

Dell™ Inspiron™ N5020/M5030/N5030 Service Manual

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Notes, Cautions, and Warnings



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



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



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

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Regulatory model: P07F series

Regulatory type: P07F001; P07F002; P07F003

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Before You Begin

Dell™ Inspiron™ N5020/M5030/N5030 Service Manual

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

This manual provides instructions for removing and installing 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 that shipped with your computer.
- 1 A component can be replaced or—if purchased separately—installed by performing the removal procedure in the reverse order.

Recommended Tools

The procedures in this document may require the following tools:


- 1 Small flat-blade screwdriver
- 1 Phillips screwdriver
- 1 Plastic scribe
- 1 BIOS executable update program available 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. Shut down the operating system:

Windows® 7:

Click **Start**  and then click **Shut Down**.


Microsoft® Windows Vista®:


Click **Start** , click the arrow , and then click **Shut Down**.


3. Ensure that the computer is turned off. If your computer did not automatically turn off when you shut down the operating system, press and hold the power button 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](#)) and all attached devices.

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

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

 **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.

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Flashing the BIOS

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The BIOS may require flashing when an update is available or when replacing the system board. To flash the BIOS:

1. Turn on the computer.
2. Go to support.dell.com/support/downloads.
3. Locate the BIOS update file for your computer:


 **NOTE:** The Service Tag for your computer is located on a label at the bottom of the computer.

If you have your computer's Service Tag:

- a. Click **Enter a Service Tag**.
- b. Enter your computer's Service Tag in the **Enter a service tag:** field, click **Go**, and proceed to [step 4](#).

If you do not have your computer's Service Tag:

- a. Select the type of product in the **Select Your Product Family** list.
- b. Select the product brand in the **Select Your Product Line** list.
- c. Select the product model number in the **Select Your Product Model** list.

 **NOTE:** If you have selected a different model and want to start over again, click **Start Over** on the top right of the menu.

- d. Click **Confirm**.
4. A list of results appear on the screen. Click **BIOS**.
5. Click **Download Now** to download the latest BIOS file.
The **File Download** window appears.
6. Click **Save** to save the file on your desktop. The file downloads to your desktop.
7. 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.
8. Double-click the file icon on the desktop and follow the instructions on the screen.

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Internal Module With Bluetooth® Wireless Technology

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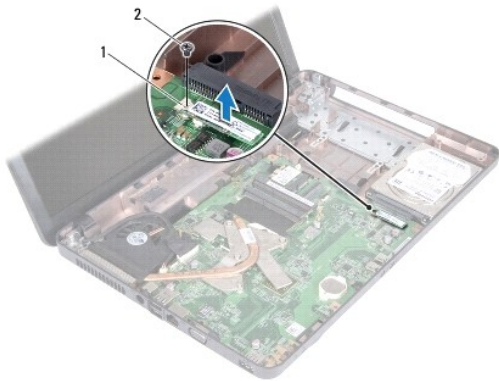
- [Removing the Bluetooth Module](#)
- [Replacing the Bluetooth Module](#)

- 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:** 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 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, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

If you ordered a card with Bluetooth® wireless technology with your computer, it is already installed.

Removing the Bluetooth Module

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 palm rest (see [Removing the Palm Rest](#)).
5. Remove the screw that secures the Bluetooth module to the connector on the system board.
6. Lift the Bluetooth module away from the system board.




1	Bluetooth module	2	screw
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Replacing the Bluetooth Module

1. Follow the instructions in [Before You Begin](#).
2. Align the connector on the Bluetooth module with the connector on the system board and press the Bluetooth module until it is fully seated.
3. Replace the screw that secures the Bluetooth module to the system board.

4. Replace the palm rest (see [Replacing the Palm Rest](#)).
5. Replace the keyboard (see [Replacing the Keyboard](#)).
6. 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.

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Camera Module

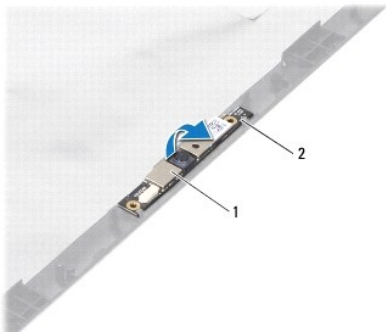
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- [Removing the Camera Module](#)
- [Replacing the Camera Module](#)

- 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:** 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 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, remove the main battery (see [Removing the Battery](#)) before working inside the computer.
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Removing the Camera Module

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 palm rest (see [Removing the Palm Rest](#)).
5. Remove the display assembly (see [Removing the Display Assembly](#)).
6. Remove the display bezel (see [Removing the Display Bezel](#)).
7. Release the camera module from the latches that secure it to the display cover.
8. Lift the camera module off the display cover.




1	camera module	2	latches (2)
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Replacing the Camera Module

1. Follow the instructions in [Before You Begin](#).
2. Slide the camera module under the latches until it is fully seated.
3. Replace the display bezel (see [Replacing the Display Bezel](#)).
4. Replace the display assembly (see [Replacing the Display Assembly](#)).

5. Replace the palm rest (see [Replacing the Palm Rest](#)).
6. Replace the keyboard (see [Replacing the Keyboard](#)).
7. 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.

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Coin-Cell Battery

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- [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:** 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 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, remove the main battery (see [Removing the Battery](#)) before working inside the computer.
-

Removing the Coin-Cell Battery

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 palm rest (see [Removing the Palm Rest](#)).
5. Using a plastic scribe, pry the coin-cell battery from the slot on the system board.



1	plastic scribe	2	coin-cell battery
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Replacing the Coin-Cell Battery

1. Follow the instructions in [Before You Begin](#).
2. Hold the coin-cell battery with the positive side facing up.
3. Slide the coin-cell battery into the slot and press it gently until it snaps into place.
4. Replace the palm rest (see [Replacing the Palm Rest](#)).
5. Replace the keyboard (see [Replacing the Keyboard](#)).
6. 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.
-

Processor Module

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

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- 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 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, remove the main battery (see [Removing the Battery](#)) before working inside the computer.
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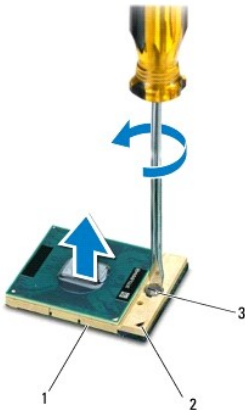
Removing the Processor Module

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 palm rest (see [Removing the Palm Rest](#)).
5. Remove the processor heat sink (see [Removing the Processor Heat Sink](#)).

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 so that it is perpendicular to the processor when turning the cam screw.

6. 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	pin-1 corner
3	ZIF-socket cam screw		

CAUTION: To ensure maximum cooling for the processor, do not touch the heat transfer areas on the processor thermal-cooling assembly. The oils in your skin can reduce the heat transfer capability of the thermal pads.


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

7. Lift the processor module from the ZIF socket.
-

Replacing the Processor Module

 **NOTE:** If a new processor is installed, you will receive a new thermal-cooling assembly, which will include an affixed thermal pad, or you will receive a new thermal pad along with documentation to illustrate proper installation.


1. Follow the instructions in [Before You Begin](#).
2. Align the pin-1 corner of the processor module with the pin-1 corner of the ZIF socket, then insert the processor module.

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

When the processor module is properly 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 properly.

 **CAUTION:** To avoid damage to the processor module, hold the screwdriver perpendicular to the processor module when turning the cam screw.

3. Tighten the ZIF socket by turning the cam screw clockwise to secure the processor module to the system board.
4. Replace the processor heat sink (see [Replacing the Processor Heat Sink](#)).
5. Replace the palm rest (see [Replacing the Palm Rest](#)).
6. Replace the keyboard (see [Replacing the Keyboard](#)).
7. 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.

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Processor Heat Sink

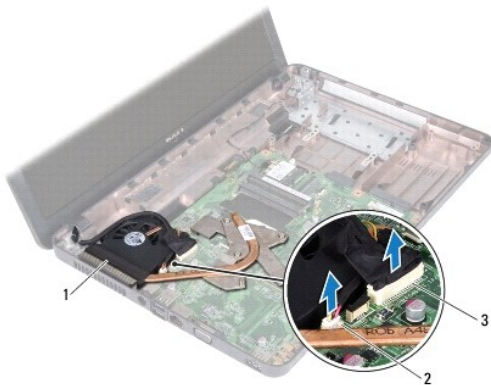
Dell™ Inspiron™ N5020/M5030/N5030 Service Manual

- [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 processor heat sink.
- ⚠ **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 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, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

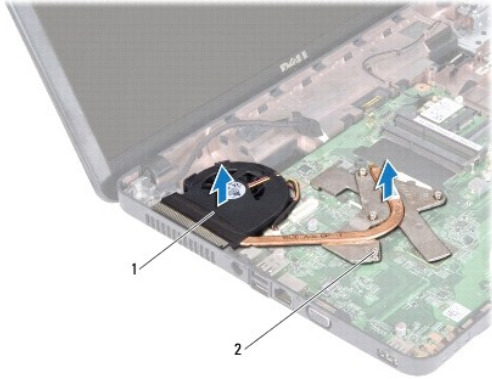
Removing the Processor Heat Sink

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 palm rest (see [Removing the Palm Rest](#)).
 5. Remove the adhesive tape that secures the display cable to the processor heat sink.
- 🔧 **NOTE:** Make a note of the cable routing before disconnecting the cables.
6. Disconnect the fan cable and the display cable from their connectors on the system board.



1	processor heat sink	2	fan cable connector
3	display cable connector		

7. In sequential order (indicated on the processor heat sink), loosen the four captive screws that secure the processor heat sink to the system board.
- 🔧 **NOTE:** The appearance and number of screws on the processor heat sink may vary based on the your computer model.
8. Lift the processor heat sink off the system board.



1	processor heat sink	2	captive screws (4)
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Replacing the Processor Heat Sink

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. Place the processor heat sink on the system board.
3. Align the four captive screws on the processor heat sink with the screw holes on the system board and tighten the screws in sequential order (indicated on the processor heat sink).

NOTE: The appearance and number of screws on the processor heat sink may vary based on the your computer model.

4. Route the cables through the routing guides. Connect the fan cable and display cable to their connectors on the system board.
5. Replace the adhesive tape that secures the display cable to the processor heat sink.
6. Replace the palm rest (see [Replacing the Palm Rest](#)).
7. Replace the keyboard (see [Replacing the Keyboard](#)).
8. 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.

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Display

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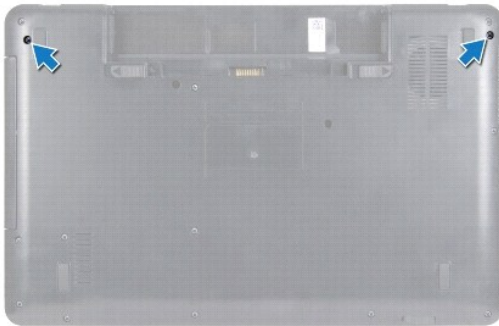
- [Display Assembly](#)
- [Display Bezel](#)
- [Display Panel](#)

- 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:** 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 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, remove the main battery (see [Removing the Battery](#)) before 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 two screws that secure the display assembly to the base of the computer.



5. Remove the palm rest (see [Removing the Palm Rest](#)).
6. Turn the computer over and open the display as far as possible.
7. Make a note of the Wireless Mini-Card antenna cable routing and disconnect the Wireless Mini-Card antenna cable from the Wireless Mini- Card.
8. Disconnect the display cable from the connector on the system board and remove it from the routing guide.
9. Remove the two screws (one on each side) that secure the display assembly to the computer base.
10. Lift and remove the display assembly out of the computer base.



1	display assembly	2	screws (2)
3	display cable	4	Mini-Card antenna cable

Replacing the Display Assembly

1. Follow the instructions in [Before You Begin](#).
2. Place the display assembly in position and replace the two screws (one on each side) that secure the display assembly to the computer base.
3. Route the display cable into the routing guide and connect the display cable to the connector on the system board.
4. Route the Mini-Card antenna cable into the routing guide and connect the Mini-Card antenna cable to the connector on the Mini-Card.
5. Turn the computer over and replace the two screws at the base of the computer.
6. Replace the palm rest (see [Replacing the Palm Rest](#)).
7. Replace the keyboard (see [Replacing the Keyboard](#)).
8. Replace the battery (see [Replacing the Battery](#)).

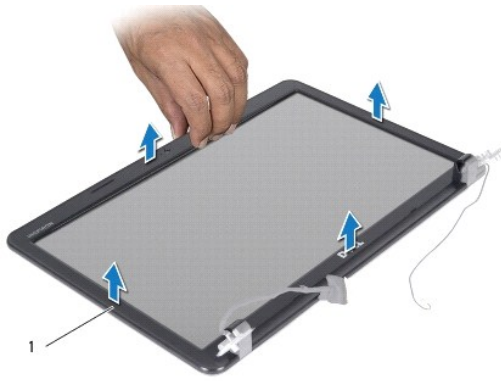
CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

Display Bezel

Removing the Display Bezel

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

1. Follow the instructions in [Before You Begin](#).
2. Remove the display assembly (see [Removing the Display Assembly](#)).
3. Using your fingertips, carefully pry up the inside edge of the display bezel.
4. Remove the display bezel.



1	display bezel
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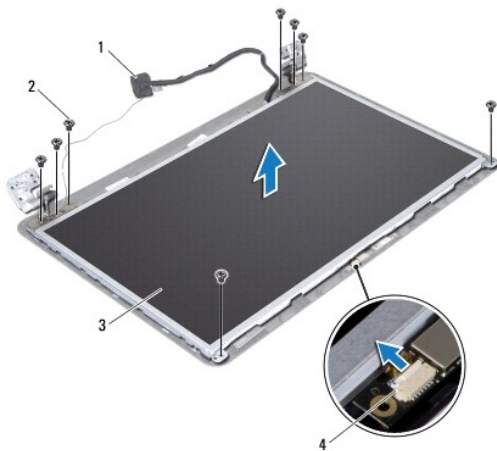
Replacing the Display Bezel

1. Follow the instructions in [Before You Begin](#).
2. Align the display bezel over the display panel, and gently snap it into place.
3. Replace the display assembly (see [Replacing the Display Assembly](#)).

Display Panel

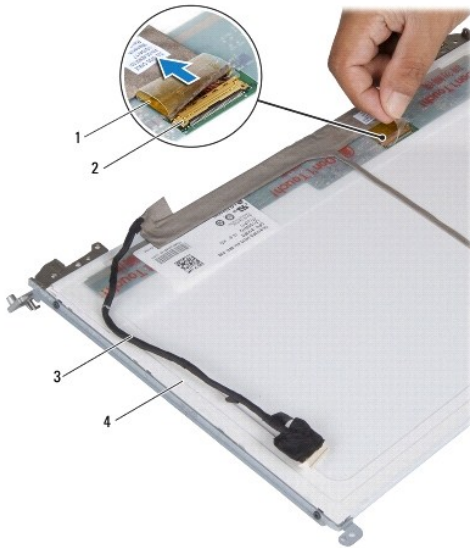
Removing the Display Panel

1. Follow the instructions in [Before You Begin](#).
2. Remove the display assembly (see [Removing the Display Assembly](#)).
3. Remove the display bezel (see [Removing the Display Bezel](#)).
4. Disconnect the camera cable from the connector on the camera module.
5. Remove the eight screws that secure the display panel to the display cover.



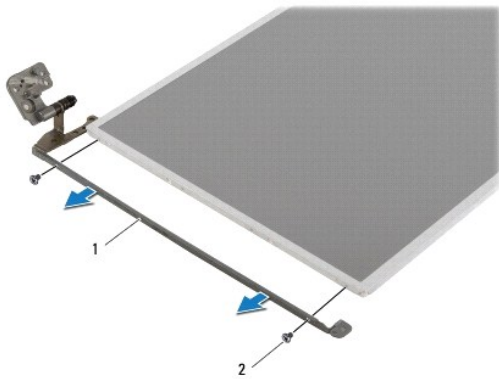
1	display cable	2	screws (8)
3	display panel	4	camera cable connector

- Lift the display panel off the display cover.
- Turn the display panel over and place it on a clean surface.
- Lift the tape that secures the display cable to the display board connector and disconnect the display cable.
- Peel off the camera cable from the back of the display panel.



1	tape	2	display board connector
3	display cable	4	back of the display panel

- Remove the four screws (two on each side) that secure the display panel brackets to the display panel.




1	display panel brackets (2)	2	screws (4)
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Replacing the Display Panel

- Follow the instructions in [Before You Begin](#).

2. Replace the four screws (two on each side) that secure the display panel brackets to the display panel.
3. Connect the display cable to the display board connector and secure it with the tape.
4. Adhere the camera cable to the back of the display panel.
5. Place the display panel on the display cover and connect the camera cable to the connector on the camera module.
6. Align the screw holes on the display panel with the screw holes on the display cover.
7. Replace the eight screws that secure the display panel to the display cover.
8. Replace the display bezel (see [Replacing the Display Bezel](#)).
9. Replace the display assembly (see [Replacing the Display Assembly](#)).

 **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.

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Hard Drive

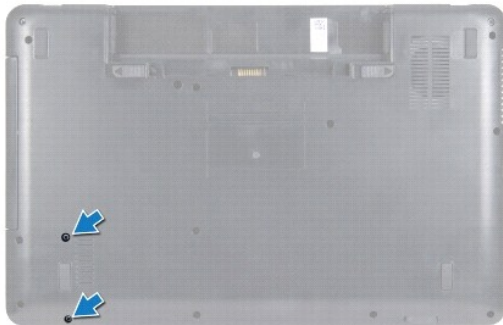
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- [Removing the Hard Drive](#)
- [Replacing the Hard Drive](#)

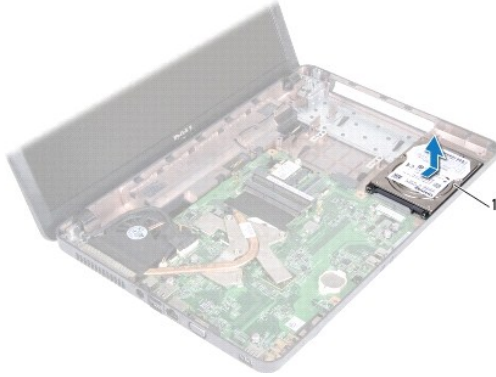
- ⚠ **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.
 - ⚠ **WARNING:** If you remove the hard drive from the computer when the drive is hot, do not touch the metal housing of the hard drive.
 - ⚠ **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 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:** 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:** Hard drives are extremely fragile. Exercise care when handling the hard drive.
 - ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.
 - 🔧 **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.
-

Removing the Hard Drive

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 two screws that secure the hard drive to the base of the computer.



5. Remove the palm rest (see [Removing the Palm Rest](#)).
- ⚠ **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).
6. Slide the hard drive away from the hard-drive connector on the system board.
7. Lift the hard drive out of the hard-drive bay.



1	hard drive
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Replacing the Hard Drive

1. Follow the instructions in [Before You Begin](#).
2. Remove the new hard drive from its packaging.
Save the original packaging for storing or shipping the hard drive.
3. Place the hard drive in the hard-drive bay and push the hard drive towards the connector until it is fully seated.
4. Turn the computer over and replace the two screws that secure the hard-drive to the base of the computer.
5. Replace the palm rest (see [Replacing the Palm Rest](#)).
6. Replace the keyboard (see [Replacing the Keyboard](#)).
7. 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.

8. Install the operating system for your computer, as needed. See "Restoring Your Operating System" in the *Setup Guide*.
9. Install the drivers and utilities for your computer, as needed.

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Power Button Module

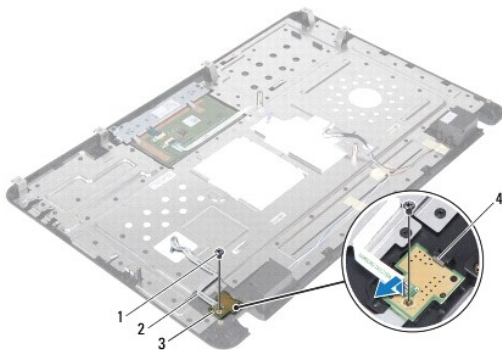
Dell™ Inspiron™ N5020/M5030/N5030 Service Manual

- [Removing the Power Button Module](#)
- [Replacing the Power Button 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:** 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 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, remove the main battery (see [Removing the Battery](#)) before working inside the computer.
-

Removing the Power Button Module

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 palm rest (see [Removing the Palm Rest](#)).
5. Turn the palm rest over.
6. Remove the screw that secures the power button module to the palm rest.
7. Peel the power button cable off the palm rest.
8. Lift and slide the power button module from under the latch.




1	screw	2	power button cable
3	power button module	4	latch

Replacing the Power Button Module

1. Follow the instructions in [Before You Begin](#).
2. Slide the power button module under the latch and align the screw hole on the power button module with the screw hole on the palm rest.

3. Replace the screw that secures the power button module to the palm rest.
4. Adhere the power button cable to the palm rest.
5. Replace the palm rest (see [Replacing the Palm Rest](#)).
6. Replace the keyboard (see [Replacing the Keyboard](#)).
7. 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.

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Keyboard

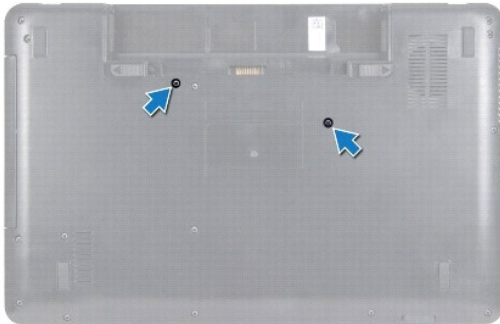
Dell™ Inspiron™ N5020/M5030/N5030 Service Manual

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

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- 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 instructions in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the two screws that secure the keyboard to the computer base.



4. Turn the computer over and open the display as far as possible.

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

5. Slide a plastic scribe between the keyboard and palm rest. Pry and lift the keyboard to disengage it from the three tabs on the palm rest.
6. Ease the keyboard up and slide the five tabs at the bottom of the keyboard out of the slots on the palm rest.



1	plastic scribe	2	palm rest tabs (3)
3	keyboard	4	palm rest

7. Without pulling hard on the keyboard, slide it towards the display.
8. Lift the connector latch and pull the keyboard cable to disconnect it from the connector on the system board.
9. Lift the keyboard off the computer.



1	keyboard tabs (5)	2	keyboard cable
3	connector latch		

Replacing the Keyboard

1. Follow the instructions in [Before You Begin](#).
2. Slide the keyboard cable into the connector on the system board and press down on the connector latch to secure the cable.
3. Slide the five tabs at the bottom of the keyboard into the slots on the palm rest.
4. Gently press around the edges of the keyboard to secure the keyboard under the three tabs on the palm rest.
5. Close the display and turn the computer over.
6. Replace the two screws that secure the keyboard to the computer base.
7. 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.

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Memory Module(s)

Dell™ Inspiron™ N5020/M5030/N5030 Service Manual

- [Removing the Memory Module\(s\)](#)
- [Replacing the Memory Module\(s\)](#)

- 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:** 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 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, 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 type of memory supported by your computer.

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

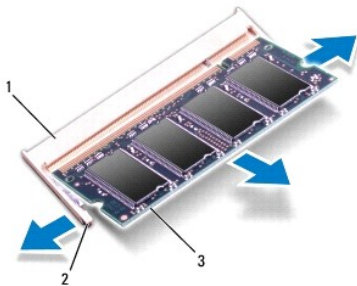
Your computer has two user-accessible SODIMM connectors.

Removing the Memory Module(s)

1. Follow the instructions in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the keyboard (see [Removing the Keyboard](#)).

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

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




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

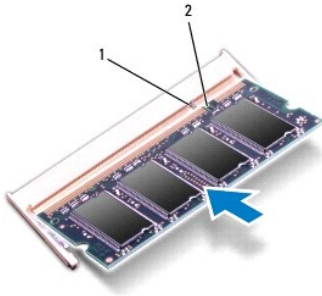
Replacing the Memory Module(s)

CAUTION: If you need to install memory modules in two connectors, install a memory module in the connector labeled "DIMM A" before you install a memory module in the connector labeled "DIMM B."

1. Follow the instructions in [Before You Begin](#).


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

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



1	tab	2	notch
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4. Replace the keyboard (see [Replacing the Keyboard](#)).
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.

6. Turn on the computer.

As the computer boots, it detects the memory module(s) and automatically updates the system configuration information.

To confirm the amount of memory installed in the computer:

Windows® 7:

Click **Start**  → **Control Panel** → **System and Security** → **System**.

Windows Vista®:

Click **Start**  → **Help and Support** → **Dell System Information**.

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Wireless Mini-Card

Dell™ Inspiron™ N5020/M5030/N5030 Service Manual

- [Removing the Wireless Mini-Card](#)
- [Replacing the Wireless Mini-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:** 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 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, remove the main battery (see [Removing the Battery](#)) before working inside the computer.
- CAUTION:** When the wireless Mini-Card 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).
- NOTE:** Dell does not guarantee compatibility or provide support for wireless Mini-Cards from sources other than Dell.

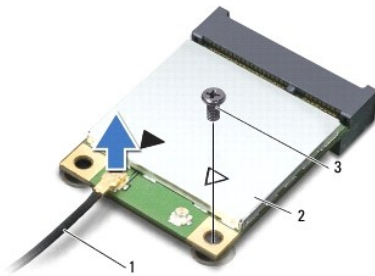
If you ordered a wireless Mini-Card with your computer, the card is already installed.

Your computer supports one half Mini-Card slot: For Wireless Local Area Network (WLAN), Wi-Fi, or Worldwide Interoperability for Microwave Access (WiMax)

- NOTE:** Depending on the configuration of the computer when it was sold, the wireless Mini-Card slot may or may not have a wireless Mini-Card installed in it.

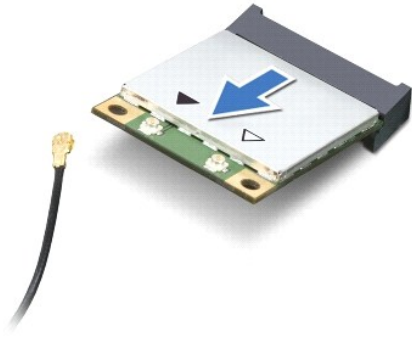
Removing the Wireless Mini-Card

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. Disconnect the antenna cable from the wireless Mini-Card.



1	antenna cable	2	wireless Mini-Card	3	screw
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5. Remove the screw that secures the wireless Mini-Card to the connector on the system board.
6. Lift the wireless Mini-Card out of the connector on the system board.



Replacing the Wireless Mini-Card

1. Follow the instructions in [Before You Begin](#).
2. Remove the new wireless 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.

CAUTION: The connectors are keyed to ensure correct insertion. If you feel resistance, check the connectors on the card and on the system board, and realign the card.

CAUTION: To avoid damage to the wireless Mini-Card, never place cables under the card.

3. Insert the wireless Mini-Card connector at a 45-degree angle into the connector on the system board.
4. Press the other end of the wireless Mini-Card down into the slot on the system board and replace the screw that secures the Mini-Card to the connector on the system board.
5. Connect the black antenna cable to the connector marked with a black triangle on the wireless Mini-Card.
6. Replace the keyboard (see [Replacing the Keyboard](#)).
7. 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.

8. Install the drivers and utilities for your computer, as required.

NOTE: If you are installing a wireless Mini-Card from a source other than Dell, you must install the appropriate drivers and utilities.

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Optical Drive

Dell™ Inspiron™ N5020/M5030/N5030 Service Manual

- [Removing the Optical Drive](#)
- [Replacing the Optical 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:** 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 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, remove the main battery (see [Removing the Battery](#)) before working inside the computer.
-

Removing the Optical Drive

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 screw that secures the optical drive to the computer base.
5. Slide the optical drive out of the optical drive bay.



1	optical drive	2	screw
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Replacing the Optical Drive

1. Follow the instructions in [Before You Begin](#).
2. Slide the optical drive into the optical drive bay until it is fully seated.
3. Replace the screw that secures the optical drive to the computer base.
4. Replace the keyboard (see [Replacing the Keyboard](#)).
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.

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Palm Rest

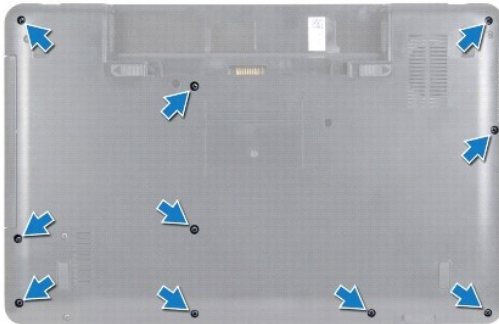
Dell™ Inspiron™ N5020/M5030/N5030 Service Manual

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

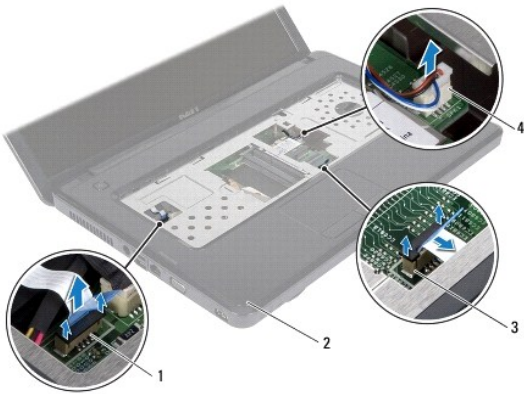
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- CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.
-

Removing the Palm Rest

1. Follow the instructions in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the ten screws that secure the palm rest to the computer base.



4. Remove the keyboard (see [Removing the Keyboard](#)).
- CAUTION:** To avoid damage to the connectors, lift the connector latch and then remove the cables.
- 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 speaker cable from the connector on the system board.
 6. Lift the connector latches and pull the pull-tabs to disconnect the touch pad cable and power button cable from their connectors on the system board.



1	power button cable connector	2	palm rest
3	touch pad cable connector	4	speaker cable connector

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

- Slide a plastic scribe between the computer base and the palm rest and pry out the palm rest off the computer base.



1	palm rest	2	plastic scribe
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Replacing the Palm Rest

- Follow the instructions in [Before You Begin](#).
- Slide the tabs on the palm rest into the slots on the computer base and gently snap the palm rest into place.
- Connect the speaker cable to the connector on the system board.
- Slide the touch pad cable and power button cable into their connectors on the system board and press down on the connector latches to secure the cables.
- Close the display and turn the computer over.
- Replace the ten screws that secure the palm rest to the computer base.
- Replace the keyboard (see [Replacing the Keyboard](#)).
- 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.

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Battery

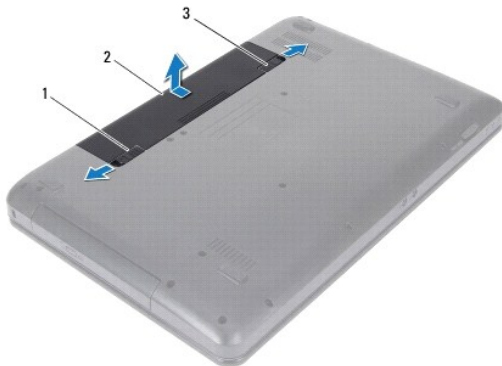
Dell™ Inspiron™ N5020/M5030/N5030 Service Manual

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

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- 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 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 instructions in [Before You Begin](#).
2. Shut down the computer and turn it over.
3. Slide the battery lock latch to the unlock position.
4. Slide the battery release latch to the side.
5. Slide and lift the battery out of the battery bay.



1	battery release latch	2	battery	3	battery lock latch
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Replacing the Battery

1. Follow the instructions in [Before You Begin](#).
 2. Align the tabs on the battery with the slots on the battery bay.
 3. Slide the battery into the battery bay until it clicks into place.
 4. Slide the battery lock latch to the lock position.
-

Speakers

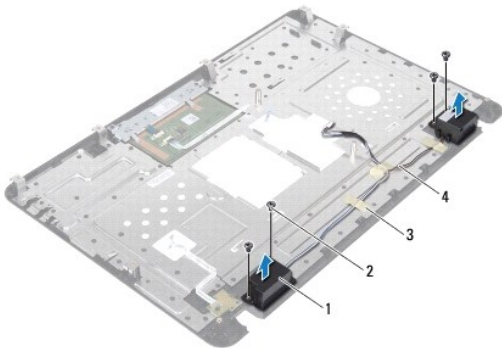
Dell™ Inspiron™ N5020/M5030/N5030 Service Manual

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

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

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 palm rest (see [Removing the Palm Rest](#)).
5. Turn the palm rest over.
6. Remove the four screws that secure the speakers to the palm rest.
7. Make a note of the speaker cable routing. Remove the adhesive tape and lift the speakers along with the cable, off the palm rest.




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

Replacing the Speakers

1. Follow the instructions in [Before You Begin](#).
2. Use the alignment posts to place the speakers on the palm rest.
3. Replace the four screws that secure the speakers to the palm rest.
4. Route the speaker cable and replace the adhesive tape.

5. Replace the palm rest (see [Replacing the Palm Rest](#)).
6. Replace the keyboard (see [Replacing the Keyboard](#)).
7. 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.

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System Board

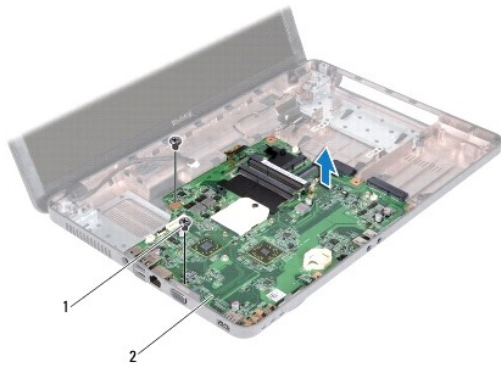
Dell™ Inspiron™ N5020/M5030/N5030 Service Manual

- [Removing the System Board](#)
- [Replacing the System Board](#)
- [Entering the Service Tag in the BIOS](#)

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

Removing the System 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 palm rest (see [Removing the Palm Rest](#)).
5. Remove memory module(s) (see [Removing the Memory Module\(s\)](#)).
6. Remove the hard drive (see [Removing the Hard Drive](#)).
7. Remove the optical drive (see [Removing the Optical Drive](#)).
8. Remove the Mini-Card (see [Removing the Wireless Mini-Card](#)).
9. Remove the Bluetooth module (see [Removing the Bluetooth Module](#)).
10. Remove the processor heat sink (see [Removing the Processor Heat Sink](#)).
11. Remove the processor module (see [Removing the Processor Module](#)).
12. Remove the coin-cell battery (see [Removing the Coin-Cell Battery](#)).
13. Press and eject any installed cards from the Media Card Reader.
14. Remove the two screws that secure the system board to the computer base.



1	screws (2)	2	system board
---	------------	---	--------------

15. Lift the system board assembly off the computer base.
-

Replacing the System Board

1. Follow the instructions in [Before You Begin](#).
2. Align the connectors on the system board with the slots on the computer base and place it on the computer base.
3. Replace the two screws that secure the system board to the computer base.
4. Replace any card or blank that you removed from the Media Card Reader.
5. Replace the coin-cell battery (see [Replacing the Coin-Cell Battery](#)).
6. Replace the processor module (see [Replacing the Processor Module](#)).
7. Replace the processor heat sink (see [Replacing the Processor Heat Sink](#)).
8. Replace the Bluetooth module (see [Replacing the Bluetooth Module](#)).
9. Replace the Mini-Card (see [Replacing the Wireless Mini-Card](#)).
10. Replace the optical drive (see [Replacing the Optical Drive](#)).
11. Replace the hard drive (see [Replacing the Hard Drive](#)).
12. Replace memory module(s) (see [Replacing the Memory Module\(s\)](#)).
13. Replace the palm rest (see [Replacing the Palm Rest](#)).
14. Replace the keyboard (see [Replacing the Keyboard](#)).
15. 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.

16. Turn on the computer.

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

17. Enter the service tag (see [Entering the Service Tag in the BIOS](#)).
-

Entering the Service Tag in the BIOS

1. Ensure that the AC adapter is plugged in and that the main battery is installed properly.
 2. Turn on the computer.
 3. Press <F2> during POST to enter the system setup program.
 4. Navigate to the security tab and enter the service tag in the **Set Service Tag** field.
-

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