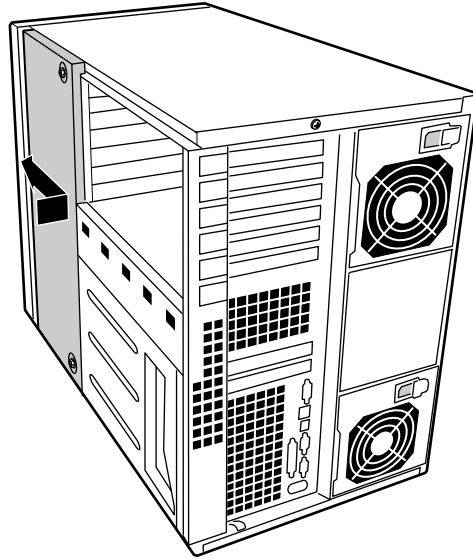


- 5 Replace the access covers and power up the system.

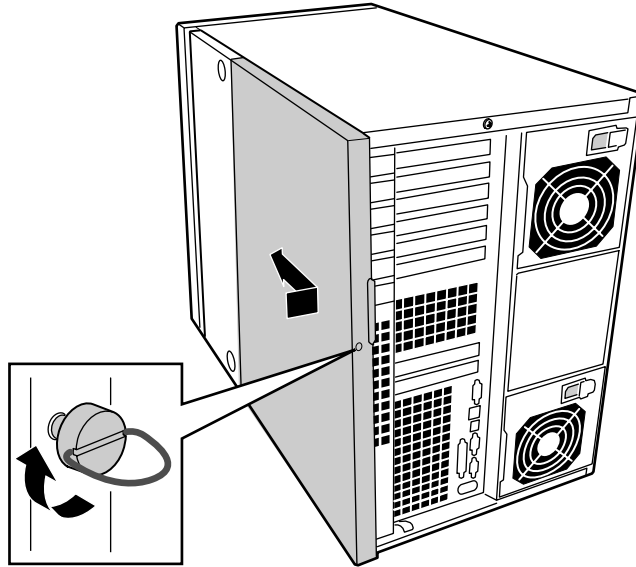
Replacing the side panels

➡ To replace the right side access panels:

- 1 Position the front access panel at the side of the chassis and 3/4-inch to the rear of the front edge.



- 2 Push inward to engage the retaining tabs on the top and bottom edges of the access panel with the corresponding slots on the top and bottom edges of the chassis.
- 3 Slide the panel forward until the screw holes align.
- 4 Retighten the two captive screws you loosened when you removed the access panel.
- 5 Position the back access panel at the side of the chassis and 3/4-inch to the rear of the front access panel.



- 6** Push inward and engage the retaining tabs on the top and bottom edges of the panel with the corresponding slots on the top and bottom edges of the chassis.
- 7** Slide the panel forward until it lines up with the front access panel.
- 8** Tighten the thumbscrew and lock the case, if necessary.

Replacing and Adding System Components

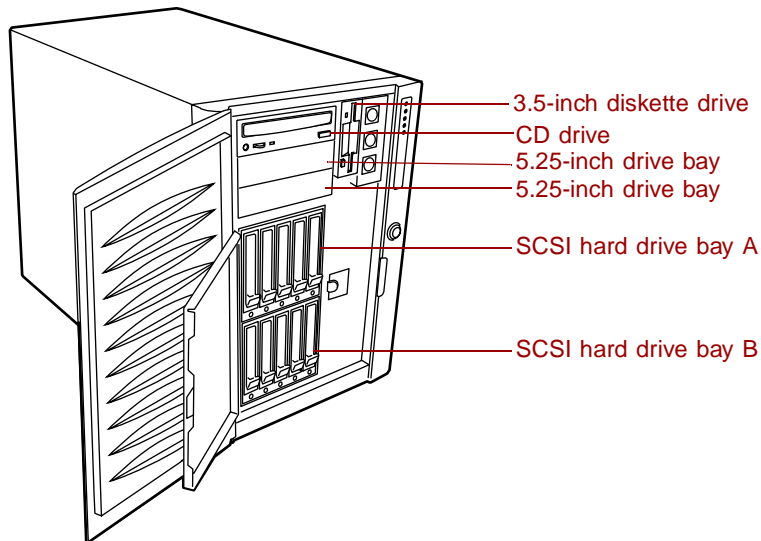
4

Replacing or adding drives

Preparing to replace or add a drive

One 3.5-inch diskette drive and one CD drive are included with your computer. You can add drives of the following types:

- Ten additional 3.5-inch SCA-2 SCSI hard drives with two hard drive cage assemblies installed (standard configuration). The integrated dual-channel Ultra 160 Adaptec SCSI controller will support as many as 30 drives.
- Two additional 5.25-inch devices, or two additional 3.5-inch devices with 5.25-inch drive rail adaptors.



As you prepare to install drives, keep the following in mind:

- To remove and install drives, you need an antistatic wrist strap.
- If you remove a drive, place it in an antistatic bag or container.
- Before you install a drive, see the drive documentation for information on configuring the drive, setting any jumpers on the drive, and attaching cables to the drive.
- If you are installing a drive that requires an additional controller card, install the card before you install the drive.
- IDE drives can be configured as single, master, or slave. IDE CD drives can be configured as master or slave. Configure the drives by using the drive-select jumpers located on the drives.
- If only one drive is attached to a controller cable, configure the drive as master if it is a CD drive. If two drives of any type are attached to the cable, configure one as master and one as slave.

You may need to configure the drives you install using the BIOS Setup utility. Press F2 at start up to open the BIOS Setup utility.

Drive cabling considerations

Excluding the diskette drive, there are two types of devices that can be installed in the server; IDE devices and SCSI devices. This section covers cabling considerations for both types of devices.

The number of devices you can install depends on:

- The number supported by the controller
- The number of physical drive bays/cage slots available

IDE requirements

An 18-inch long IDE cable that supports two drives is standard in the system. If no drives are present on an IDE channel, the cable must be removed. If only one drive is installed, it must be connected at the end of the cable.

Important



If you disable the IDE controller to reuse the interrupt for that controller, you must physically unplug the IDE cable from the system board. Simply disabling the drive by configuring the System Setup Utility (SSU) option does not free the interrupt.

SCSI requirements

Two Ultra wide SCSI cables are standard in the system. They connect the system board to the hard drive cage backplanes.

Important



Cabling and connections must meet the SCSI bus specification. Otherwise, the bus may be unreliable and data corruption may occur or devices might not work at all.

Terminate only the device at the end of the SCSI cable. Hard drives usually provide active termination, while SCSI CD-ROM drives do not. The SCSI backplane on the hard drive cage provides active termination for the SCSI drives connected to the backplane.

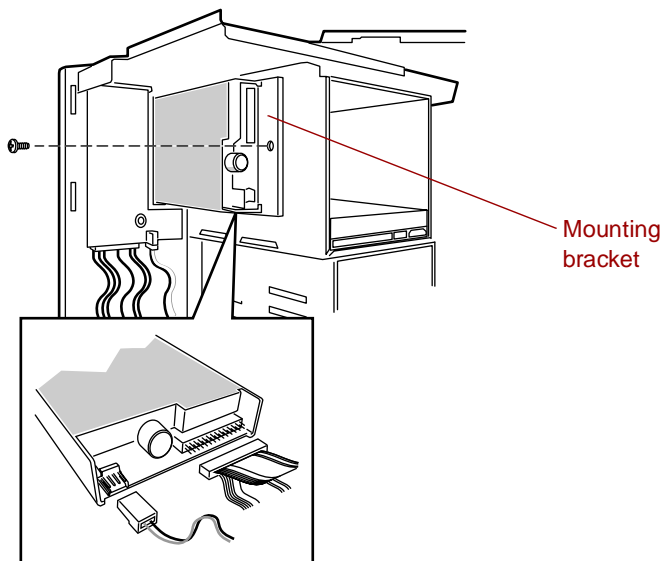
In general, install legacy devices in the 5.25-inch drive bay and connect them to the legacy SCSI cable. Ultra, Ultra-2, and Ultra 160 (Ultra 3) devices are normally hard drives. Connect them to the SCSI backplane at the rear of the SCSI drive bay. The wide SCSI connectors support either single-ended (SE) or low voltage differential (LVD) drives.

The 3.5-inch diskette drive

The diskette drive is included in the original configuration. If you need to replace the diskette drive, follow the instructions below.

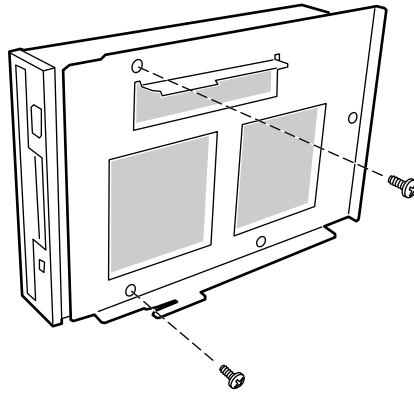
➔ To replace the diskette drive:

- 1 Observe the safety and ESD precautions in “Preventing static electricity discharge” on page 15.
- 2 Remove the front and back access panels (see “Opening the case” on page 17).
- 3 Remove the fans (see “Replacing the system fans” on page 67) and foam fan carrier from the drive bay.
- 4 Disconnect the power and signal cables from the diskette drive. The connectors are keyed for ease in reconnecting them to the drive.
- 5 Remove and save the screw that secures the diskette drive mounting bracket to the side of the 5.25-inch drive bay.

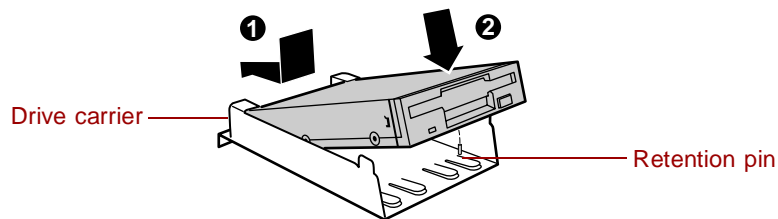


- 6 Slide the mounting bracket toward the back of the chassis to disengage the tabs from the slots in the side of the 5.25-inch drive bay.

- 7 Remove the two screws that hold the mounting bracket to the drive, then lift the front of the mounting bracket and slide it to the rear, disengaging the retention pins from the diskette drive and removing the bracket.



- 8 Set aside the screws and the mounting bracket.
- 9 Place the drive in an antistatic protective wrapper if you are not reinstalling the same drive.
- 10 Remove the new 3.5-inch diskette drive from its protective wrapper, and place it component-side up on an antistatic surface.
- 11 Set any jumpers or switches according to the drive manufacturer's instructions.
- 12 Place the drive into the mounting bracket by sliding the back of the drive into the bracket, then lowering the mounting holes on the front of the drive onto the two retention pins in the front portion of the bracket.



- 13 Attach the bracket to the drive with the two screws you removed previously, then tighten the screws firmly.

- 14** Position the bracket on the side of the 5.25-inch drive bay so that the front of the drive projects through the opening in the front of the chassis and the mounting hole aligns with the threaded standoff.
- 15** Secure the assembly to the 5.25-inch bay with the screw you removed earlier, and tighten the screw firmly.
- 16** Connect the signal and power cables to the drive. The red stripe on the signal cable goes to pin 1 on the drive connector.
- 17** Reinstall the foam fan carrier, fans (see “To install the system fans:” on page 68) and connect the power, data, and front panel cables to the fan power board.
- 18** Reinstall the right side access panels (see “Replacing the side panels” on page 23).
- 19** Run the BIOS Setup utility to specify that the diskette drive is installed in the system.

The 5.25-inch device

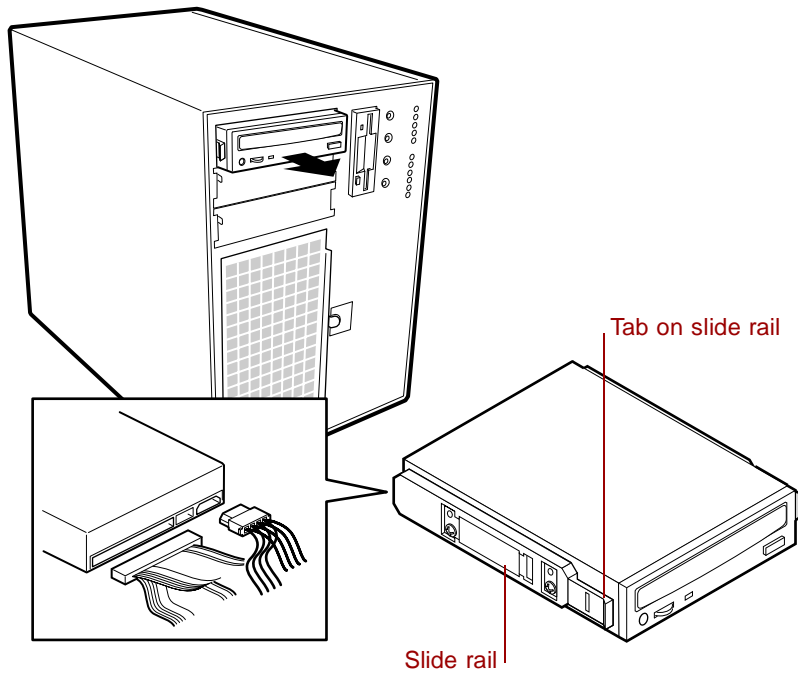
Three 5.25-inch half-height bays provide space for tape backup, CD, or other removable media drives.

Either type of device (IDE or SCSI) can be installed in the 5.25-inch peripheral bays. The system board only provides a single IDE connector and therefore only supports two IDE devices. The legacy narrow SCSI and legacy wide SCSI connectors on the system board support up to seven devices each. The last device on the SCSI bus must be terminated.

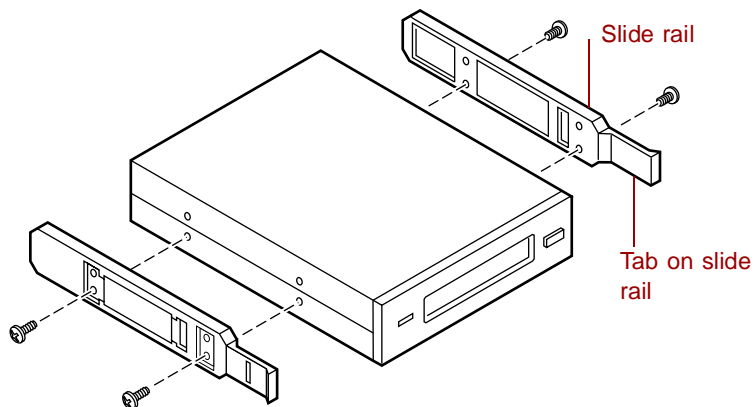
To replace a 5.25-inch device:

- 1** Observe the safety and ESD precautions in “Preventing static electricity discharge” on page 15.
- 2** Open the computer door.
- 3** Remove the access panels (see “Opening the case” on page 17).
- 4** Open the drive bay (see “Opening the chassis bays” on page 20).
- 5** Disconnect the power and data cables from the drive.

- 6 The drive has two protruding plastic, slide rails attached. Squeeze the rail tabs toward each other as you carefully slide the drive forward out of the bay, and place it on an antistatic surface.



- 7 Remove and save the four screws and two slide rails.



- 8 Remove the new drive from its protective wrapper, and place it on an antistatic surface.
- 9 Set any jumpers or switches on the drive according to the drive manufacturer's instructions.
- 10 Using the four screws previously removed, attach the plastic slide rails to the drive.
- 11 Position the drive so the plastic slide rails engage in the bay guide rails. Push the drive into the bay until the slide rails lock in place.
- 12 Connect a power cable and appropriate data cable to the drive.
 - **SCSI drive:** Attach connectors on the cable to the SCSI device or devices you are installing.

Caution



The internal narrow SCSI interface in this system supports only single-ended SCSI devices. Connecting Low Voltage Differential (LVD) SCSI drive types to this interface can result in electrical damage to the system board and peripherals.

- **IDE drive:** The system board has one IDE connector. It can support an IDE data cable up to 18 inches long.
- 13 If the drive requires any other cables, connect them.
 - 14 Close the drive bay, making sure not to damage any data or power cables (see "Closing the chassis bays" on page 22).
 - 15 Replace the access panels (see "Closing the case" on page 22).
 - 16 Close the computer door.

➔ To install a 5.25-inch device:

- 1 Observe the safety and ESD precautions in "Preventing static electricity discharge" on page 15. Also see the cabling information in "Drive cabling considerations" on page 27.
- 2 Open the computer door.
- 3 Remove the right side access panels, see "Removing the side panels" on page 18.

- Using the hole in the front of the metal EMI shield, pull out on the left side of the shield to disengage it from the chassis. Remove and save the shield.

Important

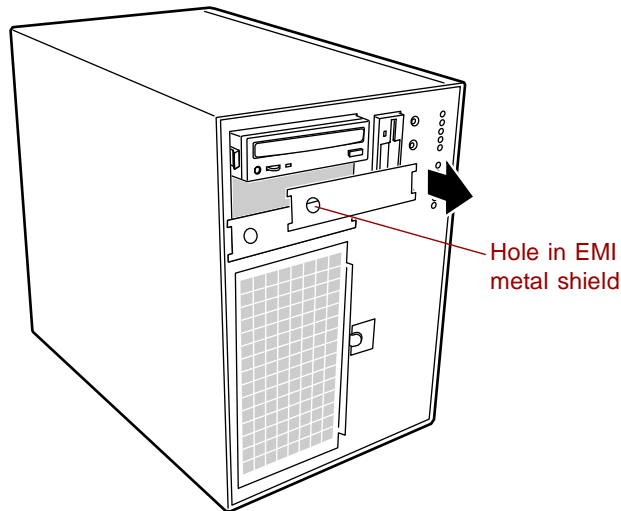


System EMI integrity and cooling are both protected by having drives installed in the bays or filler panels and EMI shields covering the bays. When you install a drive, save the panel and shield to reinstall in case you should later remove the drive and not reinstall one in the same bay.

Important

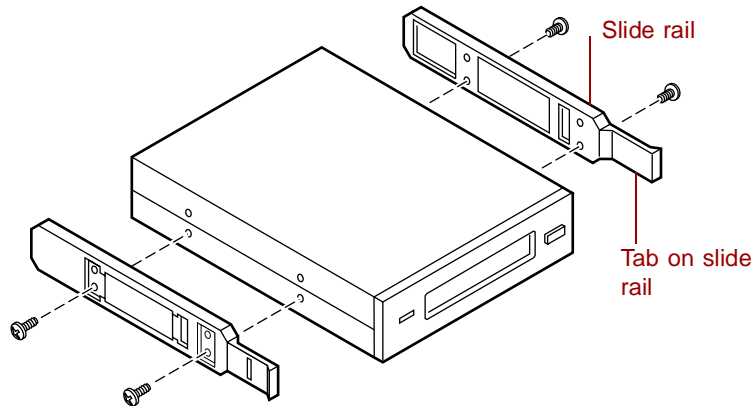


Installing a DLT tape backup drive requires the use of two 5.25-inch drive bays and therefore the removal of two EMI shields. A DLT drive also requires special drive rails, available from Gateway.



- Open the drive bay (see “Opening the chassis bays” on page 20) to gain access to the back of the 5.25-inch drive bay.
- Remove the drive from its protective wrapper, and place it on an antistatic surface.
- Set any jumpers or switches on the drive according to the drive manufacturer’s instructions.

- Using two screws of the appropriate size and length (not supplied), attach each plastic slide rail with its metal grounding plate to the drive.



- Position the drive so the plastic slide rails engage in the bay guide rails. Push the drive into the bay until the slide rails lock in place.
- Connect a power cable and appropriate data cable to the drive.
 - SCSI drive:** Attach connectors on the cable to the SCSI device or devices you are installing.

Caution



The internal narrow SCSI interface in this system supports only single-ended SCSI devices. Connecting Low Voltage Differential (LVD) SCSI drive types to this interface can result in electrical damage to the system board and peripherals.

- IDE drive:** The system board has one IDE connector. It can support an IDE data cable up to 18 inches long.
- If the drive requires any other cables, connect them.
 - Close the drive bay, making sure not to damage any data or power cables (see “Closing the chassis bays” on page 22).
 - Replace the access panels (see “Closing the case” on page 22).
 - Close the computer door.

To install a 3.5-inch device in a 5.25-inch drive bay:

- 1 Observe the safety and ESD precautions in “Preventing static electricity discharge” on page 15. Also see the cabling information in “Drive cabling considerations” on page 27.
- 2 Open the computer door.
- 3 Remove the right side access panels (see “Removing the side panels” on page 18).
- 4 Using the hole in the front of the metal EMI shield, pull out on the left side of the shield to disengage it from the chassis (see “To install a 5.25-inch device” for illustration). Remove and save the shield.

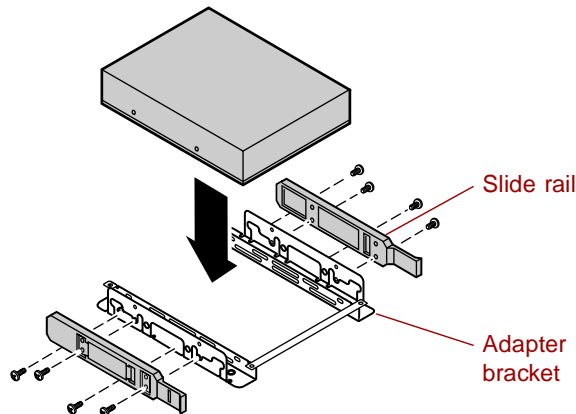
Important



System EMI integrity and cooling are both protected by having drives installed in the bays or filler panels and EMI shields covering the bays. When you install a drive, save the panel and shield to reinstall in case you should later remove the drive and not reinstall one in the same bay.

- 5 Open the drive bay (see “Opening the chassis bays” on page 20) to gain access to the back of the 5.25-inch drive bay.
- 6 Remove the drive from its protective wrapper, and place it on an antistatic surface.
- 7 Set any jumpers or switches on the drive according to the drive manufacturer’s instructions.

- 8 Using two screws of the appropriate size and length (not supplied), attach the adapter bracket to the 3.5-inch device.
- 9 Using two screws of the appropriate size and length (not supplied), attach each plastic slide rail, with its metal grounding plate, to the adapter bracket.



- 10 Position the drive so the plastic slide rails engage in the bay guide rails. Push the drive into the bay until the slide rails lock in place.
- 11 Connect a power cable and appropriate data cable to the drive.
 - **SCSI drive:** Attach connectors on the cable to the SCSI device or devices you are installing.

Caution



The internal narrow SCSI interface in this system supports only single-ended SCSI devices. Connecting Low Voltage Differential (LVD) SCSI drive types to this interface can result in electrical damage to the system board and peripherals.

- **IDE drive:** The system board has one IDE connector. It can support an IDE data cable up to 18 inches long.
- 12 If the drive requires any other cables, connect them.
 - 13 Close the drive bay, making sure not to damage any data or power cables (see “Closing the chassis bays” on page 22).
 - 14 Replace the access panels (see “Closing the case” on page 22).
 - 15 Close the computer door.

SCSI hard drives

The system supports a variety of SCSI drives. Contact your sales representative or Gateway dealer for a list of approved SCSI devices. See the sections below for specific instructions.

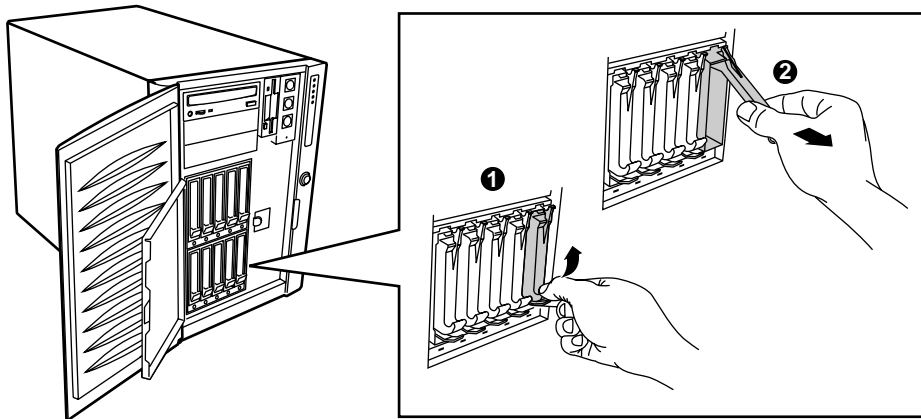
The hard drive cages in this system come pre-configured. The top drive cage is channel A and the bottom drive cage is channel B. Drive IDs are also pre-assigned, 0 to 4 from left to right, in each cage.

Installing a SCSI hard drive

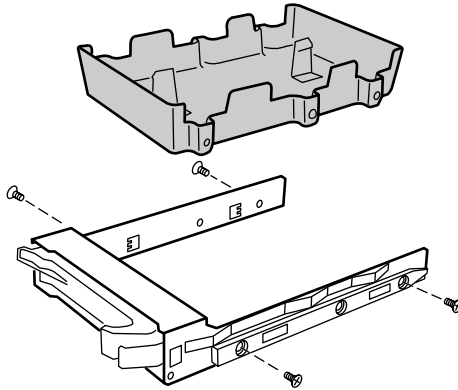
Before you can install a SCA-2 SCSI hard drive in the system, you must mount it on a drive carrier to allow easy installation into the server.

➔ To install a SCSI drive:

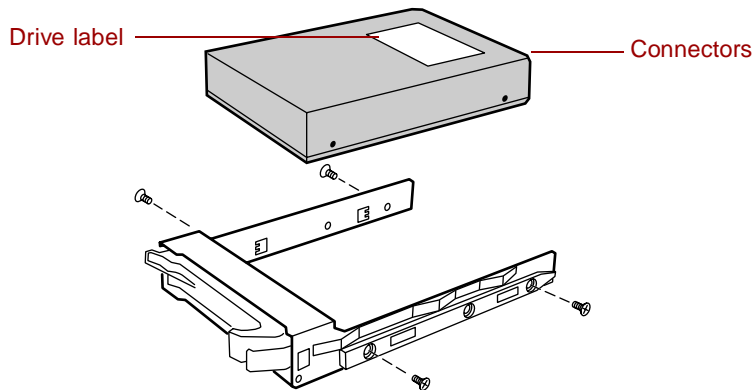
- 1 Open the computer door.
- 2 Open the metal door protecting the hard drive cages.
- 3 Select the slot in the hard drive cage where you intend to install the new SCSI drive.
- 4 Pull up on the bottom of the plastic latch and gently pull up on the carrier handle, disengaging the latch that secures the carrier to the cage.
- 5 Remove the empty drive carrier from the slot in the hard drive cage.



- 6 Remove the four screws securing the plastic air baffle to the drive carrier, then remove the air baffle (save it for possible future use).

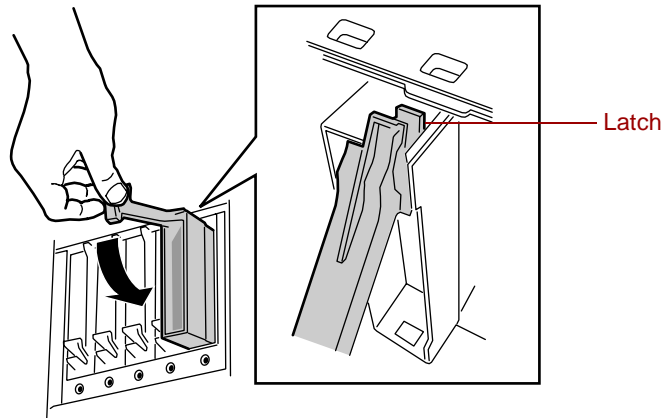


- 7 Remove the 3.5-inch hard drive from its wrapper and place it on an antistatic surface.
- 8 Orient the drive carrier so the latch is toward you and the rails are down.
- 9 Place the drive in the drive carrier so the connector is to the rear of the drive carrier (opposite the plastic latch) and the drive label is up.



- 10 Attach the drive to the drive carrier using the four screws previously removed.
- 11 Holding the assembly by the drive carrier, position it so that it engages the hard drive cage guide rails of the open drive slot.

- 12 Lift the plastic latch to the fully open position and firmly push the drive into the bay. When the plastic latch engages the locking slot in the hard drive cage, push it down until it snaps into place.



- 13 Close the metal door protecting the hard drive cages, then close the system door.

Hot-swapping a SCSI drive

A bank of five green LEDs on the front panel monitors the drive status of each drive in the hard drive cages. Each LED corresponds directly to a drive, so that the LED on the far left reflects an error condition of the drive on the far left. The five LEDs and corresponding drives are numbered (left to right) zero through four. When a green LED is on continuously (indicating a bad drive), you can hot-swap (replace) the drive. You do not need to shut the system down to hot-swap a drive.

➔ To hot-swap a SCSI drive:

- 1 Open the computer door.
- 2 Open the metal door protecting the hard drive cages.
- 3 Check the bank of green LEDs on the front panel to determine which drive is bad.
- 4 Pull up on the bottom of the plastic latch and gently pull up on the carrier handle, disengaging the latch that secures the carrier to the cage.
- 5 Grasp the plastic carrier handle and pull it toward you to disengage the drive connector from the backplane connector.

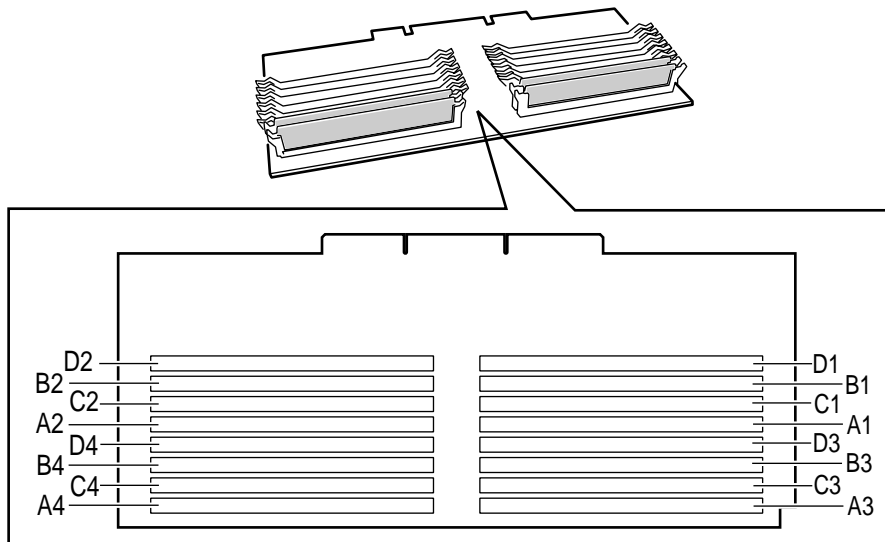
- 6** Carefully slide the bad drive out of the bay. Place the drive on an antistatic surface.
- 7** Remove the drive carrier from the bad drive and install it on the new drive (see "To install a SCSI drive:" on page 37, steps 6-10).
- 8** Holding the assembly by the drive carrier, position it so that it engages the hard drive cage guide rails of the open drive slot.
- 9** Lift the plastic latch to the fully open position and firmly push the drive into the bay. When the plastic latch engages the locking slot in the hard drive cage, push down on it until it snaps into place.
- 10** Close the metal door protecting the hard drive cages, then close the computer door.

Replacing or adding memory

The Synchronous Dynamic Random Access Memory (SDRAM) Dual Inline Memory Modules (DIMMs) supported by your system board conform to the following standards:

- 64 MB, 128 MB, 256 MB, 512 MB, and 1 GB ECC DIMMs
- PC100-compliant, registered, parity, ECC SDRAM
- 16 GB maximum system memory

Memory is installed on a memory module card in four banks. Each bank has four slots: Bank 1 (A1-A4), Bank 2 (B1-B4), Bank 3 (C1-C4) and Bank 4 (D1-D4).

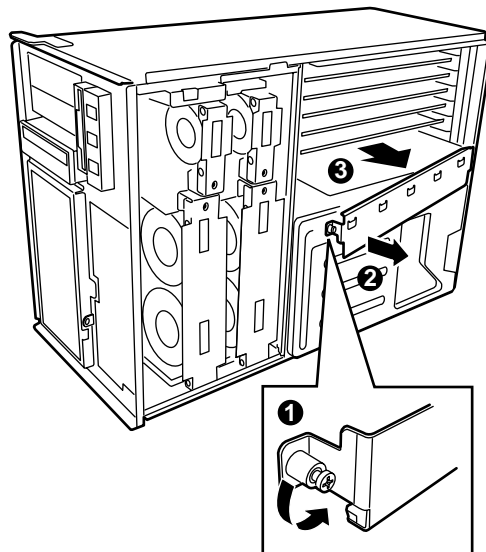


When you are selecting and installing DIMMs, keep the following in mind:

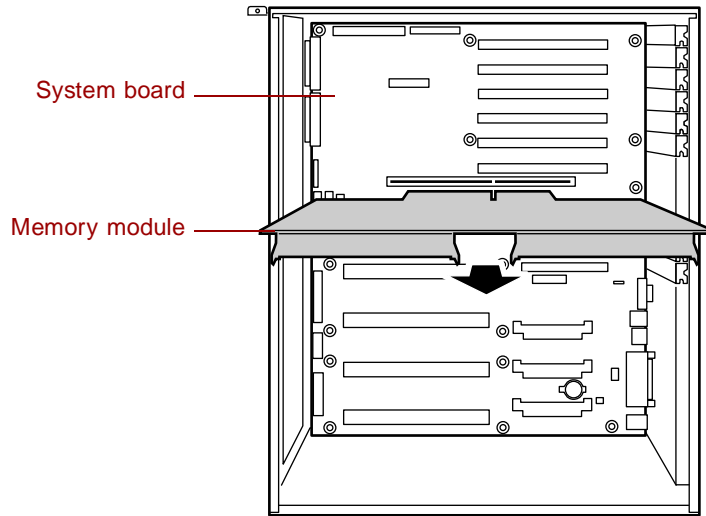
- Memory must be installed by bank (in groups of four) in order, beginning with Bank 1 (A1-A4). All four DIMMs in a bank must be identical.
- Only registered DIMMs should be used.
- No jumper settings are required for the memory size or type because the BIOS automatically detects this information.
- For additional memory, contact Gateway.

➔ **To replace DIMMs:**

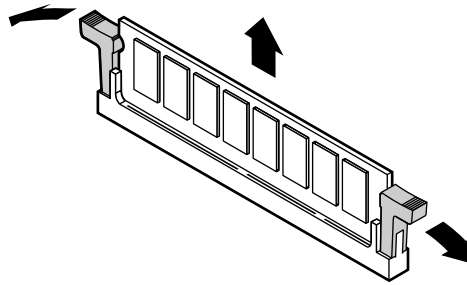
- 1 Observe the safety and ESD precautions in “Preventing static electricity discharge” on page 15.
- 2 Turn off the system and disconnect the power cord(s), modem cord (if installed) and all other external peripheral devices.
- 3 Remove the back access panel. (See “Removing the side panels” on page 18 and “Preventing static electricity discharge” on page 15.)
- 4 Loosen the captive screw securing the memory module retention bracket to the chassis, then swing the retention bracket out from the chassis and remove it.



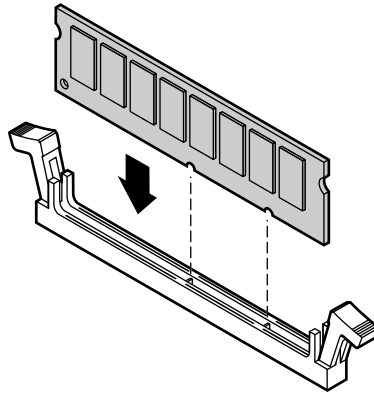
- 5 Gently pull the memory module from its socket on the system board and place it on an antistatic surface with the DIMM sockets facing up.



- 6 Pull open the socket clamps on each side of the DIMM socket, then lift the DIMM out of the socket. Store the DIMM in an antistatic container.



- 7 Insert the new DIMM into the socket and align the two notches in the DIMM with the two notches in the DIMM socket.



- 8 Gently press the DIMM into the socket until it is firmly seated. Inserting the DIMM automatically locks the socket clamps on each end of the DIMM.
- 9 Repeat the process with the other three DIMMs in the bank.
- 10 Reinstall the memory module card into its slot in the system board. (Make sure to align the card with the plastic guides on the chassis.)
- 11 Reinstall and secure the memory module retention bracket with the attached captive screw.
- 12 Reinstall the back access panel following the instructions on page 23.
- 13 Reconnect peripherals, the modem cord, and the power cord, then turn on the system.

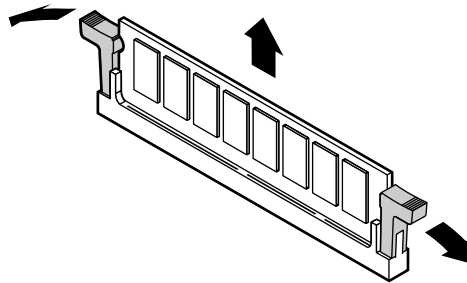
➔ To remove DIMMs:

Important



DIMMs must be added or removed in banks of four (see “Replacing or adding memory” on page 41). Installation must be done, in order, from Bank 1 through Bank 4, and removal in the opposite order.

- 1 Observe the safety and ESD precautions in “Preventing static electricity discharge” on page 15.
- 2 Turn off the system and disconnect the power cord(s), modem cord (if installed) and all other external peripheral devices.
- 3 Remove the back access panel. (See “Removing the side panels” on page 18 and “Preventing static electricity discharge” on page 15.)
- 4 Remove the DIMM by pulling open the socket clamps on each side of the DIMM socket, then lifting the DIMM out of the socket. Store the DIMM in an antistatic container.



- 5 Repeat the process with the other three DIMMs in the bank.
- 6 Reinstall the memory module card into its slot in the system board. (Make sure to align the card with the plastic guides on the chassis.)
- 7 Reinstall and secure the memory module retaining bracket with the attached captive screw.
- 8 Reinstall the back access panel following the instructions on page 23.
- 9 Reconnect peripherals, the modem cord, and the power cord, then turn on the system.

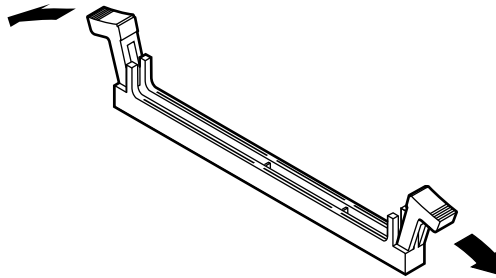
➔ To add DIMMs:

Important

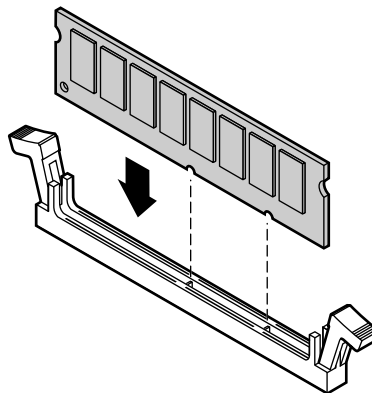


DIMMs must be added or removed in banks of four (see “Replacing or adding memory” on page 41). Installation must be done, in order, from Bank 1 through Bank 4, and removal in the opposite order.

- 1 Observe the safety and ESD precautions in “Preventing static electricity discharge” on page 15.
- 2 Turn off the system and disconnect the power cord(s), modem cord (if installed) and all other external peripheral devices.
- 3 Remove the back access panel. (See “Removing the side panels” on page 18 and “Preventing static electricity discharge” on page 15.)
- 4 To add a DIMM, pull open the socket clamps on each side of the DIMM socket.



- 5 Insert the new DIMM into the socket and align the two notches in the DIMM with the two notches in the DIMM socket.



- 6** Gently press the DIMM into the socket until it's firmly seated. Inserting the DIMM automatically locks each of the socket clamps on each end of the DIMM.
- 7** Repeat the process with the other three DIMMs in the bank.
- 8** Reinstall the memory module card into its slot in the system board. (Make sure to align the card with the plastic guides on the chassis.)
- 9** Reinstall and secure the memory module retaining bracket with the attached captive screw.
- 10** Reinstall the back access panel following the instructions on page 23.
- 11** Reconnect peripherals, the modem cord, and the power cord(s), then turn on the system.

Replacing or adding a processor

The system is compatible with the Intel® Pentium® III 550 MHz and faster processors with 100 MHz front-side bus (FSB). As many as four processors may be installed in the system (they must have the same processor and FSB speed). Processor and FSB speed are automatically detected by the system. Processors must be installed in order, from slot 1 through slot 4 and a Voltage Regulator Module (VRM) must be installed for each processor added to the system. Whenever processors are installed, the most current version of the BIOS should be installed as well (see “Updating the BIOS” on page 73).

When adding or replacing a processor, order a processor upgrade kit from Gateway. The kit includes the processor, a heatsink, and a VRM.

Caution

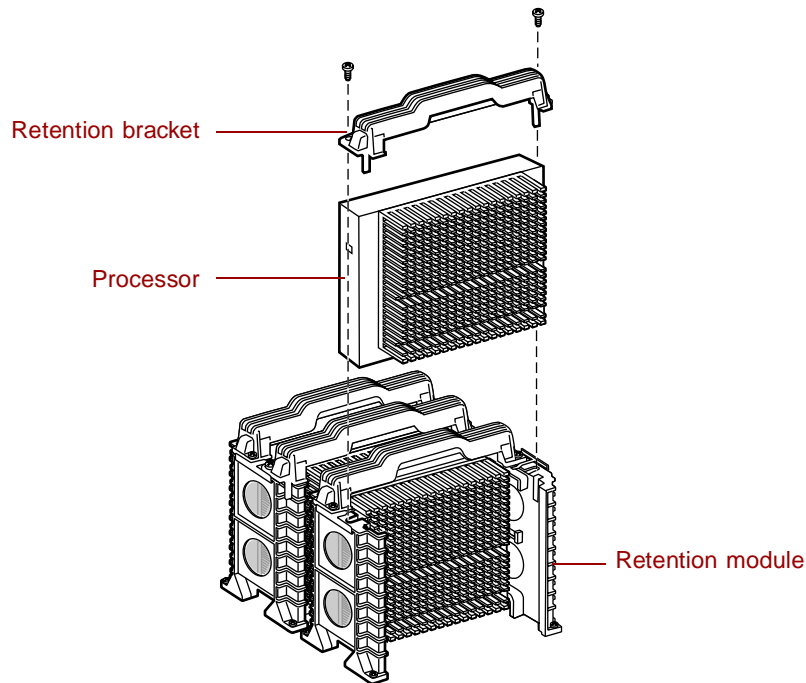


A heatsink must be installed on each processor. Installing a processor without a heatsink could result in damage to, or failure of, the processor.

➔ To replace a processor:

- 1 Observe the safety and ESD precautions in “Preventing static electricity discharge” on page 15.
- 2 Turn off the system and disconnect the power cord(s), modem cord (if installed) and all other external peripheral devices.
- 3 Remove the back access panel. (See “Removing the side panels” on page 18.)
- 4 Loosen the captive screw securing the memory module retention bracket to the chassis, then swing the retention bracket out from the chassis and remove it.
- 5 Remove the foam cover from the electronics bay. (Do not remove the plastic air baffle attached to the foam cover.)

- Using a Phillips screwdriver, remove the screws holding the retention bracket to the processor retention module of the processor you want to replace.

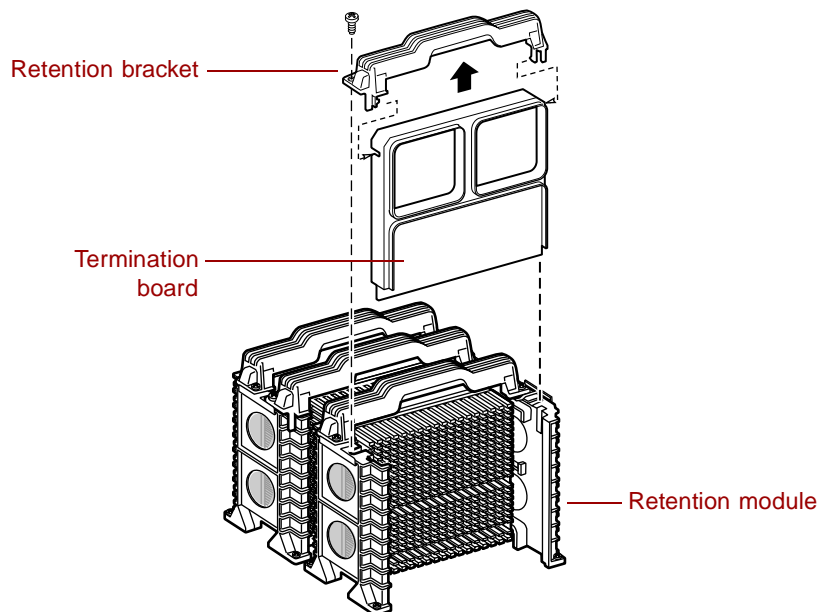


- Remove the retention bracket.
- Grasp the processor and pull it up and out of the slot.
- Place the processor in an antistatic container.
- Remove the new processor from its antistatic container.
- Align the new processor with the processor slot (note that the processor slot is keyed so the processor can only be installed one way) and press firmly to install it.
- Reinstall the processor retention bracket onto the processor retention module.
- Replace the foam cover on the electronics bay.
- Reinstall and secure the memory module retaining bracket with the attached captive screw.

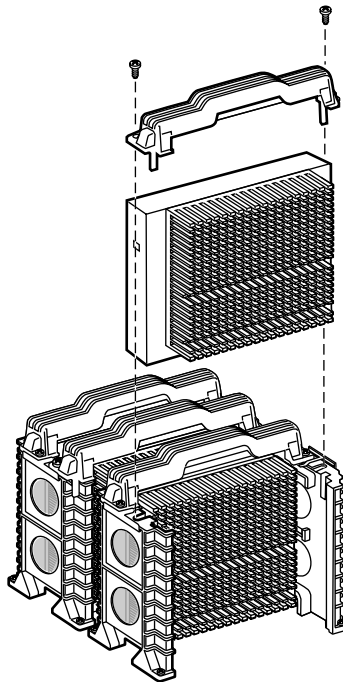
- 15 Reinstall the back access panel following the instructions on page 23.
- 16 Reconnect peripherals, the modem cord, and the power cord, then turn on the system.
- 17 You must enable Processor Retest from the BIOS Setup utility whenever you replace or add a processor.

➔ **To add an additional processor:**

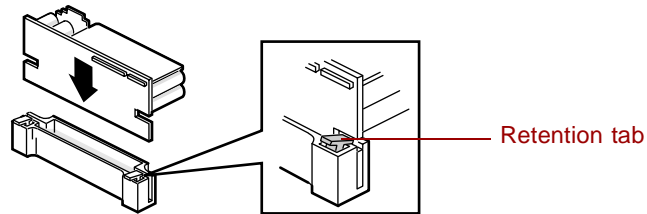
- 1 Observe the safety and ESD precautions in “Preventing static electricity discharge” on page 15.
- 2 Turn off the system and disconnect the power cord(s), modem cord (if installed) and all other external peripheral devices.
- 3 Remove the back access panel. (See “Removing the side panels” on page 18.)
- 4 Loosen the captive screw securing the memory module retention bracket to the chassis, then swing the retention bracket out from the chassis.
- 5 Remove the foam cover from the lower electronics bay. (Do not remove the plastic air baffle attached to the foam cover.)
- 6 Using a Phillips screwdriver, remove the screws holding the retention bracket to the processor retention module of the next processor slot.



- 7** Remove the processor retention bracket and the termination board from the processor slot.
- 8** Remove the retention bracket from the termination board.
- 9** Place the termination board in an antistatic container for future use.
- 10** Remove the new processor from its antistatic container.
- 11** Align the new processor with the processor slot (note that the processor slot is keyed so the processor can only be installed one way) and press firmly to install it.
- 12** Reinstall the processor retention bracket onto the processor retention module using the screws you removed previously.



- 13** Install the VRM that came with the processor upgrade kit into the VRM socket specified for the processor you just installed (refer to “System board” on page 6 for location). Push down firmly until the retention tabs engage the edges of the VRM.



- 14** Replace the foam cover on the electronics bay.
- 15** Reinstall the memory module retaining bracket and secure with the attached captive screw.
- 16** Reinstall the back access panel following the instructions on page 23.
- 17** Reconnect peripherals, the modem cord, and the power cord(s), then turn on the system.
- 18** You must enable Processor Retest from the BIOS Setup utility whenever you replace or add a processor.

Adding an expansion card

This server has six, full-length, hot-pluggable PCI expansion slots (two 64-bit/33 MHz slots and four 64-bit/66 MHz slots) and two half-length, standard PCI slots (32-bit 33 MHz) on the system board that may be used for a variety of expansion cards. These cards may include a SCSI controller card, a modem, or a high-end sound card.

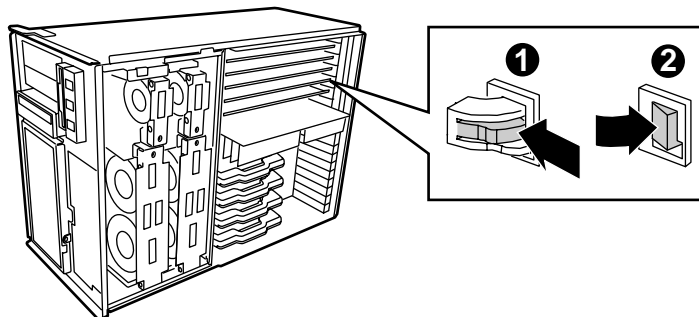
Important



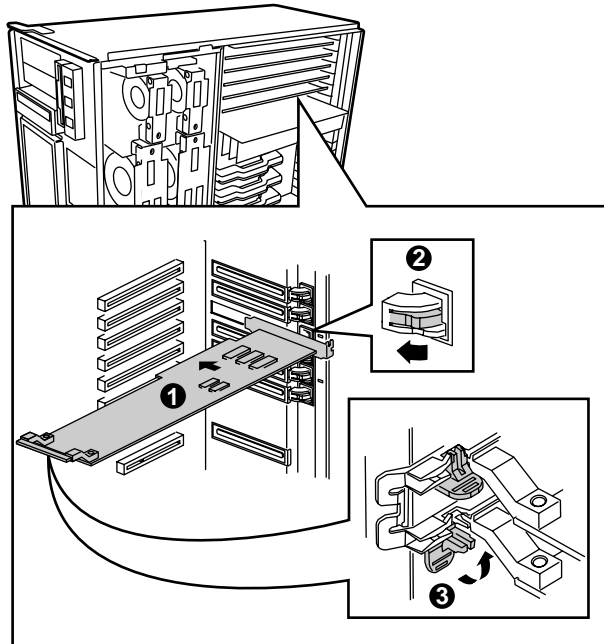
Expansion cards are only hot-pluggable if they specifically indicate this capability. Drivers for hot-plug controllers are available on the Server Companion CD. Hot-pluggable cards can only be installed in the full-length PCI slots in the upper portion of the electronics bay that are equipped with hot-plug status LEDs and switches. See page 56 for information on installing hot-pluggable cards.

➔ To add a full-length expansion card:

- 1 Observe the safety and ESD precautions in “Preventing static electricity discharge” on page 15.
- 2 Turn off the system and disconnect the power cord(s), modem cord (if installed) and all other external peripheral devices.
- 3 Remove the back access panel. (See “Removing the side panels” on page 18.)
- 4 Locate an available slot appropriate to the type of card you are installing (64-bit/66 MHz or 64-bit/33 MHz full-length PCI, see “System board” on page 6 for locations).
- 5 Remove the slot cover by gently pushing it out the back of the chassis.
- 6 Press the center of the plastic card retainer, then rotate it out of the way.



- 7 Set any jumpers on the card to the appropriate settings (refer to your card documentation for jumper settings).
- 8 Holding the card by its top edges, firmly press the card into the selected expansion slot on the system board.
- 9 From the back of the system, press the plastic card retainer in to hold the card in place.

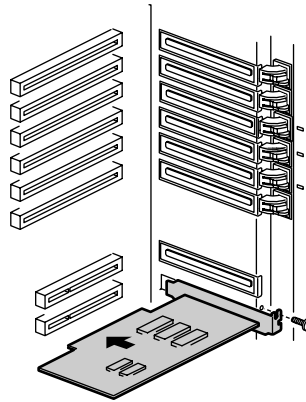


- 10 If the card is a full-length card with a plastic stabilizer, close the plastic rear retention latch to secure the other end of the card in place.
- 11 Replace the back access panel.
- 12 Reconnect the power cord(s), modem cord (if installed), and all other external peripheral devices.
- 13 Restart the system and install drivers as necessary.

You may need to reconfigure your system after installing some expansion cards. You may also need to install software that came with the card. Check the card documentation for additional information.

➔ To add a half-length expansion card:

- 1 Observe the safety and ESD precautions in “Preventing static electricity discharge” on page 15.
- 2 Turn off the system and disconnect the power cord(s), modem cord (if installed) and all other external peripheral devices.
- 3 Remove the back access panel. (See “Removing the side panels” on page 18.)
- 4 Remove the memory module retention bracket and the foam cover on the lower electronics bay. (Do not remove the plastic air baffle attached to the foam cover.)
- 5 Locate an available half-length slot.
- 6 Remove the screw securing the slot cover in place, then remove the cover.
- 7 Set any jumpers on the card to the appropriate settings (refer to your card documentation for jumper settings).
- 8 Holding the card by its top edges, firmly press the card into the selected expansion slot on the system board.



- 9 Using the screw you removed previously, secure the card into place.

- 10 Replace the foam cover and secure the memory module retention bracket, then replace the back access panel.
- 11 Reconnect the power cord(s), modem cord (if installed), and all other external peripheral devices, then restart the system.

You may need to reconfigure your system after installing some expansion cards. You may also need to install software or drivers that came with the card. Check the card documentation for additional information.

To install a hot-pluggable, full-length expansion card:

Caution



Do not remove the plastic safety curtains between the hot-pluggable PCI slots. Removal of these curtains may permit cards being installed to contact energized cards and cause electrical sparks or damage the system.

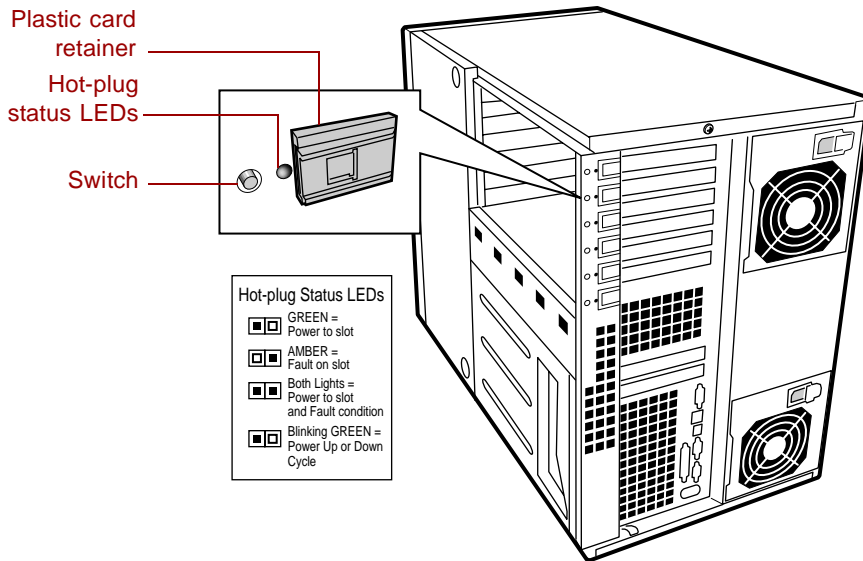
Important



Drivers for hot-plug controllers have not been pre-loaded onto your hard drive, but are available on the Server Companion CD which came with your server.

- 1 Remove the back access panel without turning off the system. (See “Removing the side panels” on page 18 and “Preventing static electricity discharge” on page 15.)
- 2 Locate an available slot appropriate to the type of card you are installing (64-bit/66 MHz or 64-bit/33 MHz, see “System board” on page 6 for locations).
- 3 Remove the slot cover by gently pushing it out the back of the chassis.
- 4 Press the center of the plastic card retainer, then rotate it out of the way. (See “To add a full-length expansion card” on page 53.)

- From the back of the server, note the hot-plug status LED beside the plastic card retainer. If the LED is green, press the switch beside it to turn off the power to the PCI slot.



- Set any jumpers on the card to the appropriate settings (refer to your card documentation for jumper settings).
- Holding the card by its top edges, firmly press the card into the selected expansion slot on the system board.
- From the back of the system, press the plastic card retainer in to hold the card in place.
- If the card is a full-length card with a plastic stabilizer, close the plastic retention latch to secure the other end of the card in place.
- Press the switch beside the LEDs to turn on the power to the PCI slot. The LED will blink green for a few seconds, then show steady green when the power is on.
- Replace the back access panel.

You may need to reconfigure your system after installing some expansion cards. You may also need to install software that came with the card. Check the card documentation for additional information.

To remove a hot-plug card without turning the server off:

- 1 Remove the back access panel. (See “Removing the side panels” on page 18 and “Preventing static electricity discharge” on page 15.)
- 2 Locate the card you want to remove.
- 3 From the back of the server, note the LED corresponding to the card you want to remove (the LED should be green). Press the switch beside it to turn off the power to the PCI slot. The LED blinks and goes out when the power is turned off to the PCI slot. (See “To install a hot-pluggable, full-length expansion card” page 56.)

Caution



You must wait for the LED to go out before you attempt to remove an expansion card from a hot-pluggable PCI slot.

- 4 Press the center of the plastic card retainer that secures the card in place, then rotate it out of the way.
- 5 If the card is a full-length card with a plastic stabilizer, open the plastic retention latch to release the other end of the card.
- 6 Holding the card by its top edges, firmly pull the card from the expansion slot on the system board.
- 7 If you are installing another card in the selected slot, see “To install a hot-pluggable, full length expansion card” on page 56. If you are not installing another card, place a metal slot cover in the opening left by the card you removed.
- 8 From the back of the system, press the plastic card retainer in.
- 9 Replace the back access panel.

You may need to reconfigure your system after removing some expansion cards. You may also need to remove software. Check the card documentation for additional information.

Replacing the battery

The battery provides power for the system real-time clock and CMOS memory, which holds the system configuration information.

If your battery is failing you may notice your system clock slowing down and giving you the incorrect time. If so, open the BIOS Setup utility and write down all the values in the various menus before replacing the battery. Replacing the battery resets the BIOS Setup utility to its default values.

Warning



Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by manufacturer.

Dispose of used batteries according to manufacturer's instructions.

Warnung



Explosionsgefahr bei falsch eingebauter batterie.

Ersetzen der batterien nur mit batterien des gleichen typs oder mit batterien vom hersteller empfohlenen typs.

Entsorgen gebrauchter batterien entsprechned herstellerangaben.

Attention



Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.

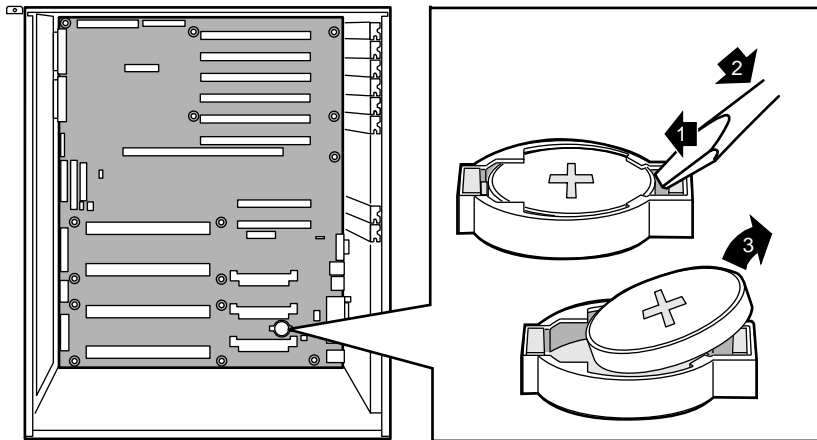
Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.

Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

➔ To replace the battery:

- 1 Restart the computer and start the BIOS Setup utility by pressing F2 when you are prompted to do so.
- 2 Write down the CMOS values from the **Main**, **Advanced**, **Security**, **Server** and **Boot** menus so you can reenter them after you replace the battery. For more information about the BIOS Setup utility program, see “Using the BIOS Setup Utility” on page 71.
- 3 Observe the safety and ESD precautions in “Preventing static electricity discharge” on page 15.

- 4 Turn off the system and disconnect the power cord(s), modem cord (if installed) and all other external peripheral devices.
- 5 Remove the back access panel. (See “Removing the side panels” on page 18.)
- 6 Remove the memory module retention bracket and the foam cover on the lower electronics bay. (Do not remove the plastic air baffle attached to the foam cover.)
- 7 Remove the VRM for processor 3.
- 8 Locate the battery on the system board (see “System board” on page 6). The battery is circular and has the positive pole mark (+) on the top.
- 9 Using a small, flat-bladed screwdriver, carefully remove the battery from its socket on the system board.



- 10 Press the new battery in the socket with the positive pole up. Be sure you have pressed the battery down far enough for it to contact the base of the socket (it should snap into place).
- 11 Replace the VRM you removed.
- 12 Close the case following the instructions on page 22.
- 13 Reconnect peripherals, the modem cord, and the power cord(s), then turn on the system.
- 14 If the CMOS data is not correct, change the information in the BIOS Setup utility using the data you recorded in Step 2.

Troubleshooting the battery installation

If you have problems after installing the new battery, try each of the items listed below, restarting the computer after each try.

- Turn off the computer and make sure that all exterior cables are attached and secured to the correct connectors.
- Make sure that all power switches are on. If the computer is plugged into a power strip or surge protector, make sure it is turned on also.
- Enter the BIOS Setup utility and compare the settings on the screen with your notes or the system hardware manuals. Correct any discrepancies.
- Turn off the computer, remove the cover, and make sure that all cables inside the case are attached securely. Also, make sure that the colored cable edges are aligned correctly and that the connectors do not miss any pins. Disconnect and reconnect the cables. Close the case as described in Chapter 3, reconnect the modem and power cords, then turn on the computer.
- Turn off the computer, remove the cover and, if you have the proper test equipment, make sure that the new battery has power. (Although unlikely, your new battery may be defective.) Close the case as described in Chapter 3, reconnect the modem and power cords, then turn on the computer.

Replacing the system board

The system board is mounted on stand-offs in the electronics bay. The board is secured by 2 screws, as well as the screws that hold the processor retention brackets in place.

Important



All references to front, rear, left, or right on the computer are based on the computer being in a normal, upright position, as viewed from the front.

➔ To remove the system board:

- 1 Observe the safety and ESD precautions in “Preventing static electricity discharge” on page 15.
- 2 Turn off the system and disconnect the power cord(s), modem cord (if installed) and all other external peripheral devices.
- 3 Remove the back access panel. (See “Removing the side panels” on page 18.)
- 4 Remove the memory module retention bracket and the foam cover on the lower electronics bay. (Do not remove the plastic air baffle attached to the foam cover.)
- 5 Place the chassis gently on its left side.
- 6 Remove all expansion cards and the memory module card from the system board.
- 7 Remove the processors, the terminator cards, and the processor retention brackets from the system board.
- 8 Remove the plastic safety curtains between the PCI slots.
- 9 Disconnect all cables from the system board, including the power cables from the power supply. Note where the cables are connected and their orientation.
- 10 Remove the two retaining screws securing the board to the electronics bay.
- 11 Remove the system board and place it in an antistatic container.

To reinstall the system board:

- 1** Observing the precautions in “Preventing static electricity discharge” on page 15, remove the system board from its antistatic container.
- 2** Holding the system board by the edges, place it in the case by aligning the mounting holes on the board with the threaded standoffs on the electronics bay. Carefully align the I/O panel on the rear of the board with the I/O plate on the case.
- 3** Replace the retention screws previously removed from the system board, then tighten the screws.
- 4** Reconnect the cables that you removed previously.
- 5** Replace the plastic safety curtains between the PCI slots.
- 6** Reinstall the processor retention brackets, the processors, and the terminator cards (see “Replacing or adding a processor” on page 48).
- 7** Reinstall the memory module card and other expansion cards (see “Replacing or adding memory” on page 41).
- 8** Close the case by following the instructions on page 22.
- 9** Reconnect peripherals, the modem cord, and the power cord(s), then turn on the system.

Replacing a hot-swap power supply

If your system configuration includes three power supplies, it is possible to hot-swap a failed power supply without shutting down your system. The average configuration for this server is two power supplies (top and bottom). Gateway does not recommend hot-swapping power supplies with this configuration.

An audio alarm and front panel LED indicate if one of the power supplies has failed. To determine which power supply has failed, look for an amber Fail LED on the back of each power supply.

The Predictive Fail LED indicates if one of the power supplies has a fan or cooling problem which would eventually cause a failure. This allows you to replace the indicated power supply prior to an actual failure.

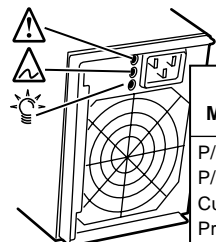
Caution



Gateway does not recommend hot-swapping if your system only has two power supplies. A single power supply may overload if it does not have sufficient capacity to provide power for your system as it is configured.

➔ To replace a hot-swap power supply:

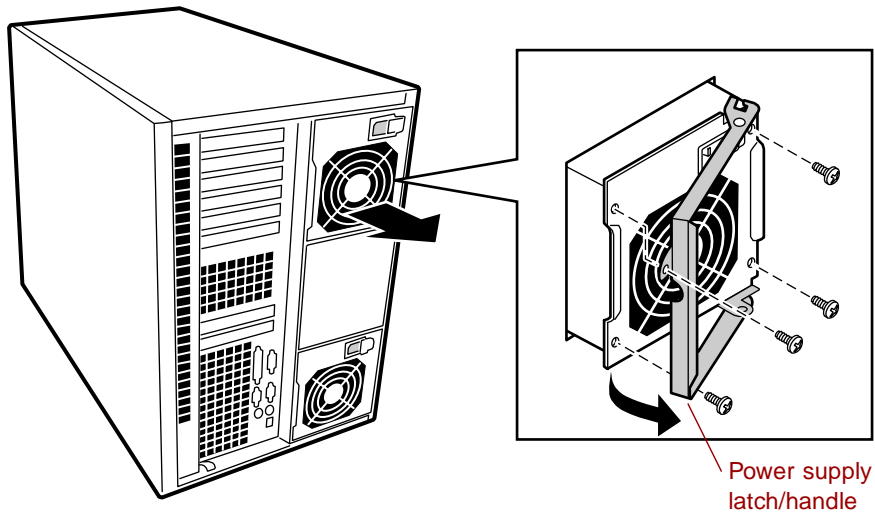
- 1 Determine which power supply needs to be replaced, based on the LED indicators on the top of each power supply. If your system does not have three power supplies, shut down your operating system and turn off the system power.



Power Supply Condition LEDs	Predictive Fail LED		
	Power LED	Fail LED	Fail LED
LED Color	<i>Green</i>	<i>Amber</i>	<i>Amber</i>
Marking Next to LED			
P/S on, All outputs normal	ON	OFF	OFF
P/S Failure	OFF	OFF	ON
Current Limit	ON	OFF	Blink
Predictive Failure	ON	Blink/ON	OFF

- 2 Remove the four screws securing the power supply to the back of the chassis.

- 3 Grasp the left edge of the power supply latch/handle and pull it out and to the right.



- 4 Unplug the power supply.
- 5 With steady, even pressure, pull the power supply out of the chassis.
- 6 Verify that the new power supply is the same as the one removed.
- 7 Swing the power supply latch/handle of the new power supply out and to the right.
- 8 Plug the power cord into the new power supply.
- 9 Verify that only the green power LED comes on.
- 10 Align the new power supply with the opening left by the power supply you removed.
- 11 With steady, even pressure, push the new power supply into the server until it seats firmly.
- 12 Swing the power supply latch/handle in and to the left to secure it.
- 13 Replace the four screws you removed previously.
- 14 If you previously turned off the system, turn the power back on and restart.

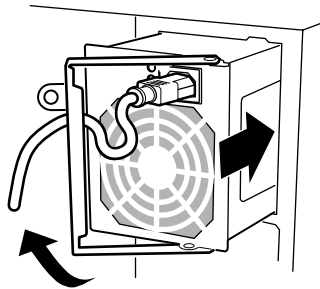
➔ To add a hot-swap power supply:

Important



Gateway recommends that the top power supply be installed first, the bottom power supply be installed next, and the middle power supply be installed last.

- 1 Remove the four screws securing the power supply access cover to the back of the chassis. Put the cover aside and retain the screws.
- 2 Swing the power supply latch/handle of the new power supply out and to the right.
- 3 Plug the power cord into the new power supply.
- 4 Verify that only the green power LED comes on.
- 5 Align the new power supply with the opening left by the access cover you removed.
- 6 With steady, even pressure, push the new power supply into the server until it seats firmly.



- 7 Swing the power supply latch/handle in and to the left to secure it.
- 8 Replace the four screws you removed previously.

Replacing the system fans

The system fans are mounted in the drive bay. There are potentially four fan units in this bay, depending on your configuration, two small units which cool the PCI slots, and two larger, double-fan units which cool the memory module and the processors. All fan units are hot-swappable, and can be added or replaced without shutting down the server.

➔ To remove the system fans:

- 1 Remove the right side access panels. (See “Removing the side panels” on page 18 and “Preventing static electricity discharge” on page 15.)
- 2 Determine which fan unit needs to be replaced. The amber LED indicates faulty fan unit, if ISC (Intel Server Control) is running.
- 3 Grasp the fan unit firmly and pull straight out from the drive bay.

Warning

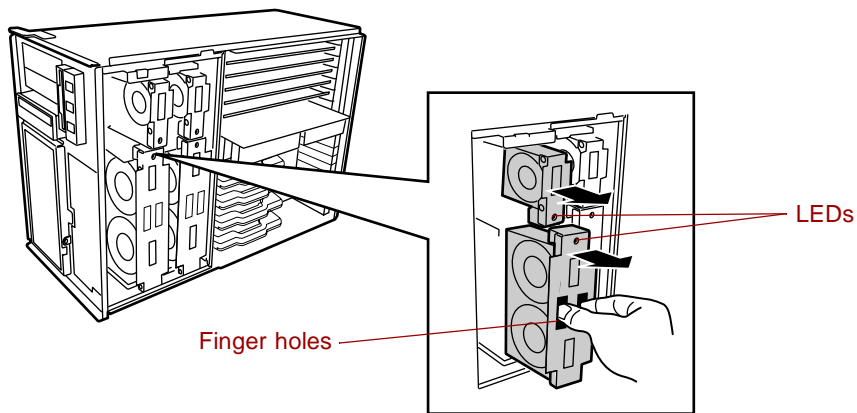


Do not grip the fan by the sides of the fan bracket. The fan blades may be in motion and may cut your fingers. Use the holes in the top of the bracket as shown.

Warnung

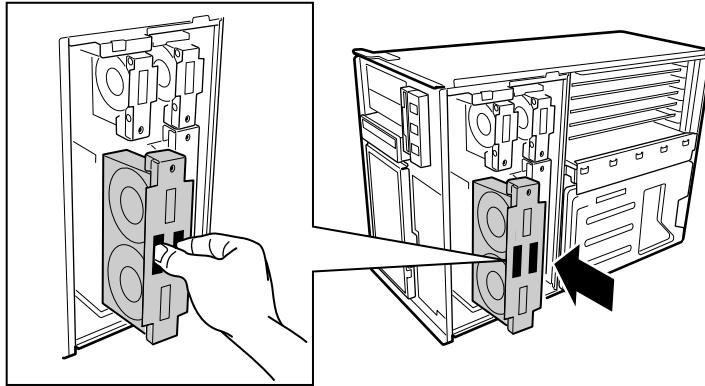


Fassen Sie den Lüfter nicht an den Seiten der Halteklammer an. Die Lüfterlamellen könnten noch in Bewegung sein und es besteht die Gefahr, daß Sie sich in die Finger schneiden. Nutzen Sie statt dessen, wie angezeigt, die Aussparungen in der Oberfläche der Halteklammer.



➔ **To install the system fans:**

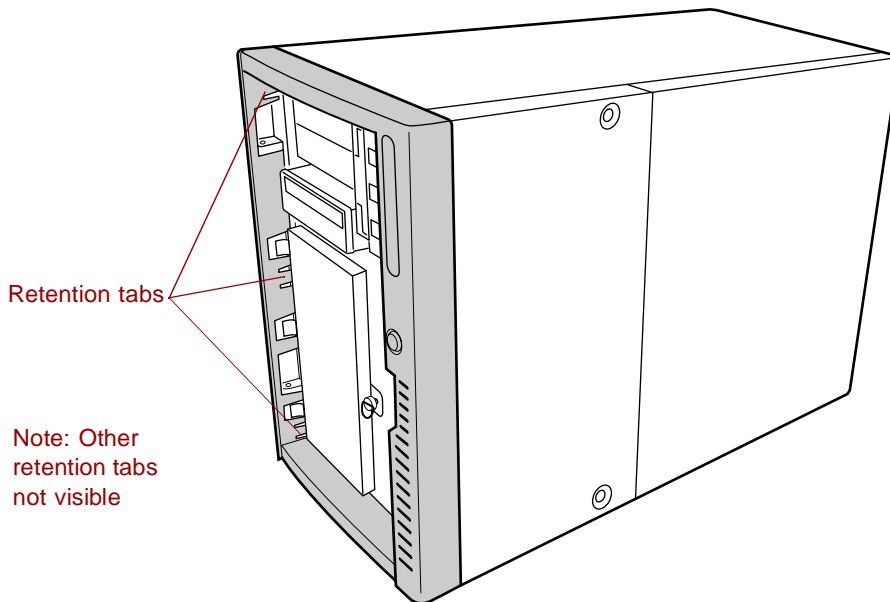
- 1 Remove the right side access panels. (See “Removing the side panels” on page 18 and “Preventing static electricity discharge” on page 15.)
- 2 Determine where the fan unit needs to be placed (large, double-fan units on the bottom, and small, single-fan units on top).
- 3 Grasp the fan unit and push inward, seating the fan unit firmly in the drive bay.



Replacing the bezel

➔ To remove the bezel:

- 1 With the tower in the upright position, open the system door and lift the door so that the hinge pins (2) come out of the hinge-pin sockets.
- 2 Pull the door away from the bezel and set it aside.
- 3 Beginning at the top left inside edge of the bezel, depress the plastic retention tabs toward the outside edge of the bezel, and pull the bezel out from the chassis slightly, enough to keep the tabs from snapping back into place.
- 4 Work your way around the bezel until all eight tabs (three left, one bottom, two right, and two top) have been released, then pull the bezel off the chassis.



Reinstalling the bezel

To reinstall the bezel:

- 1 Align the bezel with the chassis, just as it was aligned prior to removal. Make sure the plastic retention tabs line up with the appropriate slots in the chassis.
- 2 Press the bezel onto the chassis until the retention tabs snap into place.
- 3 Align the door with the chassis, just as it was aligned prior to removal.
- 4 Insert the hinge pins (2) into the hinge-pin sockets, allowing the door to fall into place, then close the door.

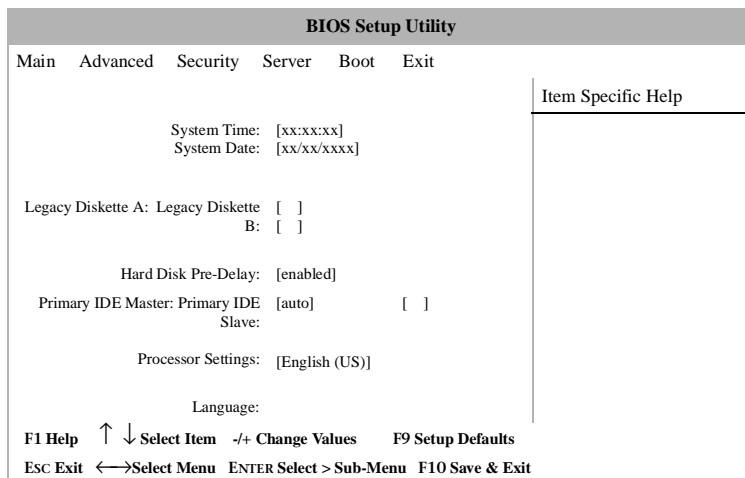
Using the BIOS Setup Utility

5

About the BIOS Setup utility

The computer BIOS has a built-in setup utility that lets you configure several basic system characteristics. The settings are stored in battery-backed RAM and are retained even when the power is off.

Open the BIOS Setup utility by restarting the computer, then pressing F2 when the Gateway logo screen appears during startup. The Main BIOS Setup utility screen opens. It may not look exactly like the screen shown below.



As you select items on the Main menu or in submenus you see specific information related to the current selection in the Item Specific Help box.

The command bar across the bottom of the screen shows the keystrokes necessary to access help, navigate through the menus, and perform other functions.

- F1 opens the Help screen, providing general help for using the BIOS Setup utility.
- The ↑ (up arrow) and ↓ (down arrow) keys select items in the menu.
- The ← (left arrow) and → (right arrow) keys move you between the menus.
- ENTER either moves you to a submenu screen when a selected item is preceded by > or activates a selected field.
- ESC closes the screen you are in and returns you to the previous screen or exits you from the BIOS Setup utility.
- F9 opens a screen that lets you return all values to their default settings.
- F10 opens a screen that lets you save all settings, then exit the BIOS Setup utility.

The main screen has the following menu selections at the top of the screen:

- **Main** gives you access to basic information and settings related to your system hardware and configuration.
- **Advanced** gives you access to information and settings for system resources, hardware, and system configuration.
- **Security** gives you access to settings related to system access passwords and security settings (see “System security” on page 86).
- **Server** gives you access to information and options for server management features.
- **Boot** gives you access to information and settings for boot features and boot sequences.
- **Exit** gives you access to options for exiting the BIOS Setup utility.

Refer to the Help box on the right side of the BIOS Setup screens for information about menu items.

Updating the BIOS

If you need a new version of the BIOS, you can download the BIOS update from the technical support area of the Gateway Web site (www.gatewayatwork.com) and install the new version from a diskette.

To update the BIOS you need to perform the following tasks in sequence:

- Create a bootable diskette
- Note the current BIOS settings
- Create the BIOS update diskette
- Update the BIOS
- Restore the BIOS settings

Follow the detailed instructions for updating the BIOS that are included in the self-extracting file that you can download from the technical support area of Gateway's Web site.



Setting the system board jumpers

The system board has three jumpers. Each of these jumpers has a specific function described in the sections below.

The CMOS Clear jumper

The CMOS Clear jumper on the system board (pins 1 through 3 of jumper J9F2) lets you clear all BIOS Setup settings, protect them, or place them under control of the BMC. (See the figure on page 6 for the location of the jumper.)

The following table shows the settings required to perform those tasks. Make sure you turn off the computer and unplug the power cord before moving the jumper.

Mode	Jumper Setting	Action When Set
CMOS protected	 Pins 1-2	Normal operation
Clear CMOS	 Pins 2-3	Causes computer to clear all BIOS settings and return to defaults

Caution





Moving the jumper while the power is on can damage your computer. Always turn off the computer and unplug the power cord(s) from the computer before changing the jumper.

Password Clear jumper

The Password Clear jumper on the system board (pins 5 through 7 of jumper J9F2) lets you delete the passwords. (See the figure on page 6 for the location of the jumper.)

The following table shows the settings required to perform this task. Make sure you turn off the computer and unplug the power cord before moving the jumper.

Mode	Jumper Setting	Action When Set
Protect	 Pins 5-6	Normal operation
Clear	 Pins 6-7	Clears all passwords at bootup

Caution





Moving the jumper while the power is on can damage your computer. Always turn off the computer and unplug the power cord(s) from the computer before changing the jumper.

BOOT Option jumper

The BOOT Option jumper on the system board (pins 9 through 11 of jumper J9F2) lets you recover the BIOS. (See the figure on page 6 for the location of the jumper.)

The following table shows the settings required to perform those tasks. Make sure you turn off the computer and unplug the power cord before moving the jumper.

Mode	Jumper Setting	Action When Set
Normal	 Pins 9-10	Normal operation
Recovery	 Pins 10-11	Causes computer to attempt BIOS update or recovery from diskette

Caution



Moving the jumper while the power is on can damage your computer. Always turn off the computer and unplug the power cord(s) from the computer before changing the jumper.

BIOS recovery mode

If you are trying to update the BIOS and have a problem such as a power outage, the update may not be successful. You can then try to recover the BIOS by setting the Boot Option jumper.

When you are trying to recover the BIOS, no image appears on your monitor.

➔ To recover the BIOS:

- 1 Turn off the system and disconnect the power cord, modem cord (if installed), and all external peripheral devices.
- 2 Remove the left side cover panel. (See “Removing the side panels” on page 18 and “Preventing static electricity discharge” on page 15.)
- 3 Remove the jumper from pins 9-10 of jumper J9F2 (see “System board” on page 6 for location) and place it on pins 10-11.

- 4 Close the case by following the instructions on page 22, then reconnect the power cord.
- 5 Place the bootable diskette containing the BIOS files into drive A:, then turn on the computer.

At the start of the BIOS recovery process, the computer beeps once. The recovery process may take a few minutes.

- 6 When the process is completed, you will be prompted to remove the diskette from drive A: and turn off the computer.
- 7 Disconnect the power cord and remove the left side cover panel again. (See “Removing the side panels” on page 18 and “Preventing static electricity discharge” on page 15.)
- 8 Place the jumper back on pins 9-10 of jumper J9F2.
- 9 Close the case, reconnect the cords, then turn on the computer.
- 10 Enter the BIOS Setup utility by pressing F2 when the Gateway Logo screen appears.
- 11 Once in BIOS Setup utility go to the appropriate tabs and select any BIOS fields you want to change, then reenter the values you wrote down at the beginning of this process.
- 12 Save your changes, then exit the BIOS Setup utility.

Troubleshooting: If the BIOS recovery was unsuccessful, go back to the Gateway Web site and start the process over. If you continue to have problems, contact Client Care or your system administrator.

Managing Your System

6

Protecting against power source problems

Surge suppressors, line conditioners, and uninterruptible power supplies can help protect your system against power source problems.

Surge suppressors

During a power surge, the voltage level of electricity coming into your system can increase far above normal levels and cause data loss or system damage.

Protect your computer and peripherals by connecting them to a surge suppressor, which will absorb voltage surges and prevent them from reaching your computer.

When purchasing a surge suppressor:

- Make sure the surge suppressor meets the appropriate product safety certification for your location, such as Underwriters Laboratories (UL).
- Check the maximum amount of voltage the suppressor allows to pass through the line. The lower the voltage that the suppressor allows to pass through, the better the protection for your system.

- Check the energy absorption (*dissipation*) rating. The higher the energy absorption rating, the better the protection for your system.
- Check for line-conditioner capabilities. A line conditioner smooths out some of the normal line noise (small voltage fluctuations) of an electrical supply.

Line conditioners

A line conditioner protects your system from the small fluctuations in voltage from an electrical supply. Most systems can handle this variation, called *line noise*, without problems. However, some electrical sources include more line noise than normal. Line noise can also be a problem if your system is located near, or shares a circuit with, a device that causes electromagnetic interference, such as a television or a motor.

Some surge suppressors and uninterruptible power supplies include simple line-conditioning capabilities.

Uninterruptible power supplies

Use a standby uninterruptible power supply (UPS) to protect your computer from data loss during a total power failure. A UPS uses a battery to keep your computer running temporarily during a power failure and lets you save your work and shut down your computer. You cannot run your computer for an extended period of time while using only the UPS.

Maintaining and managing your hard drive

Regular maintenance can keep your hard drive operating efficiently and good file management can keep your system free of unwanted files while making important files secure and easier to find.

Hard drive maintenance utility

If you are using the Windows NT operating system, you can help maintain the performance of your hard drive by regularly using Check Disk. If you are using another operating system, refer to your operating system documentation for available hard drive maintenance utilities.

Using Check Disk in Windows NT

Bad sectors are parts of a hard drive or diskette that will not hold data. A lost allocation unit is a group of sectors that has lost its place in the table that the operating system uses to locate files. Check Disk checks the hard drive for bad sectors or lost allocation units and lets you fix them.

Use Check Disk from once a week to once a month, depending on how often you use your system. Also use Check Disk if you have any hard drive problems.

To use Check Disk:

- 1 Double-click the **My Computer** icon. The My Computer window opens.
- 2 Right-click the drive you want to check.
- 3 Select **Properties**. The drive's properties window opens.
- 4 Click the **Tools** tab.
- 5 At **Error-checking**, click **Check Now**. The Check Disk window opens.
- 6 Scan the entire hard drive by selecting **Scan for and attempt recovery of bad sectors**.
- 7 Click **Start**. Check Disk checks the drive for errors.
- 8 Follow any on-screen instructions for completing the scan.

Hard drive management practices

By deleting unneeded files from your hard drive and managing the space that is automatically allocated for saving certain files, you can help maintain the performance of the hard drive. We suggest that you first check your hard drive for available space, then back up important files prior to deleting unneeded files, in case you delete important files by mistake.

Checking hard drive space

In Windows NT, you can see a chart of the available hard drive space. If you are using another operating system, refer to your software documentation for available hard drive management utilities.

➔ To check hard drive space:

- 1 Double-click on the **My Computer** icon on the desktop. The My Computer window opens.
- 2 Right-click the drive you want to check.
- 3 Select **Properties**. The drive properties window opens. The **General** tab shows you the available and used space on the drive.

Backing up files

Regularly backing up your files protects you from losing data and lets you keep fewer files on your hard drive. Back up old files to a large capacity disk drive or tape drive and delete the files from your hard drive. You can use the software that came with your tape backup drive or your large capacity disk drive to back up the files.

You can also back up files by running the Backup utility that came with your operating system. In Windows NT, Backup copies files to a tape drive.

➔ To run Backup in Windows NT:

- 1 Click **Start**, then select **Programs, Administrative Tools**, then **Backup**.
- 2 Follow the on-screen instructions.

Deleting unneeded files

By deleting unneeded files from the hard drive, you free up space on the hard drive and help improve hard-drive performance. The following sections give you some simple ways to delete unneeded files.

Deleting Windows temporary files

During normal operation, Windows constantly creates new temporary (.tmp) files. You can safely delete all but the most recent .tmp files.

To delete .tmp files:

- 1 Open Windows Explorer, then select **Tools**, **Find**, then **Files and Folders**.
- 2 In the **Named** text box, type ***.tmp**.
- 3 In the **Look in** drop down list, select your drive letter.
- 4 Click **Find Now**. The list of .tmp files appears.
- 5 Click **Modified** above the list. To see the **Modified** button, you may need to maximize the Find window. The list is sorted by date.
- 6 Highlight all the files in the list except those with the current date.
- 7 Press **SHIFT + DELETE**. A dialog box opens asking if you want to delete the files.
- 8 Click **Yes**. The files are deleted.

Deleting temporary Internet files

As you visit Web sites, your browser stores temporary Internet files on your hard drive in a *memory cache* and a *disk cache*. Files in the memory cache are removed when you turn off your computer. Files are saved in the disk cache until the space designated for the cache is full. See your browser's Help files for instructions on emptying the disk cache.

You can save space on the hard drive by decreasing the size of the Internet file disk cache. See your browser's Help files for instructions.

Emptying the Recycle Bin

When you delete a file from your hard drive in Windows NT, it is not immediately removed from the hard drive. Instead, the file is moved into the Recycle Bin. Because files are stored in the Recycle Bin and not deleted from the hard drive immediately, you can retrieve a file that you accidentally delete from the hard drive.

To delete all the files from the Recycle Bin, right-click the **Recycle Bin** icon on the desktop, then click **Empty Recycle Bin**.

You can save space on the hard drive by decreasing the size of the Recycle Bin.

➔ To decrease the size of the Recycle Bin:

- 1 Right-click the **Recycle Bin**, then select **Properties**.
- 2 At the **Global** tab, select either **Configure drives independently** or **Use one setting for all drives**.
- 3 If you are configuring drives independently, click the tab for the drive you want to configure.
- 4 Move the slider to set the size of the Recycle Bin. A good initial setting is 5%.
- 5 Click **OK**.

Protecting your computer from viruses

A *virus* is a program that attaches itself to a program or data file on a computer, then spreads from one computer to another. Viruses can damage data, cause computers to malfunction, and can display annoying or offensive messages. Some viruses can go unnoticed for long periods of time because they are activated by a certain date or time. Protect your computer from viruses by:

- Using an anti-virus program to check files and programs that are on diskettes, attached to e-mail messages, or downloaded from the Internet. After you run the anti-virus program you can back up your files to diskettes, a separate hard drive, or a high-capacity storage drive.
- Keeping your anti-virus program updated.
- Obtaining all software from reputable sources and checking the software for viruses before installing it.
- Disabling macros on suspicious Microsoft Word and Excel files. These programs will warn you if a document that you are opening contains a macro that might have a virus.

➔ To remove a virus:

- 1 Find and remove the virus immediately using your anti-virus program.
- 2 Turn off your computer and leave it off for at least 30 seconds.
- 3 Turn on the computer and rescan for the virus.
- 4 If the virus is still on your computer, contact Gateway Client Care.

System administration and control

Your server has three server-management tools included to enable administration and control of Windows NT environments. These tools are Intel® Server Control (ISC), ManageX Event Manager, and the Direct Platform Control (DPC) Console.

Intel Server Control (ISC)

Using a graphical user interface, ISC can locally or remotely provide real-time monitoring and alerting for server hardware sensors. System status indicators such as temperature, voltage, cooling, chassis intrusion, processor status, cooling fan status, and power supply status can be monitored and recorded. You can establish a threshold or range of accepted values for each of these indicators and ISC can be configured to respond to variances in a number of ways, from an entry in the event log, to a displayed message or audio alarm, or even a complete server shutdown.

ISC can also provide a system hardware inventory, SCSI controller status, LAN adapter status, and BIOS and system slot information.

Additional information about Intel Server Control can be found under **Documentation** on the Server Companion CD which came with your system.

ManageX Event Manager

ManageX lets the system administrator manage multiple systems on a Windows NT, Windows 2000, or Novell Netware network from a single window, and implement commands and policies across the network with a single action. With this tool you can automate system management tasks, which can be triggered by specific events or at specified thresholds.

Additional information about the ManageX Event Manager can be found under **Documentation** on the Server Companion CD which came with your system.

Direct Platform Control (DPC) Console

The Direct Platform Control (DPC) Console provides remote emergency management of servers. The DPC Console is independent of the server operating system and provides a means to verify the state of the server or view the System Event Log (SEL). It will also turn the server on or off.

Additional information about DPC Console can be found under **Documentation** on the Server Companion CD which came with your system.

System security

To help prevent unauthorized entry or use of the system, the system includes key locks on the chassis (to prevent entry) and the bezel door (to prevent use).

Security measures may also be set in the BIOS Setup utility which establish passwords and automatic system lockouts. The system also includes server management software that monitors the chassis intrusion switch.

Mechanical locks and monitoring

The system includes chassis intrusion switches for both cover panels. When an access cover is opened, the switch transmits an alarm signal to the system board, where server management software processes the signal. You can program a response to an intrusion, for example, the system may power down or lock the keyboard.

Software locks through the BIOS Setup utility

The Security tab in the BIOS (see “About the BIOS Setup utility” on page 71) provides several security features to prevent unauthorized or accidental access to the system. Once the security measures are enabled, access to the system is allowed only after you enter the correct password(s). For example, the security features let you:

- Enable the secure mode lockout timer so the server requires a password to reactivate the keyboard and mouse after a specified time-out period of 1 to 120 minutes.
- Set and enable administrator and user passwords.
- Set secure mode to prevent keyboard or mouse input and to prevent use of the front panel reset and power switches.
- Activate a hot-key combination to enter secure mode quickly.
- Disable writing to the diskette drive when secure mode is set.

Using passwords

If you set and enable a user password but not an administrator password, enter the user password to boot the system with limited BIOS Setup access.

If you set and enable both a user and an administrator password:

- Enter either one to boot the server and enable the keyboard and mouse.
- Enter the administrator password for full access to the BIOS Setup to change the system configuration.

Secure mode

Configure and enable the secure boot mode in the BIOS. When secure mode is in effect, you:

- Can boot the system and run the operating system, but you must enter the user password to use the keyboard or mouse.
- Cannot turn off system power or reset the system from the front panel switches.

Taking the system out of secure mode does not change the state of system power. That is, if you press and release the power switch while secure mode is in effect, the system will not power off when secure mode is later removed. However, if the front panel power switch remains depressed when secure mode is removed, the system will power off.

Summary of software security features

The following table lists the software security features and describes what protection each offers. In general, to enable or set the features listed here, you must run the BIOS Setup utility and go to the Security tab. The table also refers to other BIOS menus and to the Setup utility.

Feature	Description
Secure boot mode	<p>To enter secure mode, set and enable a password to automatically put the system into secure mode.</p> <p>If you set a hot-key combination, you can secure the system by pressing the key combination. This means you do not have to wait for the inactivity time-out period.</p> <p>When the system is in secure mode, the system boots and runs the OS, but does not accept mouse or keyboard input until you enter the user password.</p> <p>At bootup, if the system detects a CD in the CD drive or a diskette in drive A, it requests a password. When you enter the password, the system boots from CD or diskette and disables secure mode.</p> <p>If you have not installed a CD drive or if there is no CD in the drive or diskette in drive A, the system boots from drive C and automatically enters secure mode. All enabled secure mode features go into effect at bootup.</p> <p>To leave secure mode, enter the correct password(s).</p>
Disable writing to diskette	<p>In secure mode, the system will not boot from or write to a diskette unless a password is entered.</p>
Disable the power and reset buttons	<p>If you enable this protection feature in the BIOS, the system disables the power and reset buttons when in secure mode.</p>
Set a time-out period so that keyboard and mouse input are not accepted.	<p>You can specify and enable an inactivity time-out period from 1 to 120 minutes. If no keyboard or mouse action occurs for the specified period, keyboard and mouse input is not accepted.</p>

Feature	Description
Control access to the BIOS Setup utility (set administrator password)	<p>To control access to the system configuration, set an administrator password and enable it through BIOS Setup utility.</p> <p>If both the administrator and user passwords are enabled, either can be used to boot the system or enable the keyboard and/or mouse, but only the administrator password allows changes to BIOS Setup.</p> <p>Once set, passwords can be disabled by deleting the password or by changing the Clear Password jumper. To change the jumper, see “Setting the system board jumpers” on page 74.</p>
Control access to the system (set user password)	<p>To control access to the system, set a user password and enable the Password on Boot option using the BIOS Setup utility.</p> <p>Once set, passwords can be disabled by deleting the password or by changing the Clear Password jumper. To change the jumper, see “Setting the system board jumpers” on page 74.</p>
Boot without keyboard	<p>The system can boot with or without a keyboard. During POST and before the system boots, the BIOS automatically detects and tests the keyboard, if present, and displays a message. Do not plug in a keyboard while the system is on.</p>
Specify the boot sequence	<p>The sequence you specify in the BIOS determines the boot order. If secure mode is enabled (user password is set), you are prompted for a password before the system boots fully. If secure mode is enabled and the Secure Mode Boot option is also enabled, the system boots fully but requires a password before accepting any keyboard or mouse input.</p>

System recovery

You should take advanced precautions in case your hard drive is damaged, or your BIOS or system files get corrupted. These precautions will make it easier to restart your system and recover damaged files.

Creating a startup diskette

If your computer hard drive is damaged, you may not be able to start the computer from the hard drive. A startup diskette is a bootable diskette that lets you start the computer and attempt to fix the problem.

When you set up Windows NT, you are prompted to create a startup diskette. If you did not choose to create a startup diskette at that time, you may create one later by running the Windows NT upgrade/installation program. This process is started by going to the DOS Command Prompt, changing to the C:\I386 subdirectory and typing `winnt32/ox`. Press ENTER and follow the prompts.

Using your Server Companion CD

The Server Companion CD included with your system can be used to:

- Install hardware drivers
- Reinstall selected utilities
- Access system documentation

Instructions for each operating system are provided with the Server Companion CD.

Cleaning Your System

7

Cleaning the mouse

If the mouse pointer on the screen moves erratically when you move the mouse, the inside of the mouse may be dirty.

➔ To clean the mouse:

- 1 Turn off the computer, then disconnect the mouse cable from the mouse port.
- 2 Turn your mouse upside down and remove the roller ball cover.
- 3 Cup your hand under the mouse and turn your mouse right-side up. The roller ball should drop into your hand. If it does not, gently shake the mouse until the ball drops out of the socket.
- 4 Use adhesive tape to pick up any dust or lint on the surface of the ball.
- 5 Wipe away dirt or lint inside the ball socket with a lint-free cloth. You can also blow into the socket to remove dirt and lint. Use a cotton swab dipped in isopropyl alcohol to clean the rollers inside the socket.
- 6 Let surfaces dry completely.
- 7 Return the ball to the socket and replace the cover.

Cleaning the keyboard

You should clean the keyboard occasionally to free it of dust and lint particles trapped under the keys. The easiest way to do this is to blow trapped dirt from under the keys using an aerosol can of air with a narrow, straw-like extension.

If you spill liquid on the keyboard, turn off the computer, then disconnect the keyboard. Turn the keyboard upside down to let the liquid drain. Let the keyboard dry for a few days before trying to use it again. If the keyboard does not work after it is dry, you may need a new one.

Cleaning the monitor screen

Use a soft cloth and window cleaner to clean the monitor screen. Squirt a little cleaner on the cloth (never directly on the screen), then wipe the screen with the cloth.

Cleaning the computer and monitor cases

Warning



When you clean the system, turn off the computer, monitor, and peripherals, then unplug the power cord and modem cord (if installed). Be careful not to drip liquid into the computer, monitor, and peripherals when cleaning the system.

Always turn off the computer and other peripherals before cleaning any components.

Use a damp, lint-free cloth to clean the computer case, monitor case, keyboard, speakers, and other parts of your system. Avoid abrasive or solvent cleaners because they can damage the finish on your components.

Your computer is cooled by air drawn in through the vents on the chassis and blown out through the power supply exhaust fan. Keep vents on the front and back of the chassis free of dust. With the computer turned off and unplugged, brush the dust away from the vents with a slightly damp cloth. Be careful not to drip any water into the vents. Do not attempt to clean dust from the inside the computer.

Troubleshooting

8

Introduction

If your system does not operate correctly, re-read the instructions for the procedures you have performed. If an error occurs within a program, consult the documentation supplied with the program. This section identifies solutions to some possible problems.

Troubleshooting checklist

Before turning on the system, make sure that:

- The power cord is connected to the AC power-in connector and an AC outlet.
- The AC outlet is supplying power.
- If a power strip is used, it is turned on, and the circuit breaker is set.
- The voltage selection switch on the system power supply reflects the proper voltage.

Verifying your configuration

If your system is not operating correctly, the BIOS may contain an invalid configuration parameter. Open the BIOS Setup utility and check your configuration settings. (See “About the BIOS Setup utility” on page 71.)

Troubleshooting guidelines

As you troubleshoot your system, keep the following guidelines in mind:

- Never remove the chassis cover while the computer is turned on, except when hot-plugging a PCI expansion card or system fan.
- Do not attempt to open the monitor. Even if the power is disconnected, stored energy in the monitor components can inflict a painful or harmful shock.
- If a peripheral does not work, make sure that all connections are secure.
- If you see an error message on the screen, write it down, word for word. You may be asked about it when calling technical support.
- Only qualified personnel should open the system for maintenance.
- If you are qualified to maintain the system yourself, make sure you are properly grounded before opening the system chassis. See “Preventing static electricity discharge” on page 15 for more information on preventing electrostatic damage to the system.

CD drive problems

The system does not recognize the CD drive.

Probable cause	Solution
The CD is not intended for PC use	Make sure the CD is PC-compatible.
The CD is loaded incorrectly	Make sure the label is facing up, then try again.
The CD is scratched or dirty	Try cleaning the CD with a lint-free cloth. Make sure the CD is not scratched.
The CD drive needs to be added as new hardware	In the Control Panel window (Start Settings Control Panel), double-click Add New Hardware . Follow the on-screen instructions for adding the drive.
The CD cables are not installed correctly	Open the system and make sure all cables between the CD controller and the CD drive are connected correctly.
The CD drive may be defective	Replace the CD drive.

Hard drive problems

The system does not recognize the SCSI drive.

Probable cause	Solution
The SCSI bus is not properly terminated	Make sure the last device on the SCSI chain is properly terminated.
The drive is configured with a conflicting SCSI address	Change the device's SCSI address to one that is not currently being used by the system.
The cables are not connected correctly	Open the system and make sure the cable connections are correct.

The system does not recognize the IDE drive.

Probable cause	Solution
The primary IDE drive may be configured incorrectly	Restart your computer, then press F2 to open the BIOS Setup utility. From the Advanced IDE Configuration menu, set the IDE Controller to Both and the Primary IDE Master to Auto . Consult the hard drive user's guide for instructions on how to configure the drive. Configure the drive correctly.
The drive cables are not connected properly	Open the system and make sure all cables to the controller card are connected correctly. Some systems do not have IDE controller cards because the IDE controller is built into the system board.

Memory and processor problems

The system detected memory errors during start up.

Probable cause	Solution
Memory was added or removed, and the new configuration was not saved in the BIOS Setup utility	Open the BIOS Setup utility and save the new memory configuration.
The memory was installed incorrectly	Make sure the memory is seated and oriented correctly.
A memory chip is faulty	Replace the DIMM with the faulty chip. Third-party diagnostic programs can help determine which chip or memory segment is failing.

The system does not recognize a new or additional processor.

Probable cause	Solution
The processor was installed incorrectly	Check the installation. Make sure the processor is fully seated in its socket. The processor should be recognized automatically if it was installed correctly.
The system doesn't recognize all of the processors	Enable the processor retest in the BIOS Setup utility.

Modem problems

The system does not recognize the modem.

Probable cause	Solution
The modem has not been added as new hardware	Add the modem as new hardware.
The modem is not connected to a live phone jack	Make sure the line connected to the modem is working and plugged into the appropriate port on the modem (line port).
The modem is not configured with a valid interrupt or address	Check the system settings for possible conflicts. If one exists, correct the problem by selecting an available interrupt and address.
The phone jack is shared by another modem or telephone	If the modem shares the jack with another device, make sure the other device does not have the port open (for example, someone is on the phone, or another modem is in use).

Peripheral/adapter problems

The system does not recognize a SCSI device.

Probable cause	Solution
The device needs to be added as new hardware	In the Control Panel window (Start Settings Control Panel), double-click Add New Hardware . Follow the on-screen instructions for adding the device.
The SCSI ID may be invalid	Assign an available SCSI ID to the device.
The SCSI chain is not terminated	Make sure the last device on the SCSI chain is terminated. If it is not, terminate it.
The device cables are not installed correctly	Open the system and check all cables between the controller and the device. Install the cables correctly if necessary.

The system does not recognize the diskette drive.

Probable cause	Solution
The diskette drive may be configured incorrectly	Restart your computer, then press F2 to open the BIOS Setup utility. In the Boot Removable Devices menu, make sure that the diskette drive parameters are set correctly.
The drive cables are not connected properly	Open the system and make sure all cables are correctly connected to the controller card. Some systems do not have a floppy (diskette) controller card because the floppy controller is built into the system board.

The diskette drive will not read, write, or format.

Probable cause	Solution
The diskette is not IBM-formatted	Make sure the diskette you are trying to format is IBM-compatible. If it is, try reformatting it. If it is not, get a compatible diskette.
The diskette is corrupted	Run Check Disk on the diskette. If errors are detected and corrected, try accessing the diskette again.
The diskette is write-protected	Make sure the write-protection window on the upper-right corner of the diskette is closed (unprotected).

The diskette drive LED illuminates continuously.

Probable cause	Solution
The diskette is corrupted	Remove the diskette from the drive. If the light remains on, try restarting the system.
The cable to the drive is not connected properly	Open the system and make sure the cable is connected properly between the diskette drive and its controller. Make sure the pins are not bent or misaligned.

Printer problems

The printer will not turn on.

Probable cause	Solution
The printer is not plugged in	Make sure the power cable is plugged into a working power source.
The printer is not turned on	Make sure the printer's power switch is depressed or set to the On position. If power is applied to the printer, the green power LED should be illuminated.
The printer is defective	Try another printer, if one is available.

The printer is turned on but will not print.

Probable cause	Solution
The printer is not connected to the system	Make sure the data cable is properly connected between the printer and the system. Check the connector and cable for bent or broken pins.
The printer is not designated as the default printer	If the printer that you are trying to print to is not the default printer, make sure you have selected it through the program's printer setup function.
The printer has not been added to the system.	In the Printers window (Start Settings Printers), double-click Add Printer . Follow the on-screen instructions for adding the new printer.
The printer is not on-line	Check that the Ready light is on, or "Ready" message appears on the readout.

The printer prints garbled text.

Probable cause	Solution
The wrong driver is being used for the selected printer	In the Printers window (Start Settings Printers), select the printer. From the File menu, select Properties . Make sure the printer is using the correct printer driver. If not, install the correct one.

System problems

The system will not start up.

Probable cause	Solution
The system is not connected to an AC outlet	Make sure the power cable(s) are connected correctly to an operating AC power source.
The memory card or a DIMM is not seated properly. Indicated by a beep	Open the system and reseat the loose memory card or the DIMM.
The terminator card or additional processor is not seated properly. Indicated by a beep	Open the system and reseat the loose terminator card or additional processor.

The system is non-responsive.

Probable cause	Solution
An error occurs during a program or your system may be out of memory	Restart your computer by pressing the reset button. If the system is still non-responsive, press and hold in the power button for 4 seconds to turn the system off. Turn the system back on and follow the on-screen instructions.
Keyboard, mouse, and front panel are locked out when password is set	Enter the password.

The keyboard does not work.

Probable cause	Solution
Keyboard is locked out when password is set	Enter the password.
A key was depressed while the system was starting up	Clear the sticking key, then turn off the system, wait for a few seconds, then turn the system back on.
The keyboard is not plugged in or connected properly	Make sure the cable is plugged in correctly.
Something spilled into the keyboard	Turn off the system. Turn the keyboard upside down to drain, then turn it right side up to let it dry before using the keyboard again.
The keyboard is defective	Try a keyboard you know is working.

The mouse does not work.

Probable cause	Solution
Mouse is locked out when password is set	Enter the password.
The mouse is not plugged in or connected properly	Make sure the cable is plugged in correctly.
The mouse driver did not load when the system started	Load the appropriate mouse driver manually or contact technical support.
The mouse is defective	Try a mouse that you know is working.

The system power and reset buttons are not responsive.

Probable Cause	Solution
Front panel is locked out when password is set	Enter the password.

Video problems

The system is running but the screen is blank.

Probable cause	Solution
The monitor is not turned on	Make sure the monitor is plugged in and turned on. If power is applied to the monitor, the green power LED should illuminate.
The monitor's data cable is not connected	Make sure the monitor data cable is connected to the video controller on the back of the system.
The connector or cable is damaged	Check the connector and cable for bent or damaged pins.
The monitor is defective	Connect a working monitor to the computer.
The monitor brightness and contrast controls are turned down	Adjust the brightness and contrast knobs to the center position.
The memory card or a DIMM is not seated properly. Indicated by a beep	Open the system and reseat the loose memory card or the DIMM.
The terminator card or additional processor is not seated properly. Indicated by a beep	Open the system and reseat the loose terminator card or additional processor.

The image on the screen is dim or difficult to read.

Probable cause	Solution
The monitor brightness and contrast controls are turned down	Adjust the brightness and contrast knobs until the text becomes clear.
Sunlight is glaring off the display	Position the monitor away from the sun or a window.
The monitor may be old	Replace the monitor.

The color monitor displays everything in black and white.

Probable cause	Solution
The system was turned on before the monitor	Make sure the monitor is turned on, then restart the system.
The display type is set incorrectly	In the Control Panel window (Start Settings Control Panel), double-click Display , set the display to the appropriate monitor type, then restart the system.

The displayed characters are garbled.

Probable cause	Solution
The video cable is damaged	Make sure the cable and connectors are in good condition (no bent pins or broken wires).
The display setup is incorrect	In the Control Panel window (Start Settings Control Panel), double-click Display and check the settings. The correct video type should be selected, along with a supported resolution. Check your monitor and video controller documentation for details.

The video is distorted.

Probable cause	Solution
The monitor controls are not properly adjusted	Adjust the monitor controls until the text becomes clear. (See your monitor documentation for more information.)
The connector or cable is damaged	Make sure the cable and connectors are in good condition (no bent pins or broken wires).
The surge protector or UPS is damaged	Disconnect the monitor power cable and connect it directly to the power source.

Probable cause	Solution
The monitor is too close to a source of electrical interference	Move the monitor away from sources of electrical interference, such as televisions, unshielded speakers, microwave ovens, fluorescent lights, and metal beams or shelves.
The monitor needs to be degaussed	Turn off the computer and monitor for at least a half hour, then restart the system.

Error messages

This section lists common error messages that you may see. These messages often indicate procedural errors such as an incorrect keystroke or a write-protected diskette. Some messages, however, may indicate a problem that requires you to consult the troubleshooting section of this manual.

Error message	Solutions
Access denied	Try saving to a new file or diskette. Move the write-protection tab over the hole on the back of the diskette.
Bad command or file name	Make sure you entered the right command. Make sure the specified drive is correct, then try again. If you are trying to exit MS-DOS to return to Windows, type <code>exit</code> , then press <code>ENTER</code> .
Base memory [xxx] expansion	This is an informational message only. No action is required.
Checking RAM on disk controller	Your BIOS configuration is incorrect. Open the BIOS Setup utility, then make sure the settings are correct.
CD-ROM drive is not recognized	See "The system does not recognize the CD drive." on page 95 for possible solution.
Data error	Use Check Disk on the drive with the error.
Decreasing available memory	Your BIOS configuration is incorrect. Open the BIOS Setup utility, then make sure the settings are correct.
Diskette drive is not recognized	See "The system does not recognize the diskette drive." on page 99 for possible solution.
Diskette drive 0 seek to track 0 failed	Open the BIOS Setup utility, then make sure the drive settings are correct. Check the diskette drive cables. Make sure Pin 1 on the cable aligns with Pin 1 on the connector.

Error message	Solutions
Diskette drive reset failed	<p>Open the BIOS Setup utility, then make sure the drive settings are correct.</p> <p>Check the diskette drive cables. Make sure Pin 1 on the cable aligns with Pin 1 on the connector.</p>
Diskette read failed - press F1 to retry boot	<p>Make sure the boot disk contains the Command.com file.</p> <p>Use the configuration utility (if necessary) to make sure your drive or controller is configured correctly.</p> <p>Press F1 to restart the computer.</p>
Gate A20 failure	<p>You may have an XT keyboard connected to an AT system or vice versa. Make sure the keyboard is configured to work with the appropriate system. Some keyboards have a switch to select either AT or XT.</p>
Hard disk controller failure	<p>Make sure the hard drive cable is properly connected.</p> <p>Open the BIOS Setup utility, then make sure that the correct drive type is selected.</p>
Hard disk controller failure - press F1 to try reboot	<p>The drive controller may be defective. Press F1 to try to restart the computer.</p> <p>Try running Fdisk and DOS Format. For more information, refer to your operating system documentation.</p>
Insert bootable media device	<p>See "The system does not recognize the IDE drive." on page 96 for a possible solution.</p> <p>See "The system does not recognize the SCSI drive." on page 96 for a possible solution.</p> <p>Backup your files as soon as possible.</p>
Insufficient disk space	<p>Check the free space on the disk volume. If the volume is full or almost full, remove unnecessary files.</p>
Invalid configuration information	<p>Open the BIOS Setup utility, then make sure the settings are correct.</p>

Error message	Solutions
Invalid password	<p>Enter your password again, making sure to enter it correctly. Be aware that some passwords are case sensitive.</p> <p>If you do not know the password, you may need to reinstall the software you are trying to access.</p> <p>Startup passwords are stored in BIOS. If this password has been set and is unknown, you may be able to reset the password through system board jumper settings.</p>
Keyboard clock line failure	<p>Try a working keyboard.</p> <p>Make sure the keyboard is compatible with the system. You may have to change the switch setting to AT.</p>
Keyboard controller failure	<p>Try a working keyboard.</p> <p>Make sure the keyboard is compatible with the system. You may have to change the switch setting to AT.</p>
Keyboard not detected	<p>See "The keyboard does not work." on page 104 for a possible solution.</p> <p>Turn off the system, then check the keyboard cable.</p>
Keyboard stuck key failure	<p>Remove any objects that may be resting on the keyboard, then restart the system.</p> <p>Check for sticky keys. Clean the keyboard if necessary.</p>
Memory errors were detected while the system powered up	<p>See "The system detected memory errors during start up." on page 97 for a possible solution.</p>
Memory size error	<p>Enter the BIOS Setup utility, then save the memory configuration.</p>
Non-system disk or disk error	<p>Eject the diskette, then press ENTER.</p> <p>If the diskette is bootable, check it for errors.</p>
Not enough memory	<p>Close all programs that are not currently in use.</p>

Error message	Solutions
Print queue is full	<p>Wait until the current print job has completed before sending another print job.</p> <p>If you receive this error often, you need to add memory to the printer.</p>
Printer is out of paper	<p>Add paper to the printer.</p> <p>Make sure the printer is online.</p>
Required parameter missing	<p>Make sure you entered the right command.</p> <p>If you are trying to exit MS-DOS to return to Windows, type <code>exit</code>, then press <code>ENTER</code>.</p>
Syntax error	<p>Make sure you entered the right command.</p> <p>If you are trying to exit MS-DOS to return to Windows, type <code>exit</code>, then press <code>ENTER</code>.</p>
Time and date not set	<p>Open the BIOS Setup utility, then set the system date and time.</p>
Write-protect error	<p>Move the write-protection tab over the hole on the back of the diskette.</p>

Safety and Regulatory Information



Important safety information

Your Gateway system is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product it is important that the safety instructions marked on the product and in the documentation are followed.

Warning



Please always follow these instructions to help ensure against personal injury and damage to your Gateway system.

Setting up your system

- Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.
- Do not use this product near water or a heat source such as a radiator.
- Make sure you set up the system on a stable work surface.
- The product should only be operated from the type of power source indicated on the rating label.
- If your computer has a voltage selector switch, ensure that the switch is in the proper position for your area. The voltage selector switch is set at the factory to the correct voltage.
- Openings in the computer case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space, at least 6 inches (15 cm), around the system for ventilation when you set up your work area. Never insert objects of any kind into the computers ventilation slots.
- Some products are equipped with a three wire power cord to ensure that the product is properly grounded when in use. The plug on this cord will only fit into a grounding-type outlet. This is a safety feature. If you are unable to insert the plug into an outlet, contact an electrician to install the appropriate outlet.
- If you use an extension cord with this system, make sure that the total ampere rating on the products plugged into the extension cord does not exceed the extension cord ampere rating.
- If your system is fitted with a TV Tuner, cable, or satellite receiver card, make sure that the antenna or cable system is electrically grounded to prevent against voltage surges and build up of static charges.

Care during use

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill anything on the system. The best way to avoid spills is to avoid eating and drinking near your system.
- Some products have a replaceable CMOS battery on the system board. There is a danger of explosion if the CMOS battery is replaced incorrectly. Replace the battery with the same or equivalent type recommended by the manufacturer. Dispose of batteries according to the manufacturers instructions.
- When the computer is turned off, a small amount of electrical current still flows through the computer. Always unplug all power cables and modem cables from the wall outlets before cleaning the system.
- Unplug the system from the wall outlet and refer servicing to qualified personnel if:
 - The power cord or plug is damaged.
 - Liquid has been spilled into the system.
 - The system does not operate properly when the operating instructions are followed.
 - The system was dropped or the cabinet is damaged.
 - The systems performance changes.

Replacement parts and accessories





Use only replacement parts and accessories recommended by Gateway.

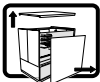
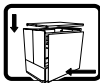


Important

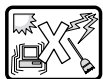


Do not use Gateway products in areas classified as hazardous locations. Such areas include patient care areas of medical and dental facilities, oxygen laden environments, or industrial facilities.

Warnings

	WARNING: English (US)	AVERTISSEMENT: Français	WARNUNG: Deutsch	AVVERTENZA: Italiano	ADVERTENCIAS: Español
	<p>The power supply in this product contains no user-serviceable parts. There may be more than one supply in this product. Refer servicing only to qualified personnel.</p>	<p>Le bloc d'alimentation de ce produit ne contient aucune pièce pouvant être réparée par l'utilisateur. Ce produit peut contenir plus d'un bloc d'alimentation. Veuillez contacter un technicien qualifié en cas de problème.</p>	<p>Benutzer können am Netzgerät dieses Produkts keine Reparaturen vornehmen. Das Produkt enthält möglicherweise mehrere Netzgeräte. Wartungsarbeiten müssen von qualifizierten Technikern ausgeführt werden.</p>	<p>Rivolgersi ad un tecnico specializzato per la riparazione dei componenti dell'alimentazione di questo prodotto. È possibile che il prodotto disponga di più fonti di alimentazione.</p>	<p>El usuario debe abstenerse de manipular los componentes de la fuente de alimentación de este producto, cuya reparación debe dejarse exclusivamente en manos de personal técnico especializado. Puede que este producto disponga de más de una fuente de alimentación.</p>
	<p>Do not attempt to modify or use the supplied AC power cord if it is not the exact type required. A product with more than one power supply will have a separate AC power cord for each supply.</p>	<p>Ne pas essayer d'utiliser ni modifier le câble d'alimentation CA fourni, s'il ne correspond pas exactement au type requis. Le nombre de câbles d'alimentation CA fournis correspond au nombre de blocs d'alimentation du produit.</p>	<p>Versuchen Sie nicht, das mitgelieferte Netzkabel zu ändern oder zu verwenden, wenn es sich nicht genau um den erforderlichen Typ handelt. Ein Produkt mit mehreren Netzgeräten hat für jedes Netzgerät ein eigenes Netzkabel.</p>	<p>Non modificare o utilizzare il cavo di alimentazione in c.a. fornito dal produttore, se non corrisponde esattamente al tipo richiesto. Ad ogni fonte di alimentazione corrisponde un cavo di alimentazione in c.a. separato.</p>	<p>No intente modificar ni usar el cable de alimentación de corriente alterna, si no corresponde exactamente con el tipo requerido. El número de cables suministrados se corresponden con el número de fuentes de alimentación de corriente alterna que tenga el producto.</p>
	<p>The power button on the system does not turn off system AC power. To remove AC power from the system, you must unplug each AC power cord from the wall outlet or power supply. The power cord(s) is considered the disconnect device to the main (AC) power. The socket outlet that the system plugs into shall be installed near the equipment and shall be easily accessible.</p>	<p>Notez que le commutateur CC de mise sous tension /hors tension du panneau avant n'éteint pas l'alimentation CA du système. Pour mettre le système hors tension, vous devez débrancher chaque câble d'alimentation de sa prise.</p>	<p>Der Wechselstrom des Systems wird durch den Ein-/Aus-Schalter für Gleichstrom nicht ausgeschaltet. Ziehen Sie jedes Wechselstrom-Netzkabel aus der Steckdose bzw. dem Netzgerät, um den Stromanschluß des Systems zu unterbrechen.</p>	<p>L'interruttore attivato/disattivato nel pannello anteriore non interrompe l'alimentazione in c.a. del sistema. Per interromperla, è necessario scollegare tutti i cavi di alimentazione in c.a. dalle prese a muro o dall'alimentazione di corrente.</p>	<p>Nótese que el interruptor activado/desactivado en el panel frontal no desconecta la corriente alterna del sistema. Para desconectarla, deberá desenchufar todos los cables de corriente alterna de la pared o desconectar la fuente de alimentación.</p>
	<p>SAFETY STEPS: Whenever you remove the chassis covers to access the inside of the system, follow these steps:</p> <ol style="list-style-type: none"> 1 Turn off all peripheral devices connected to the system. 2 Turn off the system by pressing the power button. 3 Unplug all AC power cords from the system or from wall outlets. 4 Label and disconnect all cables connected to I/O connectors or ports on the back of the system. 5 Provide some electrostatic discharge (ESD) protection by wearing an antistatic wrist strap attached to chassis ground of the system—any unpainted metal surface—when handling components. 6 Do not operate the system with the chassis covers removed. 	<p>CONSIGNES DE SÉCURITÉ - Lorsque vous ouvrez le boîtier pour accéder à l'intérieur du système, suivez les consignes suivantes:</p> <ol style="list-style-type: none"> 1 Mettez hors tension tous les périphériques connectés au système. 2 Mettez le système hors tension en mettant l'interrupteur général en position OFF (bouton-poussoir). 3 Débranchez tous les cordons d'alimentation c.a. du système et des prises murales. 4 Identifiez et débranchez tous les câbles reliés aux connecteurs d'E-Sou aux accès derrière le système. 5 Pour prévenir les décharges électrostatiques lorsque vous touchez aux composants, portez une bande antistatique pour poignet et reliez-la à la masse du système (toute surface métallique non peinte du boîtier). 6 Ne faites pas fonctionner le système tandis que le boîtier est ouvert. 	<p>SICHERHEITSMASSNAHMEN: Immer wenn Sie die Gehäuseabdeckung abnehmen um an das Systeminnere zu gelangen, sollten Sie folgende Schritte beachten:</p> <ol style="list-style-type: none"> 1 Schalten Sie alle an Ihr System angeschlossenen Peripheriegeräte aus. 2 Schalten Sie das System mit dem Hauptschalter aus. 3 Ziehen Sie den Stromanschlußstecker Ihres Systems aus der Steckdose. 4 Auf der Rückseite des Systems beschriften und ziehen Sie alle Anschlußkabel von den I/O Anschlüssen oder Ports ab. 5 Tragen Sie ein geerdetes Antistatik Gelenkband, um elektrostatische Ladungen (ESD) über blanke Metallstellen bei der Handhabung der Komponenten zu vermeiden. 6 Schalten Sie das System niemals ohne ordnungsgemäß montiertes Gehäuse ein. 	<p>PASSI DI SICUREZZA: Qualora si rimuovano le coperture del telaio per accedere all'interno del sistema, seguire i seguenti passi:</p> <ol style="list-style-type: none"> 1 Spegner tutti i dispositivi periferici collegati al sistema. 2 Spegner il sistema, usando il pulsante spento/accesso dell'interruttore del sistema. 3 Togliere tutte le spine dei cavi del sistema dalle prese elettriche. 4 Identificare e sconnettere tutti i cavi collegamenti I/O od alle prese installate sul retro del sistema. 5 Qualora si tocchino i componenti, proteggersi dallo scarico elettrostatico (SES), portando un cinghia anti-statica da polso che è attaccata alla presa a terra del telaio del sistema – qualsiasi superficie non dipinta –. 6 Non far operare il sistema quando il telaio è senza le coperture. 	<p>INSTRUCCIONES DE SEGURIDAD: Cuando extraiga la tapa del chasis para acceder al interior del sistema, siga las siguientes instrucciones:</p> <ol style="list-style-type: none"> 1 Apague todos los dispositivos periféricos conectados al sistema. 2 Apague el sistema presionando el interruptor encendido/apagado. 3 Desconecte todos los cables de alimentación CA del sistema o de las tomas de corriente alterna. 4 Identifique y desconecte todos los cables enchufados a los conectores E/S o a los puertos situados en la parte posterior del sistema. 5 Cuando manipule los componentes, es importante protegerse contra la descarga electrostática (ESD). Puede hacerlo si utiliza una muñequera antiestática sujeta a la toma de tierra del chasis — o a cualquier tipo de superficie de metal sin pintar. 6 No ponga en marcha el sistema si se han extraído las tapas del chasis.

WARNING: English (US)	AVERTISSEMENT: Français	WARNUNG: Deutsch	AVVERTENZA: Italiano	ADVERTENCIAS: Español
 <p>After you have completed the six SAFETY steps above, you can remove the system covers. To do this:</p> <ol style="list-style-type: none"> 1 Unlock and remove the padlock from the back of the system if a padlock has been installed. 2 Remove and save all screws from the covers. 3 Remove the covers. 	<p>Une fois TOUTES les étapes précédentes accomplies, vous pouvez retirer les panneaux du système. Procédez comme suit :</p> <ol style="list-style-type: none"> 1 Si un cadenas a été installé sur à l'arrière du système, déverrouillez-le et retirez-le. 2 Retirez toutes les vis des panneaux et mettez-les dans un endroit sûr. 3 Retirez les panneaux. 	<p>Nachdem Sie die oben erwähnten ersten sechs SICHERHEITSSCHRITTE durchgeführt haben, können Sie die Abdeckung abnehmen, indem Sie:</p> <ol style="list-style-type: none"> 1 Öffnen und entfernen Sie die Verschlusseinrichtung (Padlock) auf der Rückseite des Systems, falls eine Verschlusseinrichtung installiert ist. 2 Entfernen Sie alle Schrauben der Gehäuseabdeckung. 3 Nehmen Sie die Abdeckung ab. 	<p>Dopo aver seguito i sei passi di SICUREZZA sopracitati, togliere le coperture del telaio del sistema come segue:</p> <ol style="list-style-type: none"> 1 Aprire e rimuovere il lucchetto dal retro del sistema qualora ve ne fosse uno installato. 2 Togliere e mettere in un posto sicuro tutte le viti delle coperture. 3 Togliere le coperture. 	<p>Después de completar las seis instrucciones de SEGURIDAD mencionadas, ya puede extraer las tapas del sistema. Para ello:</p> <ol style="list-style-type: none"> 1 Desbloquee y extraiga el bloqueo de seguridad de la parte posterior del sistema, si se ha instalado uno. 2 Extraiga y guarde todos los tornillos de las tapas. 3 Extraiga las tapas.
 <p>For proper cooling and airflow, always reinstall the chassis covers before turning on the system. Operating the system without the covers in place can damage system parts. To install the covers:</p> <ol style="list-style-type: none"> 1 Check first to make sure you have not left loose tools or parts inside the system. 2 Check that cables, add-in boards, and other components are properly installed. 3 Attach the covers to the chassis with the screws removed earlier, and tighten them firmly. 4 Insert and lock the padlock to the system to prevent unauthorized access inside the system. 5 Connect all external cables and the AC power cord(s) to the system. 	<p>Afin de permettre le refroidissement et l'aération du système, réinstallez toujours les panneaux du boîtier avant de mettre le système sous tension. Le fonctionnement du système en l'absence des panneaux risque d'endommager ses pièces. Pour installer les panneaux, procédez comme suit :</p> <ol style="list-style-type: none"> 1 Assurez-vous de ne pas avoir oublié d'outils ou de pièces démontées dans le système. 2 Assurez-vous que les câbles, les cartes d'extension et les autres composants sont bien installés. 3 Revissez solidement les panneaux du boîtier avec les vis retirées plus tôt. 4 Remettez le cadenas en place et verrouillez-le afin de prévenir tout accès non autorisé à l'intérieur du système. 5 Rebranchez tous les cordons d'alimentation c. a. et câbles externes au système. 	<p>Zur ordnungsgemäßen Kühlung und Lüftung muß die Gehäuseabdeckung immer wieder vor dem Einschalten installiert werden. Ein Betrieb des Systems ohne angebrachte Abdeckung kann Ihrem System oder Teile darin beschädigen. Um die Abdeckung wieder anzubringen:</p> <ol style="list-style-type: none"> 1 Vergewissern Sie sich, daß Sie keine Werkzeuge oder Teile im Innern des Systems zurückgelassen haben. 2 Überprüfen Sie alle Kabel, Zusatzkarten und andere Komponenten auf ordnungsgemäßen Sitz und Installation. 3 Bringen Sie die Abdeckungen wieder am Gehäuse an, indem Sie die zuvor gelösten Schrauben wieder anbringen. Ziehen Sie diese gut an. 4 Bringen Sie die Verschlusseinrichtung (Padlock) wieder an und schließen Sie diese, um ein unerlaubtes Öffnen des Systems zu verhindern. 5 Schließen Sie alle externen Kabel und den AC Stromanschlußstecker Ihres Systems wieder an. 	<p>Per il giusto flusso dell'aria e raffreddamento del sistema, rimettere sempre le coperture del telaio prima di riaccendere il sistema. Operare il sistema senza le coperture al loro proprio posto potrebbe danneggiare i componenti del sistema. Per rimettere le coperture del telaio:</p> <ol style="list-style-type: none"> 1 Controllare prima che non si siano lasciati degli attrezzi o dei componenti dentro il sistema. 2 Controllare che i cavi, dei supporti aggiuntivi ed altri componenti siano stati installati appropriatamente. 3 Attaccare le coperture al telaio con le viti tolte in precedenza e avvitare strettamente. 4 Inserire e chiudere a chiave il lucchetto sul retro del sistema per impedire l'accesso non autorizzato al sistema. 5 Ricollegare tutti i cavi esterni e le prolunghe AC del sistema. 	<p>Para obtener un enfriamiento y un flujo de aire adecuados, reinstale siempre las tapas del chasis antes de poner en marcha el sistema. Si pone en funcionamiento el sistema sin las tapas bien colocadas puede dañar los componentes del sistema. Para instalar las tapas:</p> <ol style="list-style-type: none"> 1 Asegúrese primero de no haber dejado herramientas o componentes sueltos dentro del sistema. 2 Compruebe que los cables, las placas adicionales y otros componentes se hayan instalado correctamente. 3 Incorpore las tapas al chasis mediante los tornillos extraídos anteriormente, tensándolos firmemente. 4 Inserte el bloqueo de seguridad en el sistema y bloquéelo para impedir que pueda accederse al mismo sin autorización. 5 Conecte todos los cables externos y los cables de alimentación CA al sistema.
 <p>A microprocessor and heat sink may be hot if the system has been run-ning. Also, there may be sharp pins and edges on some board and chassis parts. Contact should be made with care. Consider wearing protective gloves.</p>	<p>Le microprocesseur et le dissipateur de chaleur peuvent être chauds si le système a été sous tension. Faites également attention aux broches aigüés des cartes et aux bords tranchants du capot. Nous vous recommandons l'usage de gants de protection.</p>	<p>Der Mikroprozessor und der Kühler sind möglicherweise erhitzt, wenn das System in Betrieb ist. Außerdem können einige Platinen und Gehäuseteile scharfe Spitzen und Kanten aufweisen. Arbeiten an Platinen und Gehäuse sollten vorsichtig ausgeführt werden. Sie sollten Schutzhandschuhe tragen.</p>	<p>Se il sistema è stato a lungo in funzione, il microprocessore e il dissipatore di calore potrebbero essere surriscaldati. Fare attenzione alla presenza di piedini appuntiti e parti taglienti sulle schede e sul telaio. È consigliabile l'uso di guanti di protezione.</p>	<p>Si el sistema ha estado en funcionamiento, el microprocesador y el dissipador de calor pueden estar aún calientes. También conviene tener en cuenta que en el chasis o en el tablero puede haber piezas cortantes o punzantes. Por ello, se recomienda precaución y el uso de guantes protectores.</p>
 <p>Danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Dispose of used batteries according to manufacturer's instructions.</p>	<p>Danger d'explosion si la batterie n'est pas remontée correctement. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le fabricant. Disposez des piles usées selon les instructions du fabricant.</p>	<p>Bei falschem Einsetzen einer neuen Batterie besteht Explosionsgefahr. Die Batterie darf nur durch denselben oder einen entsprechenden, vom Hersteller empfohlenen Batterietyp ersetzt werden. Entsorgen Sie verbrauchte Batterien den Anweisungen des Herstellers entsprechend.</p>	<p>Esiste il pericolo di un'esplosione se la pila non viene sostituita in modo corretto. Utilizzare solo pile uguali o di tipo equivalente a quelle consigliate dal produttore. Per disfarsi delle pile usate, seguire le istruzioni del produttore.</p>	<p>Existe peligro de explosión si la pila no se cambia de forma adecuada. Utilice solamente pilas iguales o del mismo tipo que las recomendadas por el fabricante del equipo. Para deshacerse de las pilas usadas, siga igualmente las instrucciones del fabricante.</p>

**WARNING: English
(US)**

The system is designed to operate in a typical office environment. Choose a site that is:

- Clean and free of airborne particles (other than normal room dust).
- Well ventilated and away from sources of heat including direct sunlight.
- Away from sources of vibration or physical shock.
- Isolated from strong electromagnetic fields produced by electrical devices.
- In regions that are susceptible to electrical storms, we recommend you plug your system into a surge suppressor and disconnect telecommunication lines to your modem during an electrical storm.
- Provided with a properly grounded wall outlet.
- Provided with sufficient space to access the power supply cords, because they serve as the product's main power disconnect.

**AVERTISSEMENT:
Français**

Le système a été conçu pour fonctionner dans un cadre de travail normal. L'emplacement choisi doit être :

- Propre et dépourvu de poussière en suspension (sauf la poussière normale).
- Bien aéré et loin des sources de chaleur, y compris du soleil direct.
- A l'abri des chocs et des sources de vibrations.
- Isolé de forts champs électromagnétiques générés par des appareils électriques.
- Dans les régions sujettes aux orages magnétiques il est recommandé de brancher votre système à un supresseur de surtension, et de débrancher toutes les lignes de télécommunications de votre modem durant un orage.
- Muni d'une prise murale correctement mise à la terre.
- Suffisamment spacieux pour vous permettre d'accéder aux câbles d'alimentation (ceux-ci étant le seul moyen de mettre le système hors tension).

**WARNUNG:
Deutsch**

Das System wurde für den Betrieb in einer normalen Büroumgebung entwickelt. Der Standort sollte:

- sauber und staubfrei sein (Hausstaub ausgenommen); gut gelüftet und keinen Heizquellen ausgesetzt sein (einschließlich direkter Sonneneinstrahlung);
- keinen Erschütterungen ausgesetzt sein;
- keine starken, von elektrischen Geräten erzeugten elektromagnetischen Felder aufweisen;
- in Regionen, in denen elektrische Stürme auftreten, mit einem Überspannungsschutzgerät verbunden sein; während eines elektrischen Sturms sollte keine Verbindung der Telekommunikationsleitungen mit dem Modem bestehen;
- mit einer geerdeten Wechselstromsteckdose ausgerüstet sein;
- über ausreichend Platz verfügen, um Zugang zu den Netzkabeln zu gewährleisten, da der Stromanschluß des Produkts hauptsächlich über die Kabel unterbrochen wird.

**AVVERTENZA:
Italiano**

Il sistema è progettato per funzionare in un ambiente di lavoro tipo. Scegliere una postazione che sia:

- Pulita e libera da particelle in sospensione (a parte la normale polvere presente nell'ambiente).
- Ben ventilata e lontana da fonti di calore, compresa la luce solare diretta.
- Al riparo da urti e lontana da fonti di vibrazione.
- Isolata dai forti campi magnetici prodotti da dispositivi elettrici.
- In aree soggette a temporali, è consigliabile collegare il sistema ad un limitatore di corrente. In caso di temporali, scollegare le linee di comunicazione dal modem.
- Dotata di una presa a muro correttamente installata.
- Dotata di spazio sufficiente ad accedere ai cavi di alimentazione, i quali rappresentano il mezzo principale di scolligamento del sistema.

**ADVERTENCIAS:
Español**

El sistema está diseñado para funcionar en un entorno de trabajo normal. escoja un lugar:

- Limpio y libre de partículas en suspensión (salvo el polvo normal).
- Bien ventilado y alejado de fuentes de calor, incluida la luz solar directa.
- Alejado de fuentes de vibración.
- Aislado de campos electromagnéticos fuertes producidos por dispositivos eléctricos.
- En regiones con frecuentes tormentas eléctricas, se recomienda conectar su sistema a un eliminador de sobrevoltaje y desconectar el módem de las líneas de telecomunicación durante las tormentas.
- Provisto de una toma de tierra correctamente instalada.
- Provisto de espacio suficiente como para acceder a los cables de alimentación, ya que éstos hacen de medio principal de desconexión del sistema.

Regulatory compliance statements

American users

FCC Part 15

This device 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 in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- Use only shielded cables to connect peripherals to the system.

Accessories: This equipment has been tested and found to comply with the limits of a Class A digital device. The accessories associated with this equipment are: shielded video cable. These accessories are required to be used in order to ensure compliance with FCC rules.

Declaration of Conformity

Responsible Party

Gateway Companies, Inc.
610 Gateway Drive, North Sioux City, SD 57049
(605) 232-2000 Fax: (605) 232-2023

Product: Gateway 8400 Server

For unique identification of the product configuration, please submit the 10-digit serial number found on the product to the responsible party.

This device complies with Part 15 of the FCC Rules. Operation of this product is subject to the following two conditions; (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution



Changes or modifications not expressly approved by Gateway could void the user's authority to operate the equipment.

FCC Part 68 (applicable to products fitted with USA modems)

Your modem complies with Part 68 of the Federal Communications Commission (FCC) rules. On the computer or modem card is a label that contains the FCC registration number and Ringer Equivalence Number (REN) for this device. If requested, this information must be provided to the telephone company.

An FCC compliant telephone line cord with a modular plug is required for use with this device. The modem is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant. See installation instructions for details.

The Ringer Equivalence Number (REN) is used to determine the number of devices which may be connected to the telephone line. Excessive REN's on a telephone line may result in the devices not ringing in response to an incoming call. In most areas, the sum of REN's should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total REN's, contact the local telephone company.

If this device causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. The telephone company may request that you disconnect the equipment until the problem is resolved.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of this equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

This equipment cannot be used on telephone company provided coin service. Connection to party line service is subject to state tariffs. Contact the state public utility commission or public service commission for information.

When programming or making test calls to emergency numbers:

- Remain on the line and briefly explain to the dispatcher the reason for the call.
- Perform such activities in the off-peak hours such as early morning or late evenings.

The United States Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone fax machine unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. Refer to your fax communication software documentation for details on how to comply with the fax-branding requirement.

Canadian users

ICES-003

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe A prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

DOC Notice (for products fitted with an IC-compliant modem)

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operation, and safety requirements. The Department does not guarantee the equipment will operate to the users' satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the inside wiring associated with a single-line individual service may be extended by means of a certified connector assembly. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Warning



To avoid electrical shock or equipment malfunction you should not attempt to make electrical ground connections by yourself, but should contact the appropriate inspection authority or an electrician, as appropriate.

The **Ringer Equivalence Number** (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

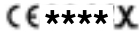
European users

European directives

This Information Technology Equipment has been tested and found to comply with the following European directives:

- EMC Directive 89/336/EEC amending directive 92/31/EEC & 93/68/EEC as per
 - EN 55022:1995 Class A
 - EN 55024:1998 according to
 - EN 61000-4-2:1995
 - EN 61000-4-3:1996
 - EN 61000-4-4:1995
 - EN 61000-4-5:1995
 - EN 61000-4-6:1996
 - EN 61000-4-8:1994
 - EN 61000-4-11:1994
- Low Voltage Directive (Safety) 73/23/EEC as per EN 60950: 1992(A1/A2/A3/A4/A11)

European telecommunication information (for products fitted with EU approved modems)

Marking by the symbol  indicates compliance of this equipment to the Telecom Terminal Equipment and Satellite Earth Stations Directive 98/13/EEC. Such marking is indicative that this equipment meets or exceeds the following technical standards:

CTR 21 (1998) - Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE (excluding TE supporting voice telephony services) in which network addressing, if provided, is by means of Dual Tone Multi Frequency (DTMF) signaling.

Warning



Although this equipment can use either loop disconnect (Pulse) or DTMF (Tone) signaling, only the performance of the DTMF signaling is subject to regulatory requirements for correct operation. It is therefore strongly recommended that the equipment is set to use DTMF signaling for access to public or private emergency services. DTMF signaling also provides faster call set up.

This equipment has been approved to Council Decision 98/482/EEC--“CTR 21” for Pan-European single terminal connection to the Public Switched Telephone Network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN termination point. In the event of problems, you should contact Gateway customer support.

Japanese users

VCCI statement

This equipment is in the Class A category (Information Technology Equipment to be used in a residential area or an adjacent area thereto) and conforms to the standards set by the Voluntary Control Council for Interference by Information Technology Equipment aimed at preventing radio interference in such residential area. When used near a radio or TV receiver, it may become the cause of radio interference. Read instructions for correct handling.

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。

Australia and New Zealand users

EMI statement

This device has been tested and found to comply with the limits for a Class A digital device, pursuant to the Australian/New Zealand standard AS/NZS 3548 set out by the Australian Communications Authority and Radio Spectrum Management Agency.

New Zealand telecommunication statement (for products fitted with Telepermit approved modems)

The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

This equipment shall not be set up to make automatic calls to the Telecom '111' Emergency Service

Important



Under power failure conditions, this telephone may not operate. Please ensure that a separate telephone, not dependent on local power, is available for emergency use.

Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set to operate within the following limits for compliance with Telecom's Specifications:

- (a) There shall be no more than 10 calls to the same number within any 30 minute period for any single manual call initiation, and
- (b) The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next attempt.

The equipment shall be set to ensure that automatic calls to different numbers are spaced such that there is no less than 5 seconds between the end of one call attempt and the beginning of another.

The equipment shall be set to ensure that calls are answered between 3 and 30 seconds of receipt of ringing.

Laser safety statement

All Gateway systems equipped with CD-ROM and DVD-ROM drives comply with the appropriate safety standards, including IEC 825. The laser devices in these components are classified a “Class 1 Laser Product” under a US Department of Health and Human Services (DHHS) Radiation Performance Standard. Should the unit ever need servicing contact an authorized service location.

Warning



Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure. To prevent exposure to laser beams, do not try to open the enclosure of a CD-ROM or DVD Drive.

Television antenna connectors protection (for systems fitted with TV/cable TV tuner cards)

External television antenna grounding

If an outside antenna or cable system is to be connected to your Gateway PC, be sure that the antenna or cable system is electrically grounded to provide some protection against voltage surges and built up static charges.

Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Lightning protection

For added protection of any Gateway product during a lightning storm or when it is left unattended or unused for long periods of time, unplug the product from the wall outlet and disconnect the antenna or cable system.

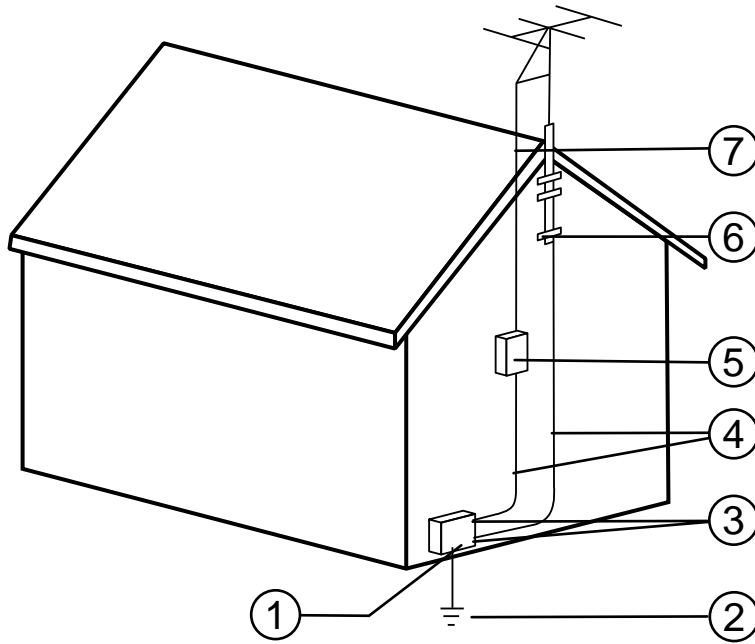
Power lines

Do not locate the antenna near overhead light or power circuits, or where it could fall into such power lines or circuits. When installing or re aligning an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits. Contact with them could be fatal.

Warning



When installing or realigning an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits. Contact with them could be fatal.



Antenna and Satellite Grounding

Reference	Grounding component
1	Electric service equipment
2	Power Service grounding electrode system (NEC Art 250, Part H)
3	Ground clamps
4	Grounding conductors (NEC Section 810-21)
5	Antenna discharge unit (NEC Section 810-20)
6	Ground clamp
7	Antenna lead in wire

Notices

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Reference Data

B

Specifications

System specifications

The following specifications are for the standard configuration. Your system may contain optional equipment. All specifications are subject to change.

Pedestal case size	12.25 in. (31.1 cm) x 25.0 in. (63.5 cm) x 18.0 in. (45.72 cm) (W x D x H).
Processors	As many as four Intel® Pentium III™ processors operating at 550 MHz and faster with 100 MHz front side bus.
RAM capacity	16 DIMM sockets on a separate memory module card support PC100-compliant, single row, registered, Synchronous Dynamic Random Access Memory (SDRAM) ECC DIMMs. Maximum memory is 16 GB.
BIOS	Phoenix BIOS. Flash BIOS for easy updates from diskette.
IDE interfaces	Supports as many as two ATAPI/IDE devices (hard drives, CD drives, LS-120 drives) using onboard PCI IDE adapter.
Diskette drive	Diskette controller integrated on the system board. Support for a single diskette drive.
I/O ports	One parallel port, two serial ports, two USB ports, one PS/2 keyboard port, one PS/2 mouse port, one RJ-45 network jack. LPT and COM configurable from system setup program. No jumper settings required.

PCI Expansion Slots	Six full length, hot-pluggable PCI slots (four 64-bit, 33MHz and two 64-bit, 66MHz), and two half-length PCI slots (32-bit, 33MHz).
Power Supply	One to three, 375 watt power supplies.
Certification	FCC Class A, UL, CUL, CE Mark, VCCI, CB Scheme.

Environmental specifications

The following specifications identify maximum environmental conditions. At no time should the server run under conditions which violate these specifications.

Variable	Requirements
Temperature	Maximum rate of change = 10° C per hour
Nonoperating	–40° to 70 °C (–38° to 158 °F)
Operating	10° to 35 °C (50° to 95 °F); derated 0.5 °C for every 1000 ft. (305 m), with a maximum rate of change of 10°C/Hour
Altitude	10,000 ft. max
Humidity	
Nonoperating	95% relative (noncondensing) @ 30° C (86° F)
Shock	
Operating	2.0 g, 11 msec, 1/2 sine
Packaged	Operational after 30-inch free fall (cosmetic damage might occur)

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