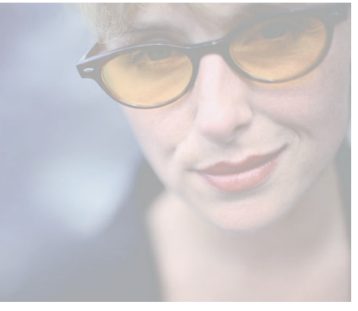
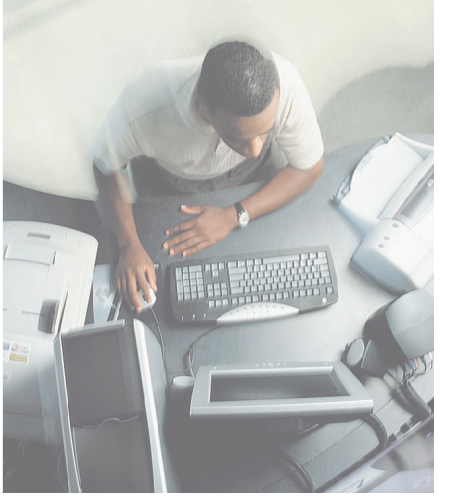
Gateway 920 Server

user'sguide





Customizing | Troubleshooting | Gateway™

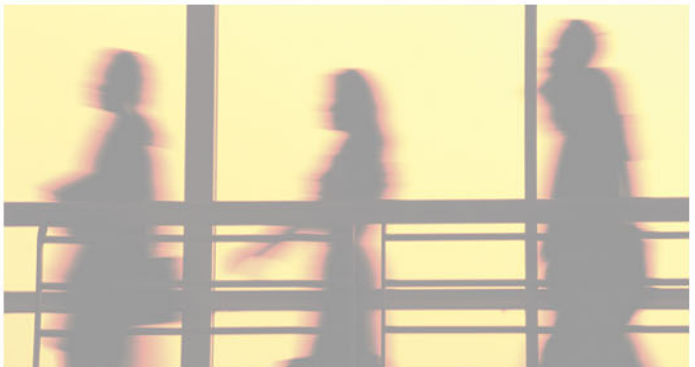
Contents

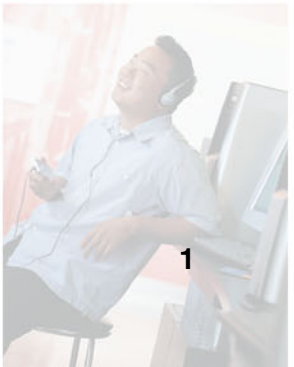
Checking Out Your Gateway Server

1

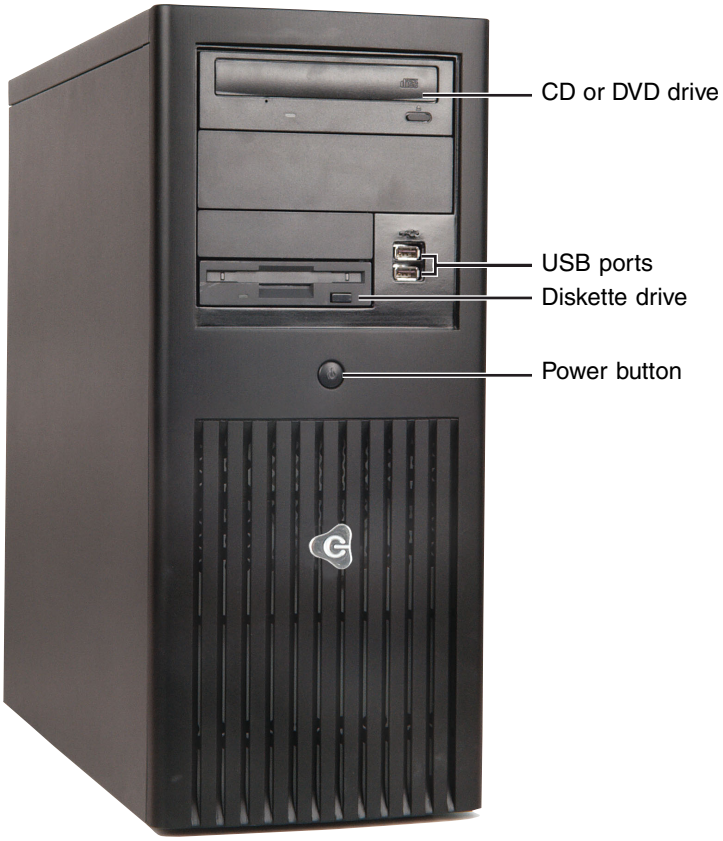
Read this chapter to learn:

- Where drives, ports, jacks, and controls are located
- Where system board components are located
- What help resources are available

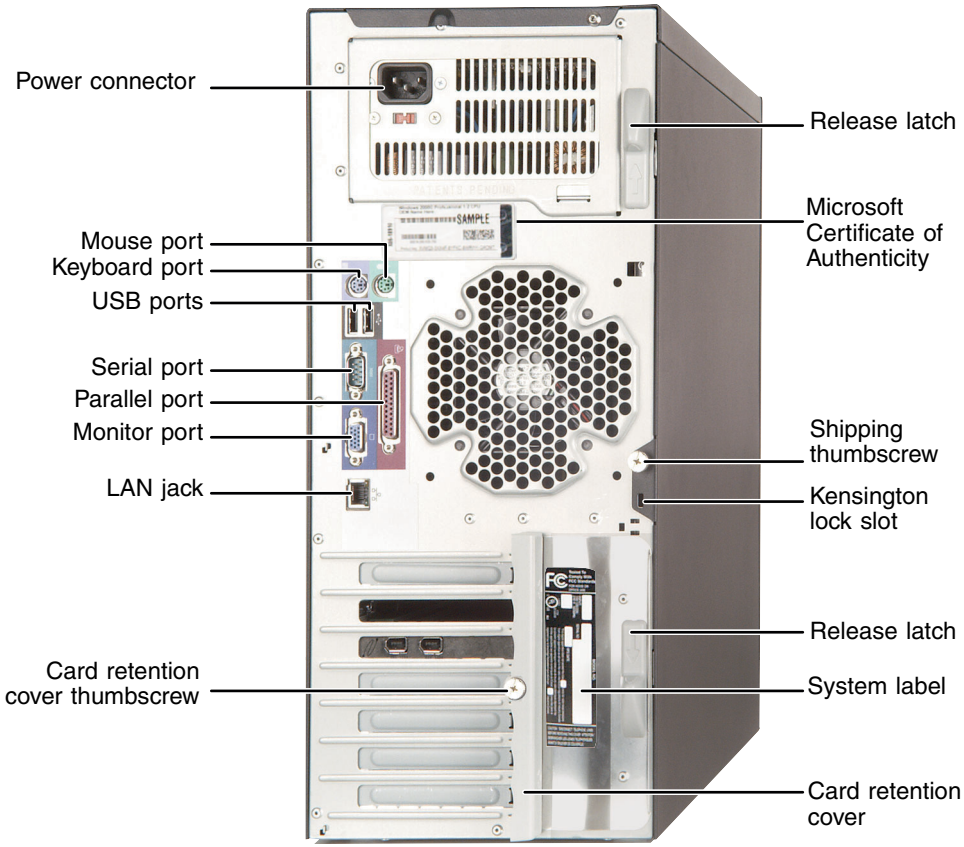




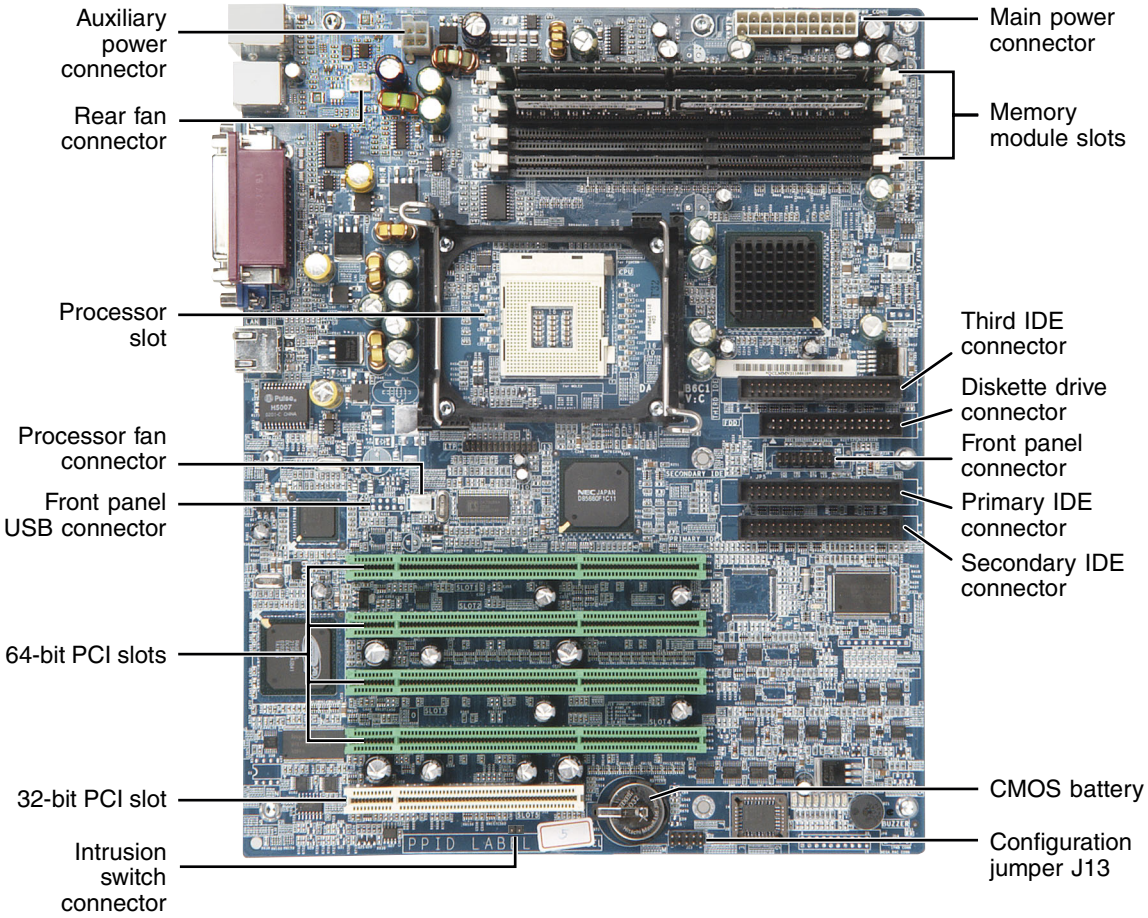
Front



Back


Power connector
Mouse port
Keyboard port
USB ports
Serial port
Parallel port
Monitor port
LAN jack
Card retention cover thumbscrew
Release latch
Microsoft Certificate of Authenticity
Shipping thumbscrew
Kensington lock slot
Release latch
System label
Card retention cover

System board



Getting Help

In addition to your operating system's documentation, there are additional information resources available to help you use your server.

Server Companion CD

Use the *Server Companion CD* to access file utilities and documentation for your server and its components. For more information, see *Using Your Server Companion CD*.

Gateway Web site

Gateway provides a variety of information on its Web site to help you use your server.

Visit the Gateway Web site at support.gateway.com for:

- Technical documentation and product guides
- Technical tips and support
- Updated hardware drivers
- Order status
- Frequently asked questions (FAQs)

Telephone support

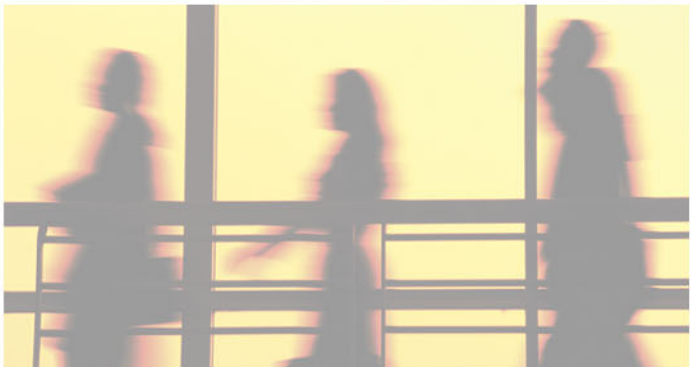
You can access a wide range of services through your telephone, including customer service, technical support, and information services. For more information, see "Telephone support" on page 64.

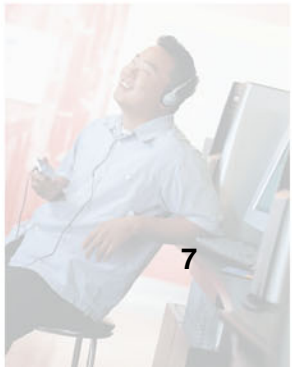
Setting Up Your Server

2

Read this chapter to learn how to:

- Use your server safely
- Start and turn off your server
- Restart (reboot) your server
- Set up your operating system





Setting up the hardware

To make sure that your working environment is safe:

- Use a clean, dry, flat, stable surface for your server. Allow at least 6 inches at the rear of the server for cabling and air circulation.
- Use the instructions on your server's setup poster to set up your hardware.
- Use an uninterruptable power supply (UPS) with surge protection for protection from power outages and power spikes.

Warning

Your server comes with a 3-wire AC power cord fitted with the correct plug style for your region. If this plug does not match the connector on your UPS or wall outlet, do not attempt to modify the plug in any way. Use a UPS or wall outlet that is appropriate for the supplied AC power cord.

- Avoid subjecting your server to extreme temperature changes. Do not expose your server to direct sunlight, heating ducts, or other heat-generating objects. Damage caused by extreme temperatures is not covered by your warranty. As a general rule, your server is safest at temperatures that are comfortable for you.
- Keep your server and magnetic media away from equipment that generates magnetic fields, such as unshielded stereo speakers. Strong magnetic fields can erase data on both diskettes and hard drives. Even a telephone placed too close to the server may cause interference.

Important

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

Protecting from power source problems

Lne conditioners and uninterruptible power supplies can help protect your server against power source problems.

Line conditioners

A line conditioner protects your server from the small fluctuations in voltage from an electrical supply. Most servers 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 server is located near, or shares a circuit with, a device that causes electromagnetic interference, such as a television or a motor.

Some uninterruptible power supplies include simple line-conditioning capabilities.

Uninterruptible power supplies

Use an uninterruptible power supply (UPS) to protect your server from data loss during a total power failure. A UPS uses a battery to keep your server running temporarily during a power failure and lets you save your work and shut down your server. You cannot run your server for an extended period of time while using only the UPS. Be sure to use a UPS with surge protection. To buy a UPS, contact Gateway Technical Support, Gateway Sales, visit accessories.gateway.com. For more information on contacting technical support, see "Telephone support" on page 64

Starting your server

Before you start your server for the first time:

- Make sure that the server and monitor are plugged into a power outlet or UPS and that the UPS (if you are using one) is turned on.
- Make sure that all cables are firmly connected to the correct ports and jacks on the back of the server.

Warning

When you connect peripheral devices to the server, make sure that your server and devices are turned off and the power cords are unplugged.

To start the server:

1 Press the power button.

When the power button LED is...	It means...
Green	The server is turned on.
Orange	The server is in Standby.
Off	The server is turned off.

If nothing happens when you press the power button:

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

2 The first time you turn on the server, any pre-installed operating system may begin asking you for configuration settings. See your operating system's documentation for instructions on configuring advanced settings for your specific network.

Understanding the power-on self-test

When you turn on your server, the power-on self-test (POST) routine checks the server memory and components. If POST finds any problems, the server displays error messages. Write down any error messages that you see, then see "Error messages" on page 68 and "Beep codes" on page 71 for troubleshooting information.

Turning off your server

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

To turn off the server:

1. See the operating system's documentation or online help for instructions on shutting down the operating system. Whenever possible, you should use the operating system's shut down procedure instead of pressing the power button.
2. If your server did not turn off automatically, press the power button. If nothing happens when you press the power button, press and hold it for five seconds and the server will turn off.

Warning

The power button on the server does not turn off server AC power. To remove AC power from the server, you must unplug the AC power cord from the wall outlet or power source. The power cord is considered the disconnect device to the main (AC) power.

Warning

If you routinely turn off your server (daily or weekly), do not unplug the server or use the On/Off switch on the UPS. Regularly cutting off all power to your server may cause the CMOS battery to fail prematurely.

Setting up the operating system

If you ordered your server with the operating system already installed by Gateway, it is completely installed and the basic settings are already configured. See your operating system's documentation or online help for instructions on configuring advanced settings for your specific network.

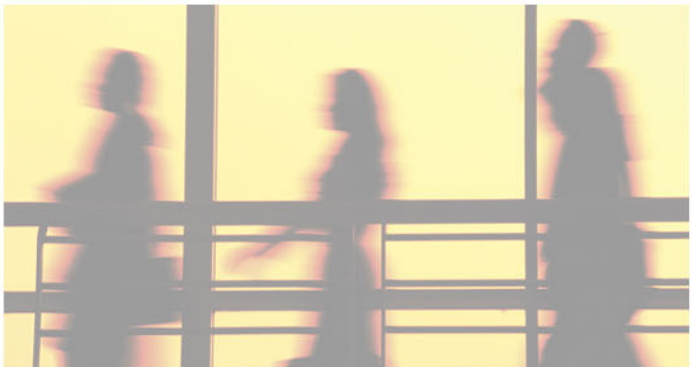
If you are installing an operating system because it was not already installed by Gateway, see the appropriate installation guide for instructions.

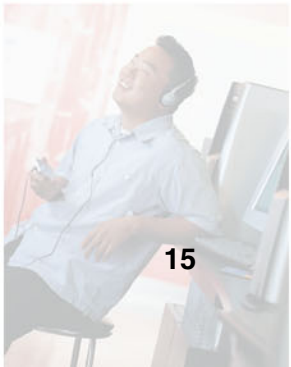
Maintaining Your Server

3

Read this chapter to learn how to:

- Care for your server
- Record the BIOS configuration
- Manage your server and network





Caring for your server

To extend the life of your server:

- Be careful not to bump or drop your server.
- When transporting your server, we recommend that you put it in the original packaging materials.
- Keep your server and magnetic media away from equipment that generates magnetic fields.
- Avoid subjecting your server to extreme temperatures. Do not expose your server to heating ducts or other heat-generating objects. Damage caused by extreme temperatures is not covered by your warranty. As a general rule, your server is safest at temperatures that are comfortable for you.
- Keep all liquids away from your server. When spilled onto server components, almost any liquid can result in extremely expensive repairs that are not covered under your warranty.
- Avoid dusty or dirty work environments. Dust and dirt can clog the internal mechanisms and can cause the server to overheat.

Cleaning your server

Keeping your server clean and the vents free from dust helps keep your server performing at its best. Your server cleaning kit could include:

- A soft, lint-free cloth
- Glass cleaner
- An aerosol can of air with a narrow, straw-like extension
- Isopropyl alcohol
- Cotton swabs
- A tape drive cleaning cartridge (if a tape drive is installed)
- A CD or DVD drive cleaning kit

Cleaning tips

- Always turn off your server and other peripheral devices before cleaning any components.

Warning

When you shut down your server, the power turns off, but some electrical current still flows through your server. To avoid possible injury from electrical shock, unplug the power cord and all other cables connected to the server.

- Use a damp, lint-free cloth to clean your server and other parts of your server system. Do not use abrasive or solvent cleaners because they can damage the finish on components.
- Keep the cooling vents free of dust. With your server turned off and unplugged, brush the dust away from the vents with a damp cloth, but be careful not to drip any water into the vents.

Cleaning the keyboard

You should clean the keyboard occasionally by using an aerosol can of air with a narrow, straw-like extension to remove dust and lint trapped under the keys.

If you spill liquid on the keyboard, turn off your server and turn the keyboard upside down to let the liquid drain. Let the keyboard dry completely before trying to use it again. If the keyboard does not work after it dries, you may need to replace it. Keyboard damage resulting from spilled liquids is not covered by your warranty.

Cleaning the screen

If your computer screen is a flat panel display, use only a damp, soft cloth to clean it. Never spray water directly onto the screen.

Warning

The computer screen is made of specially coated glass and can be scratched or damaged by abrasive or ammonia-based glass cleaners.

- OR -

If your computer screen is not a flat panel display, use a soft cloth dampened with glass cleaner to clean the screen. Never spray cleaner directly onto the screen.

Cleaning the tape drive

If you use a tape drive to back up your files, regular maintenance will lengthen the life of the drive. To maintain the drive's reliability:

- Clean the drive monthly with the cleaning cartridge included with the drive.
- Remove the tape from the drive whenever the drive is not in use.

Preparing for system recovery

If your system files are corrupted, you may not be able to start the server from the hard drive. *Startup diskettes* are diskettes that let you start the server and attempt to fix the problem. See your operating system's documentation or online help for instructions on creating startup diskettes.

Some operating systems also let you create an emergency repair diskette to back up critical operating system files. See your operating system's documentation or online help for instructions on using an emergency repair diskette.

Recording the BIOS configuration

To help keep track of your custom changes to BIOS settings and to prepare for system recovery, you should record your BIOS configuration after you have your server set up and working.

To record your BIOS configuration:

1. Print the appendix for BIOS Settings in this guide.
2. Restart your server, then press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.
3. Record the BIOS settings on your printout.

System administration

Gateway Server Manager

Gateway Server Manager lets you manage multiple computers on a Windows network from a single window, then implement commands and policies across the network with a single action. With Gateway Server Manager, you can run system management tasks which are triggered by certain events or conditions.

Printed documentation comes with the *Gateway Server Manager* CD. You can find additional documentation in the program's online help.

Server security

To prevent unauthorized use of the server, you can set BIOS startup passwords.

Using BIOS security passwords

Set up a supervisor password to prevent unauthorized access to the BIOS Setup utility. After you create a supervisor password, you can set up a user password to prevent unauthorized access to the server. You can:

- Enter either password to finish starting the server.
- Enter the supervisor password to access the BIOS Setup utility.

For information about resetting BIOS passwords, see "Bypassing the BIOS passwords" on page 61.

To set the BIOS security passwords:

1. Restart your server, then press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.
2. Select the **Security** menu.

3 Select the password to set according to the following table.

Option	Description
Supervisor password	To control access to system configuration, set a supervisor password. Using a supervisor password lets you make changes to any setting in the BIOS. Passwords can be cleared. To clear the passwords, see "Bypassing the BIOS passwords" on page 61.
User password	The supervisor password must be set up before a user password can be set. To control access to the server, set a user password. The supervisor can set the level of access granted to the user password. The user password access levels are: ▪ **No Access**. User cannot access the BIOS Setup utility. ▪ **Limited**. User can change only the date and time. ▪ **View Only**. User can see all settings, but cannot change them. ▪ **Full**. User can change every setting except the supervisor password. Passwords can be cleared. To clear the passwords, see "Bypassing the BIOS passwords" on page 61.

4 Type the password and press ENTER, then type it again and press ENTER.

5 Save your changes, then close the BIOS Setup utility.

Using your Server Companion CD

You can use your *Server Companion CD* to:

- Install hardware drivers
- Install programs
- View server documentation

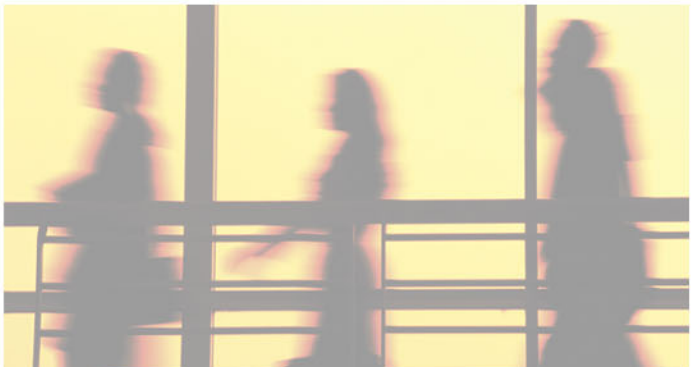
Instructions for using the CD are provided in *Using Your Server Companion CD*.

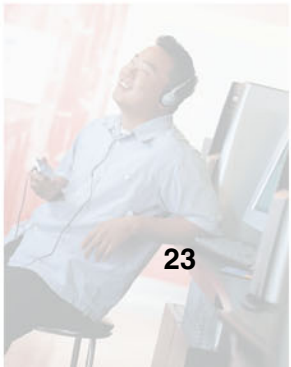
4 Installing Components

Read this chapter to learn how to:

- Open and close the server case
- Install drives
- Install memory modules
- Install expansion cards
- Replace the processor
- Replace the power supply
- Replace the system board
- Replace the rear case fan
- Replace the CMOS battery

You must open your server case to install components. If you are not comfortable with these procedures, get help from a more experienced computer user or computer service technician, or contact Gateway Technical Support.





Preparing to install components

Selecting a place to work

Work on your server in an area that:

- Is clean (avoid dusty areas)
- Is a low-static environment (avoid carpeted areas)
- Has a stable surface on which to set your server
- Has enough room to place all of your server parts
- Is near a grounded outlet so you can test your server after installation
- Is near a telephone (in case you need help from Gateway Technical Support). The telephone must be directly connected to a telephone jack and cannot be connected to your server.

Gathering the tools you need

Some tools and supplies that you may need to work on your server are:

- A notebook to take notes
- A Phillips screwdriver
- A small flat-blade screwdriver
- Small containers to store various types of screws
- A grounding wrist strap (available at most electronic stores)

Preventing static electricity discharge

The components inside your server are extremely sensitive to static electricity, also known as *electrostatic discharge* (ESD).

Warning

ESD can permanently damage electrostatic discharge-sensitive components in the server. Prevent ESD damage by following ESD guidelines every time you open the server case.

Warning

To avoid exposure to dangerous electrical voltages and moving parts, turn off your server and unplug the power cord and modem cable before opening the server case.

Before working with server components, follow these guidelines:

- Turn off the server, then unplug the power cord and all other cables.
- Press the power button to drain any residual power from the server.
- Wear a grounding wrist strap (available at most electronics stores) and attach it to a bare metal part of the server. You can also touch a bare metal surface on the back of the server with your finger.

Warning

To prevent risk of electric shock, do not insert any object into the vent holes of the power supply.

- Avoid static-causing surfaces such as carpeted floors, plastic, and packing foam.
- Avoid working on the server when your work area is extremely humid.
- Remove components from their antistatic bags only when you are ready to use them. Do not lay components on the outside of antistatic bags because only the inside of the bags provide electrostatic protection.
- Always hold expansion cards by their edges or their metal mounting brackets. Avoid touching the edge connectors and components on the cards. Never slide expansion cards or components over any surface.

Opening the server case

Because the components inside your server are extremely sensitive to static electricity, make sure that you follow the instructions at the beginning of this chapter to avoid static electricity damage.

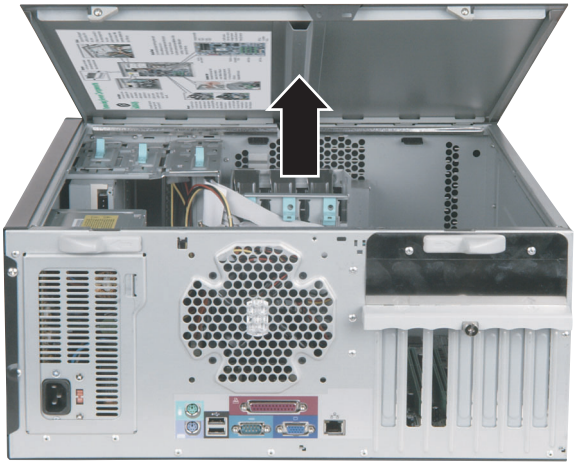
Warning

For correct cooling and air flow, always reinstall the side panel before you turn on the server. Operating the server without the cover in place can damage server components.

To open the server case:

1. Follow the instructions in "Preventing static electricity discharge" on page 25.
2. Turn off the server, then disconnect the power cord and all other cables connected to the server.
3. For more stability, place the server on its side.
4. If your case has a shipping thumbscrew installed on the back, remove the screw, then push the cover release latches away from each other.

5 Swing the side panel away from the case.



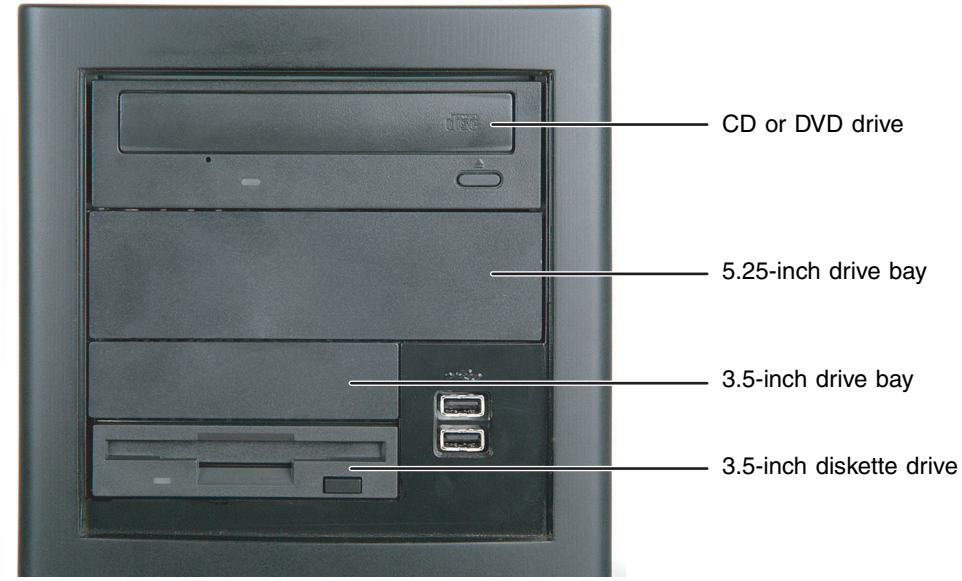
Closing the server case

To close the server case:

1. For more stability, place the server on its side.
2. Make sure that all of the internal cables are arranged inside the case so they will not be pinched when you close the server case.
3. Align the side panel's front tabs into the case notches, then swing the side panel toward the case until the release latches snap into place.
4. Set the case upright.
5. Reconnect the power cord and all other cables.

Installing drives

Your server comes with a CD or DVD drive and a 3.5-inch diskette drive. Your server also has one additional 5.25-inch drive bay and one additional 3.5-inch drive bay.



As you prepare to install drives, remember:

- Before you install a drive, see the drive's documentation for information on configuring the drive, setting drive jumpers, and attaching cables.
- If you are installing a drive that requires a controller card, you must install the card before the drive will work.

- IDE hard drives can be configured as single, master, slave, or cable-select. IDE CD or DVD drives can be configured as master, slave, or cable-select.
  - If cable-select is available (drive assignments will be marked on the cable), the IDE cable assigns the master/slave positions to the drives it connects. You can override these assignments using the jumpers on the drives.
  - If cable-select is not available and only one drive is attached to an IDE controller cable, configure the drive as master if it is a CD or DVD drive. If two drives of any type are attached to the cable, configure one as master and one as slave.
  - If you are connecting two IDE drives to the cable, connect the middle cable connector to the slave drive and connect the end cable connector to the master (boot) drive.
- You may need to configure the drives you install using the BIOS Setup utility. Press **F2** at startup to open the BIOS Setup utility.

Installing a CD, DVD, or diskette drive

Important

Drives connected to the primary and secondary IDE connectors should be ATA100 drives, and drives connected to the third IDE connector should be ATA66 drives.

To install a CD, DVD, or diskette drive:

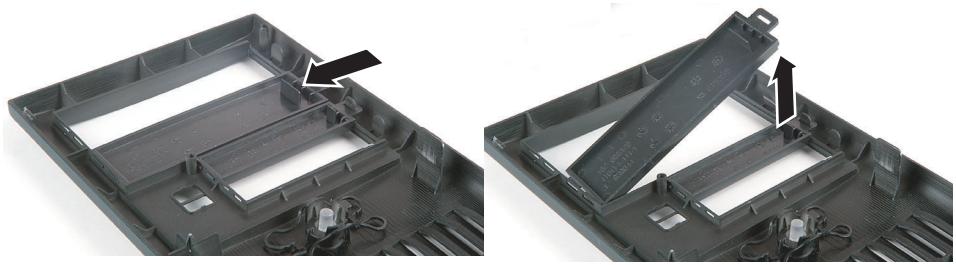
1. Follow the instructions in "Preventing static electricity discharge" on page 25.
2. Follow the instructions in "Opening the server case" on page 26.

3 If you are replacing a drive, go to Step 6.

- OR -

If you are adding a new drive, press in on the two front cover release tabs, then swing the front cover away from the server and remove the cover.

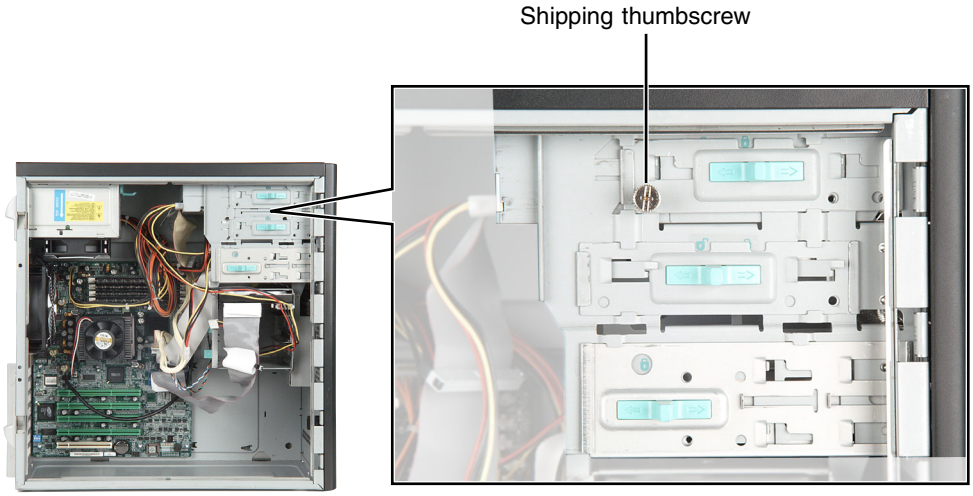
4 Press the drive bay face plate release tab, then swing the faceplate away from the front cover and remove the face plate.



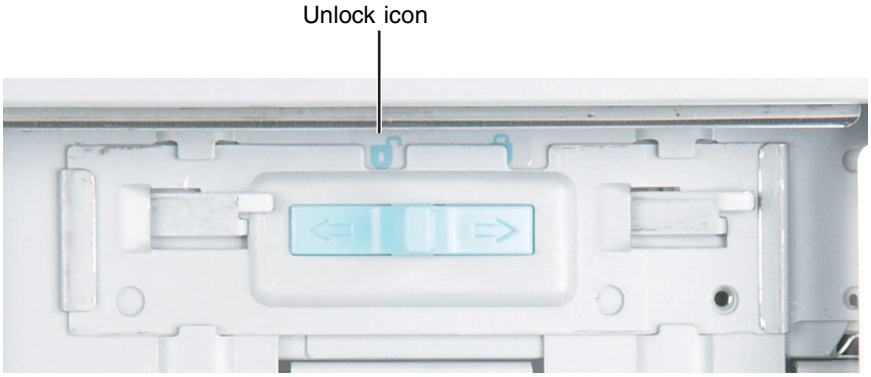
5 Remove the shield for the bay into which you are installing the new drive.

6 If you are replacing a drive, disconnect the drive cables.

7 If there is a shipping thumbscrew installed next to the drive release latch, remove the thumbscrew.



8 Slide the drive release latch back toward the rear of the case until the unlock icon is visible.

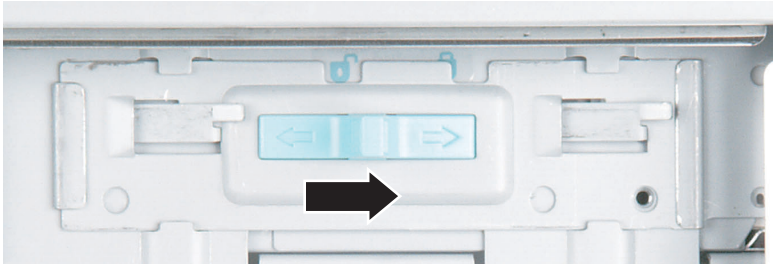


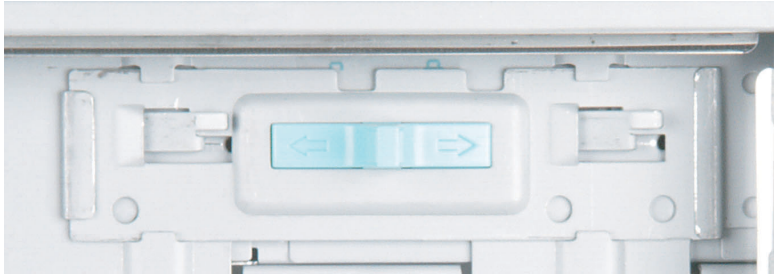
9 If you are replacing a drive, slide it forward and out of the drive bay.

10 Set any jumpers on the new drive. See the drive's documentation for further instructions.

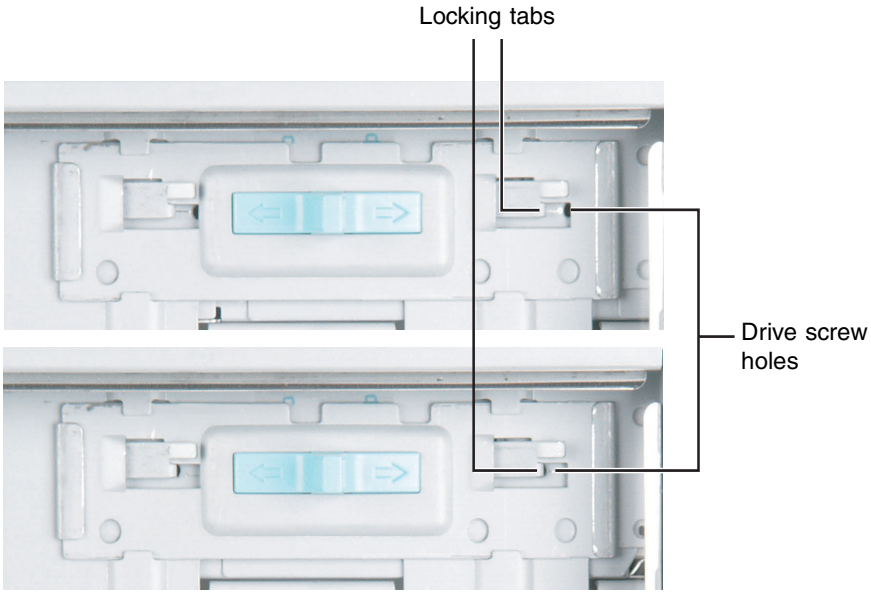
11 Slide the new drive into the drive bay.

12 Move the release latch to the right about ¼ inch (6 mm).

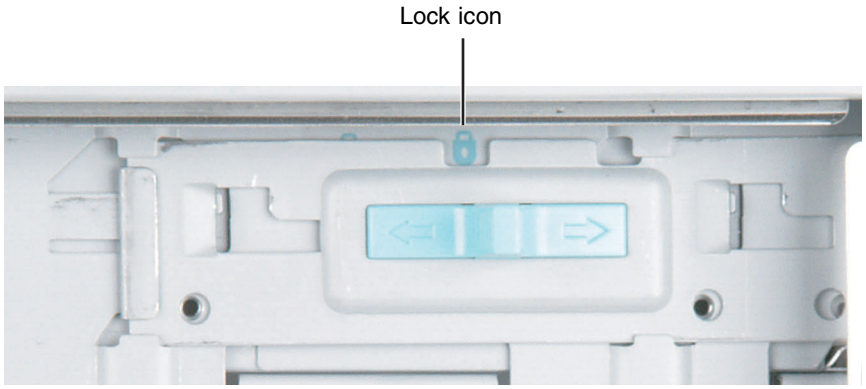




13 Align the drive's screw holes with the release latch's locking tabs.



14 Slide the drive release latch toward the front of the case until the lock icon is visible.



15 Follow the instructions in the drive's documentation to connect the drive cables.

16 If you removed the front cover, replace it.

17 Follow the instructions in "Closing the server case" on page 28.

Installing a hard drive

Important

Drives connected to the primary and secondary IDE connectors should be ATA100 drives, and drives connected to the third IDE connector should be ATA66 drives.

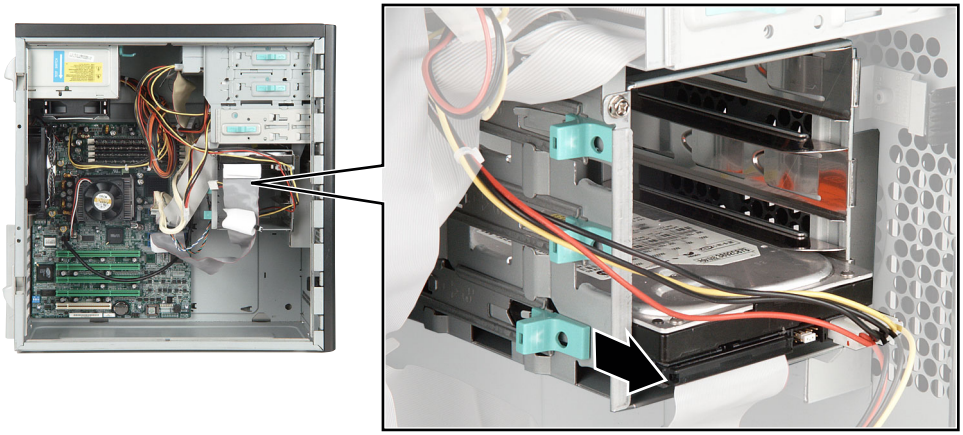
To install a hard drive:

1 Follow the instructions in "Preventing static electricity discharge" on page 25.

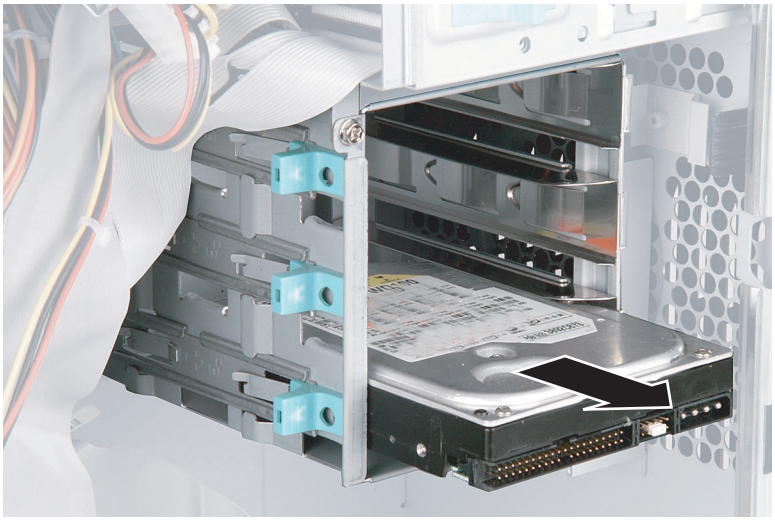
2 Follow the instructions in "Opening the server case" on page 26.

3 If you are replacing a hard drive, disconnect the old drive's cables.

4 Slide the drive release latch toward the open side of the case.

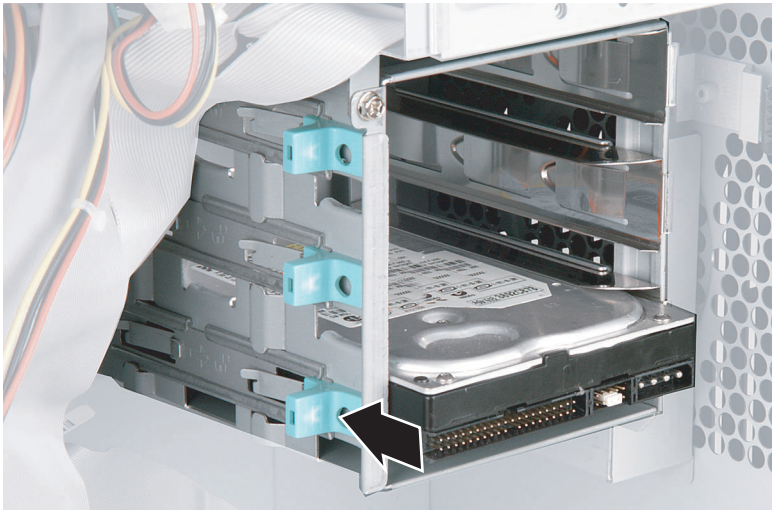


5 If you are replacing a hard drive, slide the old drive out of the drive bay.



6 Set any jumpers on the new drive. See the drive's documentation for further instructions.

7 Slide the new drive in, then slide the release latch toward the inside of the case.



8 Follow the instructions in the drive's documentation to connect the drive cables.

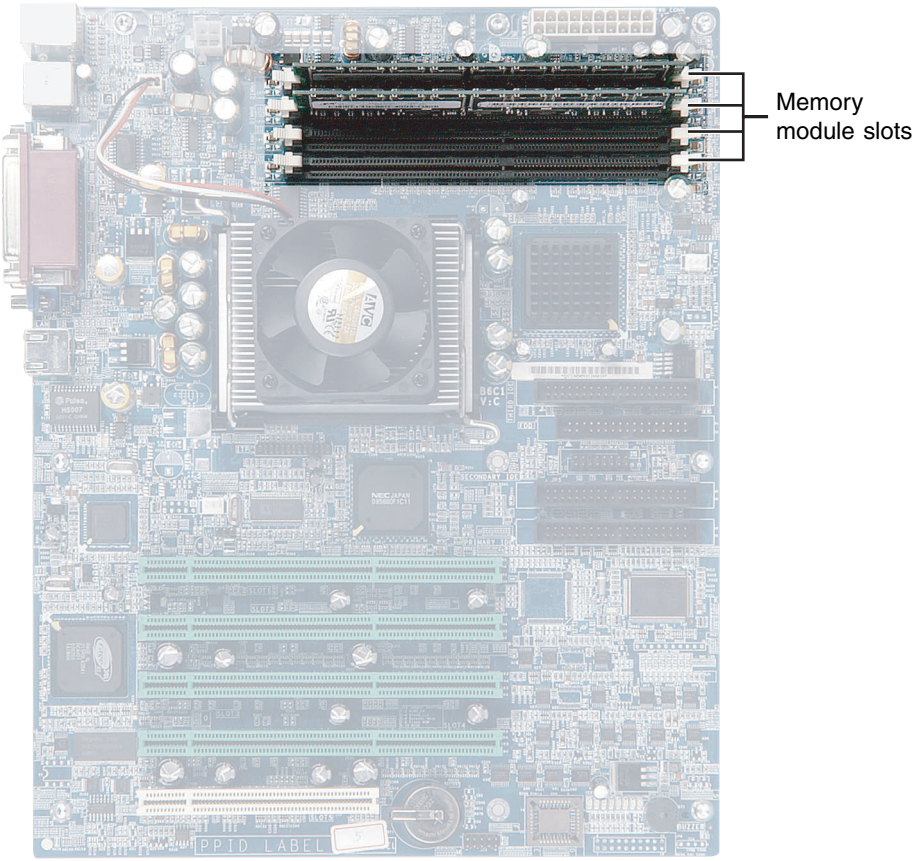
9 Follow the instructions in "Closing the server case" on page 28.

Installing memory

When you upgrade your server memory, make sure that you install the correct type of memory module for your server. Your server uses PC2100 DDR SDRAM registered ECC DIMM memory. The following illustration shows the location of the memory modules on the system board.

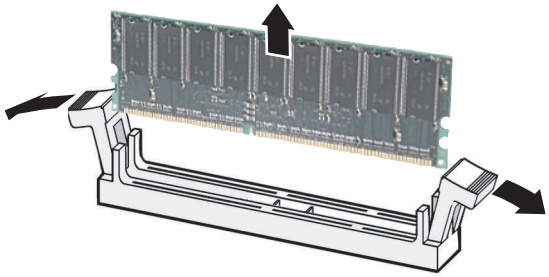
Warning

Use only PC2100 DDR SDRAM registered ECC DIMM memory modules.



To install or replace memory:

1. Follow the instructions in "Preventing static electricity discharge" on page 25.
2. Follow the instructions in "Opening the server case" on page 26.
3. Pull the plastic tabs away from the sides of the memory module slot. If you are replacing a memory module, remove the old module.



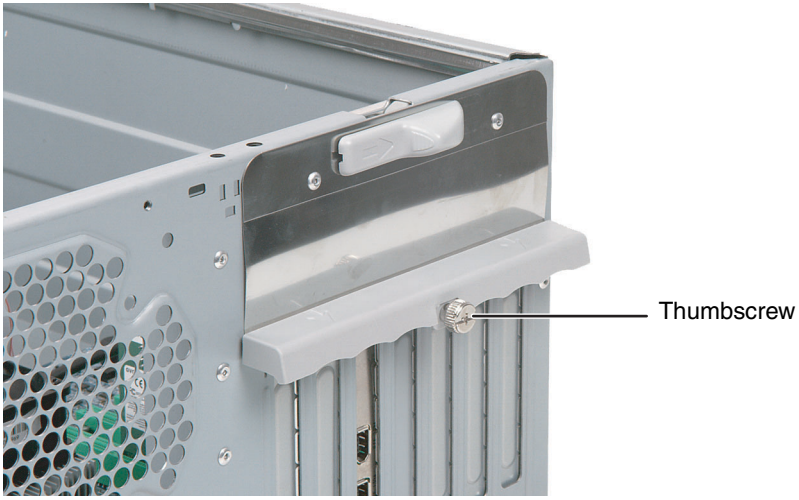
4. Align the notch on the new module with the notch in the memory module slot and press the module firmly into the slot. The tabs on the sides of the memory slot should secure the memory module automatically.
5. Follow the instructions in "Closing the server case" on page 28.
6. Turn on the server. Make sure that the server turns on and that the operating system loads completely.
7. Restart your server and open the BIOS Setup utility. Verify the amount of memory installed with the **System Memory** listed in the Main menu.

Installing PCI expansion cards

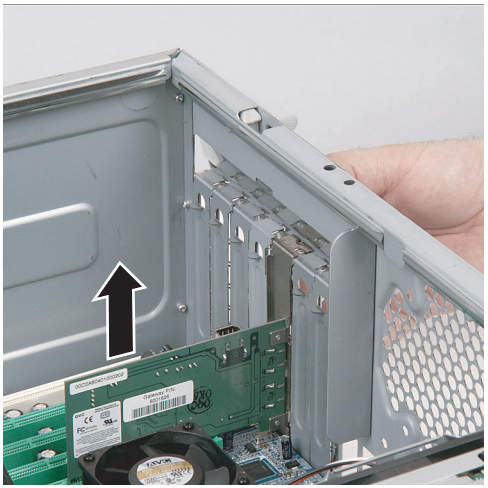
A PCI *expansion card* (sometimes called an *add-in card*) is a card used in the server to add functionality to the system. Use the following procedure to replace, add, or reseat an expansion card.

To replace, add, or reseat a PCI expansion card:

1. Follow the instructions in "Preventing static electricity discharge" on page 25.
2. Follow the instructions in "Opening the server case" on page 26.
3. If you are replacing a card, disconnect any cables that are attached to the old card.
4. Remove the thumbscrew that secures the expansion card retention cover to the server case.



5 While holding the retention cover open, remove the expansion card. You can slightly seesaw the card end-to-end to loosen the card, but do not bend the card sideways.



Warning

Do not touch the contacts on the bottom part of the expansion card. Touching the contacts can cause electrostatic damage to the card.

6 While holding the retention cover open, press the new card into the expansion slot. You can slightly seesaw the card end-to-end to help insert the card, but do not bend the card sideways.

7 Push the retention cover in, then tighten the thumbscrew.

8 Connect any cables to the card. For more information, see the card's documentation.

9 Follow the instructions in "Closing the server case" on page 28.

10 See the card's documentation for software installation instructions.

Replacing the processor

Your server is compatible with the Intel® Pentium® 4 or Intel® Celeron® processor. The server automatically detects the processor each time you turn on the server. Whenever you install a new processor, you should first install the most current version of the BIOS. For more information, see "Updating the BIOS" on page 57.

Warning

A heat sink must be installed on the processor. Installing a processor without a heat sink could damage the processor.

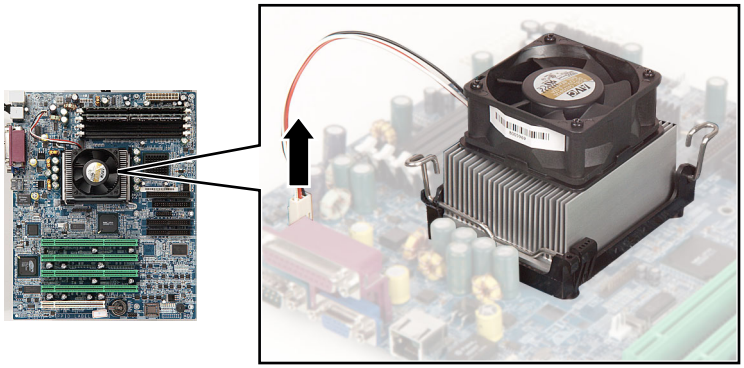
Warning

The processor and heat sink may be hot if the computer has been running. Also, there may be sharp edges on the heat sink. Consider wearing protective gloves.

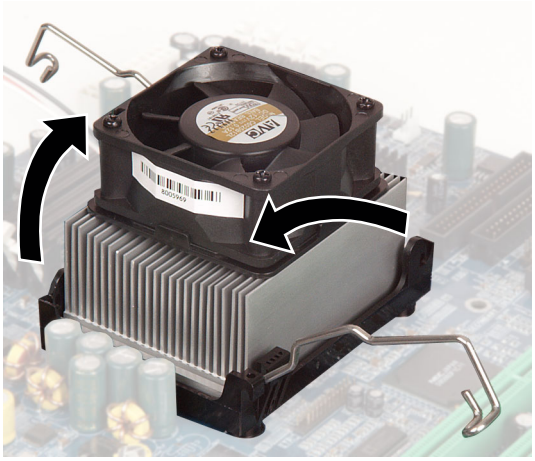
To replace the processor:

1. Install the most current BIOS version. For more information, see "Updating the BIOS" on page 57.
2. Follow the instructions in "Preventing static electricity discharge" on page 25.
3. Follow the instructions in "Opening the server case" on page 26.

4 Unplug the heat sink's cooling fan from the system board.



5 Press down on the heat sink locking lever on each side, push them slightly away from the heat sink, then lift the levers out of the way.

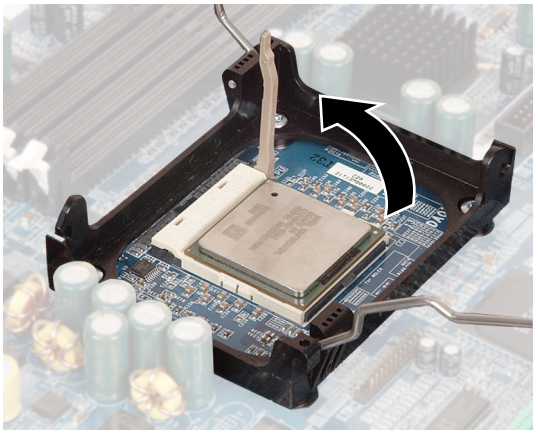


6 Remove the heat sink.

Important

The heat sink mounting paste may harden over time and hold the heat sink securely to the processor. If removing the heat sink also pulls the processor out of the processor socket, the processor should still be undamaged. Continue with the procedure.

7 Press down on the processor locking lever, push it slightly away from the processor, then rotate the lever straight up to release the processor.



8 Remove the old processor.

9 Install the new processor into the processor slot. Make sure that the arrow on the corner of the processor aligns with Pin 1 on the processor socket (the socket corner without a pin hole).

10 Press the processor locking lever down until it clicks into place.

11 Apply thermal grease to the top of the processor, if necessary.

12 Place the heat sink on the processor, then press the heat sink locking levers down until they click into place.

13 Plug the heat sink's cooling fan into the system board.

14 Follow the instructions in "Closing the server case" on page 28.

Replacing the power supply

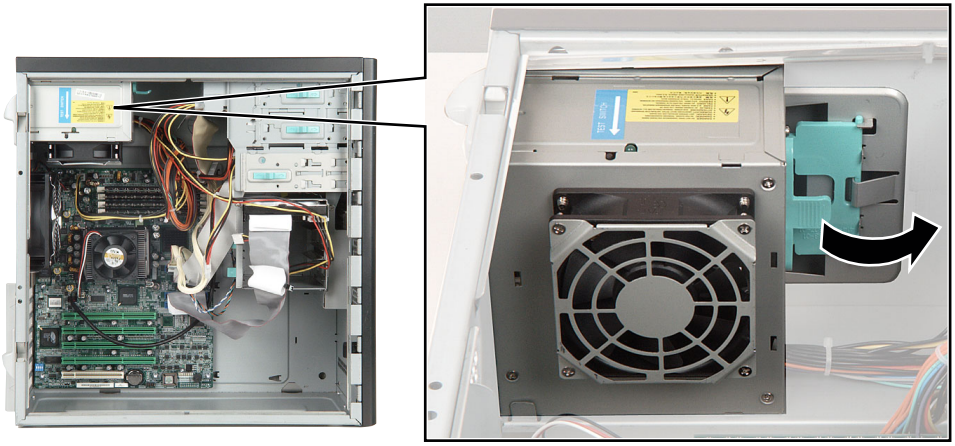
Warning

The power supply in this server contains no user-serviceable parts. Only a qualified computer technician should service the power supply.

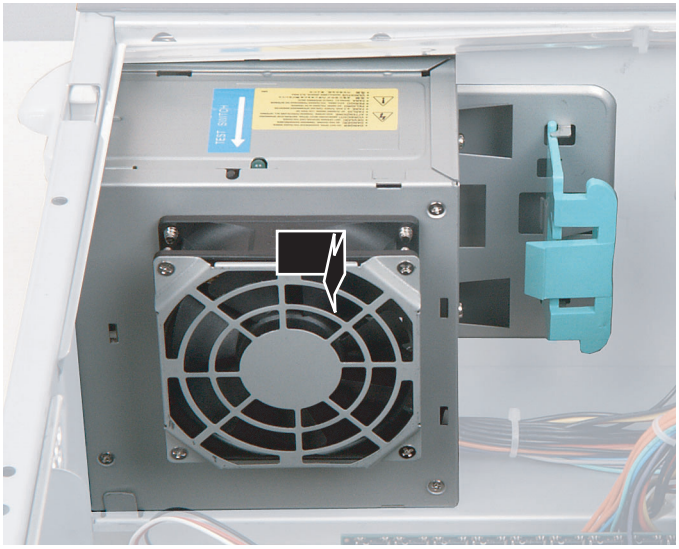
Your server comes with a 3-wire AC power cord fitted with the correct plug style for your region. If this plug does not match the connector on your UPS or wall outlet, do not attempt to modify the plug in any way. Use a UPS or wall outlet that is appropriate for the supplied AC power cord.

To replace the power supply:

1. Follow the instructions in "Preventing static electricity discharge" on page 25.
2. Follow the instructions in "Opening the server case" on page 26.
3. Disconnect the power supply cables from all components, noting their locations and orientation. (You will reconnect the cables after you install the new power supply.)
4. Pull the power supply retention clip away from the power supply.



5 While supporting the power supply with your hand, slide the power supply toward the front of the case, then out toward the bottom of the case.



6 Install the new power supply, then press the retention clip back against the case.

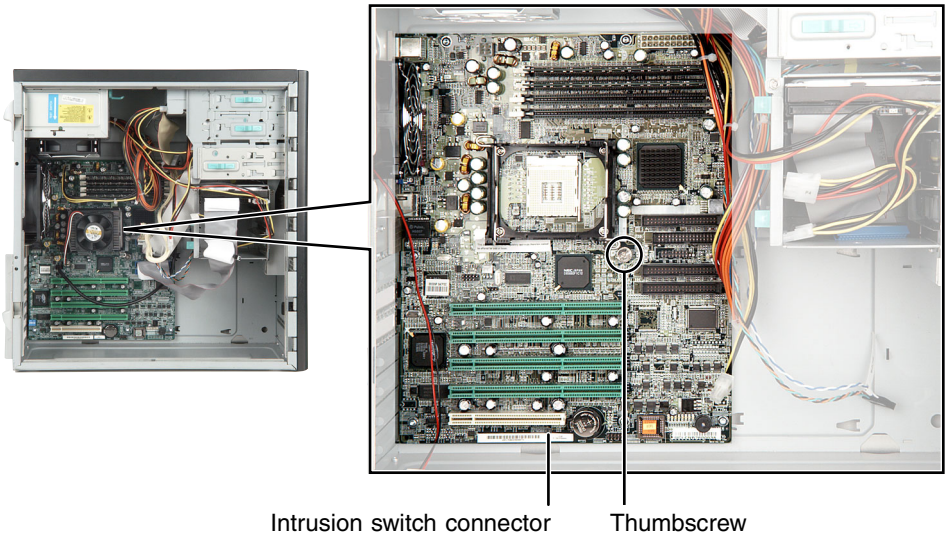
7 Reconnect the power supply cables.

8 Follow the instructions in "Closing the server case" on page 28.

Replacing the system board

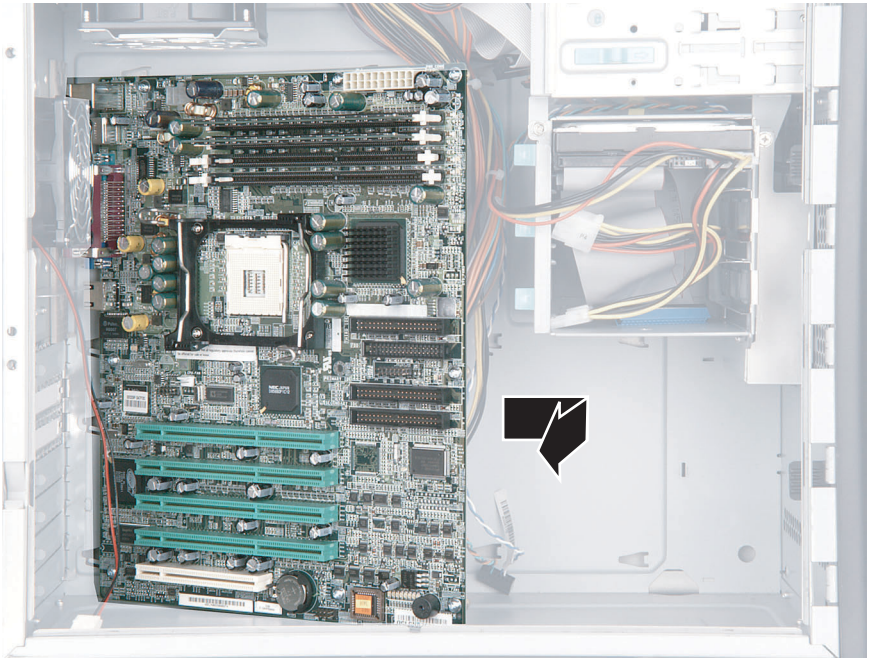
To replace the system board:

1. Follow the instructions in "Preventing static electricity discharge" on page 25.
2. Follow the instructions in "Opening the server case" on page 26.
3. Remove all of the expansion cards. For more information, see "Installing PCI expansion cards" on page 40.
4. Remove the heat sink and processor. For more information, see "Replacing the processor" on page 42.
5. Remove the memory modules. For more information, see "Installing memory" on page 38.
6. Disconnect the power and data cables from the system board, noting their locations and orientation. (You will reconnect the cables after you install the new board.) Make sure that you disconnect the intrusion switch cable.

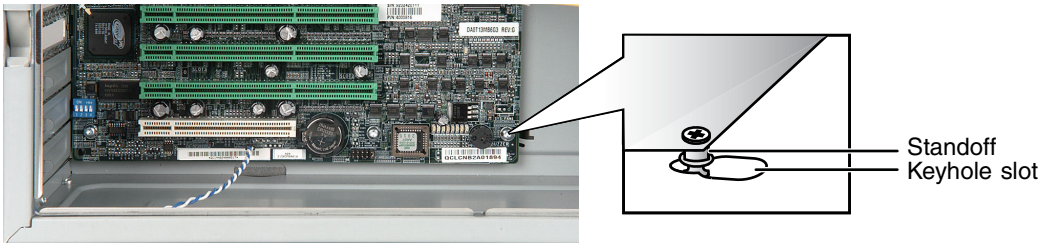


7. Remove the system board's thumbscrew.

8 Slide the system board toward the front of the case, then lift it away from the case.



9 Slide the new system board's standoffs into the keyhole slots, then slide the board toward the back of the case.



Important

The new system board must have special standoffs (*pem studs*) mounted on the bottom of the board. If necessary, use the standoffs from the original system board.

10 Lock the system board into place with the thumbscrew.

11 Install the memory, processor, and heat sink, then reconnect the heat sink cooling fan to the system board.

12 Connect the power and data cables.

13 Install the expansion cards. For more information, see "Installing PCI expansion cards" on page 40.

14 Follow the instructions in "Closing the server case" on page 28.

15 Turn on your server.

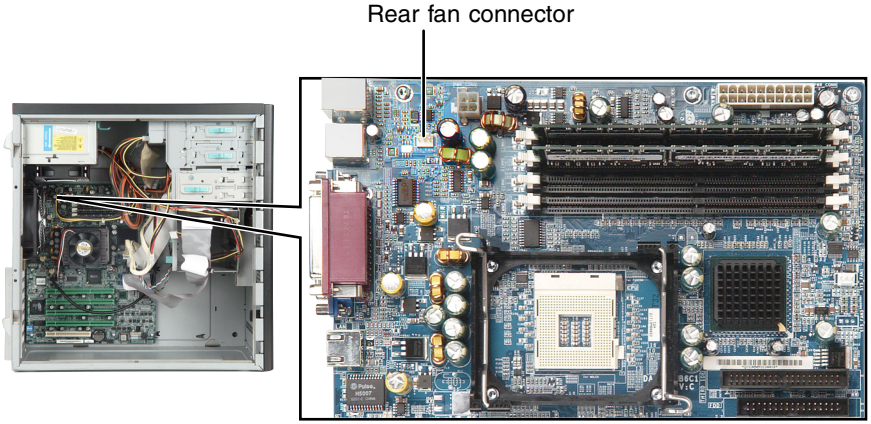
16 Press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.

17 Check BIOS settings to make sure that they detect the server's new hardware, then save your changes (if any) and close the BIOS Setup utility.

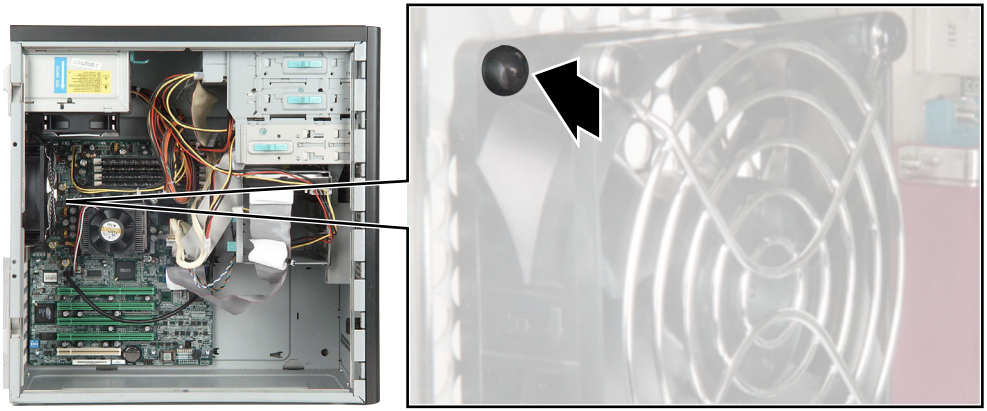
Replacing the case fan

To replace the case fan:

1. Follow the instructions in "Preventing static electricity discharge" on page 25.
2. Follow the instructions in "Opening the server case" on page 26.
3. Unplug the case fan from the system board.

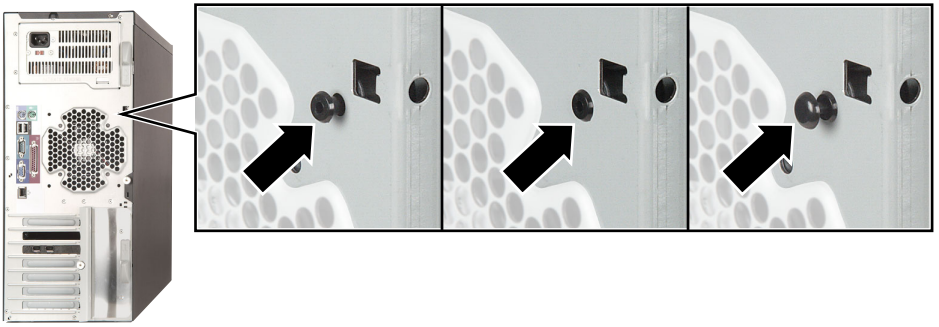


4. Use a narrow tool, such as a small screwdriver, to push each of the four fan mounting rivets and sleeves out toward the back of the case.



5 Remove each rivet, then remove the old fan.

6 Hold the new fan in place while you push the fan's rivet sleeves into the fan from the outside of the case, then push the rivets into the sleeves.



7 Reconnect the case fan to the system board.

8 Follow the instructions in "Closing the server case" on page 28.

Replacing the CMOS battery

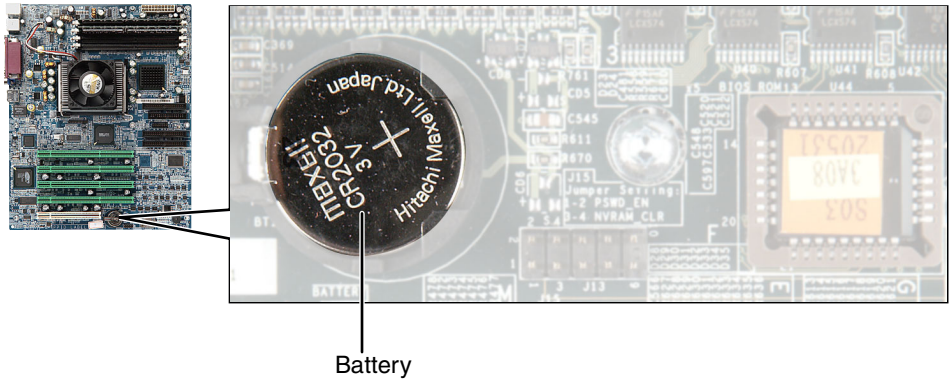
If the server clock does not keep time or the settings in the BIOS Setup utility are not saved when you turn off the server, replace the CMOS battery with an equivalent battery.

Warning

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries following the manufacturer's instructions.

To replace the battery:

1. Print the appendix for BIOS Settings in this guide.
2. Restart your server.
3. Press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.
4. Record the BIOS settings on your printout, then close the utility.
5. Turn off your server, then follow the instructions in "Preventing static electricity discharge" on page 25.
6. Follow the instructions in "Opening the server case" on page 26.
7. Locate the old battery on the system board and note its orientation. You will need to install the new battery the same way.



8 Place the edge of a small flat-head screwdriver under the battery and lift the battery up until it comes out of the socket.

9 Make sure that the positive (+) side of the new battery is facing up, then press the new battery into the socket until it snaps into place.

10 Follow the instructions in "Closing the server case" on page 28.

11 Turn on the server.

12 Press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.

13 Restore any BIOS settings that you wrote down in Step 4.

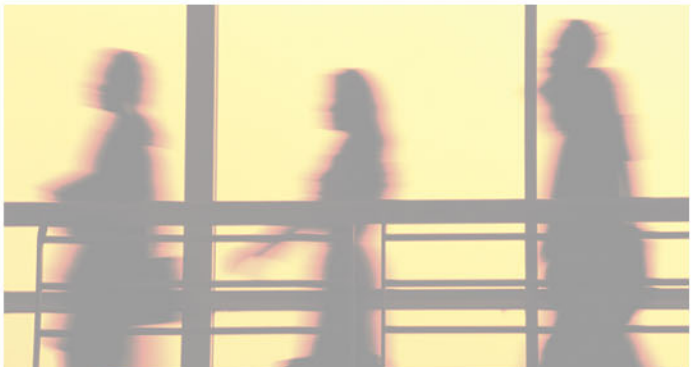
14 Save all your settings and close the BIOS Setup utility.

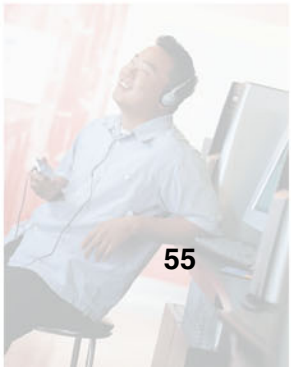
Using the BIOS Setup Utility

5

Read this chapter to learn how to:

- Open the BIOS Setup utility
- Update the BIOS
- Reset the BIOS settings to their factory defaults
- Bypass the BIOS passwords





Opening the BIOS Setup utility

The BIOS Setup utility stores basic settings for your server. These settings include basic hardware configuration, resource settings, and password security. These settings are stored and saved even when the power is off.

Caution

The options in the BIOS Setup utility have been set at the factory for optimal performance. Changes to these settings will affect the performance of your server.

Before changing any settings, write them down in case you need to restore them later. You can record the settings on a printout of the appendix for "BIOS Settings" on page 97.

To open the BIOS Setup utility:

1. Restart your server.
2. Press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.

   When you select menu items, the Item Specific Help box on the right side of the screen displays specific information about the selection. The command bar across the bottom of the screen shows the keys you press to access help, navigate through the menus, and perform other tasks.
3. Select one of these menus:
   - **Main** gives you access to basic information and settings related to your server's hardware and configuration.
   - **Advanced** gives you access to information and settings for system resources, hardware, and server's configuration.
   - **Power** gives you access to settings that control your server's power management features.
   - **Boot** lets you change startup settings.
   - **Security** gives you access to settings related to system access passwords. For more information, see "Server security" on page 20.
   - **Exit** gives you access to options for closing the BIOS Setup utility.

Updating the BIOS

If you need a new version of the BIOS, you can download the BIOS update from Gateway, then install the new version from a diskette.

To update the BIOS:

1. Print the appendix for BIOS Settings in this guide.
2. Download the BIOS update from support.gateway.com.
3. Restart your server.
4. Press **F2** when the Gateway logo screen appears during startup.
5. Record any custom BIOS settings on your printout.
6. Follow the instructions in the self-extracting BIOS update file.
7. Enter any custom BIOS settings you recorded in Step 5, then save your changes and close the BIOS Setup utility.

Recovering the BIOS

If you encounter a problem while you are updating the BIOS, such as a power outage, the BIOS update may not be successful. You can recover the old BIOS so you can try another update.

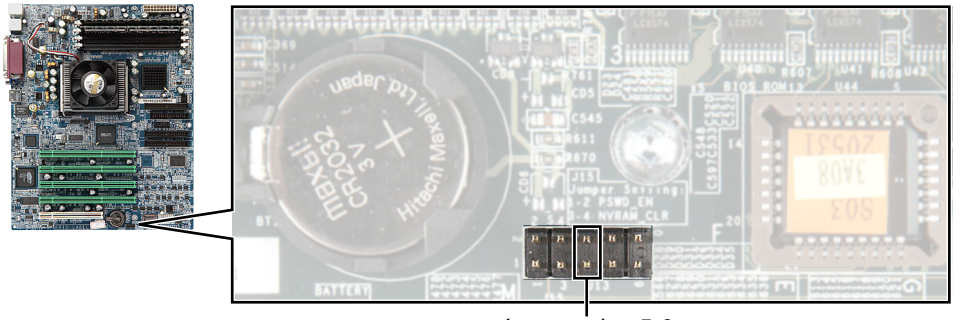
To recover the BIOS:

1. Follow the instructions in "Preventing static electricity discharge" on page 25.
2. Turn off the server, then disconnect the power cord and all other cables connected to the server.
3. Remove the side panel. For more information, see "Opening the server case" on page 26.

Warning

Moving the jumper while the power is on can damage your server. Always turn off the server and unplug the power cord and all other cables before changing the jumper.

4 Place the jumper across pins 5-6 of jumper J13.



5 Close the case, then reconnect the power cord, monitor, and keyboard. For more information, see "Closing the server case" on page 28.

6 Place the startup diskette containing the BIOS files into drive A.

7 Turn on the server. At the start of the BIOS recovery process, the server beeps once. The recovery process may take a few minutes.

8 When prompted, remove the diskette and turn off the server.

9 Disconnect the power cord and remove the side panel again. Remove the jumper from pins 5-6 of jumper J13, and place it over just one of the pins for storage.

10 Close the case, reconnect the power cord and all other cables, then turn on the server.

11 When the Gateway Logo screen appears, press **F2** to open the BIOS Setup utility.

12 In the BIOS Setup utility, go to the appropriate menus and select any BIOS fields you want to change. Make sure that the date and time are correct.

13 Save your changes, then close the BIOS Setup utility.

Resetting the BIOS

The Reset BIOS jumper on the system board lets you return all BIOS settings to the factory defaults.

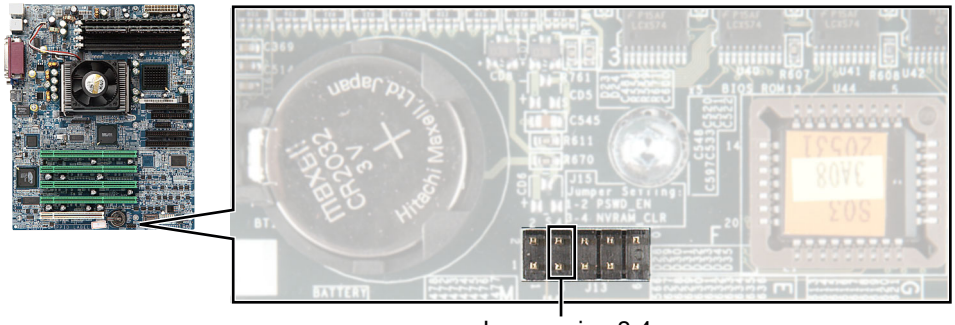
To reset the BIOS:

1. Print the appendix for BIOS Settings in this guide.
2. Restart your server.
3. Press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.
4. Record any custom BIOS settings on your printout.
5. Follow the instructions in "Preventing static electricity discharge" on page 25.
6. Turn off the server, then disconnect the power cord and all other cables connected to the server.
7. Remove the side panel. For more information, see "Opening the server case" on page 26.

Warning

Moving the jumper while the power is on can damage your server. Always turn off the server and unplug the power cord and all other cables before changing the jumper.

8. Place the jumper across pins 3-4 of jumper J13.



9 Close the case, then reconnect the power cord, monitor, and keyboard. For more information, see "Closing the server case" on page 28.

10 Turn on the server. A message appears saying that the CMOS Checksum is bad, which means the BIOS has been cleared successfully.

11 Press **F2** to load the default BIOS values and open the BIOS Setup utility. All BIOS settings return to factory defaults, and all BIOS passwords are erased.

12 Turn off the server, disconnect the power cord, and remove the side panel again.

13 Remove the jumper from pins 3-4 of jumper J13 and place it over just one of the pins for storage.

14 Close the case, reconnect the cords, then turn on the server.

Bypassing the BIOS passwords

The Bypass Password jumper on the system board lets you bypass the BIOS passwords.

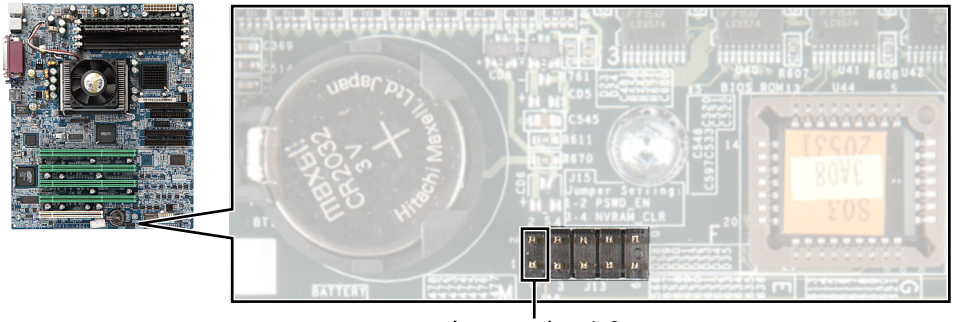
To bypass the BIOS passwords:

1. Follow the instructions in "Preventing static electricity discharge" on page 25.
2. Turn off the server, then disconnect the power cord and all other cables connected to the server.
3. Remove the side panel. For more information, see "Opening the server case" on page 26.

Warning

Moving the jumper while the power is on can damage your server. Always turn off the server and unplug the power cord and all other cables before changing the jumper.

4. Place the jumper across pins 1-2 of jumper J13.



5. Close the case, then reconnect the power cord, monitor, and keyboard. For more information, see "Closing the server case" on page 28.

6 Turn on the server. You can now open the BIOS Setup utility or perform other server tasks.

If you want to change the passwords, press **F2** when the Gateway logo screen appears. When the BIOS Setup utility opens, you can clear or change the passwords, or change other BIOS settings.

7 Turn off the server, disconnect the power cord, and remove the side panel again.

8 Remove the jumper from pins 1-2 of jumper J13 and place it over just one of the pins for storage.

9 Close the case, reconnect the cords, then turn on the server.

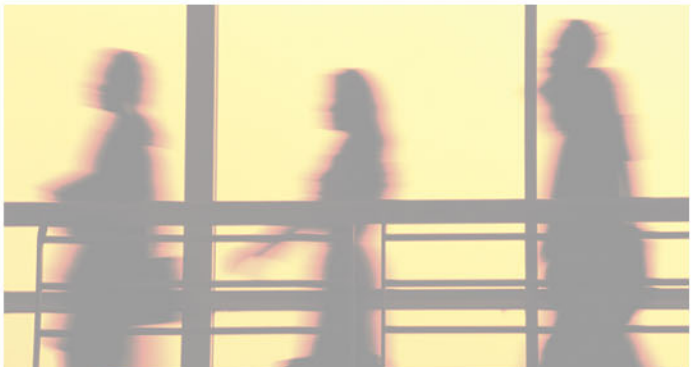
6

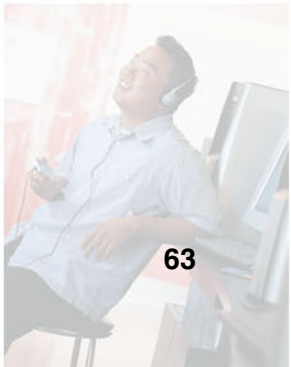
Troubleshooting

Read this chapter to learn how to:

- Get telephone support and training
- Interpret error messages and codes
- Troubleshoot

If the suggestions in this chapter do not correct the problem, see "Telephone support" on page 64 for more information about how to get help.





Telephone support

Before calling Gateway Technical Support

If you have a technical problem with your server, follow these recommendations before contacting Gateway Technical Support:

- Make sure that your server is connected correctly to a grounded AC outlet that is supplying power.
- If a peripheral device, such as a keyboard or mouse, does not appear to work, make sure that all cables are plugged in securely.
- If you have recently installed hardware or software, make sure that you have installed it following the instructions provided with it. If you did not purchase the hardware or software from Gateway, see the manufacturer's documentation and technical support resources.
- If you have "how to" questions about using a program, see:
  - The program's online Help
  - The program's documentation
  - Your operating system's documentation
  - The software or hardware manufacturer's Web site
- See "Troubleshooting" on page 70.
- Have your client ID, serial number (located on the back of your server case), and order number available, along with a detailed description of your issue, including the exact text of any error messages, and the steps you have taken.
- Make sure that your server is nearby at the time of your call. The technician may have you follow appropriate troubleshooting steps.
- Consider using Gateway's Internet technical support. Gateway's Web site has FAQs, tips, and other technical help. You can also use the Web site to e-mail Technical Support. For more information, visit Gateway's Technical Support Web site at support.gateway.com.

Telephone support

Gateway offers a wide range of customer service, technical support, and information services.

Telephone numbers

You can access the following services through your telephone to get answers to your questions:

Resource	Service description	How to reach
Fax on demand support	Order a catalog of documents on common problems, then order documents by document numbers. The documents will be faxed to you.	800-846-4526 (US) 877-709-2951 (Canada)
Tutorial support	Learn networking tips from Gateway's tutorial support on a per-issue fee basis.	877-485-1464 (US) 800-846-3609 (Canada and Puerto Rico) 605-232-2191 (all other countries) 800-846-1778 (TDD)
Gateway Technical Support	Talk to a Gateway Technical Support representative about a non-tutorial technical support question. (See "Before calling Gateway Technical Support" on page 64 before calling.) TDD Technical Support (for hearing impaired) is available: Weekdays 6:00 a.m. - 8:00 p.m. Central Time Weekends 6:00 a.m. - 5:00 p.m. Central Time	877-485-1464 (US) 800-846-3609 (Canada and Puerto Rico) 605-232-2191 (all other countries) 800-846-1778 (TDD)
Sales, accounting, and warranty	Get information about available systems, pricing, orders, billing statements, warranty service, or other non-technical issues.	800-846-2000 (US) 888-888-2037 (Canada)

Tutoring and training

Gateway's Technical Support professionals cannot provide hardware and software training. Instead, Gateway recommends the following training resources.

Resource	Service description	For more information
In-store training at Gateway stores	Our friendly and knowledgeable software trainers can teach you how to use the Internet and the most popular software programs, including Microsoft Word, Excel, and PowerPoint.	www.gateway.com/country
Gateway Learning Libraries	A variety of courses and tutorials are available on CD. Select from several easy-to-use learning libraries.	www.gateway.com/training
Online training from Learn@Gateway	More than 450 online courses are available from Learn@Gateway. All you have to do is go online and log in. You select the subject matter and the learning format (self-paced tutorials or virtual classrooms), all from the comfort of your computer.	www.learnatgateway.com/

Safety guidelines

While troubleshooting your server, follow these safety guidelines:

- Never remove the side panel while your server is turned on and while the modem cable and the power cord is connected.
- Do not attempt to open the monitor. To do so is extremely dangerous. Even if the power is disconnected, energy stored in the monitor components can be dangerous. Also, opening the monitor voids its warranty.
- Make sure that you are grounded correctly before opening the server case. For more information about preventing damage from static electricity, see "Preventing static electricity discharge" on page 25.
- After you complete any maintenance task where you have to open the server case, make sure that you close the case, tighten any screws, then reconnect all cables before you restart your server.

Warning

To avoid bodily injury, do not attempt to troubleshoot your server problem if:

- The power cord or plug is damaged
- Liquid has been spilled into your server
- Your server was dropped
- The case was damaged

Instead, unplug your server and contact a qualified computer technician. If your server was damaged during shipment from Gateway, contact Gateway Technical Support.

Error messages

These messages often indicate procedural errors such as typing an incorrect keystroke or trying to save a file to a write-protected diskette. Some messages, however, may indicate a problem that requires further troubleshooting.

Diskette drive 0 seek to track 0 failed

- Restart your server, then press and hold **F2** to open the BIOS Setup utility. Make sure that the drive settings are correct.

Error loading operating system

- The master boot record may be corrupt. For troubleshooting information, see "The master boot record is corrupted" on page 76.

Hard disk controller failure

- Make sure that the hard drive cable is connected securely.
- Restart your server, then press and hold **F2** to open the BIOS Setup utility. Make sure that the correct drive type is selected.

Hard disk controller failure - press F1 to try reboot

- The drive controller may be defective. Press **F1** to try to restart the server. For more information about running diagnostics on your hard drive, see your operating system's documentation.
- See "You need to troubleshoot an IDE hard drive" on page 76.

Insert bootable media device

- Make sure that the correct hard drive is set as the first bootable drive in the Boot menu of the BIOS Setup utility. Restart your server, then press and hold **F2** to open the BIOS Setup utility.
- See "Your server does not recognize an IDE drive" on page 75 or "Your server does not recognize a SCSI drive" on page 75 for a possible solution.

Invalid configuration information

- Restart your server, then press and hold **F2** to open the BIOS Setup utility. Make sure that the settings are correct.
- Reset the BIOS. For more information, see "Resetting the BIOS" on page 59.

Invalid partition table

- The master boot record may be corrupt. For troubleshooting information, see "The master boot record is corrupted" on page 76.

Invalid password

- Enter your password again. Some passwords are case sensitive.
- If you do not know the password, you may need to reinstall the software you are trying to access.
- System startup passwords are stored in BIOS. If this password has been set and you do not know it, you may be able to reset the password through system board jumper settings. For more information, see "Bypassing the BIOS passwords" on page 61.

Memory errors were detected while the system started up

- See "Memory errors were detected during server start up" on page 77 for a possible solution.

Memory size error

- Restart your server, then press and hold **F2** to open the BIOS Setup utility. Save the memory configuration.

Missing operating system

- The master boot record may be corrupt. For troubleshooting information, see "The master boot record is corrupted" on page 76.

System Event Log Full

- Clear the event log. To clear or view the event log, restart your server, then press and hold **F2** to open the BIOS Setup utility. Select the **Advanced** menu, then select the **Event Log Control** menu.

Troubleshooting

First steps

Try these steps first before going to the following sections:

- Make sure that the power cord is connected to your server and an AC outlet and that the AC outlet is supplying power.
- If you use a UPS, make sure that it is turned on and is rated to handle the power required by your server.
- If you added or removed server components before the problem started, review the installation procedures you performed and make sure that you followed each instruction. You may need to remove the device, uninstall the device's software, then reinstall the device.
- If an error message appears on the screen, write down the exact message before calling Gateway Technical Support.
- Restart your server, then press and hold **F2** to open the BIOS Setup utility. Check your configuration settings.
- If an error occurs in a program, see its documentation or online help.

Warning

To avoid bodily injury, do not attempt to troubleshoot your server problem if:

- The power cord or plug is damaged
- Liquid has been spilled into your server
- Your server was dropped
- The case was damaged

Instead, unplug your server and contact a qualified computer technician.

Battery replacement

If you have problems after installing a new CMOS battery, try each of the following items, closing the case and restarting the server after each try:

- Restart your server, then press and hold **F2** to open the BIOS Setup utility. Correct any discrepancies.

- Follow the instructions in "Opening the server case" on page 26, then 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.

Warning

To avoid bodily injury, do not attempt to troubleshoot your server problem if:

- The power cord or plug is damaged
- Liquid has been spilled into your server
- Your server was dropped
- The case was damaged

Instead, unplug your server and contact a qualified computer technician.

- If you have the correct test equipment, make sure that the new battery has power. Although unlikely, your new battery may be defective.

Beep codes

Whenever a recoverable error occurs during the power-on self-test (POST), the BIOS displays an error message that describes the problem. The BIOS also sounds a beep code (one long tone followed by two short tones) during POST if the video configuration fails (a faulty video controller) or if an expansion card is not functioning correctly.

A PCI expansion card (for example, a RAID controller) can also issue audible errors by itself, usually consisting of one long tone followed by a series of short tones. For more information on the beep codes issued, check the documentation for that device.

Several POST routines issue a POST terminal error and shut down the system when they fail. Before shutting down the system, the terminal error handler sounds a beep code (one long tone and a series of short tones) that identifies the test point error. If POST completes normally, the BIOS issues one short beep before passing control to the operating system.

Beeps	Description	Troubleshooting steps
1	The memory refresh circuitry on the system board is faulty.	Reseat the memory or replace with modules you know are good.
2	Parity error in the first 64 KB of memory.	Same as for 1 beep.

Beeps	Description	Troubleshooting steps
3	Memory failure in first 64 KB.	Same as for 1 beep.
4	Memory failure in first 64 KB of memory, or Timer 1 on the system board not functioning.	Remove all expansion cards. ▪ If the beep code occurs even when all expansion cards have been removed, the system board is at fault. ▪ If the beep code does not occur when the expansion cards have been removed, one of the cards is causing the problem. Install the cards one at a time until the problem happens again. When the beep code returns, the most recent card you installed is at fault.
5	The processor on the system board generated an error.	Same as for 4 beeps.
6	The keyboard controller (8042) may be defective. The BIOS cannot switch to Protected mode.	Same as for 4 beeps.
7	The processor generated an exception interrupt.	Same as for 4 beeps.
8	The server video adapter is either missing or its memory is faulty. This is not a fatal error.	Check or replace the video adapter.
9	The ROM checksum value does not match the value encoded in the BIOS.	Same as for 4 beeps.
10	The shutdown register for CMOS RAM failed.	Same as for 4 beeps.
11	The external cache is faulty.	Same as for 4 beeps.

BIOS

The settings in the BIOS Setup utility are not retained

- Replace the CMOS battery. For more information, see "Replacing the CMOS battery" on page 52.

CD or DVD drive

Your server does not recognize a CD, DVD, or the CD or DVD drive

- Restart your server, then press and hold **F2** to open the BIOS Setup utility. Make sure that the IDE controllers are enabled. For more information, see "Using the BIOS Setup Utility" on page 55.
- Reinstall the device driver. For more information, see *Using Your Server Companion CD*.
- Follow the instructions in the drive's documentation to make sure that the drive is configured correctly.
- Open your server case and make sure that the cables are connected correctly to the CD or DVD drive and the IDE connector on the system board or controller card.

Your CD or DVD drive tray does not open

- Press a straightened paper clip wire into the CD or DVD drive's manual eject hole. The drive tray opens.
- If this problem happens frequently while the server is turned on, the drive may be defective.

Diskette drive

The diskette drive is not recognized

- Restart your server.
- Open your server case and make sure that the cables are connected correctly to the diskette drive and the system board. The red-striped edge of the data ribbon cable indicates Pin 1 and corresponds with Pin 1 on the diskette drive (typically on the side farthest from the power supply connection). If necessary, reverse one end of the cable so the red-striped edge of the data ribbon cable faces Pin 1 on the diskette drive. Make sure that the pins are not bent or misaligned. For more information, see "Installing a CD, DVD, or diskette drive" on page 30.

The diskette drive LED is lit continuously

- Remove the diskette from the drive. If the light stays on, try restarting your server.

- Open your server and make sure that the cables are connected correctly to the diskette drive and the system board. The red-striped edge of the data ribbon cable indicates Pin 1 and corresponds with Pin 1 on the diskette drive (typically on the side farthest from the power supply connection). If necessary, reverse one end of the cable so the red-striped edge of the data ribbon cable faces Pin 1 on the diskette drive. Make sure that the pins are not bent or misaligned. For more information, see "Installing a CD, DVD, or diskette drive" on page 30.

Expansion cards

Your server does not recognize an expansion card

- Restart your server.
- Make sure that you have installed the necessary software or driver. For more information, see the card's documentation.
- Reseat the card. For more information, see "Installing PCI expansion cards" on page 40.
- Install the card in a different slot.

Hard drive

The hard drive cannot be accessed, or you receive a "General failure reading drive C" error message

- If a diskette is in the diskette drive, eject it and press the reset button to restart your server.
- Press the reset button to restart your server.
- Use GWScan to test the hard drive. For more information, see "You need to troubleshoot an IDE hard drive" on page 76.
- Open your server and make sure that the cables are connected correctly to the hard drive and the system board. For more information, see "Installing a hard drive" on page 35.
- If your server has been subjected to static electricity or physical shock, you may need to reinstall the operating system.

You receive a “Non-system disk” or “disk error” error message

- Eject the diskette from the diskette drive, then press ENTER.
- Make sure that your hard drive has an active partition. For more information, see “The master boot record is corrupted” on page 76.

Your server does not recognize an IDE drive

- Make sure that the IDE connectors are enabled in the BIOS Setup utility. For more information, see “Using the BIOS Setup Utility” on page 55.
- Reinstall the device driver. For more information, see *Using Your Server Companion CD*.
- Use GWScan to test the hard drive. For more information, see “You need to troubleshoot an IDE hard drive” on page 76.
- Open your server and make sure that the IDE cable is connected to both the system board IDE connector and the hard drive connector. For more information, see “Installing a hard drive” on page 35.

Your server does not recognize a SCSI drive

- Make sure that the SCSI controller is enabled in the BIOS Setup utility.
- Reinstall the device driver. For more information, see *Using Your Server Companion CD*.
- Change the drive’s SCSI address to one that is not being used by your server. For more information about SCSI device configurations, see your drive’s documentation.
- Run SCSI Verify in the SCSI BIOS. For more information about the SCSI BIOS, see the SCSI controller’s documentation.
- Open your server and reseat the drive controller card. Also make sure that the controller card and power cables are connected to the drive. For more information, see “Installing PCI expansion cards” on page 40 or your controller card’s documentation.
- Make sure that the power cable and SCSI cable are attached securely to the drive.
- Make sure that the last device on the SCSI cable is correctly terminated. For more information about SCSI device configurations, see the device’s documentation.
- Use a different SCSI cable.

The master boot record is corrupted

- In a Windows network operating system, repair the master boot record using FDISK.

To repair the master boot record:

- At a DOS command prompt, type **fdisk/mbr**, then press **ENTER**.

You need to troubleshoot an IDE hard drive

- Use the GWScan utility to test a hard drive's ability to read data and to measure seek times and transfer rates. GWScan can also repair some errors that may develop on IDE hard drives.

To download the GWScan utility:

- Search for the utility at support.gateway.com. For information about how to use GWScan, go to: ftp://ftp.gateway.com/pub/hardware_support/drivers/win3.x_and_dos/mass_storage/hard_drives/7510801.txt

Internet

See also *Modem*.

You cannot connect to the Internet

- Make sure that your account with your Internet Service Provider (ISP) is set up correctly. Contact your ISP technical support for help.
- Make sure that you do not have a problem with your modem. For more information, see "Modem (telephone dial-up)" on page 77.

Keyboard

Liquid has been spilled into the keyboard

- If you spilled liquid in the keyboard, turn off your server and unplug the keyboard. Clean the keyboard and turn it upside down to drain it. Let the keyboard dry before using it again. If the keyboard does not work after it dries, you may need to replace it. This type of damage is not covered by your server's warranty.

Memory

Memory errors were detected during server start up

- Open your server and make sure that the memory modules are installed correctly. For more information, see "Installing memory" on page 38.
- A memory module may be defective. If possible, try another memory module and see if the error repeats.

Modem (telephone dial-up)

See also *Internet*.

Your modem does not dial or does not connect

- Make sure that your server is connected to the telephone line and the telephone line has a dial tone.
- Make sure that the modem cable is less than 6 feet (1.8 meters) long.
- Remove any line splitters or surge protectors from your telephone line, then plug a working telephone into the telephone jack to check for a dial tone.
- If you have additional telephone services such as call waiting, call messaging, or voice mail, make sure that all messages are cleared and call waiting is disabled before using the modem. Contact your telephone service to get the correct code to temporarily disable the service. Also make sure that the modem dialing properties are set correctly.

To check the dialing properties in Windows:

1. In Windows 2000 Server, click **Start**, **Settings**, then click **Control Panel**. The *Control Panel* window opens.

   - OR -

   In Windows Server 2003, click **Start**, then click **Control Panel**. The *Control Panel* window opens.

2. Double-click the **Modems** icon, then click **Dialing Properties**. The *Dialing Properties* dialog box opens.

3. Make sure that all settings are correct.

- Make sure that you are not using a digital, rollover, or PBX line. These lines do not work with your modem.
- Check for line noise (scratchy, crackling, or popping sounds). Line noise is a common problem that can cause the modem to connect at a slower rate, abort downloads, or even disconnect. The faster the modem, the less line noise it can tolerate and still work correctly.

  Listen to the line using your telephone. Dial a single number (such as 1). When the dial tone stops, listen for line noise. Wiggle the modem cable to see if that makes a difference. Make sure that the connectors are free from corrosion and all screws in the wall or telephone jack are secure.

  You can also call your telephone service and have your telephone line checked for noise or low line levels.
- Try connecting with the modem at a lower connection speed. If reducing the connection speed lets you connect, contact your telephone service. The telephone line may be too noisy.
- Try another telephone line (either a different telephone number in your business or a telephone line at a different location). If you can connect on this line, call your telephone service.

Your 56K modem does not connect at 56K

Current FCC regulations restrict actual data transfer rates over public telephone lines to 53K. Other factors, such as line noise, telephone service provider equipment, or ISP limitations, may lower the speed even further.

If your system has a v.90 modem, the speed at which you can upload (send) data is limited to 33.6K. If your system has a v.92 modem, the speed at which you can upload data is limited to 48K. Your ISP may not support 48K uploads.

The modem is not recognized by your server

- If the modem shares the telephone line with another device, make sure that the telephone line is not in use (for example, someone is on the telephone, or another modem is in use).
- Shut down and restart your server.
- Reinstall the modem device driver. For more information, see *Using Your Server Companion CD*.
- Open your server and reseat the modem. For more information, see "Installing PCI expansion cards" on page 40.

Monitor

Your server is running but there is no picture

- Adjust the brightness and contrast controls to the center position.
- Make sure that the monitor is plugged in and turned on. If the monitor is turned on, the power LED should be lit.
- Check the port and cable for bent or damaged pins.
- Connect your monitor to another computer, or connect a monitor that you know works to your server.

The color is not uniform

Make sure that the monitor warms up for at least 30 minutes before making a final judgment about color uniformity.

Make sure that:

- The monitor is not positioned too close to another monitor, electric fan, or fluorescent light.
- You demagnetize the screen using the monitor's degauss feature. For more information on degauss, see the monitor's documentation.

A horizontal line or wire is visible across the monitor screen

The monitor may use thin *damper* wires, located approximately 1/3 of the way from the upper and lower screen edges, to stabilize the internal aperture grille. These wires are most obvious when the monitor displays a white background. The aperture grille allows more light to pass through the screen for brighter colors and greater luminescence. The damper wire is a critical part of the overall monitor design and does not negatively affect the monitor's function.

Power

You press the power button, but the server does not turn on

- If the power button LED is green, the server is turned on, but you may not be seeing an image on the monitor. For monitor troubleshooting, see "Monitor" on page 79.
- If your server is plugged into a UPS, make sure that the UPS is connected securely to an electrical outlet, turned on, and working correctly. One way to check this is to plug the server directly into a wall outlet, bypassing the UPS.
- To make sure that the electrical outlet is working, plug a working device, such as a lamp, into the outlet, then turn it on to test the outlet.
- Open your server and make sure that the power supply cable and power button cable are connected correctly to the system board.

When you turn on the server, it makes several short beeps

- The short beeps indicate the server has encountered some type of error. See "Beep codes" on page 71.

Processor

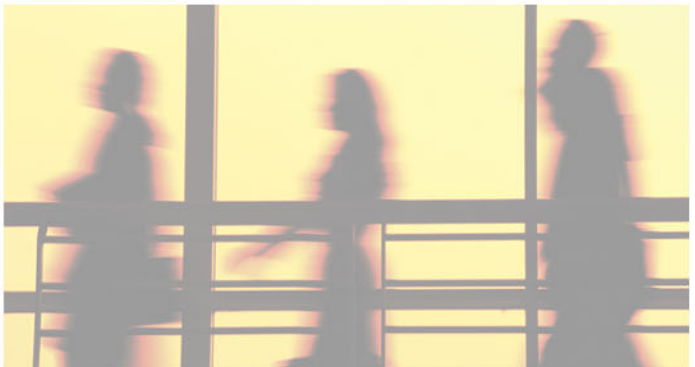
Your server does not recognize a new processor

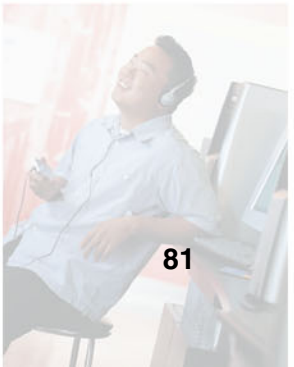
- Make sure that the processor is fully seated in its socket. The processor should be recognized automatically if it is installed correctly.

A

Server Specifications

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





System specifications

Case size	7.75 × 18 × 17.5 inches (19.69 × 45.72 × 44.45 cm)
Weight	Varies by configuration
Fans	Chassis fan (speed adjustable) CPU heat sink fan (speed adjustable)
Ports	▪ PS/2 keyboard ▪ PS/2 mouse ▪ USB (4) ▪ Serial ▪ VGA ▪ Parallel ▪ RJ-45 LAN
Drives (standard)	▪ 3.5-inch diskette ▪ CD-ROM, CD-R, or DVD-ROM
Power supply	250 W ATX power connector
Operating systems	Supports Windows 2000 Server, Windows Server 2003 Compatible with: ▪ Windows NT ▪ Novell NetWare 6
Certifications	▪ FCC Class B ▪ UL ▪ cUL

System board specifications

Processor	Supports a single FC-PGA2 Intel Pentium 4 or Intel Celeron CPU 478-pin socket 533 MHz system bus On-board VRM 9.0
Chipset	ServerWorks GC_SL 533 MHz and 400 MHz FSB 200 MHz and 266 MHz registered ECC DDR SDRAM Thin-IMB chipset-to-chipset connection 2 ATA-100 IDE channels (primary and secondary) 1 ATA-66 IDE channel (tertiary) 4 USB 1.1 ports (2 front, 2 rear) 64-bit/33 MHz PCI bus
Memory	Four DIMM slots Supports up to 4 GB registered PC2100 DDR SDRAM. ECC support
PCI device/slot	3.3V/64-bit/33 MHz PCI slots (4) 3.3V/32-bit/33 MHz PCI slot (1) On-board VGA and NIC (32-bit)
VGA	On-board ATI Rage XL ▪ 32-bit/33 MHz PCI interface ▪ 8 MB SDRAM
LAN	On-board Intel 82540EM ▪ 32-bit/33 MHz PCI interface ▪ 10/1001000 Ethernet
Super I/O	National Semiconductor PC87414 ▪ LPC interface ▪ Diskette ▪ PS/2 keyboard and mouse ▪ Parallel port (ECP/EPP) ▪ Serial port
ROM	Flash BIOS ▪ AMD AM29F004BT-70 ▪ 4 MB-64KB × 8

ACPI	ACPI compliant Supports S0, S1, S4, and S5
Hardware Monitor	On-board LM81 × 1+MAX1617A on SMBus Main logic board sensors: ▪ +2.5V, +3.3V, +5V, +12V, VTT, CPU core ▪ System and CPU temperature ▪ CPU fan speed measurement and control

Hardware monitor specifications

Voltage

Voltage Source	Maximum Value	Minimum Value
VTT	1.312V	1.150V
Vcc 12V	13.187V	10.750V
Vcc 5V	5.486V	4.498V
Vcc 3.3V	3.457V	3.130V
Vcc 2.5V	2.874V	2.444V
CPU Vcore (1.5V)	1.565V	1.367V

Fan

Fan	Maximum Value	Minimum Value
CPU fan	N/A	1200 RPM
System fan 2	N/A	1200 RPM

Temperature sensor specifications

Temperature Type	Maximum Value		Minimum Value
CPU temperature	*Varies depending on CPU specifications*		32°F (0°C)
	Intel P4 1.8 GHz	171°F (77°C)	
	Intel P4 1.9 GHz	167°F (75°C)	
	Intel P4 2.0 GHz	154°F (68°C)	
	Intel P4 2.2 GHz	156°F (69°C)	
	Intel P4 2.4 GHz	158°F (70°C)	
System temperature	158°F (70°C)		

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: 18°F (10°C) per hour Non-operating: -55° to 150°F (-48.3° to 65.5°C) Operating: 41° to 95°F (5° to 35°C); derated 0.9°F (0.5°C) for every 1,000 feet (305 meters)
Altitude	10,000 feet (3,048 meters) maximum
Humidity	Operating wet bulb: Not to exceed 91.4°F (33 °C) (with diskette drive or hard drive) Non-operating: 95% relative (non-condensing) at 86° F (30° C)
Shock	Operating: 2.0 g, 11 msec, ½ sine Packaged: Operational after 30-inch free fall (cosmetic damage might occur)
AC input power	100-120 V~, 6.5 A, 50/60 Hz 220-240 V~, 3.5 A, 50/60 Hz

Video specifications

- Full AGP side-band signalling
- 3D graphics, multimedia and windows accelerator
- DDC 2B support
- 3D texture mapping engine
- Digital video engine
- DirectDraw support
- Direct 3D support
- Integrated 230 MHz DAC
- 8 MB memory

Resolution support

	Refresh Rate (Hz)									
Resolution	**43**	**60**	**66**	**70**	**72**	**75**	**76**	**85**	**90**	**100**
640 × 480		×			×	×			×	×
800 × 600		×		×		×			×	×
1024 × 768		×			×	×			×	×
1280 × 1024	×	×		×	×					
1600 × 1200		×	×				×	×		

Electronic specifications

System I/O addresses

The following table shows the location in I/O space of all directly I/O-accessible registers.

Address	Resource
0000h - 000Fh	DMA Controller 1
0010h - 001Fh	DMA Controller 1
0020h - 0021h	Interrupt Controller 1
0022h - 0023h	
0024h - 0025h	Interrupt Controller 1
0026h - 0027h	
0028h - 0029h	Interrupt Controller 1
002Ah - 002Bh	
002Ch - 002Dh	Interrupt Controller 1
002Eh - 002Fh	Super I/O Index and Data Ports
0030h - 0031h	Interrupt Controller 1
0032h - 0033h	
0034h - 0035h	Interrupt Controller 1
0036h - 0037h	
0038h - 0039h	Interrupt Controller 1
003Ah - 003Bh	
003Ch - 003Dh	Interrupt Controller 1
003Eh - 003Fh	
0040h - 0043h	Programmable Timers
0044h - 004Fh	

Address	Resource
0050h - 0053h	Programmable Timers
0054h - 005Fh	
0060h, 0064h	Keyboard Controller
0061h	NMI Status and Control Register
0063h	NMI Status and Control Register
0065h	NMI Status and Control Register
0067h	NMI Status and Control Register
0070h	NMI Mask (bit 7) and RTC Address (bits 6::0)
0072h	NMI Mask (bit 7) and RTC Address (bits 6::0)
0074h	NMI Mask (bit 7) and RTC Address (bits 6::0)
0076h	NMI Mask (bit 7) and RTC Address (bits 6::0)
0071h	RTC Data
0073h	RTC Data
0075h	RTC Data
0077h	RTC Data
0080h - 008Fh	DMA Low Page Register
0090h - 0091h	DMA Low Page Register
0092h	System Control Port A (PC-AT control Port)
0093h - 009Fh	DMA Low Page Register
0094h	Video Display Controller
00A0h - 00A1h	Interrupt Controller 2
00A4h - 00A15	Interrupt Controller 2
00A8h - 00A19	Interrupt Controller 2
00Ach - 00Adh	Interrupt Controller 2
00B0h - 00B1h	Interrupt Controller 2
00B2h	Advanced Power Management Control

Address	Resource
00B3h	Advanced Power Management Status
00B4h - 00B5h	Interrupt Controller 2
00B8h - 00B9h	Interrupt Controller 2
00BCh - 00BDh	Interrupt Controller 2
00C0h - 00DFh	DMA Controller 2
00F0h	Clear NPX error
00F8h - 00FFh	x87 Numeric Coprocessor
0102h	Video Display Controller
0170h - 0177h	Secondary Fixed Disk Controller (IDE)
01F0h - 01F7h	Primary Fixed Disk Controller (IDE)
0200h - 0207h	Game I/O Port
0220h - 022Fh	Serial Port A
0238h - 023Fh	Serial Port B
0278h - 027Fh	Parallel Port 3
02E8h - 02Efh	Serial Port B
02F8h - 02FFh	Serial Port B
0338h - 033Fh	Serial Port B
0370h - 0375h	Secondary Diskette
0376h	Secondary IDE
0377h	Secondary IDE/Diskette
0378h - 037Fh	Parallel Port 2
03B4h - 03Bah	Monochrome Display Port
03BCh - 03BFh	Parallel Port 1 (Primary)
03C0h - 03CFh	Video Display Controller
03D4h - 03DAh	Color Graphics Controller
03E8h - 03EFh	Serial Port A

Address	Resource
03F0h - 03F5h	Diskette Controller
03F6h - 03F7h	Primary IDE - Sec. Diskette
03F8h - 03FFh	Serial Port A (Primary)
0400h - 043Fh	DMA Controller 1, Extended Mode Registers
04D0h - 04D1h	Interrupt Controllers 1 and 2 Control Register
0678h - 067Ah	Parallel Port (ECP)
0778h - 077Ah	Parallel Port (ECP)
07BCh - 07BEh	Parallel Port (ECP)
0CA0 - CA3h	BMC Registers
0CF8h	PCI CONFIG_ADDRESS Register
0CF9h	NBX Turbo and Reset control
0CFCh	PCI CONFIG_DATA Register
46E8h	Video Display Controller

Memory map

Address Range (hex)	Amount	Function
0 to 07FFFFh	640 KB	DOS region, base system memory
0A0000h to 0BFFFFh	128 KB	Video or SMM memory
0C0000h and 0DFFFFh	128 KB	Expansion card BIOS and buffer area
0E0000h to 0FFFFFh	128 KB	System BIOS
0E0000h to 0EFFFFh	2 MB	Extended system BIOS
FC000000h to FFFFFFFFh	64 MB	PCI memory space

Interrupts

The following table reflects a typical configuration, but you can change these interrupts. Use this information to determine how to program each interrupt. The actual interrupt map is defined using configuration registers in the I/O controller. I/O Redirection Registers in the I/O APIC are provided for each interrupt signal. The signals define hardware interrupt signal characteristics for APIC messages sent to local APIC(s).

Important

If you disable an IDE controller to free the interrupt for that controller, you must physically unplug the IDE cable from the system board. Simply disabling the drive by configuring the SSU option does not make the interrupt available.

Interrupt (IRQ)	Description
0	8254 timer
1	Keyboard controller
2	Cascade
3	Serial port
4	Serial port
5	[Unassigned]
6	Diskette controller
7	Parallel
8	Real-time clock
9	ACPI SCI
10	USB
11	Third IDE
12	Mouse controller
13	System interrupt/FERR
14	Primary IDE
15	Secondary IDE

PCI interrupt routing

PCI interrupt routing in PIC mode

Device	Interrupt A	Interrupt B	Interrupt C	Interrupt D
USB	PCI IRQ 5			
Intel 82540EM	PCI IRQ 1			
Rage XL	PCI IRQ 0			
PCI slot 1	PCI IRQ 2	PCI IRQ 3	PCI IRQ 2	PCI IRQ 3
PCI slot 2	PCI IRQ 4	PCI IRQ 6	PCI IRQ 4	PCI IRQ 6
PCI slot 3	PCI IRQ 7	PCI IRQ 8	PCI IRQ 7	PCI IRQ 8
PCI slot 4	PCI IRQ 9	PCI IRQ 10	PCI IRQ 9	PCI IRQ 10
PCI slot 5	PCI IRQ 11	PCI IRQ 12	PCI IRQ 11	PCI IRQ 12

PCI interrupt routing in APIC mode

IO APIC Entry	IO APIC	Interrupt Source
INTIN 0	ISA IO APIC	IRQ 0 / INTR
INTIN 1	ISA IO APIC	IRQ 1
INTIN 2	ISA IO APIC	IRQ 2 / SMI
INTIN 3	ISA IO APIC	IRQ 3
INTIN 4	ISA IO APIC	IRQ 4
INTIN 5	ISA IO APIC	IRQ 5
INTIN 6	ISA IO APIC	IRQ 6
INTIN 7	ISA IO APIC	IRQ 7
INTIN 8	ISA IO APIC	IRQ 8
INTIN 9	ISA IO APIC	IRQ 9
INTIN 10	ISA IO APIC	IRQ 10
INTIN 11	ISA IO APIC	IRQ 11
INTIN 12	ISA IO APIC	IRQ 12

IO APIC Entry	IO APIC	Interrupt Source
INTIN 13	ISA IO APIC	IRQ 13
INTIN 14	ISA IO APIC	IRQ 14
INTIN 15	ISA IO APIC	IRQ 15
INTIN 0	PCI IO APIC	VGA Rage XL INTA#
INTIN 1	PCI IO APIC	NIC Intel Kenai 32
INTIN 2	PCI IO APIC	Slot 1 INTA# & INTC#
INTIN 3	PCI IO APIC	Slot 1 INTB# & INTD#
INTIN 4	PCI IO APIC	Slot 2INTA# & INTC#
INTIN 5	PCI IO APIC	Unused
INTIN 6	PCI IO APIC	Slot 2INTB# & INTD#
INTIN 7	PCI IO APIC	Slot 3 INTA# & INTC#
INTIN 8	PCI IO APIC	Slot 3 INTB# & INTD#
INTIN 9	PCI IO APIC	Slot 4 INTA# & INTC#
INTIN 10	PCI IO APIC	Slot 4 INTB# & INTD#
INTIN 11	PCI IO APIC	Slot 5 INTA# & INTC#
INTIN 12	PCI IO APIC	Slot 5 INTB# & INTD#
INTIN 13	PCI IO APIC	
INTIN 14	PCI IO APIC	
INTIN 15	PCI IO APIC	

Additional specifications

For more information about your server, such as memory size, hard drive size, and processor type, visit Gateway's *eSupport* page at support.gateway.com. The *eSupport* page also has links to additional Gateway documentation and detailed specifications for your own server.

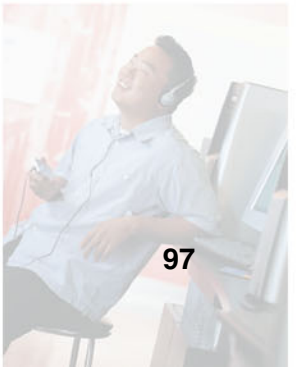
B

BIOS Settings

You can print this appendix, then record your custom BIOS settings on the printout. Only settings which can be changed are listed in this appendix. For a complete list of viewable BIOS settings, run the BIOS Setup utility.

To view all BIOS settings:

1. Restart your server.
2. Press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.
3. Select menus and submenus to display setting information.



BIOS menu	BIOS submenu	Setting	Value
Main		System Time	
		System Date	
Advanced	SuperIO Configuration	Serial Port1 (Address/IRQ)	
		Parallel Port Address	
		Parallel Port IRQ	
		Parallel Port Mode	
		ECP Mode DMA Channel	
	IDE Configuration	On-board PCI IDE Controller	
		Primary IDE Master	
		Primary IDE Slave	
		Secondary IDE Master	
		Secondary IDE Slave	
		Hard Disk Write Protect	
		Tertiary IDE Channel mode	
	IDE Configuration: Primary IDE Master	Type	
		LBA/Large Mode	
		Block Mode	
		PIO Mode	
		DMA Mode	
		S.M.A.R.T.	
		32Bit Data Transfer	
		ARMD Emulation Type	
	IDE Configuration: Secondary IDE Master	Type	
		LBA/Large Mode	

BIOS menu	BIOS submenu	Setting	Value
		Block Mode	
		PIO Mode	
		DMA Mode	
		S.M.A.R.T.	
		32Bit Data Transfer	
		ARMD Emulation Type	
	IDE Configuration: Secondary IDE Slave	Type	
		LBA/Large Mode	
		Block Mode	
		PIO Mode	
		DMA Mode	
		S.M.A.R.T.	
		32Bit Data Transfer	
		ARMD Emulation Type	
	IDE Configuration: Floppy Configuration	Floppy A	
	On-Board Devices Configuration	On-Board LAN	
		On-Board PCI VGA	
	PCIPnP Configuration	Legacy USB Support	
		PCI Slot-1 IRQ Preference	
		PCI Slot-2 IRQ Preference	
		PCI Slot-3 IRQ Preference	
		PCI Slot-4 IRQ Preference	

BIOS menu	BIOS submenu	Setting	Value
		PCI Slot-5 IRQ Preference	
	Boot Settings Configuration	Bootup Num-Lock	
	Event Log Configuration	Event Log Area	
		Event Log Data	
		Event Logging	
		ECC Event Logging	
		Clear All Event Logs	
	System Health Monitoring Hardware	Case Status	
		Current CPU1 Temp.	
		Current System Temp.	
		Current CPU Fan Speed	
		Current System Fan 1 Speed	
		Current System Fan 2 Speed	
	System Health Monitoring Hardware: Voltage Monitoring	VTT	
		Vcc 12V	
		Vcc 5V	
		Vcc 3.3V	
		Vcc 2.5V	
		CPU Vcore	
		LAN 1.5V	
		Vcc 5V Standby	
		Vcc 3.3V Standby	

BIOS menu	BIOS submenu	Setting	Value
		VGA 2.5V	
		Vdd_IMB 1.5V	
	Remote Access Configuration	Remote Access	
Power		AC Power Failure	
		Power Button Mode	
Boot	Boot Device Priority	1st Boot Device	
		2nd Boot Device	
		3rd Boot Device	
	Hard Disk Drives	1st Hard Drive	
		2nd Hard Drive	
	Removable Devices	Removable Dev	
	ATAPI CD or DVD ROM Drives	1st ATAPI CD or DVD ROM	
Security		Supervisor Password	
		User Password	

Safety, Regulatory, and Legal Information

C

Important safety information

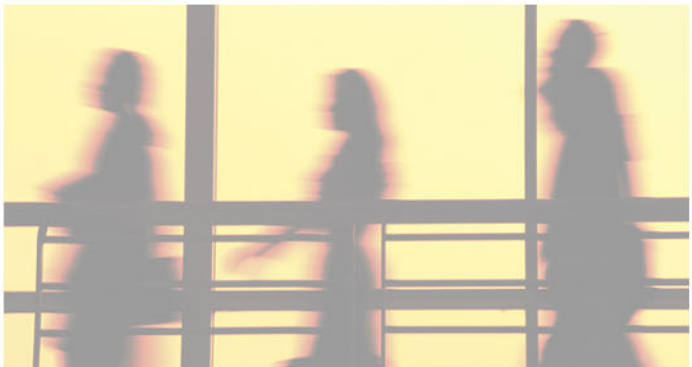
Your Gateway system is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that the safety instructions marked on the product and in the documentation are followed.

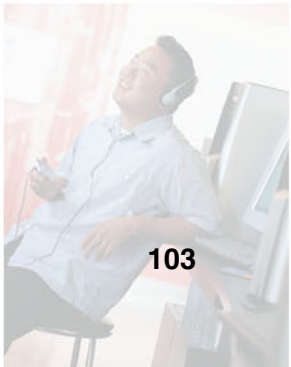
Warning

Always follow these instructions to help guard 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.
- Set up the system on a stable work surface.





- The product should be operated only from the type of power source indicated on the rating label.
- If your computer has a voltage selector switch, make sure 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 computer ventilation openings.
- Some products are equipped with a three-wire power cord to make sure that the product is properly grounded when in use. The plug on this cord will fit only 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.

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 manufacturer's instructions.
- When the computer is turned off, a small amount of electrical current still flows through the computer. To avoid electrical shock, 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 system 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.

Warning

To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.

Regulatory compliance statements

United States of America

Federal Communications Commission (FCC) Unintentional emitter per FCC Part 15

This device has been tested and found to comply with the limits for a Class B 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 to an outlet on a different circuit from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

Compliance Accessories: The accessories associated with this equipment are: shielded video cable when an external monitor is connected. These accessories are required to be used in order to ensure compliance with FCC rules.

FCC 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 920

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 FCC compliance and negate your authority to operate the product.

Telecommunications per 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 RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most areas, the sum of RENs 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 RENs, 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, an identification of the business, 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.

Canada

Industry Canada (IC)
Unintentional emitter per ICES-003

This digital apparatus does not exceed the Class B 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 B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

Telecommunications per Industry Canada CS03 (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 make sure 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 make sure, 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 do not attempt to make electrical ground connections by yourself. 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.

Laser safety statement

All Gateway systems equipped with CD and DVD drives comply with the appropriate safety standards, including IEC 825. The laser devices in these components are classified as “Class 1 Laser Products” 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 or DVD drive.

California Proposition 65 Warning

Warning

This product contains chemicals, including lead, known to the State of California to cause cancer and/or birth defects or reproductive harm.

Notices

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The information in this manual has been carefully checked and is believed to be accurate. However, changes are made periodically. These changes are incorporated in newer publication editions. Gateway may improve and/or change products described in this publication at any time. Due to continuing system improvements, Gateway is not responsible for inaccurate information which may appear in this manual. For the latest product updates, consult the Gateway Web site at www.gateway.com. In no event will Gateway be liable for direct, indirect, special, exemplary, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages.

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