

Gateway Profile™ 5
service guide

Customizing

Troubleshooting

Gateway®

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Replacing Components in Your Gateway Profile 5

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Replacing Components in Your Gateway Profile 5

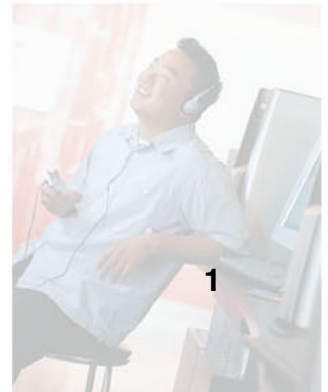
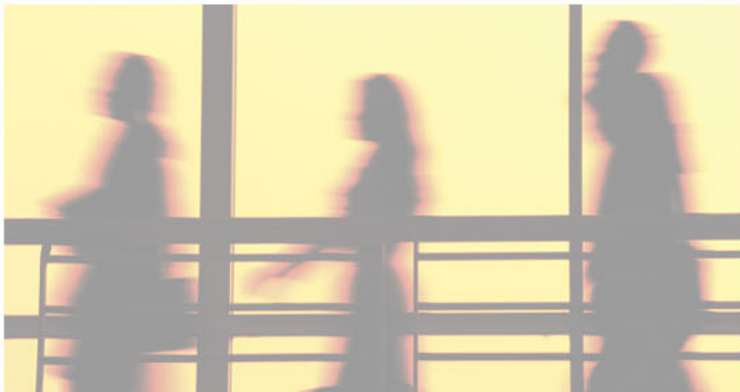
About this guide

Use this service guide to help plan your maintenance tasks for the Gateway Profile 5. All tasks covered in this guide can be performed by a field technician without jeopardizing your computer's warranty.

For information on your computer's general maintenance, technical support, safety notices, and regulatory notices, see your Gateway user's guide.

If you have suggestions regarding the content of this guide, send an e-mail with the subject "Service Guide Comments" to channel.services@gateway.com.

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Preparing your work space

Before performing maintenance on your computer, make sure that your work space and your computer are correctly prepared.

- Wear a grounding (ESD) wrist strap.
- Use a grounded or dissipative work mat.
- Use a stable and strong table.
- Make sure that the table top is large enough to hold each component as you remove it.
- Use bright lighting to make part identification easier.
- Keep your work surface free from clutter and dust that may damage components.
- Use a magnetized screwdriver for removing screws.
- As you remove components and screws, lay them toward the back of your work surface (behind your computer) or far enough to the side that your arms do not accidentally brush components or screws onto the floor.
- To help keep track of screws, try the following:
 - Place each component's screws in their own section of a parts sorter.
 - Place each component's screws next to the component on your work surface.
 - When you place flat-headed screws on your work surface, stand them on their heads to prevent the screws from rolling off the table.

Preventing static electricity discharge

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

Warning



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

Warning



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

Before opening the computer case, follow these guidelines:

- Turn off the computer power.
- Wear a grounding wrist strap (available at most electronics stores) and attach it to a bare metal part of your workbench or other grounded connection.

Warning



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

- Touch a bare metal surface on your workbench or other grounded object.
- Unplug the power cord and network cables.

Before working with computer components, follow these guidelines:

- Avoid static-causing surfaces such as carpeted floors, plastic, and packing foam.
- 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.
- Avoid touching the edge connectors and components on the Mini-PCI cards. Never slide Mini-PCI cards or components over any surface.

Preparing your computer

Warning



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



To prepare your computer:

- 1** Turn off your computer.
- 2** Following all static electricity discharge precautions, disconnect the power cord and all other external cables.
- 3** Press the power button to drain any residual power from your computer.

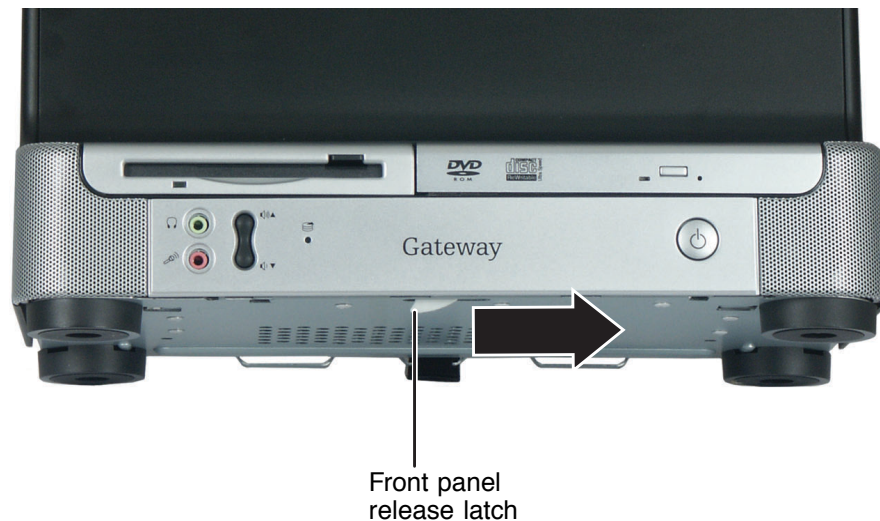


Replacing the front panel and speaker grille

Time to complete: 1.5 minutes

To replace the front panel and speaker grille:

- 1 Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2 Tilt the computer back slightly, then slide the front panel release latch to the right. The panel detaches from the computer.



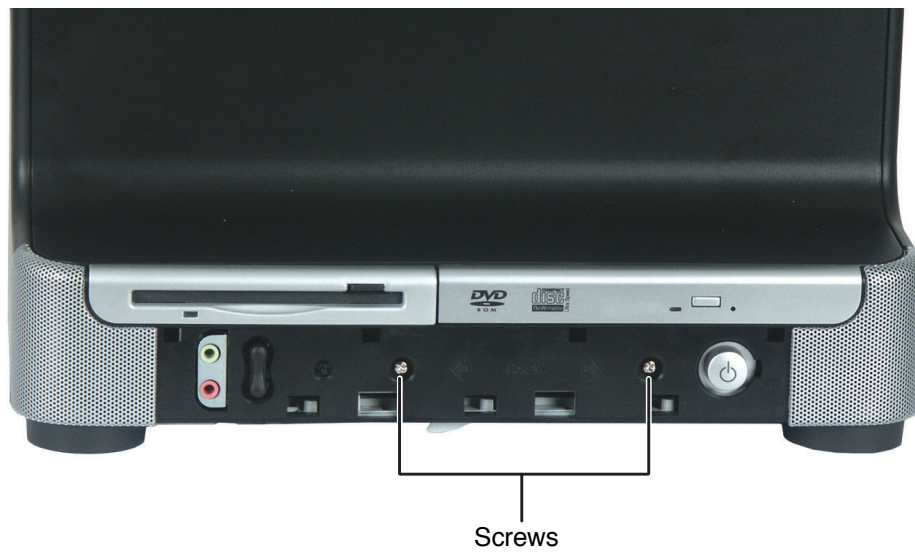
- OR -

Slide a pen, pencil, or screwdriver between the computer and the tabletop, then slide the tool to the right. The panel detaches from the computer.

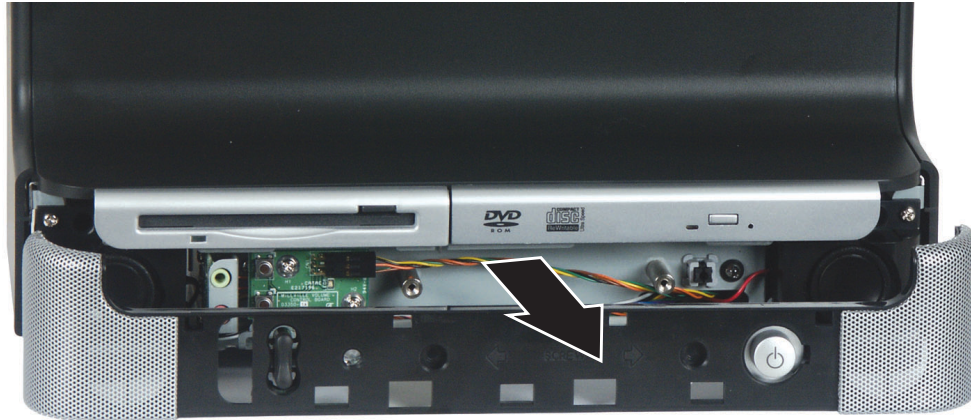
- 3** Remove the front panel from the computer.



- 4** Remove the two screws that secure the speaker grille panel to the computer.



- 5** Pull the speaker grille off the computer.



- 6** Position the new speaker grille panel on the front of the computer, then press it against the computer until it clicks into place.
- 7** Position the new front panel between the speakers, then insert the hooks on the top of the front panel into slots just below the diskette and optical drives.
- 8** Press the front panel against the computer until it clicks into place.



Replacing the back panel

Time to complete: 2 minutes

Warning



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

Tips & Tricks



For more stability, place your computer face down to perform this procedure. Avoid scratching the computer display by placing it on a towel or other non-abrasive surface.



To replace the back panel:

- 1 Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2 Remove the four screws on the back of the computer case.



- 3** With your hands positioned on each side of the case, swing the back panel up and away from the case and set the panel aside.
- 4** Make sure that all of the internal cables are arranged inside the case so they will not be pinched when you close the case.
- 5** Hook the new back panel's tabs into the notches on the top of the open computer's back, then swing the back panel down and press it into place. The cover should easily press back into place. If it does not, make sure that the tabs are aligned with the notches on the computer's back and try again.



- 6** Replace the four screws you removed previously.



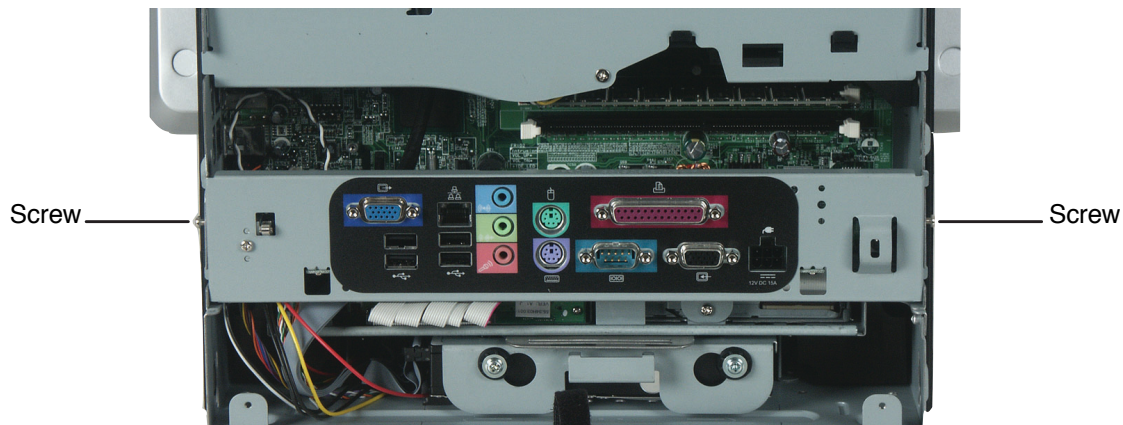
Replacing the I/O panel

Time to complete: 3.5 minutes, 5.5 minutes if panel has VGA out cable



To replace the I/O panel:

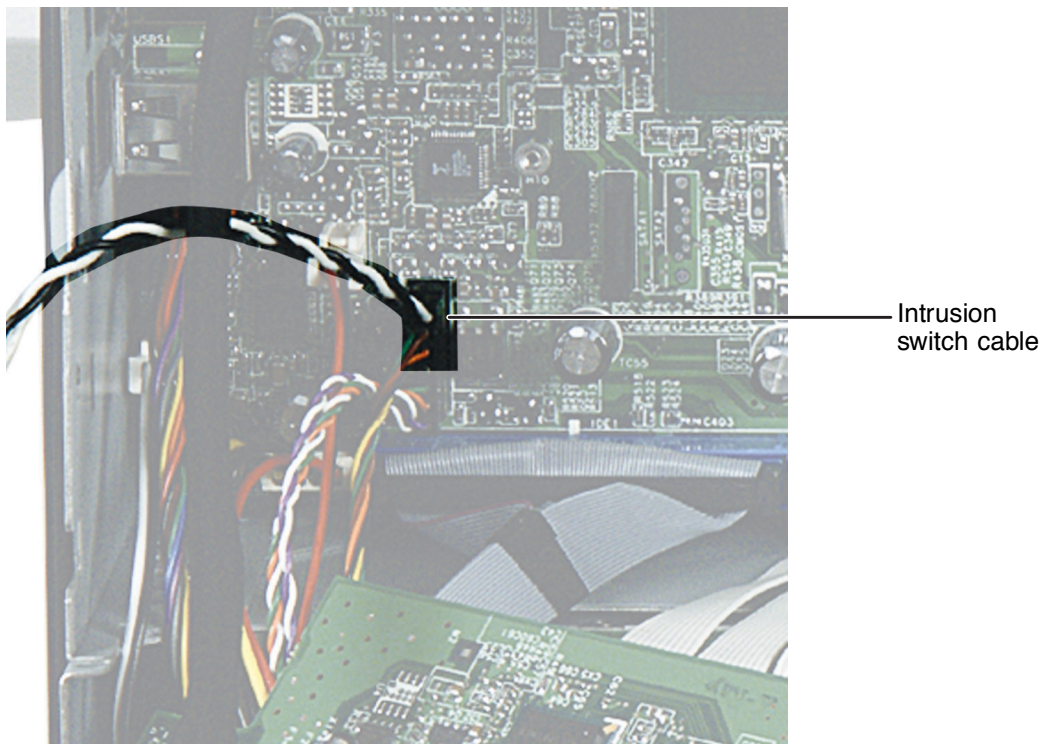
- 1** Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2** Remove back panel by following the instructions in “Replacing the back panel” on page 8.
- 3** Remove the two screws that secure the I/O panel to the computer.



- 4 Firmly pull the I/O panel away from the computer.



- 5 Unplug the intrusion switch cable and other cables that connect the I/O panel to the computer.



If your computer has a VGA out port on the I/O panel, to disconnect the VGA out cable you must remove the blower assembly. For more information, see “Replacing the blower assembly” on page 14.

If your computer has a modem port, unplug the internal modem cable from the system board.

- 6 Plug the cables you have unplugged into the new I/O panel. If your computer has a VGA out port on the I/O panel, plug the VGA out cable into the system board.
- 7 If you removed the blower assembly in Step 5, reinstall it by following the instructions in “Replacing the blower assembly” on page 14.

- 8 Secure the I/O panel to the computer using the screws you removed previously.
- 9 Install the back panel onto the computer by following the instructions in “Replacing the back panel” on page 8.



Replacing the blower assembly

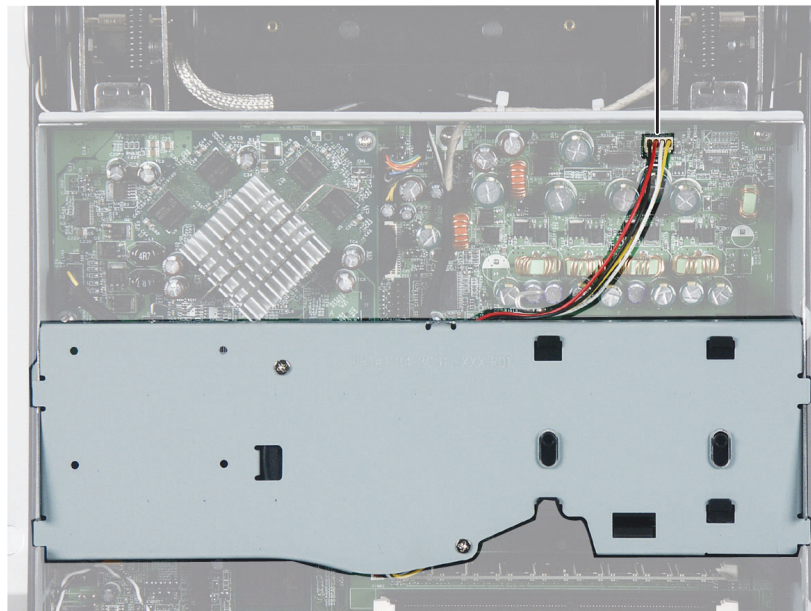
Time to complete: 4 minutes



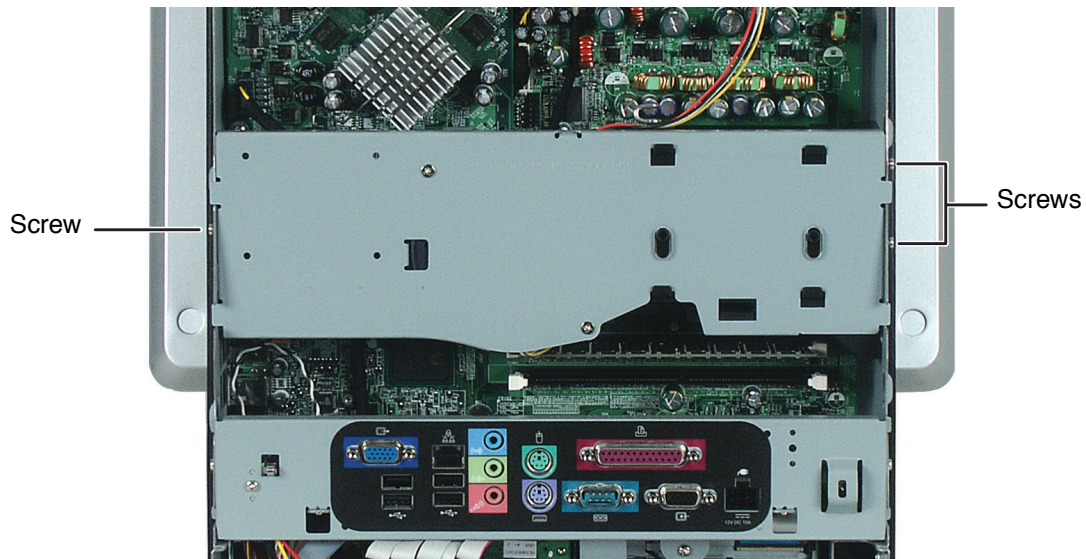
To replace the blower assembly:

- 1** Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2** Remove the back panel of the computer by following the instructions in “Replacing the back panel” on page 8.
- 3** Unplug the blower assembly power cable from the system board.

Blower assembly
power cable



- 4 Remove the three screws that secure the blower assembly to the computer.



- 5 Pull the blower assembly straight out from the computer.
- 6 Slide the new blower assembly into place. Make sure the blower assembly's power cable is not pinched between the blower assembly and the processor's heat sink.
- 7 Plug the blower assembly power cable into the system board.
- 8 Reinstall the back panel of the computer by following the instructions in "Replacing the back panel" on page 8.



Replacing drives

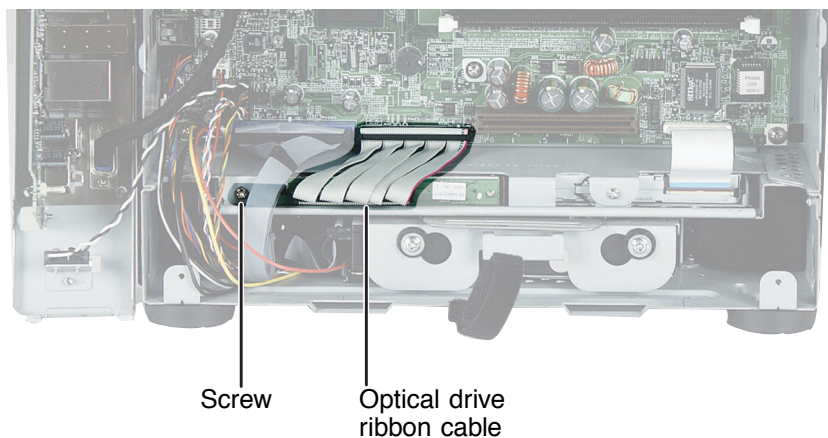
Replacing the optical drive

Time to complete: 4.5 minutes

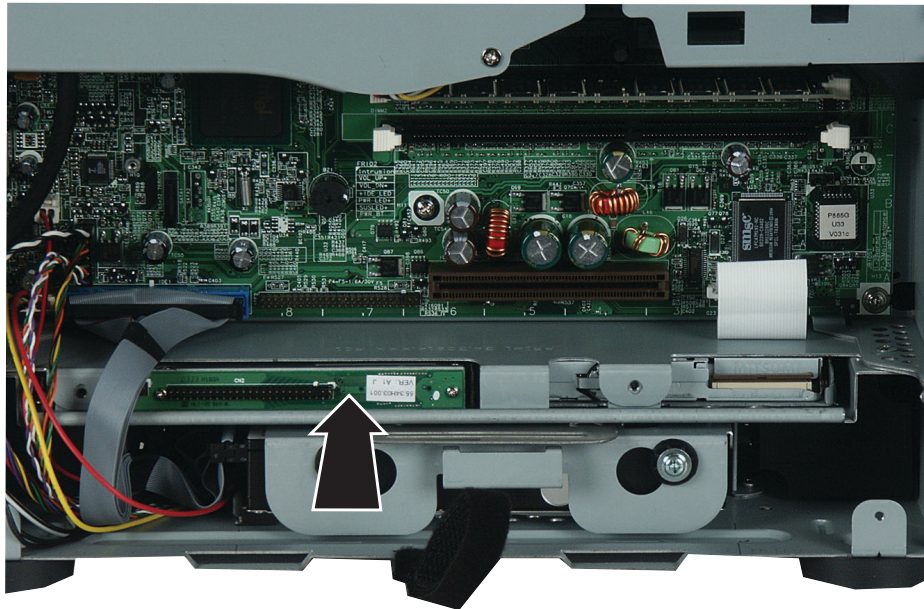


To replace the optical drive:

- 1** Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2** Remove the back panel by following the instructions in “Replacing the back panel” on page 8.
- 3** Remove the I/O panel by following the instructions in “Replacing the I/O panel” on page 10.
- 4** Unplug the ribbon cable from the optical drive, then remove the screw that secures the optical drive to the chassis.



- 5 Push the drive out of its bay toward the front of the computer.



- 6 From the front of the computer, pull the drive out of the computer.



- 7 Slide the new drive into the drive slot until the front of the drive is flush with the front panel of the computer.
- 8 Secure the drive to the chassis using the screw you removed previously.
- 9 Plug the drive's ribbon cable into the new drive.

- 10** Reinstall the I/O panel by following the instructions in “Replacing the I/O panel” on page 10.
- 11** Reinstall the back panel by following the instructions in “Replacing the back panel” on page 8.



Replacing the diskette drive

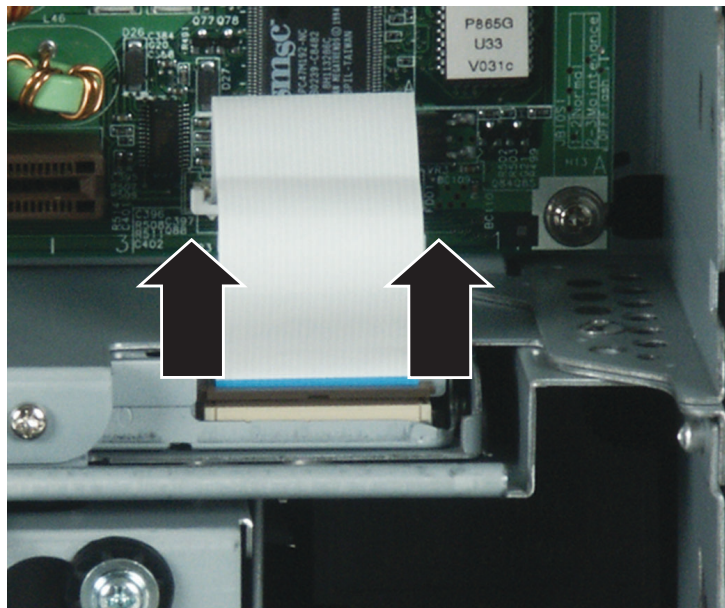
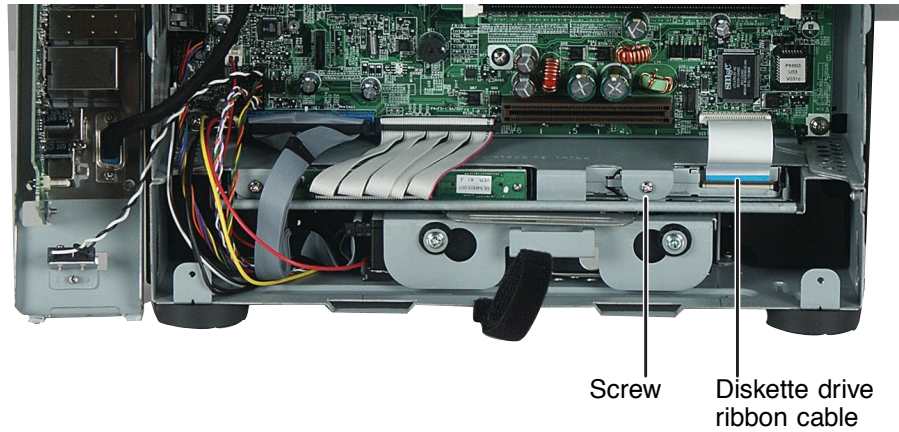
Time to complete: 4.5 minutes



To replace the diskette drive:

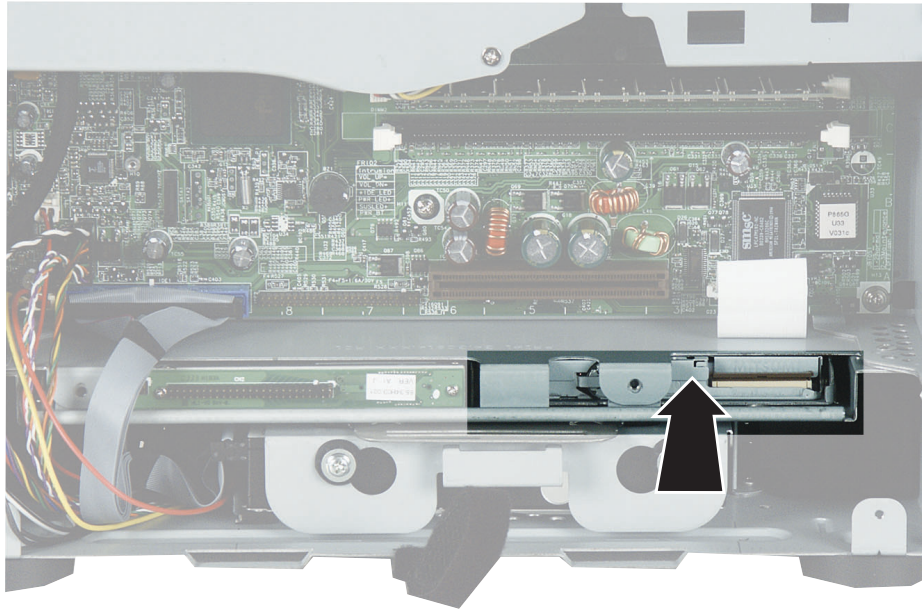
- 1** Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2** Remove the back panel by following the instructions in “Replacing the back panel” on page 8.
- 3** Remove the I/O panel by following the instructions in “Replacing the I/O panel” on page 10.

- 4 Slide the brown locking clip up on the ribbon cable connector, then slide the ribbon cable out of the connector.

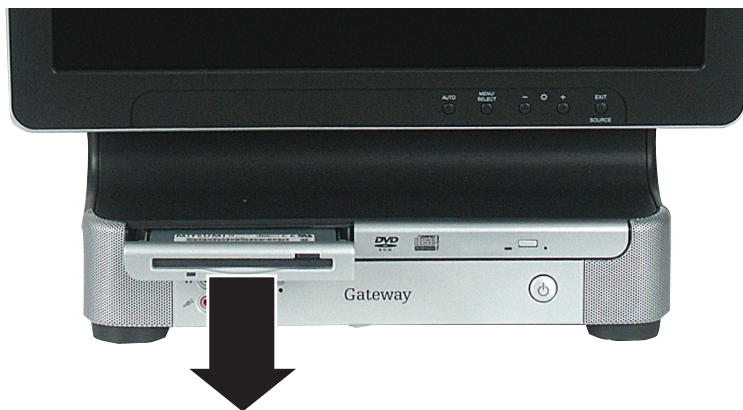


- 5 Remove the screw that secures the diskette drive to the chassis.

- 6** Push the drive out of its bay toward the front of the computer.

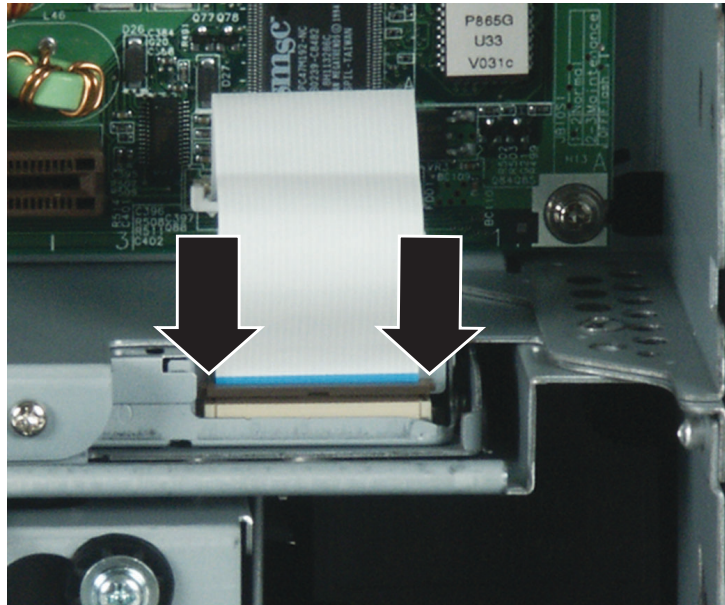


- 7** From the front of the computer, pull the drive out of the computer.



- 8** Slide the new drive into the drive slot until the front of the drive is flush with the front panel of the computer.
- 9** Secure the drive to the chassis using the screw you removed previously.
- 10** Make sure that the drive connector's brown locking clip is up, then slide the drive's ribbon cable into the connector.

- 11** Lock the ribbon cable into place by sliding the brown locking clip down.



- 12** Reinstall the I/O panel by following the instructions in “Replacing the I/O panel” on page 10.
- 13** Reinstall the back panel by following the instructions in “Replacing the back panel” on page 8.



Replacing the hard drive

Time to complete: 5 minutes

Tips & Tricks

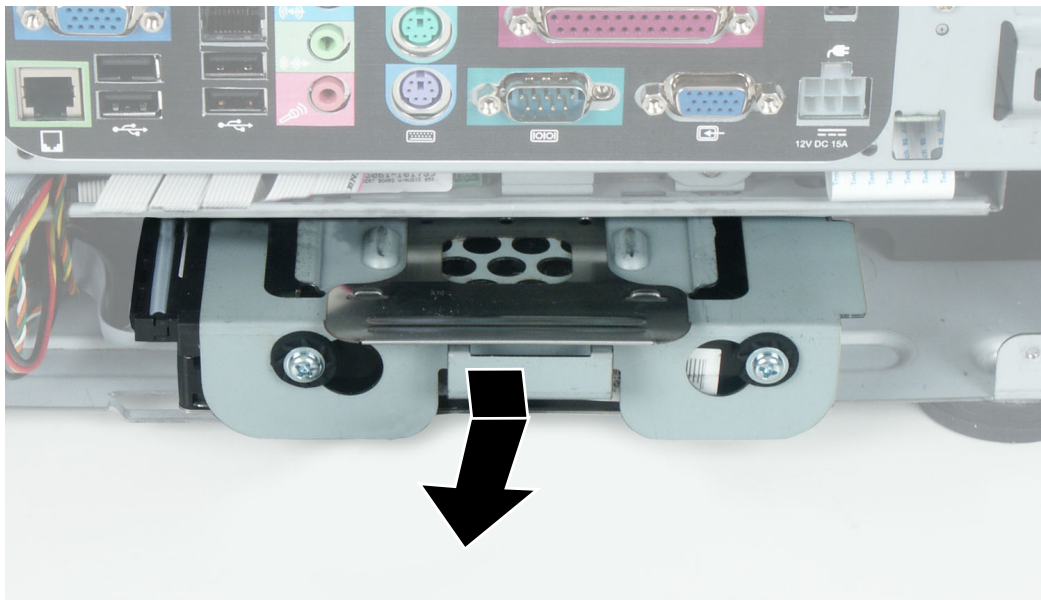


For more stability, place your computer face down to perform this procedure. Avoid scratching the computer display by placing it on a towel or other non-abrasive surface.

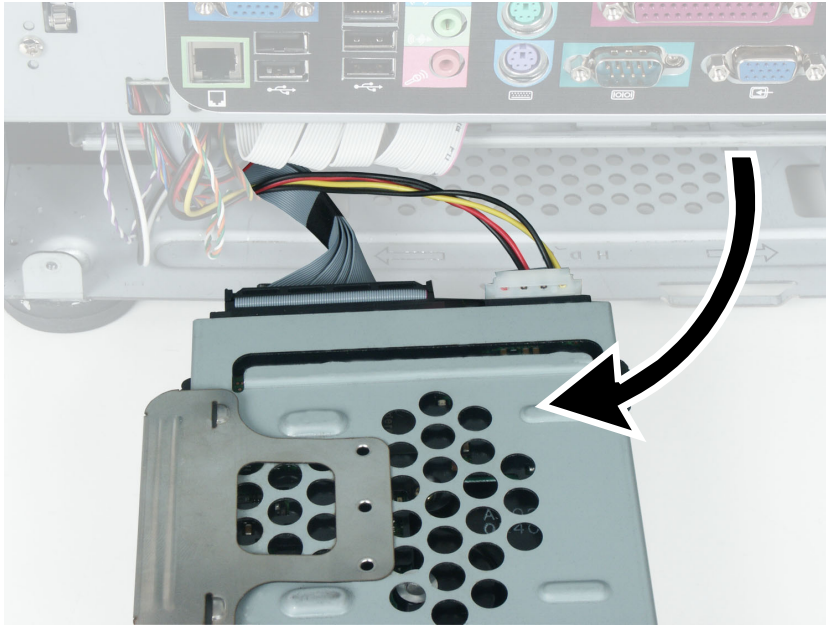


To replace the hard drive:

- 1 Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2 Remove the back panel of the computer by following the instructions in “Replacing the back panel” on page 8.
- 3 Press the drive cage release latch.

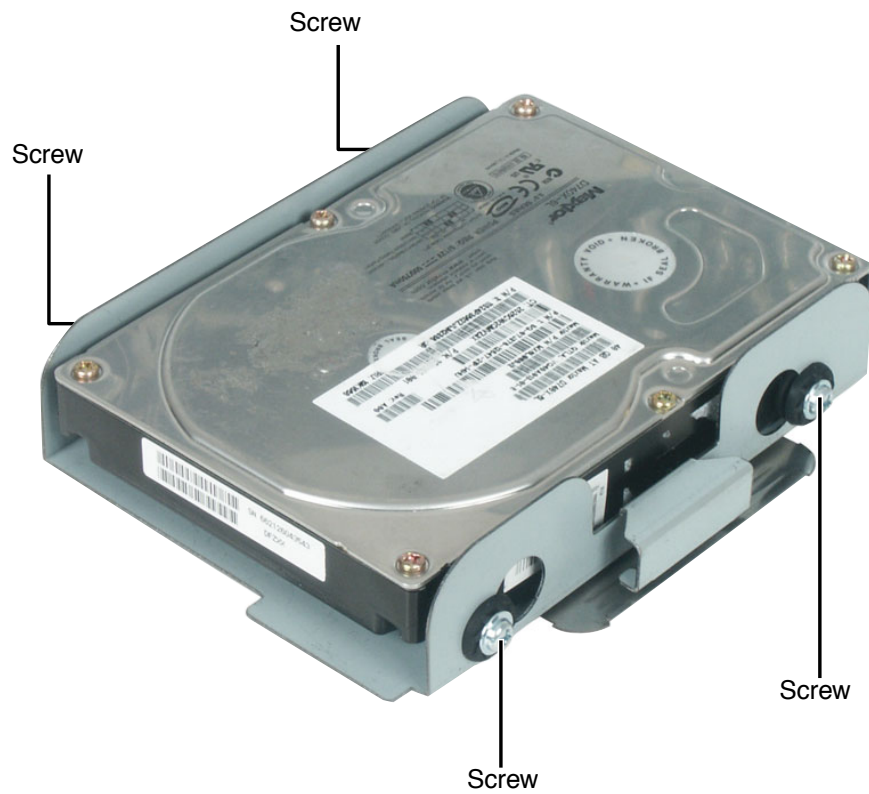


- 4 While holding the latch, pull the drive cage out of the computer.



- 5 Disconnect the drive cable and power cable from the hard drive.

- 6** Remove the four screws that secure the hard drive to the hard drive cage.



- 7 Remove the drive.



- 8 Make sure that the jumpers on the new drive are set the same as the drive you are replacing.
- 9 Insert the new drive into the drive cage and secure it with the four screws removed earlier.
- 10 Connect the drive cable and power cable to the drive.
- 11 Slide the drive cage into the computer until it clicks into place. Make sure that the drive cage's rails engage the rail guides in the top of the hard drive cage bay.
- 12 Reinstall the back panel by following the instructions in ["Replacing the back panel" on page 8](#).



Replacing memory modules

Time to complete: 4.5 minutes

When you upgrade your computer memory, make sure that you install the correct type of memory module for your computer. Your computer uses DIMM memory.

Important



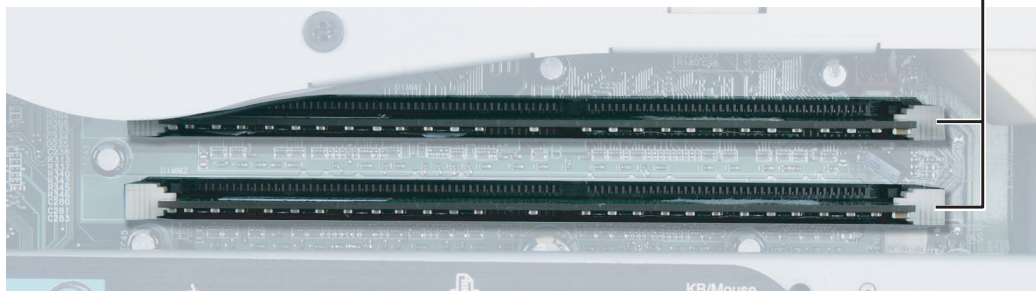
Use only DDR266, DDR333, or DDR400 DIMM memory modules. Maximum memory capacity is 2 GB.



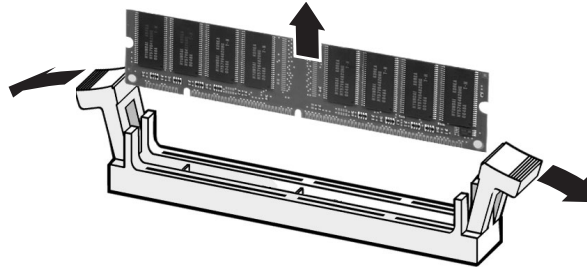
To replace memory modules:

- 1 Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2 Remove the back panel of the computer by following the instructions in “Replacing the back panel” on page 8. The memory module banks are located between the I/O ports and the blower assembly.

Memory modules



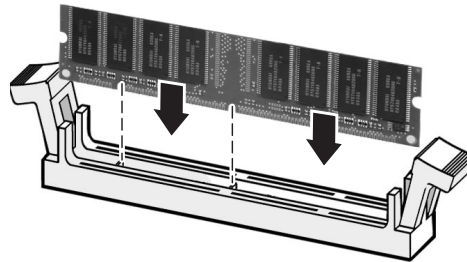
- 3 If you are removing a memory module from the memory module bank, gently pull the plastic tabs away from the sides of the memory module and remove it.



- OR -

If you are adding a memory module to an empty memory module bank, gently pull the plastic tabs away from the sides of the memory module bank.

- 4 Align the notch on the new memory module with the notch on the memory module bank and press firmly into the bank. The tabs on the sides of the memory module should secure the memory module automatically.



- 5 Reinstall the back panel by following the instructions in [“Replacing the back panel” on page 8](#).



Replacing the processor

Time to complete: 5 minutes

Tips & Tricks



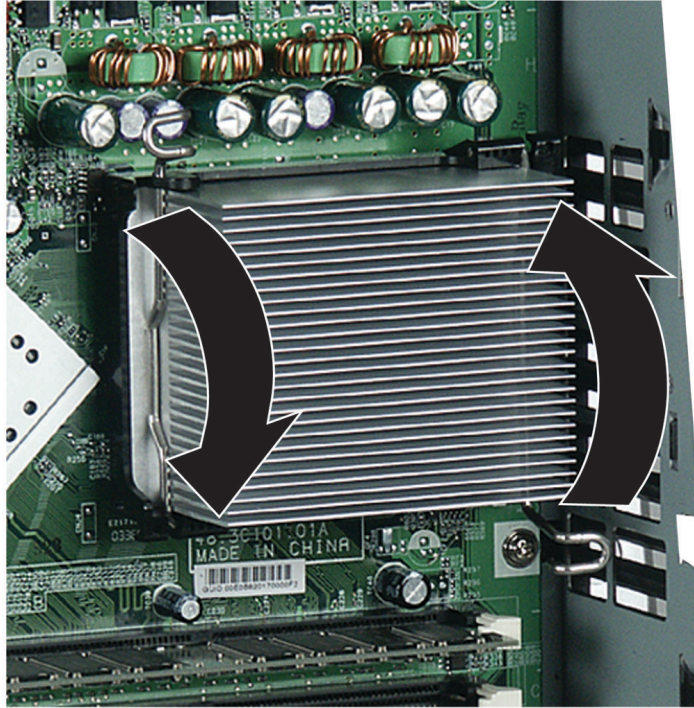
For more stability, place your computer face down to perform this procedure. Avoid scratching the computer display by placing it on a towel or other non-abrasive surface.



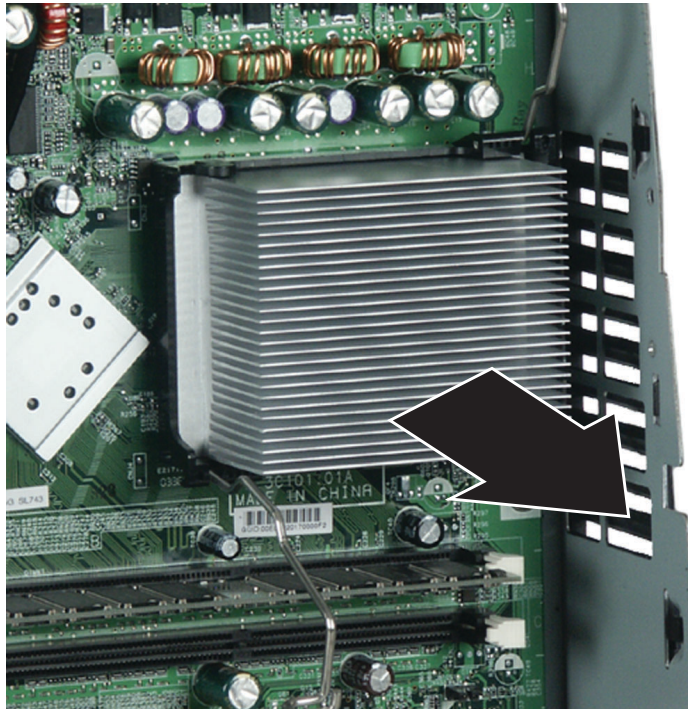
To replace the processor:

- 1** Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2** Remove the back panel of the computer by following the instructions in “Replacing the back panel” on page 8.
- 3** Remove the blower assembly by following the instructions in “Replacing the blower assembly” on page 14.

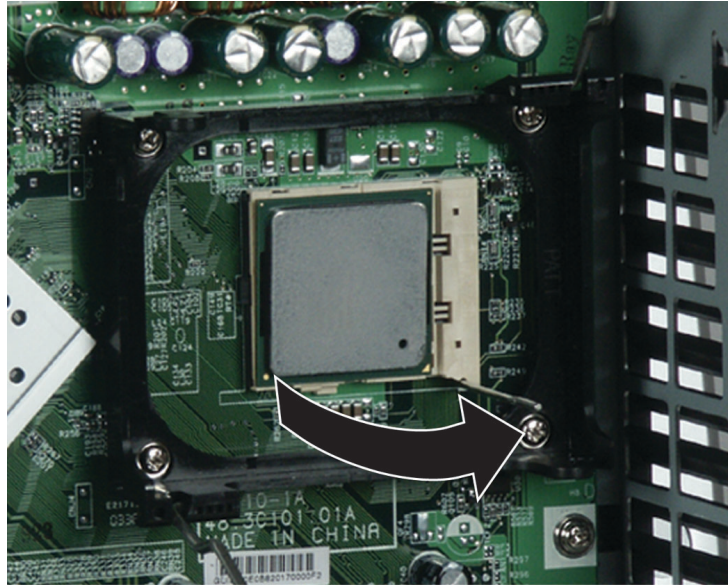
- 4 Press each heat sink retention clip toward the system board and away from the heat sink, then rotate each clip out of the way.



- 5** Gently move the heat sink side to side to loosen it from the processor, then lift the heat sink away from the processor.



- 6 While holding your hand under the processor in case the processor falls out of the socket, rotate the processor release lever to the fully open position (90°).



- 7 Lift the processor out of the socket.
- 8 Before inserting the processor into the socket, make sure that:
 - The processor release lever is open all the way (90° from the closed position).
 - The triangular arrows on the corner of the processor align with the triangular icon on the lower-right corner of the processor socket.
- 9 Install the new processor into the processor socket, then press the processor locking lever down until it clicks into place.
- 10 Apply thermal grease to the top of the processor or the bottom of the heat sink, if necessary. Heat sinks from Gateway have thermal grease already applied.
- 11 Place the heat sink onto the processor, then press the heat sink retaining clips down until they click into place.

- 12** Reinstall the blower assembly by following the instructions in “Replacing the blower assembly” on page 14.
- 13** Reinstall the back panel by following the instructions in “Replacing the back panel” on page 8.



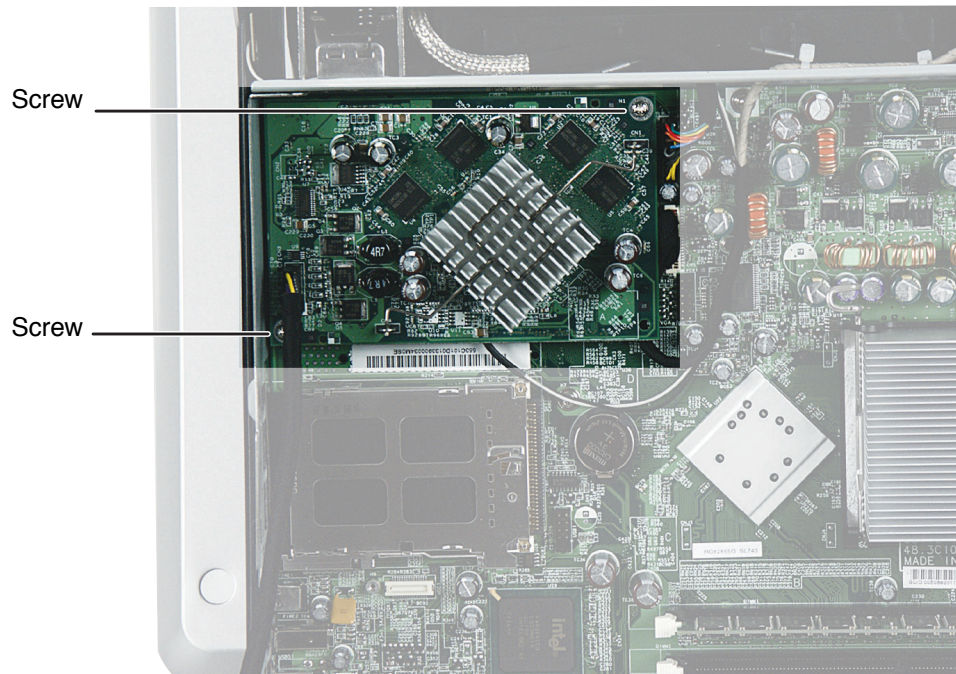
Replacing the video board

Time to complete: 5.5 minutes

Depending on your configuration, your computer may not have a video board installed.

 **To replace the video board:**

- 1** Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2** Remove the back panel by following the instructions in “Replacing the back panel” on page 8.
- 3** Remove the blower assembly by following the instructions in “Replacing the blower assembly” on page 14.
- 4** Remove the two screws that secure the video board to the computer.



- 5** Pry under the lower-right corner of the board to pull it loose, then pull the entire video board away from the computer.

- 6 Carefully line up the new video board's screw holes with the mounting posts on the system board, then press the video board into place.

Warning



Make sure the Mini PCI card's antenna cables do not block the video board connector.

- 7 Secure the video board to the system board with the two screws you removed previously.
- 8 Reinstall the blower assembly by following the instructions in "Replacing the blower assembly" on page 14.
- 9 Reinstall the back panel by following the instructions in "Replacing the back panel" on page 8.



Replacing the Mini PCI card

Time to complete: 6 minutes

Caution



By law, only approved wireless modules provided by Gateway or by an authorized Gateway representative explicitly for the Gateway Profile 5 may be installed in this computer.

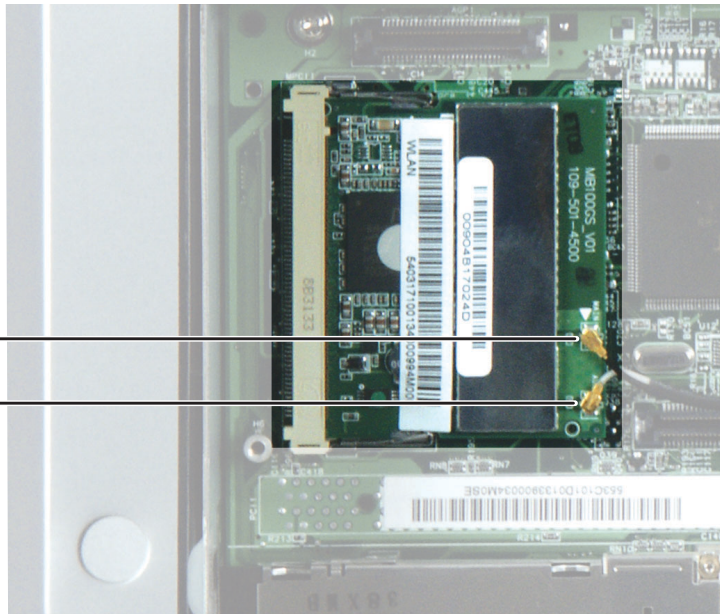


To replace the Mini PCI card:

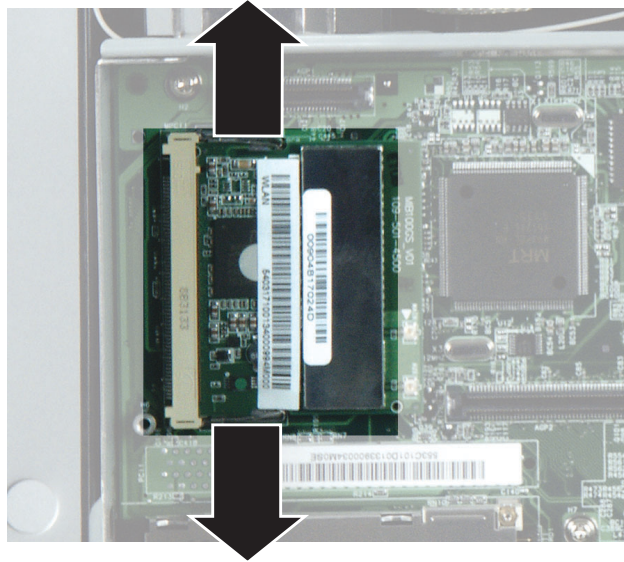
- 1** Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2** Remove the back panel by following the instructions in “Replacing the back panel” on page 8.
- 3** Remove the blower assembly by following the instructions in “Replacing the blower assembly” on page 14.
- 4** If your computer has a video board covering the Mini PCI slot, remove the video board by following the instructions in “Replacing the video board” on page 33.
- 5** Unplug the two antenna cables from the Mini PCI card.

MAIN
(black) cable

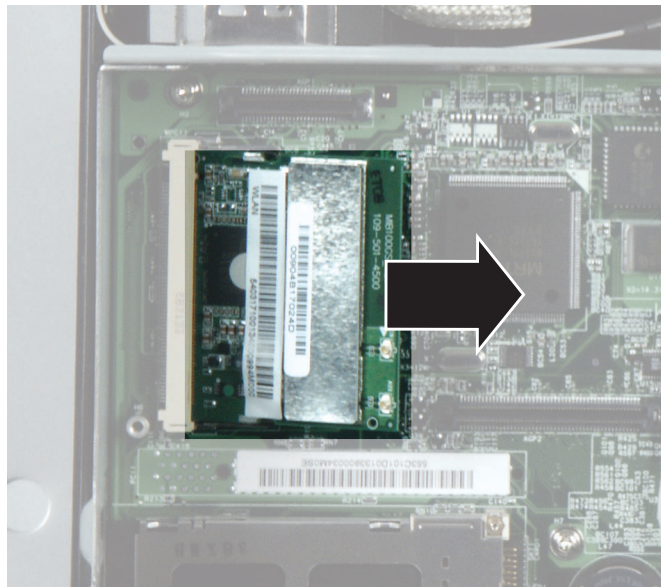
AUX
(gray) cable



- 6** Press outward on the two Mini PCI retaining clips until the card flips up.



- 7** Remove the Mini PCI card from the slot.



- 8** Insert the new Mini PCI card into the slot, then press it down until the retaining clips snap into place. The card must be fully seated in the slot before the retaining clips will snap into place.

- 9** Plug the antenna cables back into the Mini PCI card. The gray cable connects to the post labeled **MAIN**, and the black cable connects to the post labeled **AUX**.
- 10** If you removed a video board, reinstall it by following the instructions in “Replacing the video board” on page 33.
- 11** Reinstall the blower assembly by following the instructions in “Replacing the blower assembly” on page 14.
- 12** Reinstall the back panel by following the instructions in “Replacing the back panel” on page 8.



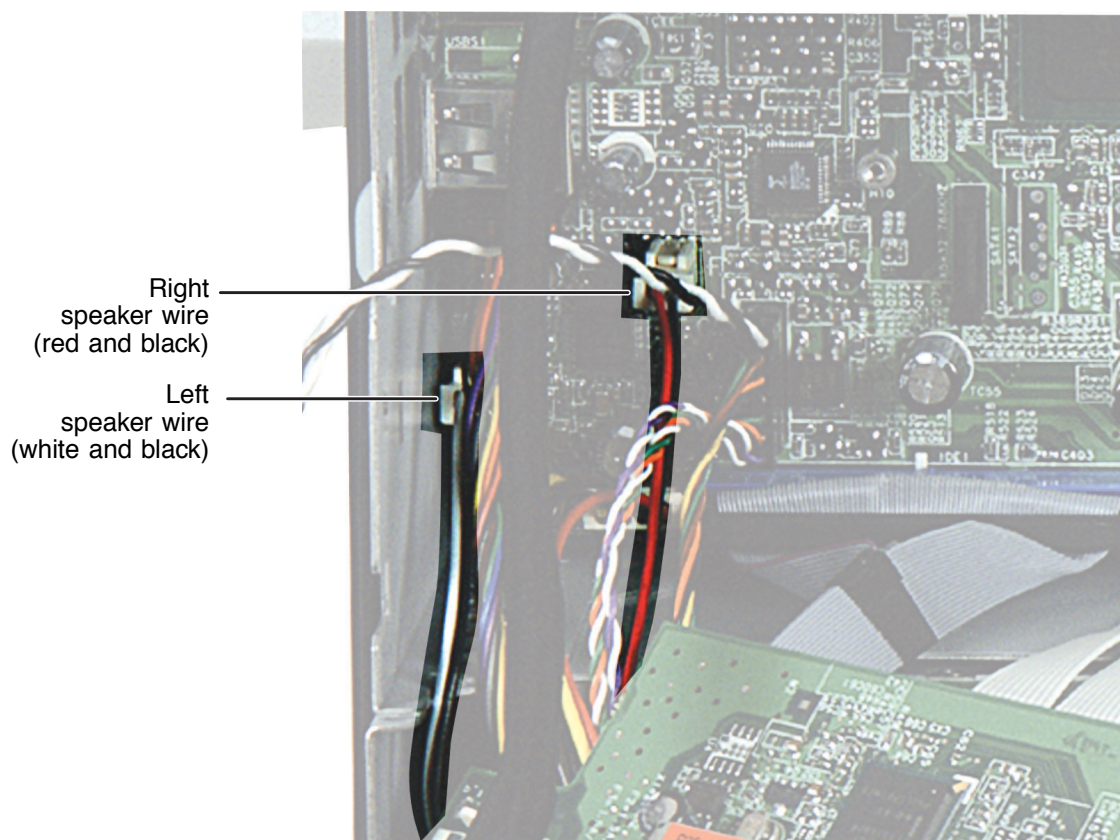
Replacing the speakers

Time to complete: 9 minutes

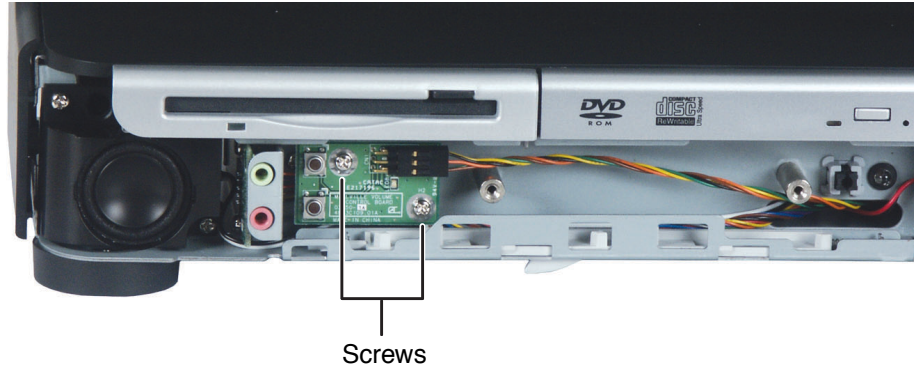


To replace the speakers:

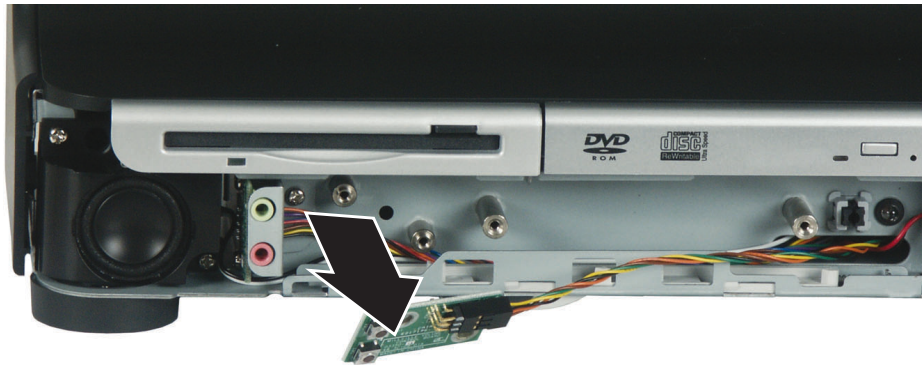
- 1** Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2** Remove the back panel by following the instructions in “Replacing the back panel” on page 8.
- 3** Remove the I/O panel by following the instructions in “Replacing the I/O panel” on page 10.
- 4** Unplug the speaker wires from the system board.



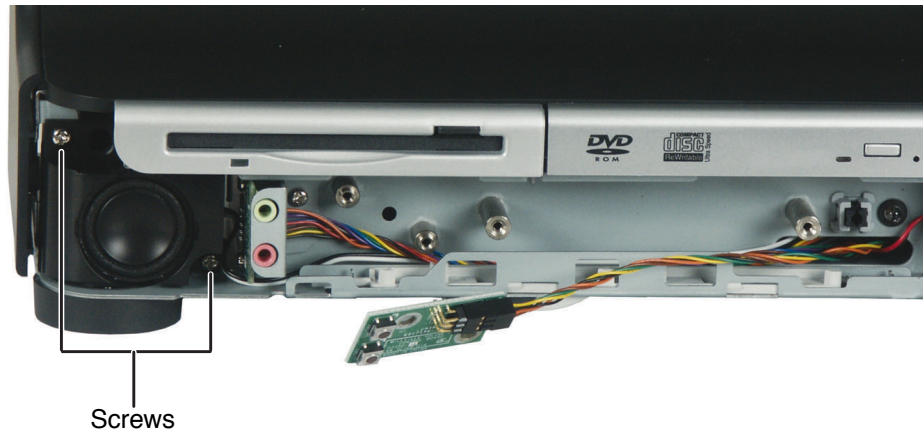
- 5 Remove the front panel and speaker grille by following the instructions in “Replacing the front panel and speaker grille” on page 5.
- 6 Remove the two screws that secure the front control circuit board to the computer.



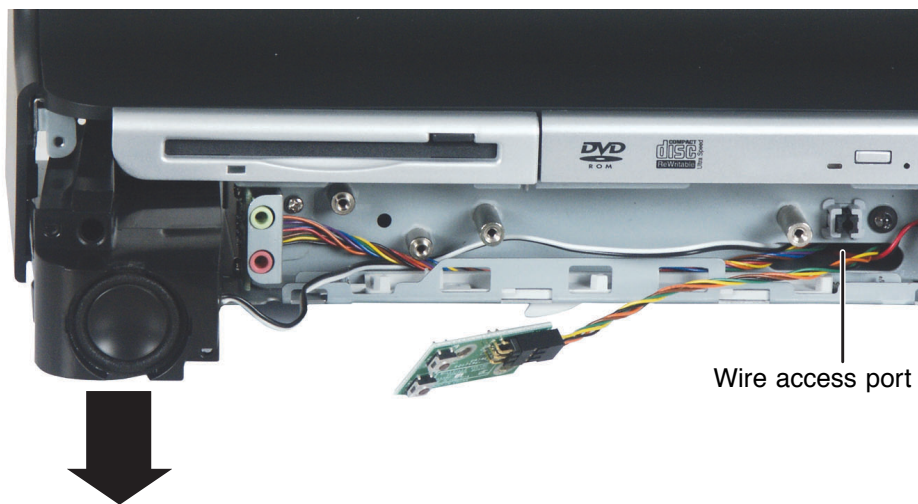
- 7 Pull the front control circuit board away from the computer to expose the left speaker wires that run underneath it.



- 8** Remove the two screws from the speaker you are replacing.

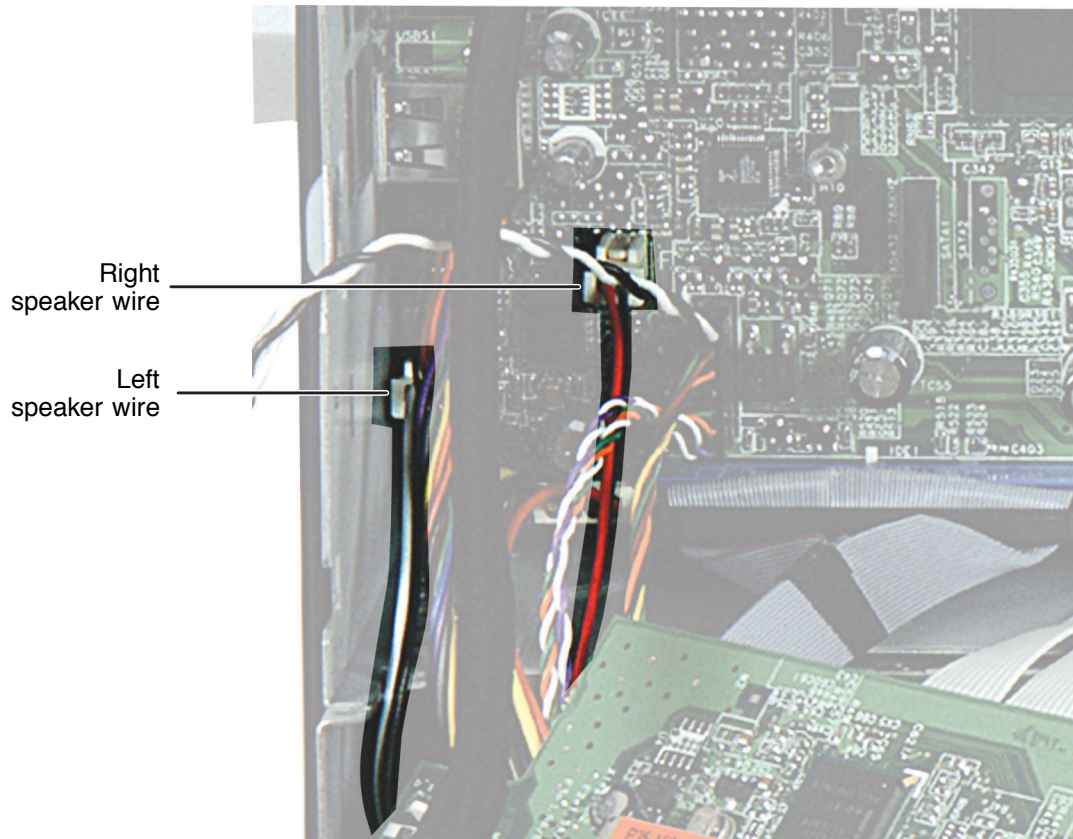


- 9** Pull the speaker out of the computer while carefully threading the speaker wire out of the wire access port.



- 10** Insert the replacement speaker into the computer, then secure it using the two screws you removed previously.
- 11** Thread the speaker wire along the inside of the front panel area, then thread the speaker wire connector through the wire access port.

- 12** Plug the wire into the appropriate connector on the system board.



- 13** Replace the speaker grille and the front panel by following the instruction in “Replacing the front panel and speaker grille” on page 5.
- 14** Reinstall the I/O panel by following the instructions in “Replacing the I/O panel” on page 10.
- 15** Reinstall the back panel by following the instructions in “Replacing the back panel” on page 8.



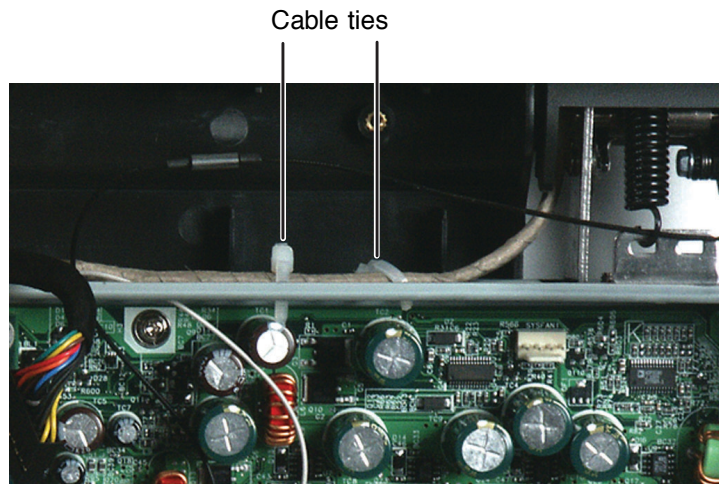
Replacing the LCD panel assembly

Time to complete: 8 minutes



To replace the LCD panel assembly:

- 1** Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2** Remove the back panel by following the instructions in “Replacing the back panel” on page 8.
- 3** Remove the blower assembly by following the instructions in “Replacing the blower assembly” on page 14.
- 4** Remove the reusable cable ties that secure the two video cables to the chassis.

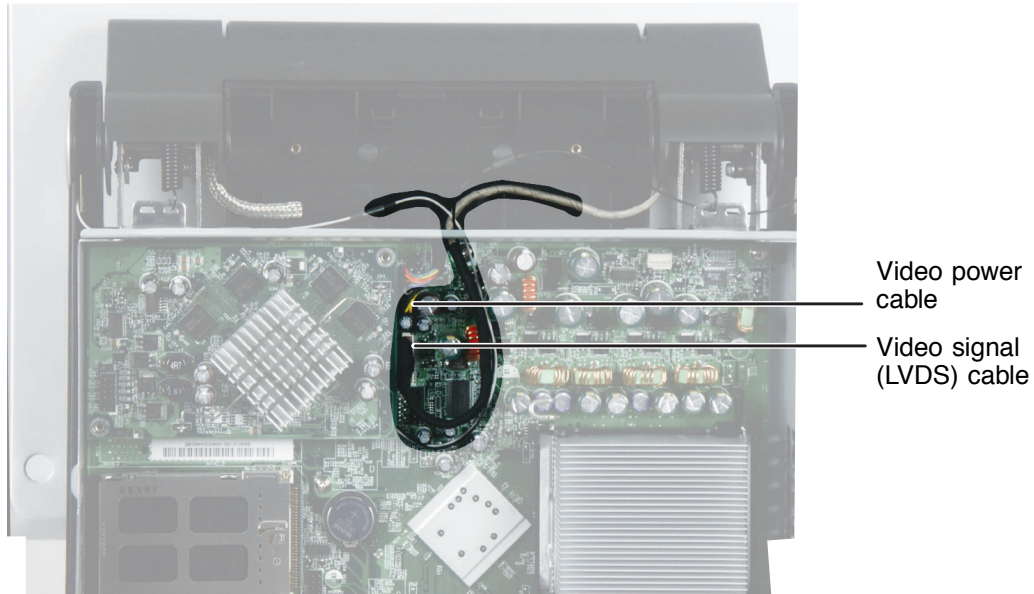


Slide the cable out of this locking slot.

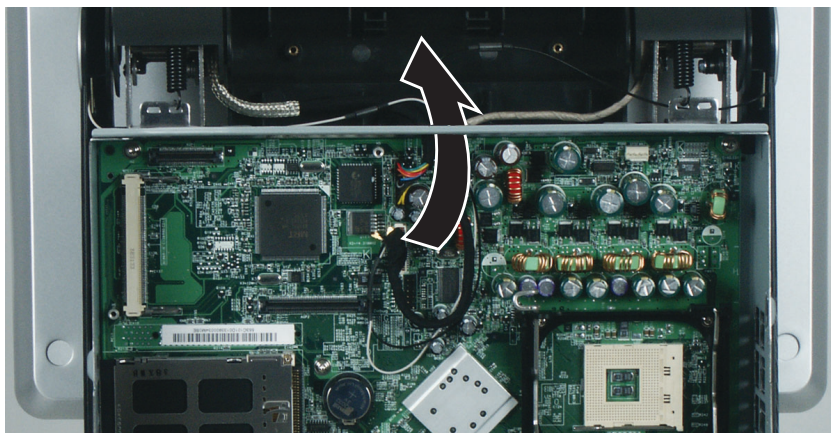


Then slide the cable out of this hole.

- 5** Disconnect the video signal (LVDS) cable and video power cable from the system board.



- 6** Thread the two video cables through the hole at the top center of the chassis.



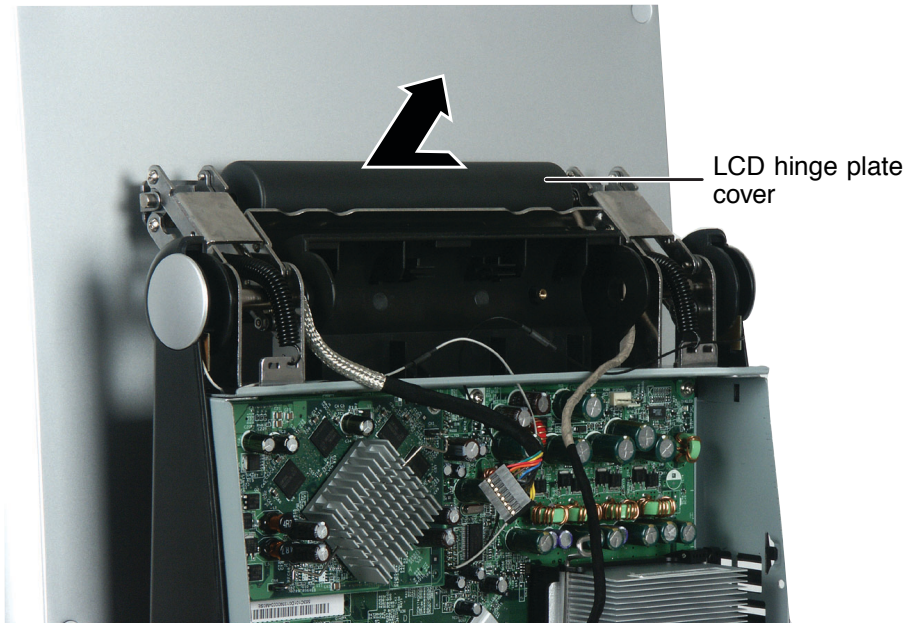
- 7** Rotate the LCD panel upward as far as it will go.

- 8** Rotate the top of the hinge cover toward you, then pull it away from the computer.

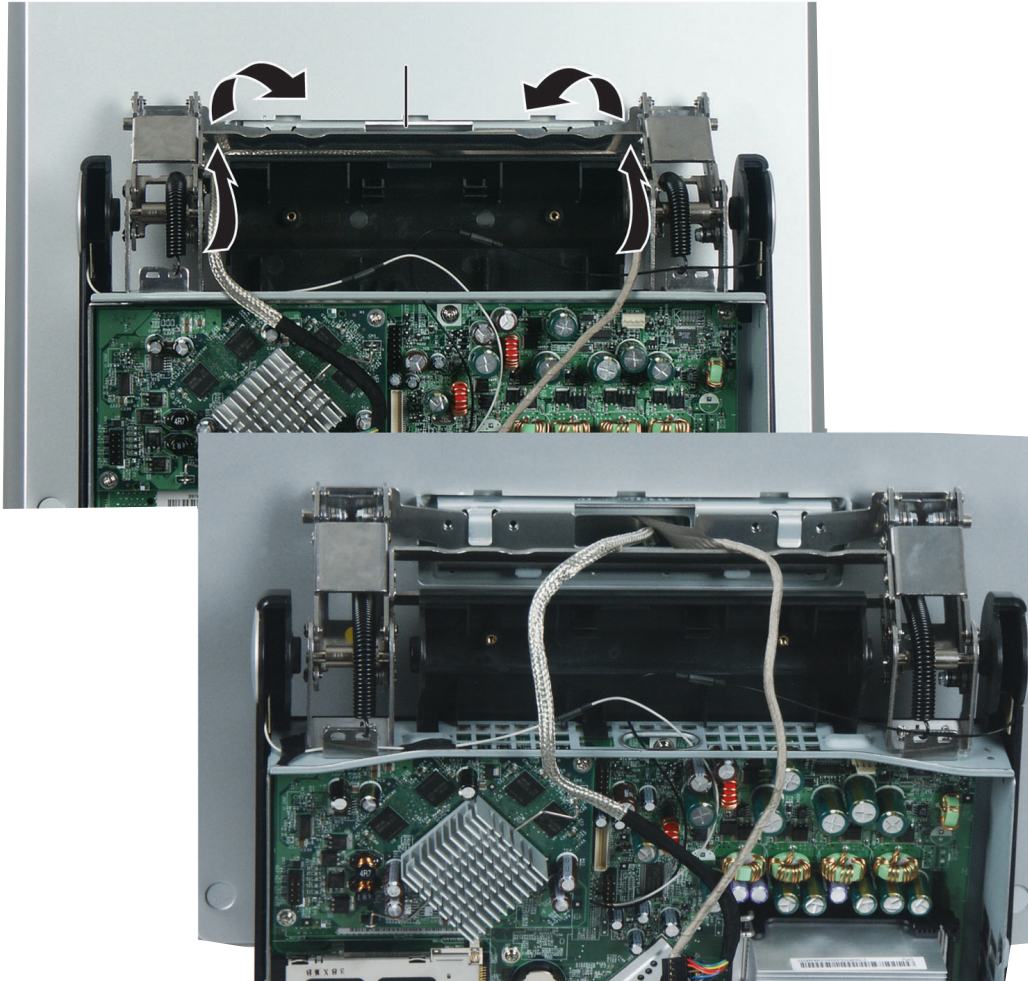


- 9** Slide the LCD panel down about one inch.

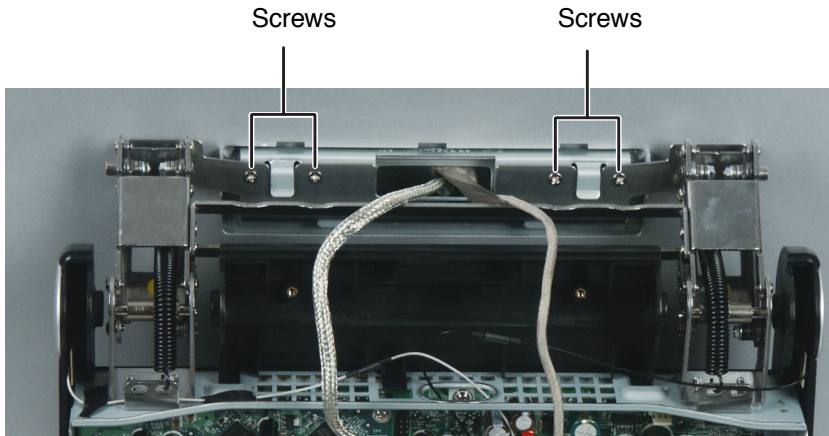
- 10** Slide the LCD hinge plate cover to the left, then pull the cover away from the computer. If the cover is difficult to remove, make sure all six hooks on the cover have disengaged from the LCD panel.



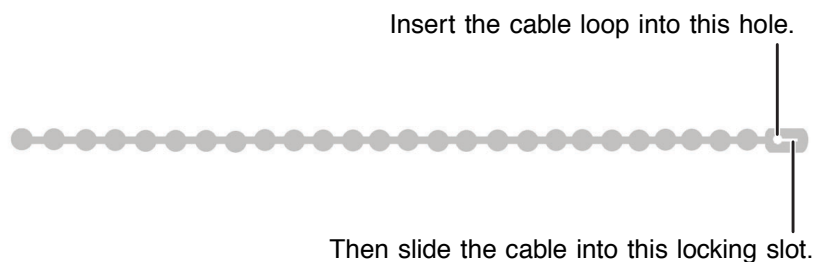
- 11** Thread the two video cables out from under the crossbar support, then lay them on top of the crossbar support.



- 12** Slide the LCD panel all the way up again, then remove the four screws that secure the hinge to the LCD panel.



- 13** Lift the LCD panel straight up and off the hooks.
- 14** Place the new LCD panel onto the hinge so the panel's hooks engage the slots on the hinge plate.
- 15** Secure the LCD panel to the hinge plate with the four screws you removed previously.
- 16** Thread the two video cables through the hole in the top center of the chassis, then plug the cables into the system board.
- 17** Tighten the reusable cable ties to secure the video cables to the top of the chassis.



- 18** Slide the LCD panel down about an inch.
- 19** Press the LCD hinge plate cover's tabs into the corresponding slots on the LCD panel, then slide the cover to the right until it locks into place.
- 20** Snap the LCD hinge cover onto the hinges.

- 21** Reinstall the blower assembly by following the instructions in “Replacing the blower assembly” on page 14.
- 22** Reinstall the back panel by following the instructions in “Replacing the back panel” on page 8.

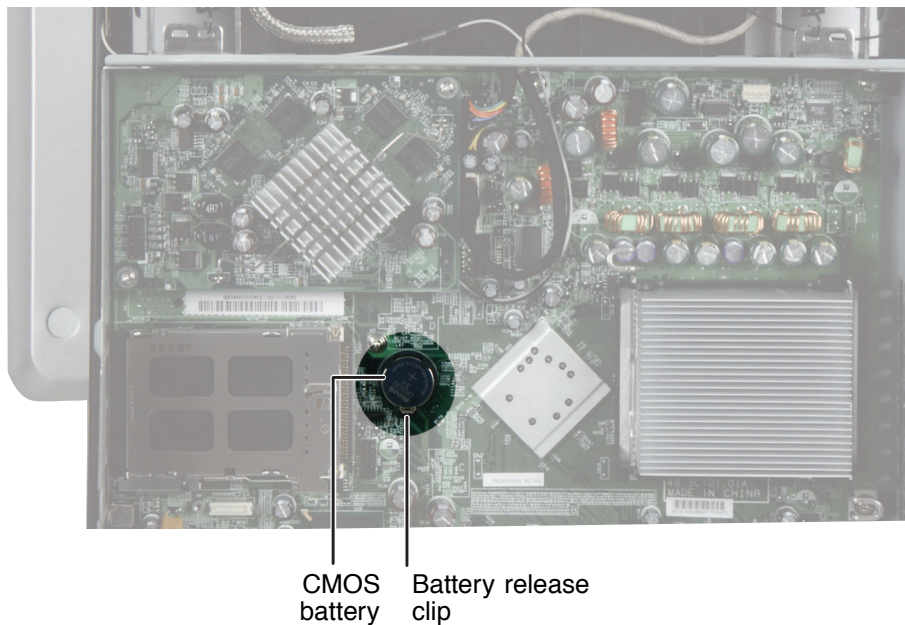


Replacing the CMOS battery

Time to complete: 4.5 minutes

To replace the CMOS battery:

- 1** Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2** Remove the back panel by following the instructions in “Replacing the back panel” on page 8.
- 3** Remove the blower assembly by following the instructions in “Replacing the blower assembly” on page 14.
- 4** Remove the CMOS battery by pressing the battery release clip down.



- 5** Press the new CMOS battery into place.

- 6** Reinstall the blower assembly by following the instructions in “Replacing the blower assembly” on page 14.
- 7** Reinstall the back panel by following the instructions in “Replacing the back panel” on page 8.



Replacing the system board

Time to complete: 11.5 minutes

Tips & Tricks



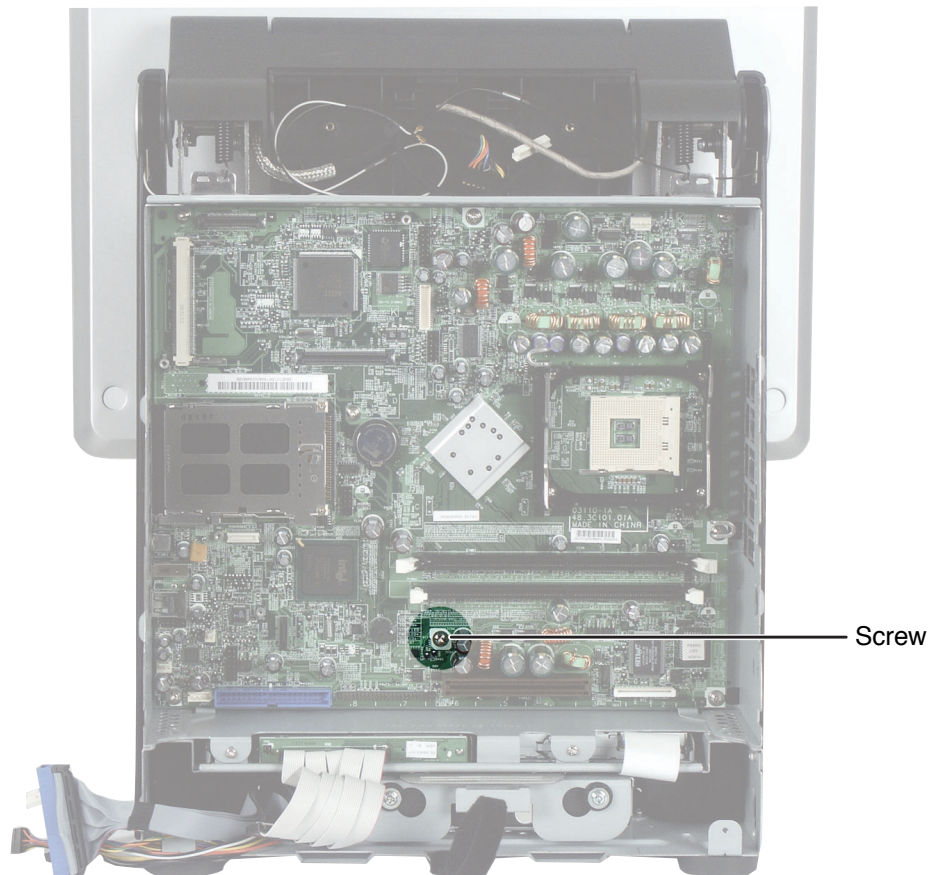
For more stability, place your computer face down to perform this procedure. Avoid scratching the computer display by placing it on a towel or other non-abrasive surface.



To replace the system board:

- 1 Turn off the computer and prepare it by following the instructions in “Preparing your computer” on page 4.
- 2 Remove the back panel by following the instructions in “Replacing the back panel” on page 8.
- 3 Remove the I/O panel by following the instructions in “Replacing the I/O panel” on page 10.
- 4 Remove the blower assembly by following the instructions in “Replacing the blower assembly” on page 14.
- 5 If your computer has a video board covering the Mini PCI card slot, remove the video board by following the instructions in “Replacing the video board” on page 33.
- 6 Remove the Mini PCI card by following the instructions in “Replacing the Mini PCI card” on page 35.
- 7 Thread the Mini PCI card’s antenna cables through the hole in the top center of the chassis.
- 8 Remove the memory modules and processor by following the instructions in “Replacing memory modules” on page 26 and “Replacing the processor” on page 28.
- 9 Disconnect the ribbon cables to the optical drive and the diskette drive by following the instructions in “Replacing the optical drive” on page 16. and “Replacing the diskette drive” on page 18.
- 10 Disconnect all remaining cables from the system board. Make note of the location of the cables, especially the cabling in the lower-left corner of the system board.

- 11** Remove the screw that secures the system board to the chassis.

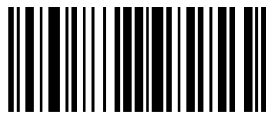


- 12** Slide the system board about ½ inch to the right, then remove the board from the chassis.
- 13** Insert the new board into the chassis, then slide it about ½ inch to the left.
- 14** Secure the system board to the chassis using the screw you removed previously.
- 15** Reconnect all cables you had removed previously.
- 16** Reinstall the Mini PCI card by following the instructions in “Replacing the Mini PCI card” on page 35.
- 17** If your computer had a video board, reinstall it by following the instructions in “Replacing the video board” on page 33.

- 18** Reinstall the memory modules and processor by following the instructions in “Replacing memory modules” on page 26 and “Replacing the processor” on page 28.
- 19** Reinstall the blower assembly by following the instructions in “Replacing the blower assembly” on page 14.
- 20** Reinstall the I/O panel by following the instructions in “Replacing the I/O panel” on page 10.
- 21** Reinstall the back panel by following the instructions in “Replacing the back panel” on page 8.



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