

Dell™ Inspiron™ 9200 Service Manual

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Notes, Notices, and Cautions

-  **NOTE:** A NOTE indicates important information that helps you make better use of your computer.
-  **NOTICE:** A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.
-  **CAUTION:** A CAUTION indicates a potential for property damage, personal injury, or death.

Abbreviations and Acronyms

For a complete list of abbreviations and acronyms, see the *Dell™ Inspiron™ Help* file. To access the help file, see the *Owner's Manual* for your Dell computer.

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 PP14L

December 2004 Rev. A01

Hard Drive

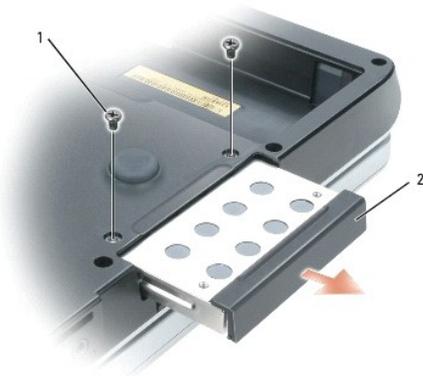
Dell™ Inspiron™ 9200

- [Removing the Hard Drive](#)
- [Replacing the Hard Drive](#)
- [Returning a Hard Drive to Dell](#)

- ⚠ **CAUTION:** If you remove the hard drive from the computer when the drive is hot, *do not touch* the metal housing of the hard drive.
 - ⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.
 - ➡ **NOTICE:** To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.
 - ➡ **NOTICE:** To prevent data loss, turn off your computer before removing the hard drive. Do not remove the hard drive while the computer is on, in standby mode, or in hibernate mode.
 - ➡ **NOTICE:** Hard drives are extremely fragile; even a slight bump can damage the drive.
 - 🔧 **NOTE:** Dell does not guarantee compatibility or provide support for hard drives from sources other than Dell.
-

Removing the Hard Drive

1. Follow the instructions in "[Before Working Inside Your Computer](#)."
2. Turn over the computer and remove the two M3 x 3-mm screws.



1	M3 x 3-mm screws (2)
2	hard drive

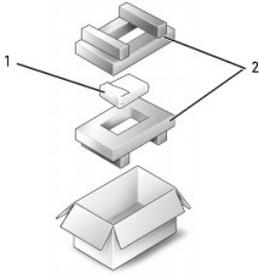
- ➡ **NOTICE:** When the hard drive is not in the computer, store it in protective antistatic packaging. See "Protecting Against Electrostatic Discharge" in your *Owner's Manual*.
3. Slide the hard drive out of the computer.
- ➡ **NOTICE:** Use firm and even pressure to slide the drive into place. If you use excessive force, you may damage the connector.
-

Replacing the Hard Drive

1. Slide the drive into the bay until it is fully seated.
2. Replace and tighten the screws.
3. Reinstall Windows. For instructions, see "Reinstalling Microsoft® Windows® XP" in your *Owner's Manual*.
4. Reinstall Drivers. For instructions, see "Reinstalling Drivers and Utilities" in your *Owner's Manual*.

Returning a Hard Drive to Dell

Return your old hard drive to Dell in its original or comparable foam packaging. Otherwise, the hard drive may be damaged in transit.



1	hard drive
2	foam packaging

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Video Card and Thermal Cooling Assembly

Dell™ Inspiron™ 9200

- [Removing the Video Card and Thermal Cooling Assembly](#)
- [Replacing the Video Card and Thermal Cooling Assembly](#)

Removing the Video Card and Thermal Cooling Assembly

⚠ CAUTION: Before performing the following procedures, read the safety instructions in your *Product Information Guide*.

🔌 NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

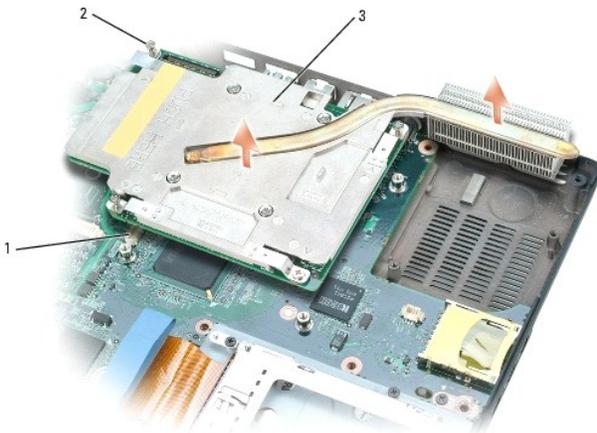
🔧 NOTE: If you ordered a video card with your computer, it is already installed.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."

1. Remove the [hinge cover](#).
2. Remove the [keyboard](#).
3. Remove the [display assembly](#).
4. Remove the [palm rest](#).

🔧 NOTE: The video card thermal cooling (heat sink) is part of the video card assembly.

5. Loosen the four captive screws from the video card and thermal cooling assembly.
6. Gently pull up the video card and thermal cooling assembly from the system board.



1	system board connector
2	M2.5 x 6-mm screws (4)
3	video card/thermal cooling assembly

Replacing the Video Card and Thermal Cooling Assembly

1. Carefully re-align the video card over the connector on the system board and press down.

🔧 NOTE: The video card and thermal cooling assembly is labeled "PRESS HERE."



2. Tighten the four captive screws on the video card and thermal cooling assembly.

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Microprocessor Thermal-Cooling Assembly

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- [Removing the Microprocessor Thermal-Cooling Assembly](#)
- [Replacing the Microprocessor Thermal-Cooling Assembly](#)

Removing the Microprocessor Thermal-Cooling Assembly

- ⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.
- ➡ **NOTICE:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.
- ➡ **NOTICE:** To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."
2. Remove the [hinge cover](#).
3. Remove the [keyboard](#).
4. Remove the [display assembly](#).
5. Remove the [palm rest](#).
6. Loosen in consecutive order the four captive screws, labeled "1" through "4," that secure the microprocessor thermal-cooling assembly to the system board.
7. Lift up the microprocessor thermal-cooling assembly and remove it from the system board.



1	microprocessor thermal-cooling assembly
2	captive screws (4)

Replacing the Microprocessor Thermal-Cooling Assembly

1. Evenly apply thermal grease to the top surface of the microprocessor.
2. Place the microprocessor thermal-cooling assembly over the microprocessor.
3. Tighten the four captive screws, labeled "1" through "4," in consecutive order.

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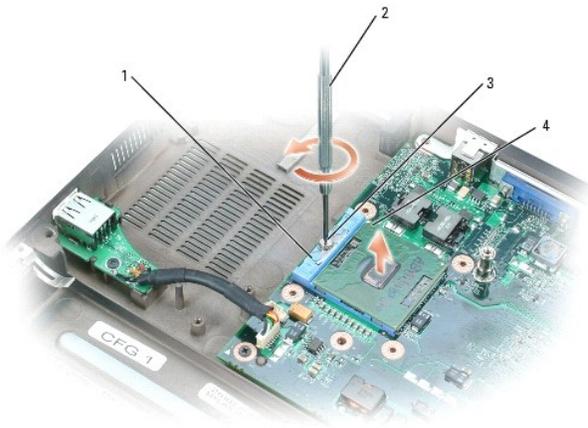
Microprocessor Module

Dell™ Inspiron™ 9200

- [Removing the Microprocessor Module](#)
- [Replacing the Microprocessor Module](#)

Removing the Microprocessor Module

- ⚠ CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.
- ➡ **NOTICE:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.
 - ➡ **NOTICE:** Do not touch the processor die. Press and hold the microprocessor down on the substrate on which the die is mounted while turning the cam screw to prevent intermittent contact between the cam screw and microprocessor.
 - ➡ **NOTICE:** To avoid damage to the microprocessor, hold the screwdriver so that it is perpendicular to the microprocessor when turning the cam screw.
 - ➡ **NOTICE:** To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.
1. Follow the instructions in "[Before Working Inside Your Computer](#)."
 2. Remove the [hinge cover](#).
 3. Remove the [keyboard](#).
 4. Remove the [display assembly](#).
 5. Remove the [palm rest](#).
 - ➡ **NOTICE:** To ensure maximum cooling for the microprocessor, do not touch the heat transfer areas on the microprocessor thermal-cooling assembly. The oils in your skin reduce the heat transfer capability of the thermal pads.
 6. Remove the [microprocessor thermal-cooling assembly](#).
 - ➡ **NOTICE:** When removing the microprocessor module, pull the module straight up. Be careful not to bend the pins on the microprocessor module.
 7. 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.



1	ZIF socket
2	screwdriver (perpendicular to microprocessor)
3	ZIF-socket cam screw
4	pin-1 corner

 **NOTE:** The ZIF-socket cam screw secures the microprocessor to the system board. Take note of the arrow on the ZIF-socket cam screw, which indicates the direction to turn the cam screw.

8. Lift the microprocessor module from the ZIF socket.
-

Replacing the Microprocessor Module

 **NOTICE:** Ensure that the cam lock is in the fully open position before seating the microprocessor module. Seating the microprocessor module properly in the ZIF socket does not require force.

 **NOTICE:** A microprocessor module that is not properly seated can result in an intermittent connection or permanent damage to the microprocessor and ZIF socket.

1. Align the pin-1 corner of the microprocessor module with the pin-1 corner of the ZIF socket, and insert the microprocessor module.

 **NOTE:** The pin-1 corner of the microprocessor module has a triangle that aligns with the triangle on the pin-1 corner of the ZIF socket.

 **NOTICE:** You must position the microprocessor module correctly in the ZIF socket to avoid permanent damage to the module and the socket.

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

2. Tighten the ZIF socket by turning the cam screw clockwise to secure the microprocessor module to the system board.
 3. Perform the steps in "Removing the Microprocessor Module" in reverse order, beginning with [step 6](#).
 4. Update the BIOS using a flash BIOS update program floppy disk or CD. For instructions on how to flash the BIOS, see "[Flashing the BIOS](#)."
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System Board

Dell™ Inspiron™ 9200

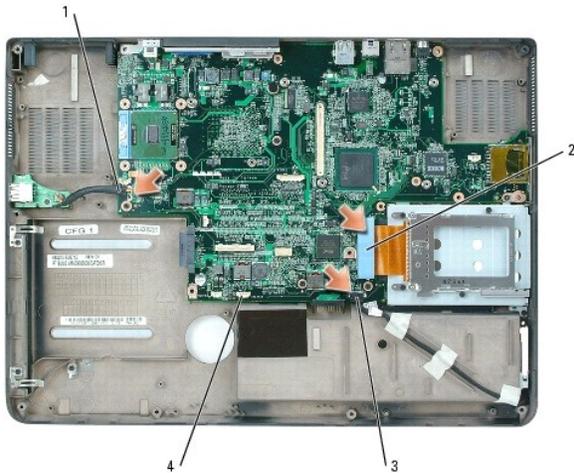
- [Removing the System Board](#)
- [Replacing the System Board](#)

Removing the System Board

- ⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.
- 👉 **NOTICE:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.
- 👉 **NOTICE:** To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

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.

1. Follow the instructions in "[Before Working Inside Your Computer.](#)"
2. Remove the [hinge cover](#).
3. Remove the [keyboard](#).
4. Remove the [display assembly](#).
5. Remove the [palm rest](#).
6. Remove the speaker connector from the system board.
7. Remove the USB connector from the system board.
8. Remove the hard drive bay connector from the system board.



1	USB connector
2	PC Card connector
3	bluetooth cable connector
4	speaker connector

9. If applicable, remove the video card.

🔧 **NOTE:** It is not necessary but highly [recommended that you](#) remove the [system fans](#) to allow easier access to the system board.

10. Remove the [microprocessor thermal-cooling assembly](#).
11. Remove the [microprocessor](#).
12. Remove the five M2.5 x 5-mm screws from the system board.



1 system board M2.5 x 5-mm screws (5)

13. With the front of the computer facing you, lift the system board assembly from the right side, then lift the left side and draw the system board assembly out of the computer.



1 system board assembly

Replacing the System Board

1. Perform all of the steps in "[Removing the System Board](#)" in reverse order.

➡ **NOTICE:** 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.

2. Turn on the computer.

🔧 **NOTE:** After replacing the system board, enter the computer Service Tag sequence into the BIOS of the replacement system board.

3. Insert the floppy disk or CD that accompanied the replacement system board into the appropriate drive. Follow the instructions that appear on the screen.

USB Port Board

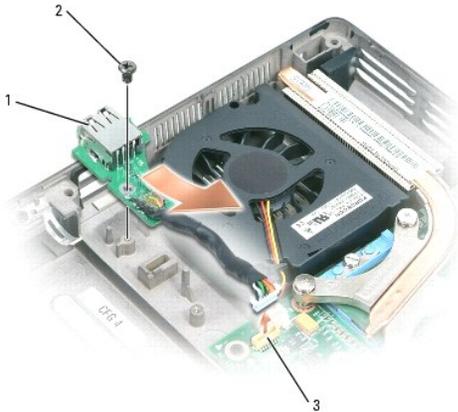
Dell™ Inspiron™ 9200

- [Removing the USB Port Board](#)
- [Replacing the USB Port Board](#)

Removing the USB Port Board

- ⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.
- 🔌 **NOTICE:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.
- 🔌 **NOTICE:** To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."
2. Remove the [hinge cover](#).
3. Remove the [keyboard](#).
4. Remove the [display assembly](#).
5. Remove the [palm rest](#).
6. Remove the connector from the system board, then remove the M2.5 x 5-mm screw and lift the board up and out of the computer.



1	USB port board
2	M2.5 x 5-mm screw (1)
3	system board connector

Replacing the USB Port Board

1. Insert the USB port board under the small lip on the bottom panel at the back of the board and over the pin on the front side of the board.
2. Reinstall the M2.5 x 5-mm screw securing the board.
3. Insert the connector into the system board.
4. Perform the steps to Remove the USB port board in reverse.
5. Replace the [palm rest](#).

6. Replace the [display assembly](#).
7. Replace the [keyboard](#).
8. Replace the [hinge cover](#).
9. Replace the battery and other items removed in "[Before Working Inside Your Computer](#)."

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Battery Latch Assembly

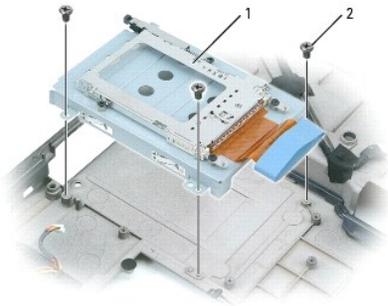
Dell™ Inspiron™ 9200

- [Removing the Battery Latch Assembly](#)
- [Replacing the Battery Latch Assembly](#)

Removing the Battery Latch Assembly

- ⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.
- 🔌 **NOTICE:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.
- 🔌 **NOTICE:** To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

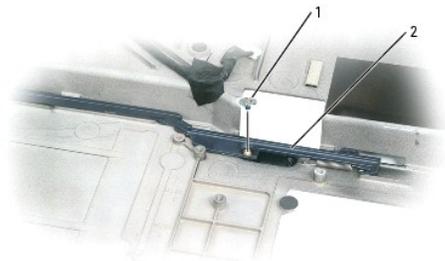
1. Follow the instructions in "[Before Working Inside Your Computer](#)."
2. Remove the [hinge cover](#).
3. Remove the [keyboard](#).
4. Remove the [display assembly](#).
5. Remove the [palm rest](#).
6. Remove the [system board](#).
7. Remove the hard drive bay by removing the three M2 x 3-mm screws and lifting out the bay.



1	hard drive bay
2	M2 x 3-mm screws (3)

8. Remove the screw in the battery latch assembly.

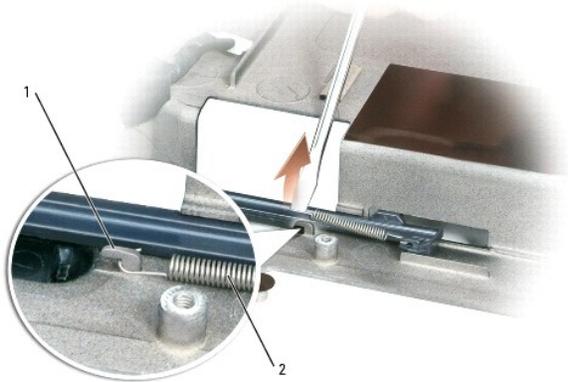
When you remove the screw, the battery latch release on the bottom of the computer will also be removed.



1	screw
---	-------

2 battery latch assembly

9. Remove the spring from the hook on the bottom panel by lifting it up and away with a screwdriver or a plastic scribe.



1	hook
2	spring

10. Remove the plastic battery latch assembly by twisting the assembly slightly and lifting it out of the channel and away from the bottom panel.



1 battery latch assembly

Replacing the Battery Latch Assembly

1. Insert the plastic latch assembly into the channel on the bottom panel and press into place.
2. Hook the spring over the hook on the bottom panel using a small screw driver or plastic scribe.
3. Place the battery latch release under the bottom panel of the computer and line it up with the hole in the panel, then replace the screw in the assembly.

Ensure that the newly installed latch moves smoothly and freely when pushed and released.

4. Replace the hard drive bay and reinsert the three M2 x 3-mm screws.
5. Replace the [system board](#).
6. Replace the other components removed in "[Removing the Battery Latch Assembly](#)" in reverse order.

Speakers

Dell™ Inspiron™ 9200

- [Removing the Speakers](#)
- [Replacing the Speakers](#)

Removing the Speakers

⚠ CAUTION: Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.

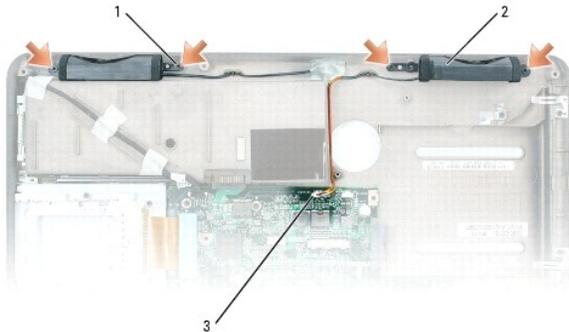
➡ NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

➡ NOTICE: To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."
2. Remove the [hinge cover](#).
3. Remove the [keyboard](#).
4. Remove the [display assembly](#).
5. Remove the [palm rest](#).

➡ NOTICE: Handle the speakers with care to avoid damaging them.

6. Remove the four M2.5 x 6-mm screws from the speakers (two on each speaker).
7. Gently remove the speakers.
8. Disconnect the speaker connector from the system board connector.



1	M2.5 x 6-mm screws (4)
2	speakers
3	speaker connector

Replacing the Speakers

1. Connect the speaker connector to the system board connector.
2. Gently align the speakers on the speaker connector.
3. Replace the four M2.5 x 6-mm screws to secure the speakers in place (two on each speaker).

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Subwoofer

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- [Removing the Subwoofer](#)
- [Replacing the Subwoofer](#)

Removing the Subwoofer

⚠ CAUTION: Before performing the following procedures, read the safety instructions in your *Product Information Guide*.

🔌 NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

If you ordered a subwoofer with your computer, it is already installed. To remove and replace a subwoofer:

1. Follow the instructions in "[Before Working Inside Your Computer](#)."
1. Remove the [hinge cover](#).
2. Remove the [keyboard](#).
3. Remove the [display assembly](#).
4. Remove the [palm rest](#).
5. Loosen the two captive screws that secure the subwoofer in place.



1	subwoofer
2	subwoofer cable connector
3	system board connector

6. Remove the subwoofer connector from the system board.
7. Connect the cable to the subwoofer connector.
8. Replace the battery in the battery bay.

Replacing the Subwoofer

1. Reconnect the subwoofer cable to the system board.

2. Place the subwoofer onto the system board.
 3. Tighten the two captive screws that secure the subwoofer in place.
-

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Flashing the BIOS

Dell™ Inspiron™ 9200

➡ **NOTICE:** Plug the AC adapter into a known good power source to prevent a loss of power. Failure to do so may cause system damage.

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

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

2. Insert the BIOS update program CD, and turn on the computer.

➡ **NOTICE:** Do not interrupt this process once it begins. Doing so may cause system damage.

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 <Alt> and <f> to reset the computer defaults.
5. Press <Esc>, select **Save changes and reboot**, and press <Enter> to save configuration changes.
6. Remove the flash BIOS update program CD from the drive and restart the computer.

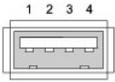
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Pin Assignments for I/O Connectors

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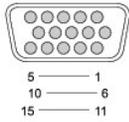
- [USB Connector](#)
 - [Video Connector](#)
 - [S-Video TV-Out Connector](#)
 - [IEEE 1394 Connector](#)
-

USB Connector



Pin	Signal
1	USB5V+
2	USBP-
3	USBP+
4	GND

Video Connector



Pin	Signal	Pin	Signal
1	CRT_R	9	5V+
2	CRT_G	10	GND
3	CRT_B	11	MONITOR_DETECT-
4	NC	12	DDC_DATA
5	GND	13	CRT_HS
6	GND	14	CRT_VS
7	GND	15	DDC_CLK
8	GND		

S-Video TV-Out Connector



S-Video	
Pin	Signal
1	GND

2	GND
3	DLUMA-L
4	DCRMA-L

Composite Video	
Pin	Signal
5	NC
6	DCMPS-L
7	GND

IEEE 1394 Connector

1 2 3 4



Pin	Signal
1	TPB-
2	TPB+
3	TPA-
4	TPA+

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Before You Begin

Dell™ Inspiron™ 9200

- [Recommended Tools](#)
- [Turning Off Your Computer](#)
- [Before Working Inside Your Computer](#)
- [Computer Orientation](#)
- [Screw Identification](#)

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

- 1 You have performed the steps in "[Turning Off Your Computer](#)" and "[Before Working Inside Your Computer](#)."
 - 1 You have read the safety information in the Dell™ *Product Information Guide*.
 - 1 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:

- 1 Small flat-blade screwdriver
 - 1 Phillips screwdriver
 - 1 Small plastic scribe
 - 1 Flash BIOS update program floppy or CD
-

Turning Off Your Computer

🔔 **NOTICE:** To avoid losing data, save and close any open files and exit any open programs before you turn off your computer.

1. Shut down the operating system:
 - a. Save and close any open files, exit any open programs, click the **Start** button, and then click **Turn Off Computer**.
 - b. In the **Turn off computer** window, click **Turn off**.

The computer turns off after the operating system shutdown process finishes.

2. 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 4 seconds.
-

Before Working Inside Your Computer

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

⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

🔔 **NOTICE:** 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.

🔔 **NOTICE:** 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.

🔔 **NOTICE:** When you disconnect a cable, pull on its connector or on its strain-relief loop, not on the cable itself. Some cables have a connector 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.

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

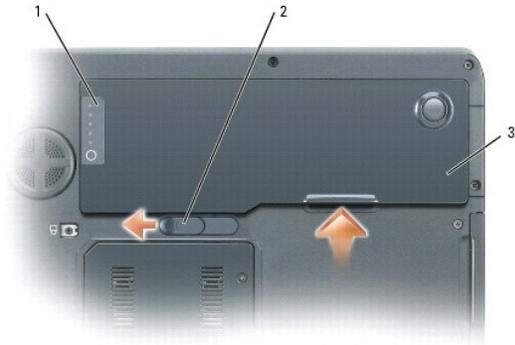
1. Ensure that the work surface is flat and clean to prevent the computer cover from being scratched.
2. [Turn off your computer](#).

🔔 **NOTICE:** To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network device.

3. Disconnect any telephone or network cables from the computer.
4. Disconnect your computer and all attached devices from their electrical outlets.
5. Close the display and turn the computer upside down on a flat work surface.

NOTICE: To avoid damaging the system board, you must remove the main battery before you service the computer.

6. Slide the battery-bay latch release on the bottom of the computer and remove the battery from the bay, and then press the power button to ground the system board.



1	battery charge gauge
2	battery-bay latch release
3	battery

7. Remove any installed PC Cards from the PC Card slot.
8. Remove any installed modules, such as a CD drive.
9. Remove the [hard drive](#).

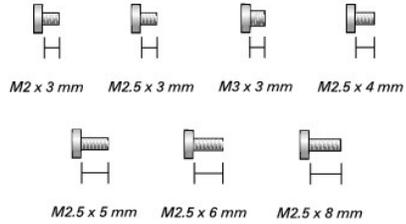
Computer Orientation



1	front
2	right
3	back
4	left

Screw Identification

When you are removing and replacing components, print "[Screw Identification](#)" as a tool to lay out and keep track of the screws. The placemat provides the number of screws and their sizes.



<p>Hard Drive: (2 each)</p>  <p>M3 x 3 mm</p>	<p>System Fans 2 (2 each)</p>  <p>M2.5 x 5 mm</p>	<p>Keyboard: (2 each)</p>  <p>M2.5 x 5 mm</p>
<p>Display Panel: (8 each)</p>  <p>M2 x 3 mm</p> <p>Display Ground Screw: (1 each)</p>  <p>M2 x 3 mm</p>	<p>Display Assembly: (4 each)</p>  <p>M2.5 x 6 mm</p>	<p>Display Bezel: (6 each, under display bumpers)</p>  <p>M2.5 x 6 mm</p> <p>(2 each, shoulder type, under screw covers)</p>  <p>M2.5 x 6 mm</p>
<p>Modem: (1 each)</p>  <p>M2.5 x 3 mm</p>	<p>USB Port Board: (1 each)</p>  <p>M2.5 x 5 mm</p>	<p>Hard Drive Bay: (3 each)</p>  <p>M2 x 3 mm</p>
<p>Palm Rest: (6 each - top side)</p>	<p>Video Card: (4 captive screws)</p>	<p>Speakers: (2 each)</p>

(11 each - bottom side)



System Board:

(5 each)



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Internal Card with Bluetooth® Wireless Technology

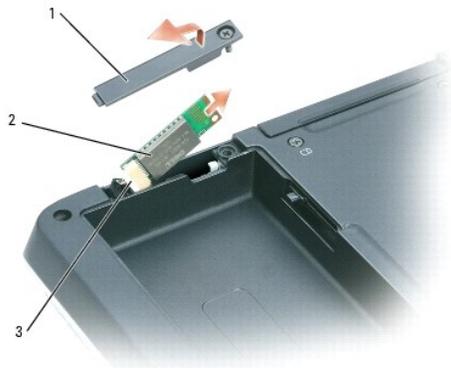
Dell™ Inspiron™ 9200

- [Removing the Internal Card](#)
- [Replacing the Internal Card](#)

Removing the Internal Card

- ⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.
- 👉 **NOTICE:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.
- 👉 **NOTICE:** To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.
- 📌 **NOTE:** If you ordered a Bluetooth card with your computer, the card is already installed.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."
2. Remove the battery.
3. Remove the M2.5 x 8-mm screw and remove the card cover from the computer.
4. Pull the card out of the compartment so that you can disconnect the card from its cable and remove it from the computer.



1	Bluetooth card door
2	Bluetooth card
3	Bluetooth card connector

Replacing the Internal Card

1. To replace the card, connect the card to the cable and then carefully insert it into the compartment.
2. Replace the card cover and the screw.
3. Replace the battery.

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Hinge Cover

Dell™ Inspiron™ 9200

- [Removing the Hinge Cover](#)
- [Replacing the Hinge Cover](#)

Removing the Hinge Cover

- ⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.
- ➡ **NOTICE:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.
- ➡ **NOTICE:** To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.
- ➡ **NOTICE:** The hinge cover is fragile and can be damaged if extreme force is used. Be careful when removing the hinge cover.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."
2. Open the display all the way (180 degrees) so that it lies flat against your work surface.
3. Using a small flat end screwdriver, insert the screwdriver on the right side to gently pry the hinge cover loose.
4. Gently remove the hinge cover pulling up from right to left.



1 hinge cover

5. Disconnect your computer and all attached devices from their electrical outlets.

Replacing the Hinge Cover

Gently snap the cover back in place starting from left to right.

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Keyboard

Dell™ Inspiron™ 9200

- [Removing the Keyboard](#)
- [Replacing the Keyboard](#)

Removing the Keyboard

⚠ CAUTION: Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.

👉 NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

👉 NOTICE: To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."

2. Open the display.

3. Remove the [hinge cover](#).

4. Remove the two M2.5 x 5-mm screws across the top of the keyboard.

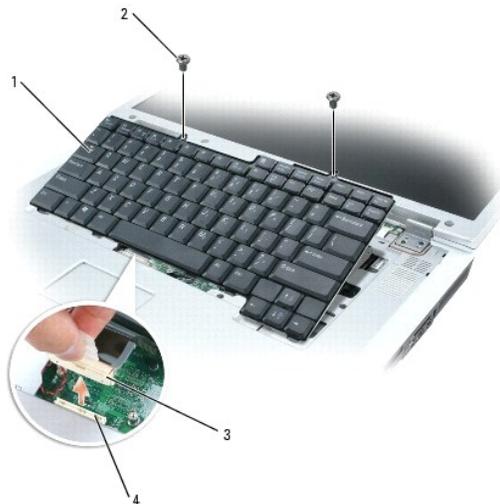
👉 NOTICE: The key caps on the keyboard are fragile, easily dislodged, and time-consuming to replace. Be careful when removing and handling the keyboard.

5. Tilt up the rear corners of the keyboard and gently slide it toward the display.

6. Hold the keyboard up and slightly forward to allow access to the keyboard connector.

7. Pull up on the keyboard connector tab to disconnect the keyboard connector from the system board.

8. Remove the keyboard.



1	keyboard
2	M2.5 x 5-mm screws (2)
3	keyboard connector tab
4	system board connector

Replacing the Keyboard

 **NOTICE:** To avoid scratching the palm rest when replacing the keyboard, hook the six tabs along the front edge of the keyboard into the palm rest, and then secure the keyboard in place. Also, be sure the display panel is laying flat (180 degrees) against the working surface to avoid scratching the display panel.

1. Reconnect the keyboard to the system board connector.
2. Gently slide the bottom of the keyboard into the base of the system.

 **NOTE:** You may need to push the bottom of the keyboard down slightly into the system base to slide the keyboard into the base of the system.

3. Replace the two M2.5 x 5-mm screws across the top of the keyboard.
 4. Replace the hinge cover.
-

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Mini PCI Card

Dell™ Inspiron™ 9200

- [Removing the Mini PCI Card](#)
- [Replacing the Mini PCI Card](#)

Removing the Mini PCI Card

CAUTION: If you are removing and/or installing a 2.4-GHz (802.11b, 802.11b/g) Mini PCI card, follow the instructions noted below. Only products approved for use in your portable computer may be installed. Approved Mini PCI cards may be purchased only from Dell.

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.

NOTICE: To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

NOTE: 2.4-GHz Wireless LAN PC Cards may be removed and installed by the user.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."

NOTE: If you ordered a Mini PCI card with your computer, the card is already installed. If a Mini PCI card is not already installed, go to "[Replacing the Mini PCI Card](#)". If you are replacing a Mini PCI card, remove the existing card.

2. Turn the computer over and loosen the two captive screws from the cover.
3. Place your finger under the cover at the indentation and lift the cover open.



4. Disconnect the antenna cables from the Mini PCI card.



1 antenna cables (2)

➔ **NOTICE:** To prevent damage to the Mini PCI card connector, do not use tools to spread the securing clips that secure the card.

5. Release the Mini PCI card by spreading the metal securing tabs until the card pops up slightly.
6. Remove the Mini PCI card from the connector at a 45-degree angle.



1	mini PCI card
2	metal securing tabs (2)

Replacing the Mini PCI Card

➔ **NOTICE:** To avoid damaging the antenna cables or the Mini PCI card, never place the cables under the card.

➔ **NOTICE:** The connectors are keyed to ensure correct insertion. If you feel resistance, check the connectors and realign the card.

1. Align the Mini PCI card with the connector at a 45-degree angle, and press the Mini PCI card into the connector until it clicks.



2. Connect the antenna cables to the Mini PCI card.



1 antenna cables (2)

3. Replace the cover.

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Coin Cell Battery

Dell™ Inspiron™ 9200

- [Removing the Coin Cell Battery](#)
- [Replacing the Coin Cell battery](#)

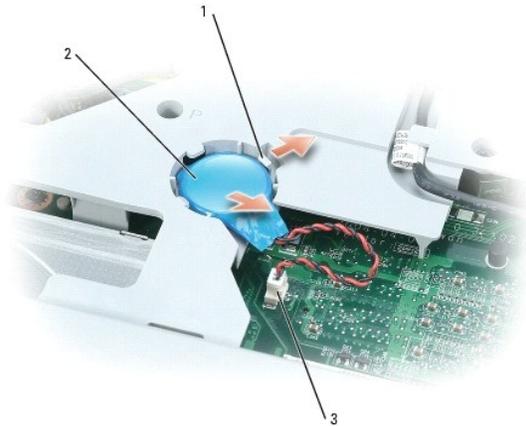
Removing the Coin Cell Battery

⚠ CAUTION: Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.

🔌 NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

🔌 NOTICE: To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."
2. Remove the [hinge cover](#).
3. Remove the [keyboard](#).
4. Remove the existing coin cell battery:
 - a. Disconnect the battery cable connector from the system board.
 - b. Press the release latch on the side of the coin-cell battery compartment, and lift up the battery.



1	release latch
2	coin cell battery
3	battery cable connector

Replacing the Coin Cell battery

1. Install the replacement battery:
 - a. Insert the battery at a 30-degree angle under the release latch with the positive side up, and then push the battery into place.
 - b. Connect the battery cable to the connector on the system board.
 2. Replace the [keyboard](#).
 3. Replace the [hinge cover](#).
-

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Palm Rest

Dell™ Inspiron™ 9200

- [Removing the Palm Rest](#)
- [Replacing the Palm Rest](#)

Removing the Palm Rest

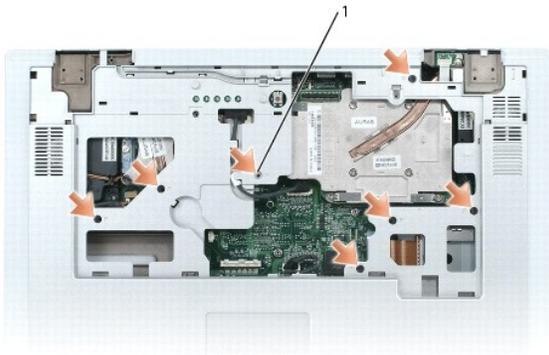
⚠ CAUTION: Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.

⚡ NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

🔌 NOTICE: To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."
2. Remove the [hinge cover](#).
3. Remove the [keyboard](#).
4. Remove the [display assembly](#).
5. Remove the seven screws labeled "P" from the top side of the palm rest.

🔍 NOTE: The screw locations may vary slightly from the image below.



1	top side screws (6)
---	---------------------

6. Remove the [coin cell battery](#).

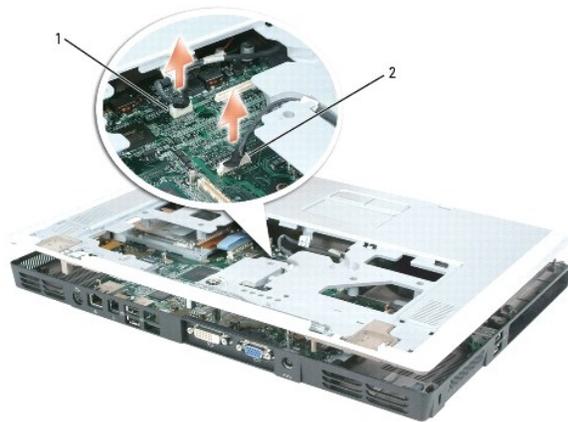
🔍 NOTE: The instructions below assume that the optical

7. Turn over the computer and remove the eleven screws from the bottom of the palm rest.



1 bottom screws (11)

8. Turn the computer top side up and disconnect the touch-pad connector from the system board.
9. Remove the LED board connector.
10. Gently lift the palm rest and remove it from the computer.



1 touch-pad connector
2 LED board connector

Replacing the Palm Rest

1. Align the palm rest with the bottom plastics and gently snap into place.
2. Reconnect the touch-pad connector to the system board.
3. Reconnect the LED board to the system board.
4. Replace the [coin cell battery](#).
5. Replace the seven M2.3 x 8-mm screws on the top side of the palm rest.
6. Turn the computer over, and replace the eleven M2.5 x 8-mm screws on the bottom of the computer.
7. Replace the [display assembly](#).

8. Replace the [keyboard](#).

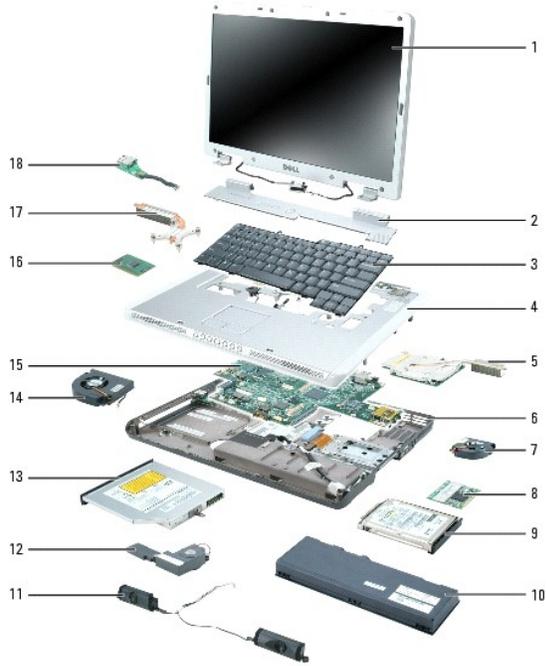
9. Replace the [hinge cover](#).

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System Components

Dell™ Inspiron™ 9200

- ➔ **NOTICE:** 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.
- ➔ **NOTICE:** Unless otherwise noted, each procedure in this document assumes that a part can be replaced by performing the removal procedure in reverse order.



1	display assembly	12	subwoofer
2	hinge cover	13	optical drive
3	keyboard	14	fan 2
4	palm rest (with touch pad)	15	system board
5	video thermal cooling assembly	16	microprocessor
6	bottom assembly	17	microprocessor thermal cooling
7	fan 1	18	USB port board
8	mini PCI card		
9	hard drive		
10	primary battery		
11	speaker assembly		

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Dell™ Inspiron™ 9200

Service Manual



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



NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



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

For a complete list of abbreviations and acronyms, see the *Dell™ Inspiron™ Help* file. To access the help file, see the *Owner's Manual* for your Dell computer.

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 PP14L

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Memory Module, Modem, and Optical Device

Dell™ Inspiron™ 9200

- [Memory Module](#)
 - [Modem](#)
 - [Optical Drive](#)
-

Memory Module

Removing the Memory Module

⚠ CAUTION: Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.

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

🔍 NOTE: This computer requires matched memory modules and therefore, it always has two identical memory modules.

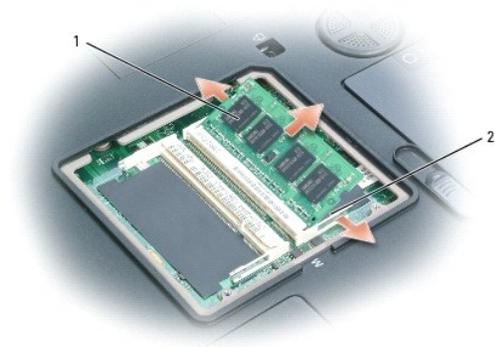
1. Follow the instructions in "[Before Working Inside Your Computer](#)."
2. Turn the computer over, loosen the two captive screws from the memory module cover, and lift the cover.



➡ NOTICE: To prevent damage to the memory module connector, do not use tools to spread the securing clips that secure the memory module.

➡ NOTICE: Handle memory modules by their edges, and do not touch the components on a module.

- a. Use your fingertips to carefully spread apart the securing clips on each end of the memory module connector until the module pops up.
- b. Remove the module from the connector at a 45-degree angle.



1	memory module
2	securing clip (2)

Replacing the Memory Module

➡ **NOTICE:** Ensure that memory modules are installed in both connectors and that they are of the same capacity. Install a memory module in the connector labeled "DDR2 DIMM A" before you install a module in the connector labeled "DDR2 DIMM B." Insert memory modules at a 45-degree angle to avoid damaging the connector.

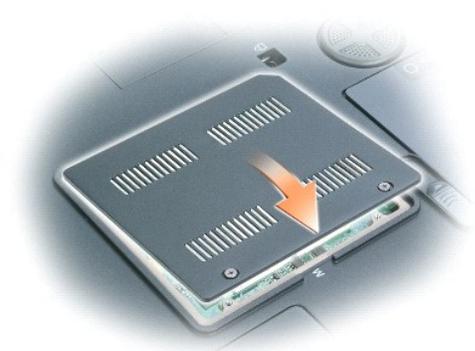
🔧 **NOTE:** If the memory module is not installed properly, the computer will not boot.

1. Ground yourself and install the new memory module:
 - a. Align the notch in the module edge connector with the tab in the connector slot.
 - b. Slide the module firmly into the slot at a 45-degree angle, and rotate the module down until it clicks into place. If you do not feel the click, remove the module and reinstall it.



2. Replace the cover and screws.

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



3. Insert the battery into the battery bay, or connect the AC adapter to your computer and an electrical outlet.
4. Turn on the computer.

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

Modem

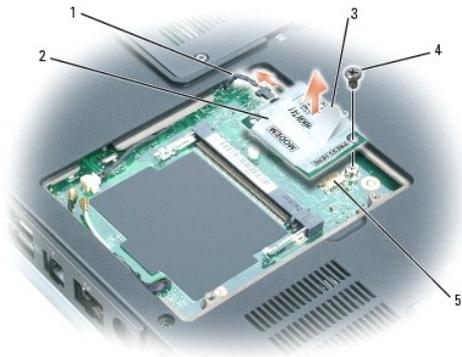
Removing the Modem

- ⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.
- 👉 **NOTICE:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.
- 👉 **NOTICE:** To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."
2. Turn the computer over, loosen the two captive screws from the cover, and lift the cover.



3. Remove the M2.5 x 3-mm screw that attaches the modem to the system board.
4. Pull up on the pull-tab to disconnect the modem from the connector on the system board.



1	modem cable
2	modem
3	pull-tab
4	screw
5	system board connector

➔ **NOTICE:** Do not disconnect the modem cable from the system board.

5. Disconnect the modem cable from the modem.

Replacing the Modem

1. Connect the modem cable to the modem.

➔ **NOTICE:** Ensure that the modem cable is routed correctly when you replace the modem.

➔ **NOTICE:** Do not press down on the left side of the modem while installing it.

2. Align the connector on the bottom of the modem with the modem connector on the system board and then press down on the right side of the modem to seat both connectors.
3. Replace the M2.5 x 3-mm screw.

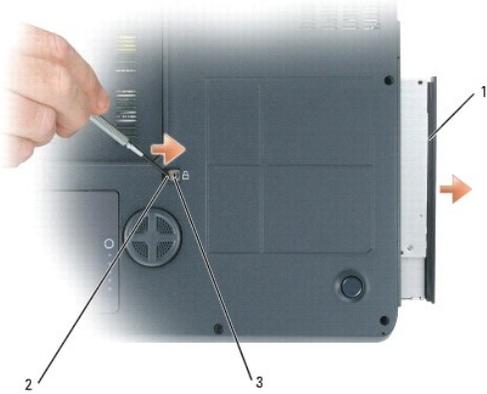
Optical Drive

Your computer ships with a fixed optical drive installed.

Removing the Optical Drive

➔ **NOTICE:** To prevent damage to devices, store them in a safe, dry place when they are not installed in the computer. Avoid pressing down on them or placing heavy objects on top of them.

1. Follow the instructions in "[Before Working Inside Your Computer.](#)"
2. Turn over the computer and remove the M2.5 x 8-mm screw.
3. Place your screwdriver inside the notch and gently slide the metal tab forward until the drive is partially out of the drive bay.



1	optical drive
2	notch
3	optical drive security screw

4. Pull the device out of the drive bay.

Replacing the Optical Drive

1. Slide the optical drive into the drive bay and snap it into place.
2. Replace the M2.5 x 8-mm screw that secures the drive in place.

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Display

Dell™ Inspiron™ 9200

- [Display Assembly](#)
 - [Display Bezel](#)
 - [Display Panel](#)
 - [Display Latch](#)
-

Display Assembly

Removing the Display Assembly

- ⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.
- 🔌 **NOTICE:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.
- 🔌 **NOTICE:** To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."
2. Turn the computer over and loosen the two captive screws from the Mini PCI card cover.



- 🔌 **NOTE:** If a Mini PCI card is installed, you will need to remove the antenna cables from the card. If one is not installed, remove the antenna cables from their secured location.

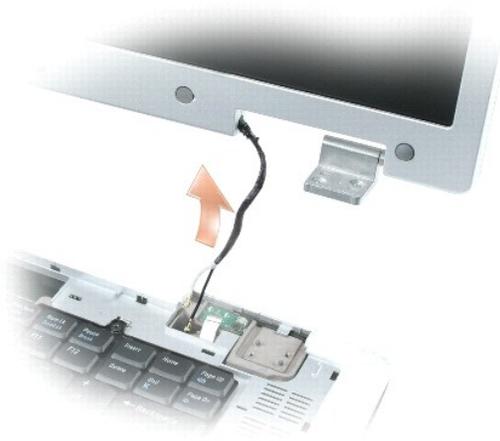
3. Disconnect the antenna cables from the Mini PCI card.



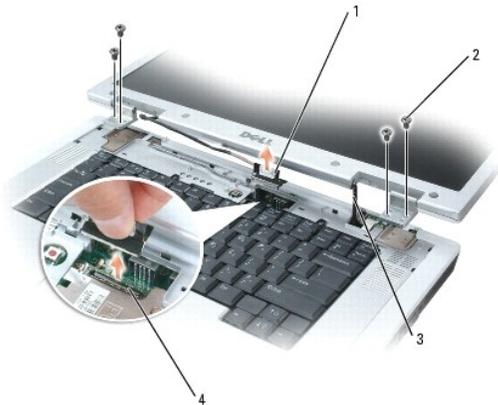
1	antenna cables
---	----------------

4. Turn the system top side up.
5. Remove the [hinge cover](#).
6. Open the display all the way (180 degrees) so that it lies flat against the work surface.
7. Use the pull-tab to disconnect the display cable.
8. Remove the four M2.5 x 5-mm screws (two on each side) that connect the LCD display to the system.

 **NOTE:** When removing the display, carefully thread the Mini-PCI antenna cables through the system base.



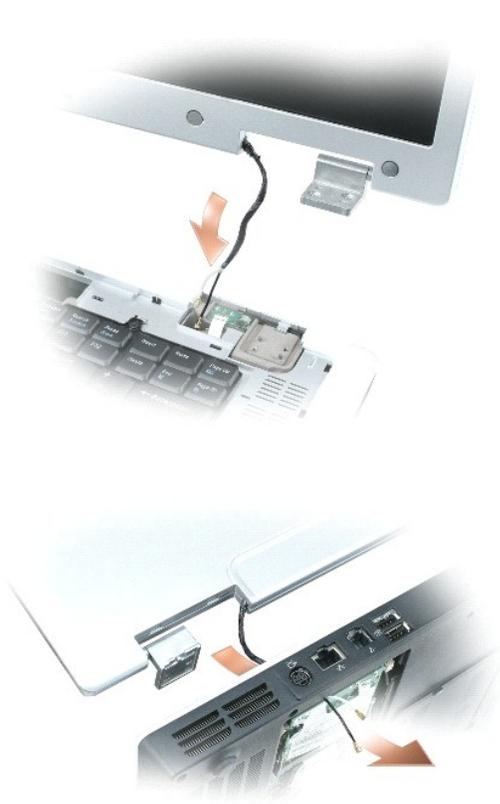
9. Lift the display out of the computer.



1	display cable pull-tab
2	M2.5 x 5-mm screws (4)
3	antenna cables (2)
4	display cable connector

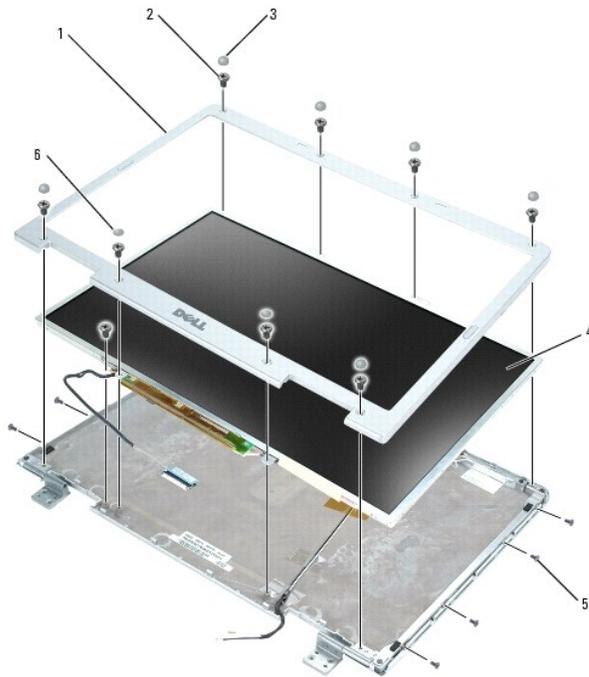
Replacing the Display Assembly

1. Align the display assembly over the screw holes in the base of the system.
2. Replace the four M2.5 x 5-mm screws.
3. Thread the Mini PCI antenna cables back through the hole in the base of the system.



4. Connect the display cable.
5. Replace the [keyboard](#).
6. Replace the [hinge cover](#).
7. If a wireless Mini PCI card is installed, connect the antenna cables from the card. If one is not installed, connect the antenna cables to their secured location.
8. Replace the cover.

Display Bezel



1	display bezel	5	M2.5 x 3-mm screws (8)
2	M2.5 x 5-mm screws (6)	6	screw cover (2)
3	rubber display bumpers (6)		
4	display panel		

Removing the Display Bezel

⚠ CAUTION: Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.

👉 NOTICE: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.

👉 NOTICE: To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."

2. Remove the [display assembly](#).

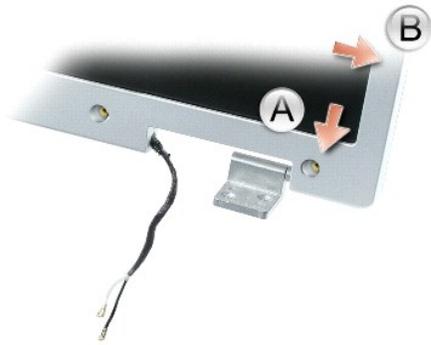
3. Remove the six rubber display bumpers.

4. Remove the two screw covers and the two shoulder screws.

5. Remove the six M2.5 x 5-mm screws around the display.

👉 NOTICE: Carefully separate the bezel from the top cover to avoid damage to the bezel.

6. Use your fingers to separate the bezel from the top cover by pulling the right bottom corner of the bezel toward the bottom edge of the assembly to clear the tab on the bottom right corner. (A) Then pull the bezel toward the right edge of the assembly to clear the tab on the lower right side. (B)



1	tabs
---	------

7. Repeat [step 6](#) for the left corner of the bezel. Then use your fingers to release the snaps around the rest of the bezel and lift it away from the cover.

Replacing the Display Bezel

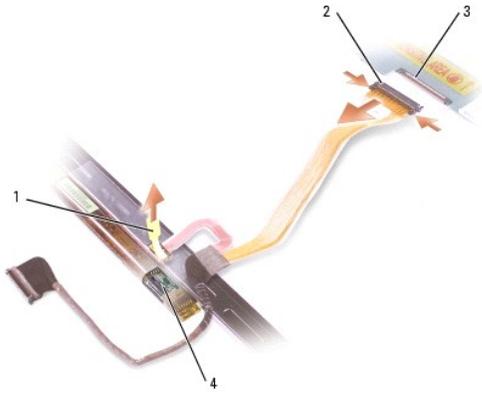
1. Starting at any corner, use your fingers to gently snap the bezel in place securing the display panel.
2. Replace the six M2.5 x 5-mm screws on the front of the bezel.
3. Replace the two shoulder screws and two screw covers.
4. Replace the six display bumpers around the display assembly.

Display Panel

Removing the Display Panel

- ⚠ CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.
 - 👉 NOTICE:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by touching an unpainted metal surface on the computer.
 - 👉 NOTICE:** To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.
1. Follow the instructions in "[Before Working Inside Your Computer](#)."
 2. Remove the [display assembly](#).
 3. [Remove the display bezel](#).
 4. Remove the M2 x 3-mm ground screw that attaches the display-panel ground wire to the back display cover.

5. Remove the eight M2 x 3-mm screws from each side of the display panel.
6. Lift the display panel out of the display cover.
7. Press in both sides of the top flex-cable connector, and pull the top flex-cable connector away from the display connector.
8. Use the pull-tab to disconnect the bottom flex-cable connector from the inverter connector.



1	pull-tab on bottom flex-cable connector
2	top flex-cable connector
3	display connector
4	inverter connector

Replacing the Display Panel

1. Reconnect the top display cable connector to the top flex-cable connector.
2. Reconnect the bottom flex-cable connector to the inverter connector.
3. Replace the display panel inside the top cover.
4. Replace the M2 x 3-mm ground screw that attaches the display-panel ground wire to the back display cover.
5. Replace the eight M2 x 3 screws (four on each side) around the display panel.
6. Replace the [display bezel](#).

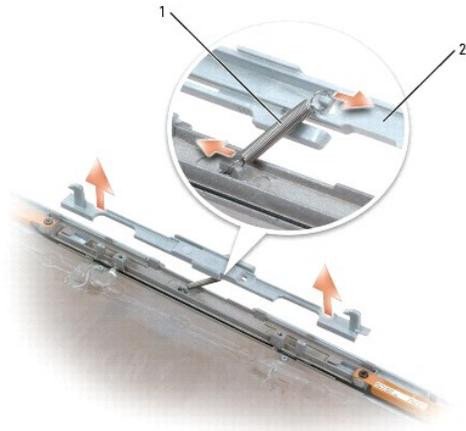
Display Latch

Removing the Display Latch

- ⚠ CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.
- 🔌 NOTICE:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by touching an unpainted metal surface on the computer.
- 🔌 NOTICE:** To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

1. Follow the instructions in "[Before Working Inside Your Computer](#)."
2. Remove the [display](#).
3. [Remove the display bezel](#).

4. Slide the latch to the right and gently lift up.
5. Remove the spring that attaches the latch to the display panel.



1	spring
2	display latch

Replacing the Display Latch

1. Replace the spring that attaches the latch to the display panel.
2. Align the latch with the Display Panel and slide the latch to the left to secure it in place.

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System Fans

Dell™ Inspiron™ 9200

- [Removing the System Fans](#)
- [Replacing the System Fans](#)

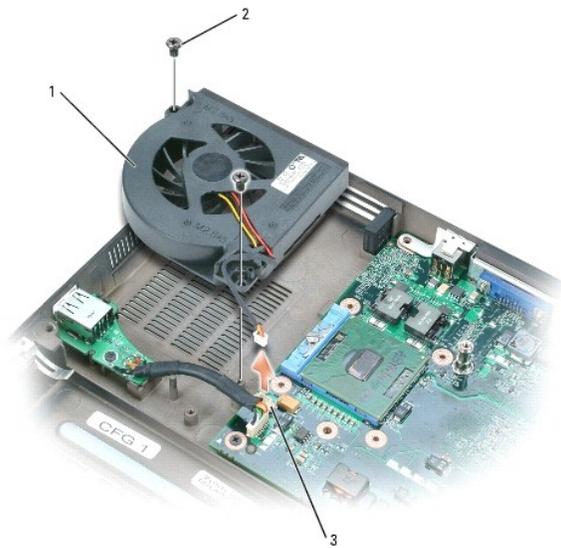
Removing the System Fans

- ⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.
- 👉 **NOTICE:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.
- 👉 **NOTICE:** To avoid damaging the system board, you must remove the main battery before you begin working inside the computer.

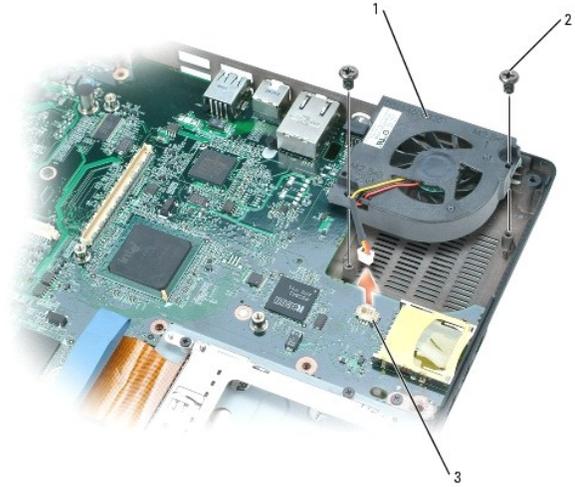
1. Follow the instructions in "[Before Working Inside Your Computer.](#)"
2. Remove the [hinge cover](#).
3. Remove the [keyboard](#).
4. Remove the [display assembly](#).
5. Remove the [palm rest](#).

- 📌 **NOTE:** This computer has two system fans. One is for the processor (the larger one on the right side) and the other is for the graphics card (the smaller one on the left side).

6. Remove the two M2.5 x 5-mm screws from the each of the fans, then remove the connector that connects each fan to the system board.
7. Lift each fan out of the computer.



1	fan
2	M2.5 x 5 screws (2)
3	system board connector



1	fan
2	M2.5 x 5 screws (2)
3	system board connector

Replacing the System Fans

1. Align each fan over the two screw holes and set them back down onto the system board.
2. Replace the four M2.5 x 5-mm screws (two on each fan) and the connector that connects the fans to the system board.

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