Dell™ Studio 14z Service Manual

Before You Begin
Battery
Memory
Keyboard
Hard Drive
Palm Rest
Display
Power Button
Camera
Communication Cards
Internal Card With Bluetooth® Wireless Technology
Coin-Cell Battery
Tweeters
Speakers
Hall Sensor Board
System Board
AC Adapter Connector
Processor Heat Sink
Fan
Processor
I/O Board
Flashing the BIOS

Notes, Cautions, and Warnings

NOTE: A NOTE indicates important information that helps you make better use of your computer.

CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

If you purchased a Dell™ n Series computer, any references in this document to Microsoft® Windows® operating systems are not applicable.

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Model PP40L

April 2009 Rev. A00

Back to Contents Page

Battery

Dell™ Studio 14z Service Manual

- Removing the Battery
- Replacing the Battery

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

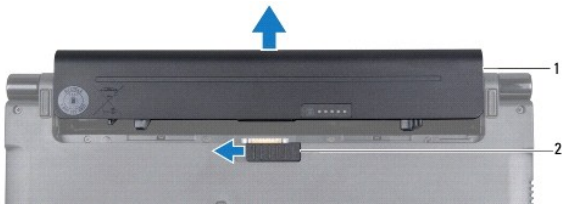
CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: To help prevent damage to the system board, you must remove the battery from the battery bay before you begin working inside the computer.

CAUTION: To avoid damage to the computer, use only the battery designed for this particular Dell computer. Do not use batteries designed for other Dell computers.

Removing the Battery

1. Follow the procedures in Before You Begin.
2. Turn the computer over.
3. Slide the battery release latch until it clicks into place.
4. Slide the battery out of the battery bay.



1	battery	2	battery release latch

Replacing the Battery

To replace the battery, slide the battery in the battery bay until it clicks into place.

Back to Contents Page

Back to Contents Page

Before You Begin

Dell™ Studio 14z Service Manual

- Recommended Tools
- Turning Off Your Computer
- Before Working Inside Your Computer

This section provides procedures for removing and installing the components in your computer. Unless otherwise noted, each procedure assumes that the following conditions exist:

- You have performed the steps in Turning Off Your Computer and Before Working Inside Your Computer.
- You have read the safety information that shipped with your computer.
- A component can be replaced or—if purchased separately—installed by performing the removal procedure in reverse order.

Recommended Tools

The procedures in this document may require the following tools:

- Small flat screwdriver
- Phillips screwdriver
- Plastic scribe
- Hex nut driver
- BIOS upgrade CD or the BIOS executable update program available on the Dell Support website at **support.dell.com**

Turning Off Your Computer

CAUTION: To avoid losing data, save and close all open files and exit all open programs before you turn off your computer.

1. Save and close all open files and exit all open programs.
2. In Microsoft® Windows Vista®, click **Start** , click the arrow , and then click **Shut Down**.

   The computer turns off after the operating system shutdown process finishes.
3. Ensure that the computer and any attached devices are turned off. If your computer and attached devices did not automatically turn off when you shut down your operating system, press and hold the power button for at least 8 to 10 seconds until the computer turns off.

Before Working Inside Your Computer

Use the following safety guidelines to help protect your computer from potential damage and to help to ensure your own personal safety.

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Handle components and cards with care. Do not touch the components or contacts on a card. Hold a card by its edges or by its metal mounting bracket. Hold a component such as a processor by its edges, not by its pins.

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

CAUTION: When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. Some cables have connectors with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

CAUTION: To avoid damaging the computer, perform the following steps before you begin working inside the computer.

1. Ensure that the work surface is flat and clean to prevent the computer cover from being scratched.
2. Turn off your computer (see Turning Off Your Computer).
3. If the computer is connected to a docking device (docked), undock it. See the documentation that came with your docking device for instructions.

CAUTION: To disconnect a network cable, first unplug the cable from your computer and then unplug the cable from the network device.

4. Disconnect all telephone or network cables from the computer.
5. Press and eject any installed cards from the ExpressCard slot or the 8-in-1 Media Card Reader.
6. Disconnect your computer and all attached devices from their electrical outlets.

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

7. Remove the battery (see Removing the Battery).
8. Turn the computer top-side up, open the display, and press the power button to ground the system board.

Back to Contents Page

Back to Contents Page

Flashing the BIOS

Dell™ Studio 14z Service Manual

- Flashing the BIOS From a CD
- Flashing the BIOS From the Hard Drive

If a BIOS upgrade CD is provided with the new processor or new system board, flash the BIOS from the CD. If you do not have a BIOS upgrade CD, flash the BIOS from the hard drive.

Flashing the BIOS From a CD

1. Ensure that the AC adapter is plugged in and that the main battery is installed properly.

NOTE: If you use a BIOS upgrade CD to flash the BIOS, set up the computer to boot from a CD before inserting the CD.

2. Insert the BIOS upgrade CD, and restart the computer.

   Follow the instructions that appear on the screen. The computer continues to boot and updates the new BIOS. When the flash update is complete, the computer will automatically reboot.

3. Press <F2> during POST to enter the system setup program.

4. Press <Esc> and then click **Load Setup Defaults** and click **Yes** in the pop- up window to reset the computer defaults.

5. Remove the BIOS upgrade CD from the drive.

6. Click **Exit Saving Changes** and click **Yes** in the pop-up window to save configuration changes.

7. The BIOS upgrade finishes and the computer restarts automatically.

Flashing the BIOS From the Hard Drive

1. Ensure that the AC adapter is plugged in, the main battery is properly installed, and a network cable is attached.

2. Turn on the computer.

3. Locate the latest BIOS update file for your computer at **support.dell.com**.

4. Click **Download Now** to download the file.

5. If the **Export Compliance Disclaimer** window appears, click **Yes, I Accept this Agreement**.

   The **File Download** window appears.

6. Click **Save this program to disk** and then click **OK**.

   The **Save In** window appears.

7. Click the down arrow to view the **Save In** menu, select **Desktop**, and then click **Save**.

   The file downloads to your desktop.

8. Click **Close** if the **Download Complete** window appears.

   The file icon appears on your desktop and is titled the same as the downloaded BIOS update file.

9. Double-click the file icon on the desktop and follow the instructions on the screen.

Back to Contents Page

Back to Contents Page

Internal Card With Bluetooth® Wireless Technology

Dell™ Studio 14z Service Manual

- Removing the Bluetooth Card
- Replacing the Bluetooth Card

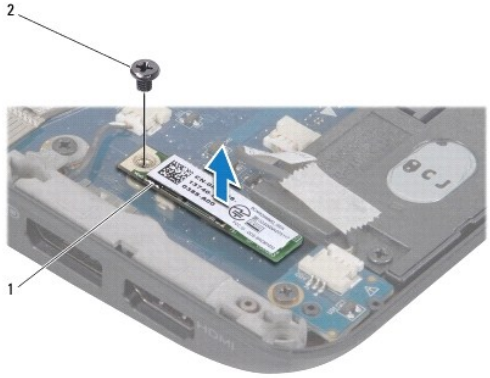
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the Bluetooth Card

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the keyboard (see Removing the Keyboard).
4. Remove the hard drive (see Removing the Hard Drive).
5. Remove the palm rest (see Removing the Palm Rest).



1	bluetooth card	2	screw

6. Remove the screw that secures the bluetooth card to the system board.
7. Lift the bluetooth card off the system board.

Replacing the Bluetooth Card

1. Follow the procedures in Before You Begin.
2. Align the connector on the bluetooth card with the connector on the system board and press gently.
3. Replace the screw that secures the bluetooth card to the system board.
4. Replace the palm rest (see Replacing the Palm Rest).
5. Replace the hard drive (see Replacing the Hard Drive).
6. Replace the keyboard (see Removing the Keyboard).

7. Replace the battery (see Replacing the Battery).

Back to Contents Page

Back to Contents Page

Camera

Dell™ Studio 14z Service Manual

- Removing the Camera
- Replacing the Camera

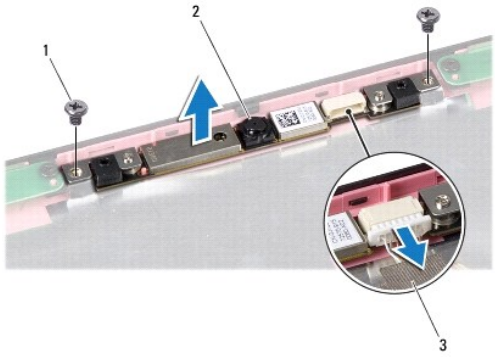
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the Camera

1. Follow the instructions in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the keyboard (see Removing the Keyboard).
4. Remove the hard drive (see Removing the Hard Drive).
5. Remove the palm rest (see Removing the Palm Rest).
6. Remove the display assembly (see Removing the Display Assembly).
7. Remove the display bezel (see Removing the Display Bezel).
8. Remove the display panel (see Removing the Display Panel).
9. Disconnect the camera cable from the connector on the camera board.
10. Remove the two screws securing the camera board.



1	screws (2)	2	camera
3	camera cable		

11. Remove the camera board.

Replacing the Camera

1. Follow the instructions in Before You Begin.

2. Align the camera board over the screw holes.
3. Replace the two screws that secure the camera board to the display cover.
4. Connect the camera cable to the connector on the camera board.
5. Replace the display panel (see Replacing the Display Panel).
6. Replace the display bezel (see Replacing the Display Bezel).
7. Replace the display assembly (see Replacing the Display Assembly).
8. Replace the palm rest (see Replacing the Palm Rest).
9. Replace the hard drive (see Replacing the Hard Drive).
10. Replace the keyboard (see Replacing the Keyboard).
11. Replace the battery (see Replacing the Battery).

Back to Contents Page

Back to Contents Page

Coin-Cell Battery

Dell™ Studio 14z Service Manual

- Removing the Coin-Cell Battery
- Replacing the Coin-Cell Battery

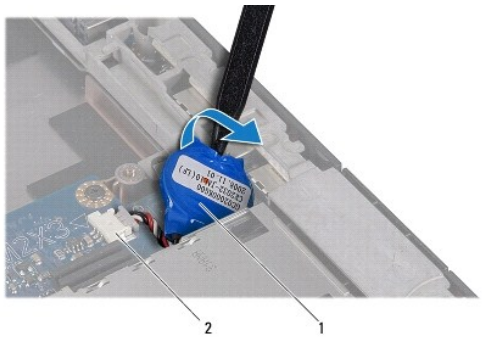
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the Coin-Cell Battery

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the keyboard (see Removing the Keyboard).
4. Remove the hard drive (see Removing the Hard Drive).
5. Remove the palm rest (see Removing the Palm Rest).



1	coin-cell battery	2	coin-cell battery cable connector

6. Disconnect the coin-cell battery cable from the connector on the system board.
7. Use a plastic scribe to push the coin-cell battery upward to release it from the slot.

Replacing the Coin-Cell Battery

1. Follow the procedures in Before You Begin.
1. Replace the coin-cell battery with the positive (+) side facing upwards.
2. Connect the coin-cell battery cable to the connector on the system board.
3. Replace the palm rest (see Replacing the Palm Rest).
4. Replace the hard drive (see Replacing the Hard Drive).
5. Replace the keyboard (see Replacing the Keyboard).

6. Replace the battery (see Replacing the Battery).

Back to Contents Page

Back to Contents Page

Processor

Dell™ Studio 14z Service Manual

- Removing the Processor
- Installing the Processor

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

CAUTION: To prevent intermittent contact between the ZIF-socket cam screw and the processor when removing or replacing the processor, press to apply slight pressure to the center of the processor while turning the cam screw.

CAUTION: To avoid damage to the processor, hold the screwdriver such that it is perpendicular to the processor when turning the cam screw.

Removing the Processor

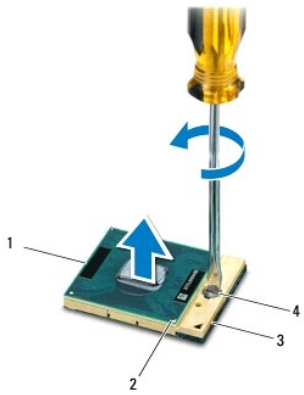
1. Follow the instructions in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the system board (see Removing the System Board).
4. Remove the processor heat sink (see Removing the Processor Heat Sink).

CAUTION: When removing the processor, pull it straight up. Be careful not to bend the pins on the processor.

CAUTION: To prevent intermittent contact between the ZIF-socket cam screw and the processor when removing or replacing the processor, press to apply slight pressure to the center of the processor while turning the cam screw.

5. To loosen the ZIF socket, use a small, flat-blade screwdriver and rotate the ZIF-socket cam screw counterclockwise until it comes to the cam stop.

   The ZIF-socket cam screw secures the processor to the system board. Take note of the arrow on the ZIF-socket cam screw.



1	processor	2	pin-1 corner of processor
3	ZIF socket	4	ZIF-socket cam screw

6. Use a processor extraction tool to remove the processor.

Installing the Processor

CAUTION: Ensure that the cam lock is in the fully open position before seating the processor. Seating the processor properly in the ZIF socket does not require force.

CAUTION: A processor that is not properly seated can result in an intermittent connection or permanent damage to the processor and ZIF socket.

1. Follow the instructions in Before You Begin.
2. Align the pin-1 corner of the processor so that it points to the triangle on the ZIF socket, and insert the processor into the ZIF socket.

   When the processor is correctly seated, all four corners are aligned at the same height. If one or more corners of the processor are higher than the others, the processor is not seated correctly.

CAUTION: To prevent intermittent contact between the ZIF-socket cam screw and the processor when removing or replacing the processor, press to apply slight pressure to the center of the processor while turning the cam screw.

3. Tighten the ZIF socket by turning the cam screw clockwise to secure the processor to the system board.
4. Peel the backing off the thermal cooling pad and adhere the pad to the portion of the processor heat sink that covers the processor.
5. Replace the processor heat sink (see Replacing the Processor Heat Sink).
6. Replace the system board (see Replacing the System Board).
7. Replace the battery (see Replacing the Battery).
8. Update the BIOS using a flash BIOS-update program CD (see Flashing the BIOS).

Back to Contents Page

Back to Contents Page

Processor Heat Sink

Dell™ Studio 14z Service Manual

- Removing the Processor Heat Sink
- Replacing the Processor Heat Sink

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

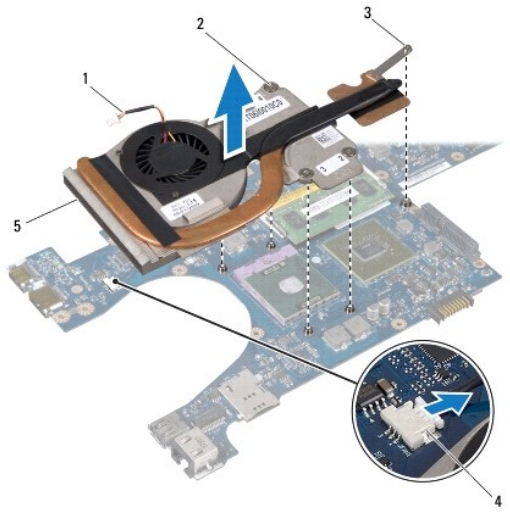
WARNING: If you remove the processor heat sink from the computer when the heat sink is hot, do not touch the metal housing of the heat sink.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the Processor Heat Sink

1. Follow the instructions in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the system board (see Removing the System Board).



1	fan cable	2	captive spring screws (4)
3	captive screw	4	fan connector
5	processor heat sink		

4. Turn the system board over and loosen the five (four captive spring screws and one captive screw) captive screws that secure the processor heat sink to the system board.
5. Disconnect the fan cable from the connector on the system board.
6. Lift the processor heat sink off the system board.

Replacing the Processor Heat Sink

WARNING: Before working inside your computer, follow the safety instructions that shipped with your computer.

CAUTION: To prevent static damage to components inside your computer, discharge static electricity from your body before you touch any of your computer's electronic components. You can do so by touching an unpainted metal surface.

NOTE: The original thermal pad can be reused if the original processor and heat sink are reinstalled together. If either the processor or heat sink is replaced, use the thermal pad provided in the kit to ensure that thermal conductivity is achieved.

NOTE: This procedure assumes that you have already removed the processor heat sink and are ready to replace it.

1. Follow the instructions in Before You Begin.
2. Peel the backing off the thermal cooling pad and adhere the pad to the portion of the heat sink that covers the processor.
3. Place the processor heat sink on the system board.
4. Tighten the five captive screws that secure the processor heat sink to the system board.
5. Connect the fan cable to the connector on the system board.
6. Replace the system board (see Replacing the System Board).
7. Replace the battery (see Replacing the Battery).

Back to Contents Page

Back to Contents Page

Display

Dell™ Studio 14z Service Manual

- Display Assembly
- Display Bezel
- Display Panel
- Display Panel Bracket

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

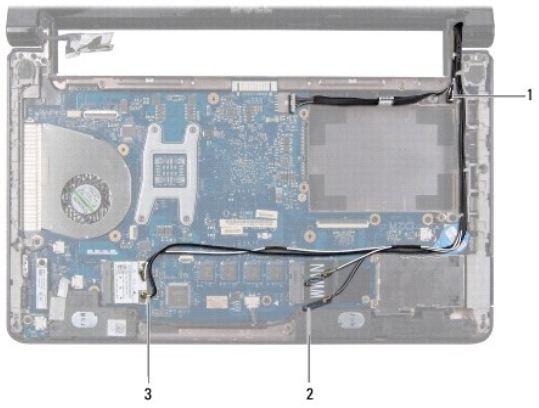
CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

CAUTION: To help prevent damage to the system board, you must remove the battery from the battery bay before you begin working inside the computer.

Display Assembly

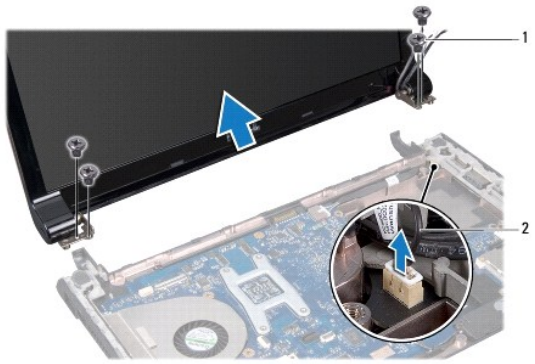
Removing the Display Assembly

1. Follow the instructions in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the keyboard (see Removing the Keyboard).
4. Remove the hard drive (see Removing the Hard Drive).
5. Remove the palm rest (see Removing the Palm Rest).



1	power button cable connector	2	mylar sleeves (2)
3	antenna cables (2)		

6. Make note of the cable routing and carefully dislodge the Mini-Card antenna cables from their routing guides.
7. Disconnect the Mini-Card cables from the Mini-Cards, if applicable (see Wireless Mini-Cards).



1	screws (4)	2	power button cable

8. Disconnect the power button cable from the connector on the system board.
9. Remove the four screws (two on each side) of the display assembly.
10. Lift the display assembly off the computer.

Replacing the Display Assembly

1. Follow the instructions in Before You Begin.
2. Place the display assembly in position and replace the four screws (two on each side) of the display assembly.
3. Connect the power button cable to the connector on the system board.
4. Route the Mini-Card antenna cables through the routing guides and if applicable, connect the cable connectors to the Mini-Cards on the system board.
5. Replace the palm rest (see Replacing the Palm Rest).
6. Replace the hard drive (see Replacing the Hard Drive).
7. Replace the keyboard (see Replacing the Keyboard).

△ **CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.**

8. Replace the battery (see Replacing the Battery).

Display Bezel

Removing the Display Bezel

△ **CAUTION: The display bezel is extremely fragile. Be careful when removing it to prevent damaging the bezel.**

1. Remove the display assembly (see Removing the Display Assembly).

1	display bezel

2. Using your fingertips, carefully pry up the inside edge of the display bezel.
3. Remove the display bezel.

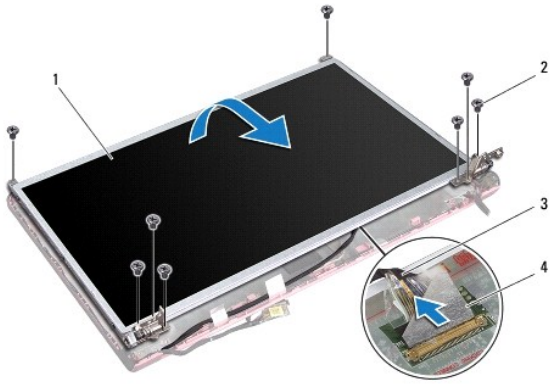
Replacing the Display Bezel

1. Realign the display bezel over the display panel, and gently snap into place.
2. Replace the display assembly (see Replacing the Display Assembly).

Display Panel

Removing the Display Panel

1. Remove the display assembly (see Removing the Display Assembly).
2. Remove the display bezel (see Removing the Display Bezel).



1	display panel	2	screws (8)
3	display panel cable	4	tape

3. Remove the eight screws securing the display panel to the display cover.
4. Turn the display panel over and place it on a clean surface.

5. Lift the tape that secures the display panel cable to the connector and remove the cable from the connector.
6. Lift the display panel off the display cover.

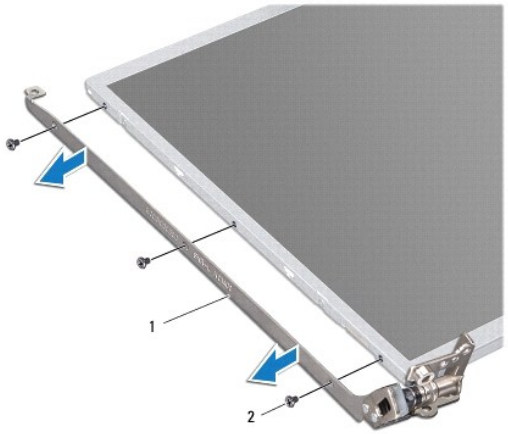
Replacing the Display Panel

1. Connect the display panel cable to the connector on the display panel and secure it with the tape.
2. Align the display panel with the display cover and replace the eight screws that secure the display panel to the display cover.
3. Replace the display bezel (see Replacing the Display Bezel).
4. Replace the display assembly (see Replacing the Display Assembly).

Display Panel Bracket

Removing the Display Panel Bracket

1. Remove the display assembly (see Removing the Display Assembly).
2. Remove the display bezel (see Removing the Display Bezel).
3. Remove the display panel (see Removing the Display Panel).



1	display panel bracket (1 left, 1 right)	2	screws (6 total; 3 on each side)

4. Remove the six screws (three on each side) that secure the display panel brackets to the display panel.

Replacing the Display Panel Bracket

1. Replace the six screws (three on each side) that secure the display panel brackets to the display panel.
2. Replace the display panel (see Replacing the Display Panel).
3. Replace the display bezel (see Replacing the Display Bezel).
4. Replace the display assembly (see Replacing the Display Assembly).

Back to Contents Page

Back to Contents Page

Fan

Dell™ Studio 14z Service Manual

- Removing the Fan
- Replacing the Fan

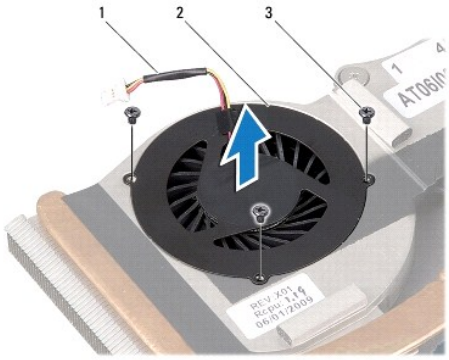
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the Fan

1. Follow the instructions in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the system board (see Removing the System Board).
4. Remove the processor heat sink (see Removing the Processor Heat Sink).
5. Remove the three screws that secure the fan to the processor heat sink assembly.



1	fan cable	2	fan
3	screws (3)		

6. Lift the fan, along with the cable, off the computer.

Replacing the Fan

WARNING: Before working inside your computer, follow the safety instructions that shipped with your computer.

CAUTION: To prevent static damage to components inside your computer, discharge static electricity from your body before you touch any of your computer's electronic components. You can do so by touching an unpainted metal surface.

NOTE: This procedure assumes that you have already removed the fan and are ready to replace it.

1. Follow the instructions in Before You Begin.
2. Place the fan, along with the cable, on the processor heat sink assembly.
3. Replace the three screws that secure the fan to the processor heat sink assembly.

4. Replace the processor heat sink (see Replacing the Processor Heat Sink).
5. Replace the system board (see Replacing the System Board).
6. Replace the battery (see Replacing the Battery).

Back to Contents Page

Back to Contents Page

Hall Sensor Board

Dell™ Studio 14z Service Manual

- Removing the Hall Sensor Board
- Replacing the Hall Sensor Board

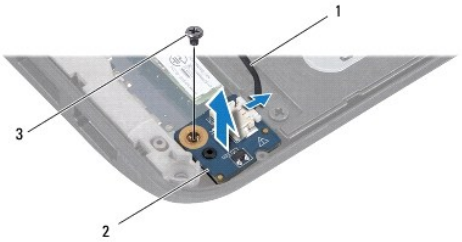
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the Hall Sensor Board

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the keyboard (see Removing the Keyboard).
4. Remove the hard drive (see Removing the Hard Drive).
5. Remove the palm rest (see Removing the Palm Rest).



1	hall sensor board cable	2	hall sensor board
3	screw		

6. Disconnect the hall sensor cable from the connector on the hall sensor board.
7. Remove the screw that secures the hall sensor board to the computer base.
8. Lift the hall sensor board out of the computer base.

Replacing the Hall Sensor Board

1. Follow the procedures in Before You Begin.
2. Place the hall sensor board on the computer base.
3. Connect the hall sensor cable to the connector on the hall sensor board.
4. Replace the screw that secures the hall sensor board to the computer base.
5. Replace the palm rest (see Replacing the Palm Rest).
6. Replace the hard drive (see Replacing the Hard Drive).

7. Replace the keyboard (see Replacing the Keyboard).

8. Replace the battery (see Replacing the Battery).

Back to Contents Page

Back to Contents Page

Hard Drive

Dell™ Studio 14z Service Manual

- Removing the Hard Drive
- Replacing the Hard Drive

WARNING: If you remove the hard drive from the computer when the drive is hot, do not touch the metal housing of the hard drive.

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To prevent data loss, turn off your computer (see Turning Off Your Computer) before removing the hard drive. Do not remove the hard drive while the computer is On or in Sleep state.

CAUTION: Hard drives are extremely fragile. Exercise care when handling the hard drive.

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

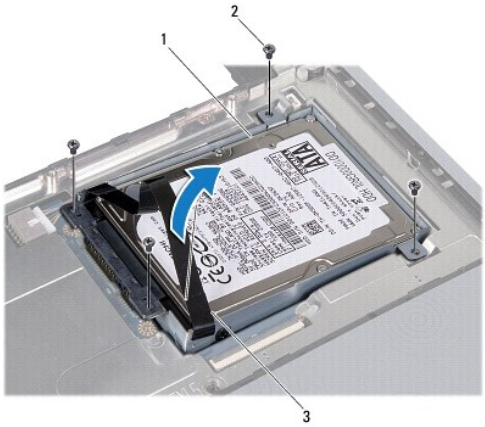
CAUTION: When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. Some cables have connectors with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

NOTE: Dell does not guarantee compatibility or provide support for hard drives from sources other than Dell.

NOTE: If you are installing a hard drive from a source other than Dell, you need to install an operating system, drivers, and utilities on the new hard drive (see the *Dell Technology Guide*).

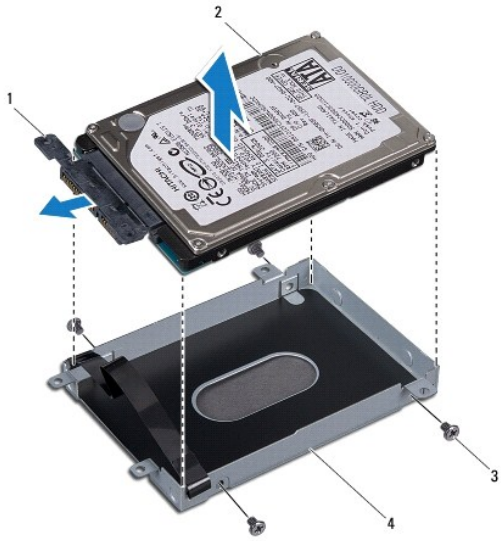
Removing the Hard Drive

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the keyboard (see Removing the Keyboard).
4. Remove the four screws securing the hard drive assembly to the computer base.



1	hard drive assembly	2	screws (4)
3	black pull-tab		

5. Pull the black pull-tab to lift the hard drive assembly out of the computer base and disconnect the interposer from the SATA connector on the system board.



1	interposer	2	hard drive
3	screws (4)	4	hard drive cage

6. Remove the four screws securing the hard drive cage to the hard drive.
7. Pull the interposer to disconnect it from the hard drive.
8. Lift the hard drive off the hard drive cage.

CAUTION: When the hard drive is not in the computer, store it in protective antistatic packaging (see "Protecting Against Electrostatic Discharge" in the safety instructions that shipped with your computer).

Replacing the Hard Drive

1. Follow the procedures in Before You Begin.
2. Remove the new drive from its packaging.

   Save the original packaging for storing or shipping the hard drive.
3. Place the hard drive in the hard drive cage.
4. Replace the four screws securing the hard drive cage to the hard drive.
5. Connect the interposer to the hard drive.
6. Place the hard drive assembly in the computer base.
7. Press the interposer firmly on to the SATA connector on the system board.
8. Replace the four screws securing the hard drive assembly to the computer base.
9. Replace the keyboard (see Replacing the Keyboard).

CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

10. Replace the battery (see Replacing the Battery).
11. Install the operating system for your computer, as needed (see the *Dell Technology Guide*).
12. Install the drivers and utilities for your computer, as needed (see the *Dell Technology Guide*).

Back to Contents Page

Back to Contents Page

I/O Board

Dell™ Studio 14z Service Manual

- Removing the I/O Board
- Replacing the I/O Board

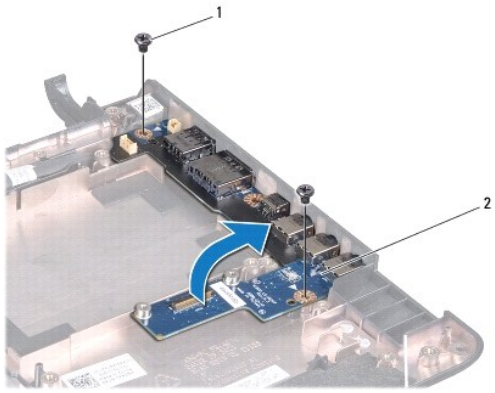
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the I/O Board

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the system board (see Removing the System Board).



1	screws (2)	2	I/O board

4. Remove the two screws that secure the I/O board to the computer base.
5. Lift the I/O board at an angle toward the side of the computer and out of the computer base.

Replacing the I/O Board

1. Follow the procedures in Before You Begin.
2. Place the I/O board on the computer base.
3. Replace the two screws that secure the I/O board to the computer base.
4. Replace the system board (see Replacing the System Board).
5. Replace the battery (see Replacing the Battery).

Back to Contents Page

Back to Contents Page

Keyboard

Dell™ Studio 14z Service Manual

- Removing the Keyboard
- Replacing the Keyboard

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

Removing the Keyboard

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Turn the computer over and open the display.
4. Ease the keyboard surround up using your fingers or a plastic scribe.

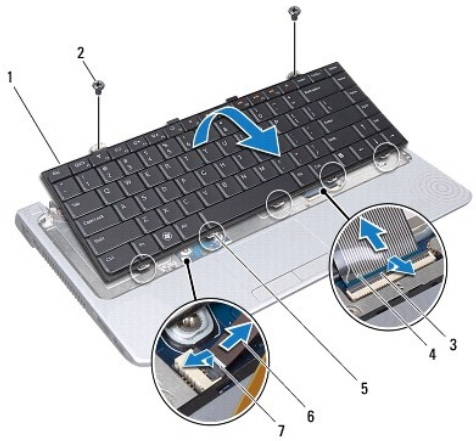
1	keyboard surround

5. Lift the keyboard surround off the computer.
6. Remove the two screws at the top of the keyboard.

CAUTION: The keycaps on the keyboard are fragile, easily dislodged, and time-consuming to replace. Be careful when removing and handling the keyboard.

7. Carefully slide the keyboard out of the computer and turn it over as indicated in the following illustration.

CAUTION: Be extremely careful when removing and handling the keyboard. Failure to do so could result in scratching the display panel.



1	keyboard	2	screws (2)
3	keyboard cable connector latch	4	keyboard cable
5	keyboard tabs (5)	6	keyboard backlight cable
7	keyboard backlight cable connector latch		

8. Release the keyboard cable connector latch and disconnect the keyboard cable from the system board connector.
9. For backlit keyboards, release the keyboard backlight cable connector latch to disconnect the keyboard backlight cable from the system board connector.
10. Lift the keyboard off the computer.

Replacing the Keyboard

1. Follow the procedures in Before You Begin.
2. For backlit keyboards, slide the keyboard backlight cable into the connector on the system board and pull down on the keyboard backlight cable connector latch to secure the keyboard backlight cable to the system board.
3. Slide the keyboard cable into the connector on the system board and pull down on the keyboard cable connector latch to secure the keyboard cable to the system board.
4. Align the tabs along the bottom of the keyboard with the slots of the palm rest and slide the keyboard tabs under the palm rest.

△ **CAUTION: The keycaps on the keyboard are fragile, easily dislodged, and time-consuming to replace. Be careful when removing and handling the keyboard.**

5. Replace the two screws at the top of the keyboard.
6. Align the tabs beneath the keyboard surround with the hooks on the palm rest and snap it into place.
7. Replace the battery (see Replacing the Battery).

Back to Contents Page

Back to Contents Page

Memory

Dell™ Studio 14z Service Manual

- Removing the Memory Module
- Replacing the Memory Module

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

CAUTION: To help prevent damage to the system board, remove the main battery (see Removing the Battery) before working inside the computer.

You can increase your computer memory by installing memory modules on the system board. See "Specifications" in your *Setup Guide* for information on the memory supported by your computer. Install only memory modules that are intended for your computer.

NOTE: Memory modules purchased from Dell are covered under your computer warranty.

Your computer has one user-accessible SODIMM socket that can be accessed from the bottom of the computer.

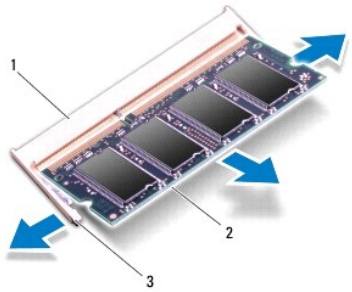
Removing the Memory Module

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Turn the computer over and loosen the captive screw on the memory module cover.
4. Remove the memory module cover.

1	captive screw	2	memory module cover

CAUTION: To prevent damage to the memory module connector, do not use tools to spread the memory module securing clips.

5. Use your fingertips to carefully spread apart the securing clips on each end of the memory module connector until the memory module pops up.
6. Remove the memory module from the memory module connector.

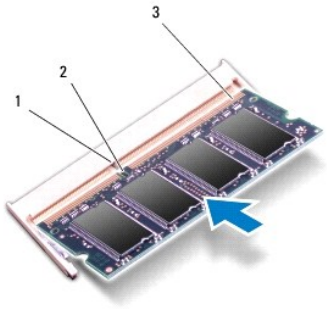


1	memory module connector	2	memory module
3	securing clips (2)		

Replacing the Memory Module

1. Follow the procedures in Before You Begin.
2. Align the notch in the memory module edge connector with the tab in the memory module connector slot.
3. Slide the module firmly into the slot at a 45-degree angle, and press the module down until it clicks into place. If you do not hear the click, remove the module and reinstall it.

NOTE: If the memory module is not installed properly, the computer may not boot.



1	tab	2	notch
3	memory module edge connector		

CAUTION: If the memory module cover is difficult to close, remove the module and reinstall it. Forcing the cover to close may damage your computer.

4. Replace the memory module cover.
5. Replace the battery (see Replacing the Battery), or connect the AC adapter to your computer and an electrical outlet.
6. Turn on the computer.

As the computer boots, it detects the additional memory and automatically updates the system configuration information.

To confirm the amount of memory installed in the computer, click **Start** → **Help and Support**→ **Dell System Information**.

Back to Contents Page

Back to Contents Page

Communication Cards

Dell™ Studio 14z Service Manual

- Subscriber Identity Module
- Wireless Mini-Cards

Subscriber Identity Module

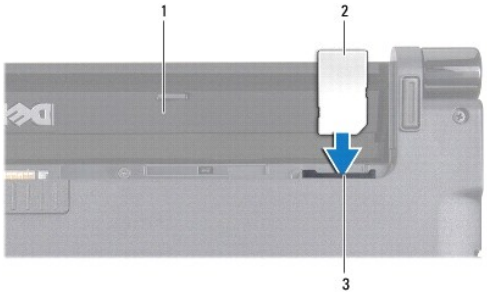
Subscriber Identity Modules (SIM) identify users uniquely through an International Mobile Subscriber Identity.

Installing the SIM

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

NOTE: Only GSM HSDPA type cards need a SIM. EVDO cards do not use a SIM.

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. In the battery bay, slide the SIM into the SIM compartment.



1	battery bay	2	SIM
3	SIM compartment		

Removing the SIM

1. Follow the procedures in Before You Begin.
2. Press the SIM into the SIM compartment to release it.
3. When it is partially ejected, remove the SIM from the battery bay.
4. Replace the battery (see Replacing the Battery).

Wireless Mini-Cards

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To help prevent damage to the system board, you must remove the battery from the battery bay before you begin working inside the computer.

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

NOTE: Dell does not guarantee compatibility or provide support for Mini-Cards from sources other than Dell.

If you ordered a wireless Mini-Card with your computer, the card is already installed.

Your computer supports two Mini-Card slots:

- one Full Mini-Card slot – for WWAN
- one Half Mini-Card slot – for WLAN

The types of Mini-Cards supported are:

- Wireless Local Area Network (WLAN) — Half Mini-Card
- Mobile broadband or Wireless Wide Area Network (WWAN) — Full Mini-Card
- Wireless Personal Area Network (WPAN) or Internal Card with Bluetooth® Wireless Technology — Full Mini-Card

NOTE: Your computer can only support one full Mini-Card and one half Mini-Card at a time.

NOTE: The WLAN slot supports a half Mini-Card.

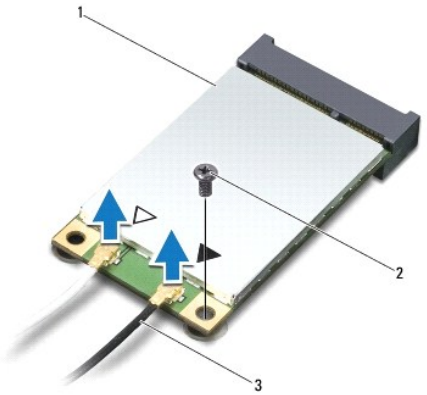
NOTE: Depending on the configuration of the system when it was sold, one or more of the Mini-Card slots may not have Mini-Cards installed in them.

Removing the Mini-Card

1. Follow the instructions in Before You Begin.
2. Remove the keyboard (see Removing the Keyboard).
3. Remove the hard drive (see Removing the Hard Drive).
4. Remove the palm rest (see Removing the Palm Rest).

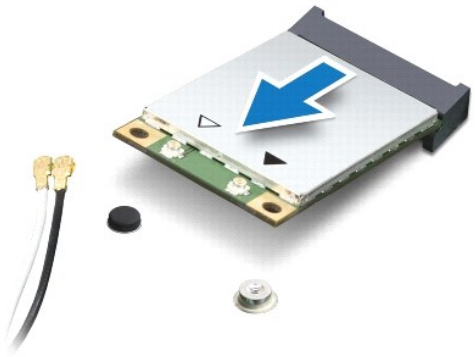
CAUTION: When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. Some cables have connectors with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

5. Disconnect the antenna cables from the Mini-Card.



1	Mini-Card	2	screw
3	antenna cables (2)		

6. Remove the screw that secures the Mini-Card to the system board.
7. Lift the Mini-Card out of the system board connector.



CAUTION: When the Mini-Card is not in the computer, store it in protective antistatic packaging. For more information, see "Protecting Against Electrostatic Discharge" in the safety information that shipped with your computer.

Replacing the Mini-Card

1. Follow the instructions in Before You Begin.
2. Remove the new Mini-Card from its packaging.

CAUTION: Use firm and even pressure to slide the card into place. If you use excessive force, you may damage the connector.

3. Insert the Mini-Card connector at a 45-degree angle into the appropriate system board connector. For example, the WLAN card connector is labeled **WLAN** and so on.
4. Press the other end of the Mini-Card down into the slot on the system board.
5. Replace the screw that secures the Mini-Card to the system board.
6. Connect the appropriate antenna cables to the Mini-Card you are installing. The following table provides the antenna cable color scheme for each Mini-Card supported by your computer.

Connectors on the Mini-Card	Antenna Cable Color Scheme
WWAN (2 antenna cables)	
Main WWAN (white triangle)	white with gray stripe
Auxiliary WWAN (black triangle)	black with gray stripe
WLAN (2 or 3 antenna cables)	
Main WLAN (white triangle)	white
Auxiliary WLAN (black triangle)	black
MIMO WLAN (*gray triangle)	gray
* The MIMO WLAN is optional and may not be available in all computers.	

NOTE: The gray antenna cable may not be available in all computers. The presence of the gray antenna cable in your Mini-Card compartment depends upon the type of display.

7. Secure the unused antenna cables in the protective mylar sleeve.
8. Replace the hard drive (see Replacing the Hard Drive).
9. Replace the keyboard (see Replacing the Keyboard).
10. Replace the palm rest (see Replacing the Palm Rest).
11. Replace the battery (see Replacing the Battery).
12. Install the drivers and utilities for your computer, as required. For more information, see the *Dell Technology Guide*.

NOTE: If you are installing a communication card from a source other than Dell, you must install the appropriate drivers and utilities. For more generic driver information, see the *Dell Technology Guide*.

Back to Contents Page

Back to Contents Page

Palm Rest

Dell™ Studio 14z Service Manual

- Removing the Palm Rest
- Replacing the Palm Rest

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

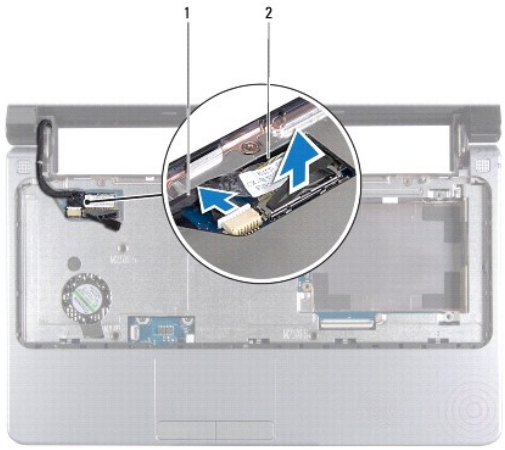
CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

CAUTION: To help prevent damage to the system board, you must remove the battery from the battery bay before you begin working inside the computer.

Removing the Palm Rest

1. Follow the instructions in Before You Begin.
2. Remove any installed cards from the ExpressCard slot or the 8-in-1 Media Card Reader.
3. Remove the battery (see Removing the Battery).
4. Remove the keyboard (see Removing the Keyboard).
5. Remove the hard drive (see Removing the Hard Drive).

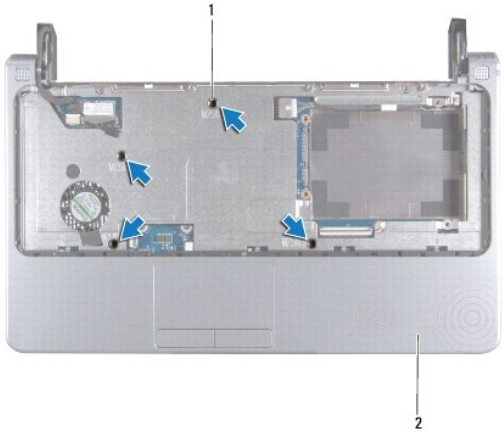
CAUTION: Pull on the plastic tab on top of the connectors to avoid damaging the connectors.



1	camera cable	2	display cable

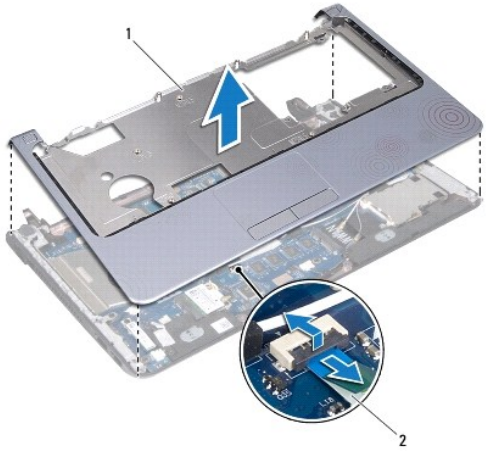
6. Disconnect the camera cable from the connector on the system board, and pull the display cable pull-tab to disconnect the display cable from the connector on the system board.

7. Turn the computer upside down and remove the 11 screws from the computer base.
8. Turn the computer top side up.



1	screws (4)	2	palm rest

9. Remove the four screws from the top of the palm rest.
10. Starting at the back center of the palm rest, use your fingers to gently ease the palm rest from the computer base by lifting the inside of the palm rest while pulling on the outside.



1	palm rest	2	touch pad cable

CAUTION: Carefully separate the palm rest from the computer base to avoid damage to the palm rest.

11. Carefully lift the palm rest and disconnect the touch pad cable from the connector on the system board.
12. Lift the palm rest away off the computer base.

Replacing the Palm Rest

1. Follow the instructions in Before You Begin.
2. Connect the touch pad cable to the connector on the system board.
3. Align the palm rest with the computer base and gently snap the palm rest into place.
4. Connect the display cable and camera cable to the respective connectors on the system board.
5. Replace the four screws on the top of the palm rest.
6. Turn the computer upside down and replace the 11 screws on the computer base.
7. Replace the hard drive (see Replacing the Hard Drive).
8. Replace the keyboard (see Replacing the Keyboard).
9. Replace the battery (see Replacing the Battery).
10. Replace any removed cards in the ExpressCard slot or 8-in-1 Media Card Reader.

Back to Contents Page

Back to Contents Page

AC Adapter Connector

Dell™ Studio 14z Service Manual

- Removing the AC Adapter Connector
- Replacing the AC Adapter Connector

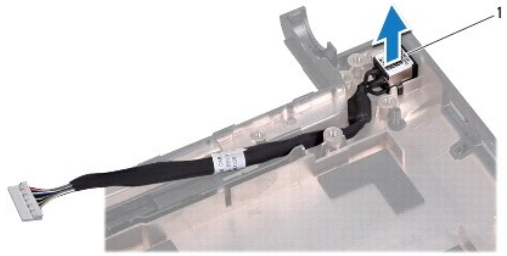
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the AC Adapter Connector

1. Follow the procedures in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the system board (see Removing the System Board).
4. Make note of the AC adapter cable routing.
5. Lift the AC adapter connector off the computer base.



1	AC adapter connector

Replacing the AC Adapter Connector

1. Follow the procedures in Before You Begin.
2. Place the AC adapter connector on the computer base.
3. Route the AC adapter cable through the routing guides.
4. Replace the system board (see Replacing the System Board).
5. Replace the battery (see Replacing the Battery).

CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

Back to Contents Page

Back to Contents Page

Power Button

Dell™ Studio 14z Service Manual

- Removing the Power Button Board
- Replacing the Power Button Board

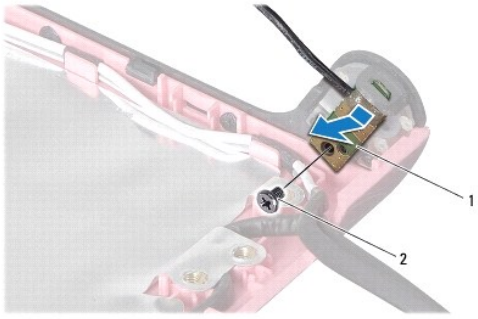
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the Power Button Board

1. Follow the instructions in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the keyboard (see Removing the Keyboard).
4. Remove the hard drive (see Removing the Hard Drive).
5. Remove the palm rest (see Removing the Palm Rest).
6. Remove the display assembly (see Removing the Display Assembly).
7. Remove the display bezel (see Removing the Display Bezel).
8. Remove the display panel (see Removing the Display Panel).
9. Remove the screw that secures the power button board to the display cover.



1	power button board	2	screw

10. Gently remove the power button board to release it from the securing tab.

Replacing the Power Button Board

1. Follow the instructions in Before You Begin.
2. Replace the power button board in the securing tab on the display cover.

3. Replace the screw that secures the power button board to the display cover.
4. Replace the display panel (see Replacing the Display Panel).
5. Replace the display bezel (see Replacing the Display Bezel).
6. Replace the display assembly (see Replacing the Display Assembly).
7. Replace the palm rest (see Replacing the Palm Rest).
8. Replace the hard drive (see Replacing the Hard Drive).
9. Replace the keyboard (see Replacing the Keyboard).
10. Replace the battery (see Replacing the Battery).

Back to Contents Page

Back to Contents Page

Speakers

Dell™ Studio 14z Service Manual

- Removing the Speakers
- Replacing the Speakers

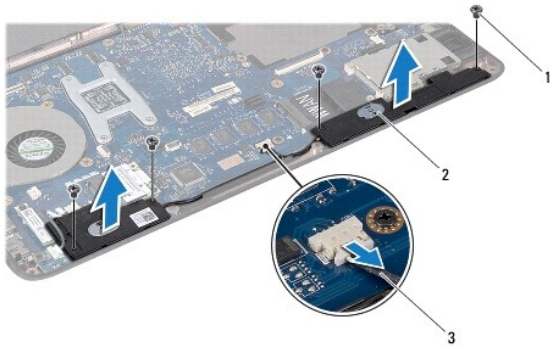
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the Speakers

1. Follow the instructions in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the keyboard (see Removing the Keyboard).
4. Remove the hard drive (see Removing the Hard Drive).
5. Remove the palm rest (see Removing the Palm Rest).
6. Remove the four screws (two on each speaker) that secure the speakers to the computer base.



1	screws (4)	2	speakers (2)
3	speaker cable		

7. Make note of the speaker cable routing.
8. Disconnect the speaker cable from its connector on the system board.
9. Lift the speakers off the computer base.

Replacing the Speakers

1. Follow the procedures in Before You Begin.
2. Replace the speakers on the computer base and route the speaker cables along the routing guides.
3. Connect the speaker cable to its connector on the system board.

4. Replace the speaker screws (two on each speaker) that secure the speakers to the computer base.
5. Replace the palm rest (see Replacing the Palm Rest).
6. Replace the hard drive (see Replacing the Hard Drive).
7. Replace the keyboard (see Replacing the Keyboard).
8. Replace the battery (see Replacing the Battery).

Back to Contents Page

Back to Contents Page

System Board

Dell™ Studio 14z Service Manual

- Removing the System Board
- Replacing the System Board

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

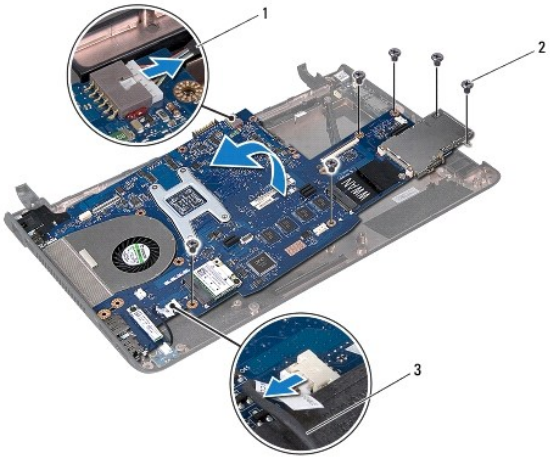
CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

The system board's BIOS chip contains the Service Tag, which is also visible on a barcode label on the bottom of the computer. The replacement kit for the system board includes a CD that provides a utility for transferring the Service Tag to the replacement system board.

CAUTION: Handle components and cards by their edges, and avoid touching pins and contacts.

Removing the System Board

1. Follow the instructions in Before You Begin.
2. Remove any installed cards from the ExpressCard slot or the 8-in-1 Media Card Reader.
3. Remove the battery (see Removing the Battery).
4. Remove installed memory modules (see Removing the Memory Module).
5. Remove the keyboard (see Removing the Keyboard).
6. Remove the hard drive (see Removing the Hard Drive).
7. Remove the palm rest (see Removing the Palm Rest).
8. Remove any installed Mini-Cards (see Communication Cards).
9. Remove the display assembly (see Removing the Display Assembly).
10. Remove the bluetooth card (see Removing the Bluetooth Card).
11. Remove the speakers (see Removing the Speakers).
12. Remove the tweeters (see Removing the Tweeters).
13. Remove the coin-cell battery (see Removing the Coin-Cell Battery).
14. Disconnect the AC adapter cable from the connector on the system board.
15. Disconnect the hall sensor cable from the connector on the system board.



1	AC adapter cable	2	screws (6)
3	hall sensor cable		

16. Remove the six screws that secure the system board to the computer base.
17. Lift the system board at an angle toward the side of the computer and out of the computer base.

Replacing the System Board

1. Follow the instructions in Before You Begin.
2. Place the system board on the computer base.
3. Replace the six screws that secure the system board to the computer base.
4. Connect the AC adapter cable to the connector on the system board.
5. Connect the hall sensor cable to the connector on the system board.
6. Replace the coin-cell battery (see Replacing the Coin-Cell Battery).
7. Replace the tweeters (see Replacing the Tweeters).
8. Replace the speakers (see Replacing the Speakers).
9. Replace the bluetooth card (see Replacing the Bluetooth Card).
10. Replace the display assembly (see Replacing the Display Assembly).
11. Replace the Mini-Cards, if applicable (see Communication Cards).
12. Replace the palm rest (see Replacing the Palm Rest).
13. Replace the hard drive (see Replacing the Hard Drive).
14. Replace the keyboard (see Replacing the Keyboard).
15. Replace the memory modules (see Replacing the Memory Module).
16. Replace the battery (see Replacing the Battery).
17. Reinstall any removed cards in the ExpressCard slot or 8-in-1 Media Card Reader.

CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

18. Turn on the computer.

NOTE: After you have replaced the system board, enter the computer Service Tag into the BIOS of the replacement system board.

19. Insert the BIOS CD that accompanied the replacement system board into the appropriate drive. Follow the instructions that appear on the screen.

Back to Contents Page

Back to Contents Page

Dell™ Studio 14z Service Manual

NOTE: A NOTE indicates important information that helps you make better use of your computer.

CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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Model PP40L

April 2009 Rev. A00

Back to Contents Page

Back to Contents Page

Tweeters

Dell™ Studio 14z Service Manual

- Removing the Tweeters
- Replacing the Tweeters

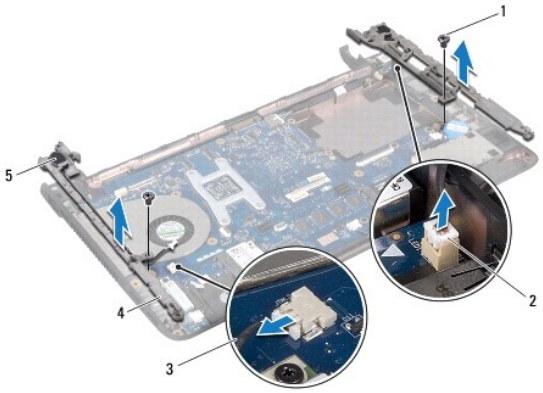
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).

CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

Removing the Tweeters

1. Follow the instructions in Before You Begin.
2. Remove the battery (see Removing the Battery).
3. Remove the keyboard (see Removing the Keyboard).
4. Remove the hard drive (see Removing the Hard Drive).
5. Remove the palm rest (see Removing the Palm Rest).
6. Remove the display assembly (see Removing the Display Assembly).
7. Remove the two screws (one on each tweeter) that secure the tweeter frames to the system board.



1	screws (2)	2	tweeter connectors (2)
3	tweeter cables (2)	4	tweeter frames (1 left, 1 right)
5	tweeters (2 total; one on each frame)		

8. Replace the hard drive (see Replacing the Hard Drive).
9. Remove the tweeter cables from their connectors on the system board.
10. Remove the tweeter frames containing the tweeters.

Replacing the Tweeters

1. Follow the procedures in Before You Begin.

2. Connect the tweeter cables to the connectors on the system board.
3. Replace the tweeter frames containing the tweeters on the system board.
4. Replace the two screws (one on each tweeter) that secure the tweeter frames to the system board.
5. Replace the display assembly (see Replacing the Display Assembly).
6. Replace the palm rest (see Replacing the Palm Rest).
7. Replace the hard drive (see Replacing the Hard Drive).
8. Replace the keyboard (see Replacing the Keyboard).
9. Replace the battery (see Replacing the Battery).

Back to Contents Page