




Dell™ Inspiron™ 410 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: D03U series
Regulatory type: D03U001

August 2010 Rev. A00

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Before You Begin

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- [Recommended Tools](#)
- [Turning Off Your Computer](#)
- [Safety Instructions](#)

This manual 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 [Safety Instructions](#).
- 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 reverse order.

Recommended Tools

The procedures in this document may require the following tools:



- 1 Small Phillips screwdriver
- 1 Hex nut driver
- 1 Flat-blade screwdriver
- 1 Flash BIOS executable update program 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 Vista®:

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






Windows 7:


Click the **Start** button  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 your operating system, press and hold the power button until the computer turns off.

Safety Instructions

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.
-  **WARNING:** Disconnect all power sources before opening the enclosure to replace, remove, or install accessories. After the installation is completed, the enclosure must be replaced and all fasteners installed before connecting to the power source.
-  **CAUTION:** Only a certified service technician is authorized to remove the computer cover and access any of the components inside the computer. See the safety instructions for complete information about safety precautions, working inside your computer, and protecting against electrostatic discharge.
-  **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:** When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. 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. Disconnect your computer and all attached devices from their electrical outlets.
5. Disconnect all attached devices from your computer.
6. Press and hold the power button while the system is unplugged to ground the system board.

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Bottom Cover

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

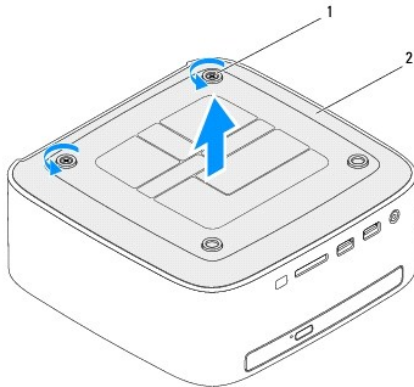
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

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).

Removing the Bottom Cover

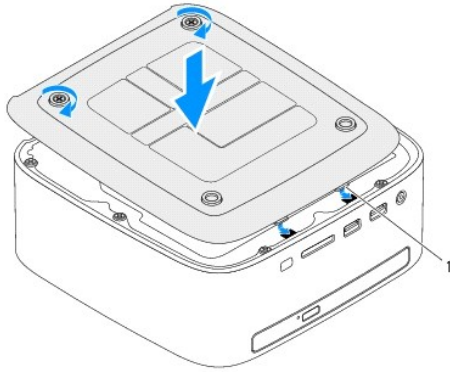
1. Follow the procedures in [Before You Begin](#).
2. Turn the computer over.
3. Loosen the two captive screws that secure the bottom cover to the chassis.
4. Lift the bottom cover off the computer.



1	captive screws (2)	2	bottom cover
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Replacing the Bottom Cover

1. Follow the procedures in [Before You Begin](#).
2. Align the tabs on the bottom cover with the slots on the computer.



1	tabs (2)
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3. Tighten the two captive screws that secure the bottom cover to the chassis.

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.

4. Connect your computer and all attached devices to electrical outlets, and turn them on.

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Wireless Mini-Card

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

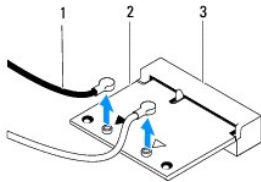
NOTE: Dell does not guarantee compatibility or provide support for Mini-Cards from sources other than Dell.

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

Your computer supports one half Mini-Card slot for Wireless Local Area Network (WLAN).

Removing the Mini-Card

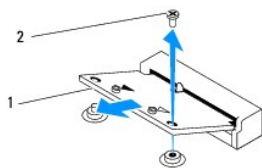
1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the optical drive (see [Removing the Optical Drive](#)).
5. Remove the drive bay (see [Removing the Drive Bay](#)).
6. Locate the Mini-card (see [System Board Components](#)).
7. Disconnect the antenna cables from the Mini-Card.



1	antenna cables (2)	2	Mini-Card
3	system-board connector		


8. Remove the screw that secures the Mini-Card to the system-board connector.
9. Lift the Mini-Card away from the system-board connector.


CAUTION: When the 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).



1	Mini-Card	2	screw
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Replacing the Mini-Card


 **CAUTION:** The connectors are keyed to ensure correct insertion. Use of excessive force may damage the connectors.

 **CAUTION:** To avoid damage to the Mini-Card, ensure that there are no cables or antenna cables under the Mini-Card.

1. Follow the procedures in [Before You Begin](#).
2. Align the notch on the Mini-Card with the tab in the system-board connector.
3. Insert the Mini-Card at a 45-degree angle into the system-board connector.
4. Press the other end of the Mini-Card down and replace the screw that secures the Mini-Card to the system-board connector.
5. Connect the appropriate antenna cables to the Mini-Card you are installing. The following table provides the antenna cable color scheme for the Mini-Card supported by your computer.

Connectors on the Mini-Card	Antenna Cable Color Scheme
WLAN (2 antenna cables)	
Main WLAN (white triangle)	white
Auxiliary WLAN (black triangle)	black

6. Replace the drive bay (see [Replacing the Drive Bay](#)).
7. Replace the optical drive (see [Replacing the Optical Drive](#)).
8. Replace the top bracket (see [Replacing the Top Bracket](#)).
9. Replace the top cover (see [Replacing the Top Cover](#)).

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

10. Connect your computer and all attached devices to electrical outlets, and turn them on.
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Coin-Cell Battery

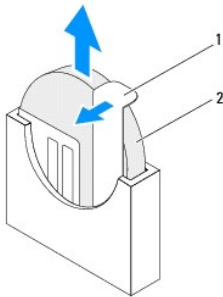
Dell™ Inspiron™ 410 Service Manual

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

- ⚠ WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.
- ⚠ WARNING:** A new battery can explode if it is incorrectly installed. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.
- ⚠ 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).
-

Removing the Coin-Cell Battery

1. Record all the screens in the system setup utility (see [System Setup Utility](#)) so that you can restore the correct settings after the new coin-cell battery has been installed.
2. Follow the procedures in [Before You Begin](#).
3. Remove the top cover (see [Removing the Top Cover](#)).
4. Remove the top bracket (see [Removing the Top Bracket](#)).
5. Remove the optical drive (see [Removing the Optical Drive](#)).
6. Remove the drive bay (see [Removing the Drive Bay](#)).
7. Locate the coin-cell battery socket (see [System Board Components](#)).
8. Carefully pull the release lever away from the coin-cell battery and lift the coin-cell battery out of the socket.




1	release lever	2	coin-cell battery
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Replacing the Coin-Cell Battery

1. Follow the procedures in [Before You Begin](#).
2. Insert the new coin-cell battery into the socket with the side labeled "+" facing left.
3. Replace the drive bay (see [Replacing the Drive Bay](#)).
4. Replace the optical drive (see [Replacing the Optical Drive](#)).
5. Replace the top bracket (see [Replacing the Top Bracket](#)).

6. Replace the top cover (see [Replacing the Top Cover](#)).

 **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.

7. Connect your computer and devices to electrical outlets, and then turn them on.

8. Enter the system setup utility (see [System Setup Utility](#)) and restore the settings you recorded in [step 1](#).

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Graphics Card

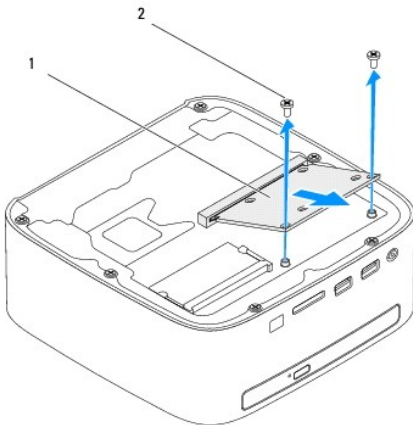
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- [Removing the Graphics Card](#)
- [Replacing the Graphics Card](#)

- 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).
-

Removing the Graphics Card

1. Follow the procedures in [Before You Begin](#).
2. Remove the bottom cover (see [Removing the Bottom Cover](#)).
3. Remove the two screws that secure the graphics card to the system board.
4. Remove the graphics card from the system board connector.



1	graphics card	2	screws (2)
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Replacing the Graphics Card

1. Follow the procedures in [Before You Begin](#).
2. Align the notch on the graphics card with the tab in the system-board connector.
3. Insert the graphics card at a 45-degree angle into the system board connector.
4. Press the other end of the graphics card down and replace the two screws that secure the graphics card to the system-board connector.
5. Replace the bottom cover (see [Replacing the Bottom Cover](#)).

- 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. Connect your computer and all attached devices to electrical outlets, and turn them on.

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Hard Drive

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

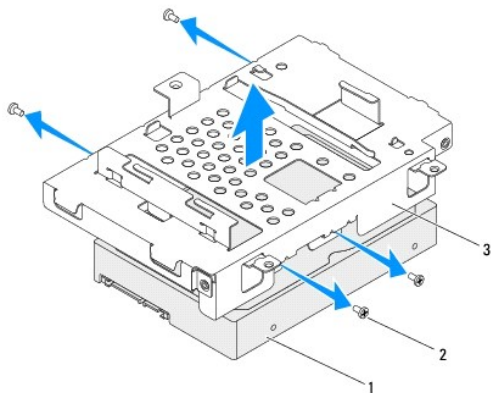
- ⚠ **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.
- ⚠ **WARNING:** If you remove the hard drive from the computer 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 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 prevent data loss, turn off your computer (see [Turning Off Your Computer](#)) before removing the hard drive. Do not remove the hard drive while the computer is On or in Sleep state.
- ⚠ **CAUTION:** Hard drives are extremely fragile. Exercise care when handling the hard drive.
- 🔍 **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 procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the optical drive (see [Removing the Optical Drive](#)).
5. Remove the drive bay (see [Removing the Drive Bay](#)).

- ⚠ **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. Remove the four screws that secure the hard drive to the drive bay.
7. Lift the drive bay off the hard drive.



1	hard drive	2	screws (4)
3	drive bay		

Replacing the Hard Drive

1. Follow the procedures 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. Align the screw holes on the drive bay with the screw holes on the hard drive.
4. Replace the four screws that secure the hard drive to the drive bay.
5. Replace the drive bay (see [Replacing the Drive Bay](#)).
6. Replace the optical drive (see [Replacing the Optical Drive](#)).
7. Replace the top bracket (see [Replacing the Top Bracket](#)).
8. Replace the top cover (see [Replacing the Top Cover](#)).

 **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.

9. Connect your computer and all attached devices to electrical outlets, and turn them on.
10. Install the operating system for your computer, as needed. See "Restoring Your Operating System" in the *Setup Guide*.
11. Install the drivers and utilities for your computer, as needed.

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Drive Bay

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

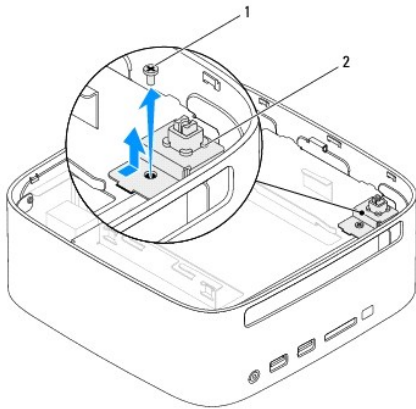
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

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).

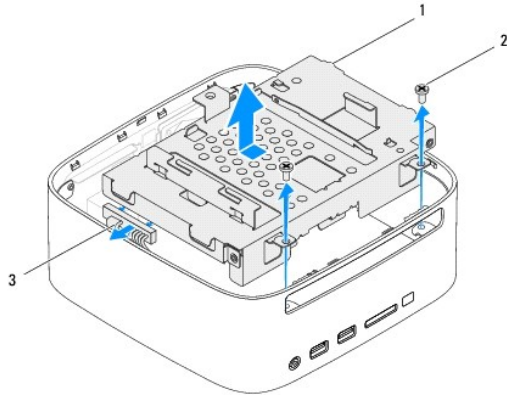
Removing the Drive Bay

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the optical drive (see [Removing the Optical Drive](#)).
5. Remove the screw that secures the power-button bracket to the drive bay.



1	screw	2	power-button bracket
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6. Without pulling hard on the power-button bracket, lift and hold the power-button bracket away from the drive bay.
7. Remove the two screws that secure the drive bay to the chassis.
8. Slide the drive bay towards the back of the computer and lift the drive bay to access the hard-drive cable.
9. Disconnect the hard-drive cable from the connector on the hard drive.
10. Carefully lift the drive bay away from the computer.



1	drive bay	2	screws (2)
3	hard-drive cable		

Replacing the Drive Bay

1. Follow the procedures in [Before You Begin](#).
2. Connect the hard-drive cable to the connector on the hard drive.
3. Align the tabs on the drive bay with the slots on the chassis. Slide the drive bay towards the front of the computer to align the screw holes on the drive bay with the screws holes on the chassis.
4. Replace the two screws that secure the drive bay to the chassis.
5. Replace the power-button bracket and replace the screw that secures the power-button bracket to the drive bay.
6. Replace the optical drive (see [Replacing the Optical Drive](#)).
7. Replace the top bracket (see [Replacing the Top Bracket](#)).
8. Replace the top cover (see [Replacing the Top Cover](#)).

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.

9. Connect your computer and all attached devices to electrical outlets, and turn them on.

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Processor Heat Sink

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- [Removing the Processor Heat Sink](#)
- [Replacing the Processor Heat Sink](#)

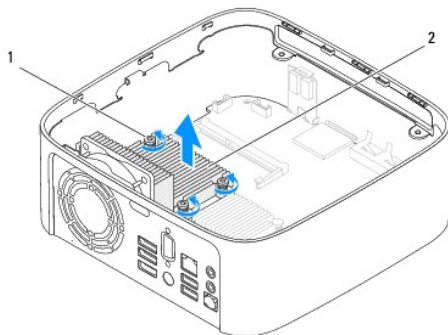
- WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.
- WARNING:** The heat sink may be very hot during normal operation. Be sure that it has had sufficient time to cool before you touch it.
- 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:** Do not perform the following steps unless you are familiar with hardware removal and replacement. Performing these steps incorrectly could damage your system board. For technical service information, see the *Setup Guide*.
-

Removing the Processor Heat Sink

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the optical drive (see [Removing the Optical Drive](#)).
5. Remove the drive bay (see [Removing the Drive Bay](#)).


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


6. Loosen the four captive screws that secure the processor heat sink to the system board.
7. Carefully lift the processor heat sink away from the computer.
8. Lay the processor heat sink down on its top, with the thermal grease facing upward.




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


 **CAUTION:** Incorrect alignment of the processor heat sink can cause damage to the system board and processor.

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

1. Follow the procedures in [Before You Begin](#).
2. Clean the thermal grease from the bottom of the processor heat sink.

 **CAUTION:** Ensure that you apply new thermal grease. New thermal grease is critical for ensuring adequate thermal bonding, which is a requirement for optimal processor operation.

3. Apply the new thermal grease to the top of the processor.
4. Align the four captive screws on the processor heat sink with the screw holes on the system board and tighten the screws.
5. Replace the drive bay (see [Replacing the Drive Bay](#)).
6. Replace the optical drive (see [Replacing the Optical Drive](#)).
7. Replace the top bracket (see [Replacing the Top Bracket](#)).
8. Replace the top cover (see [Replacing the Top Cover](#)).

 **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.

9. Connect your computer and devices to electrical outlets, and then turn them on.

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I/O Bracket

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- [Removing the I/O Bracket](#)
- [Replacing the I/O Bracket](#)

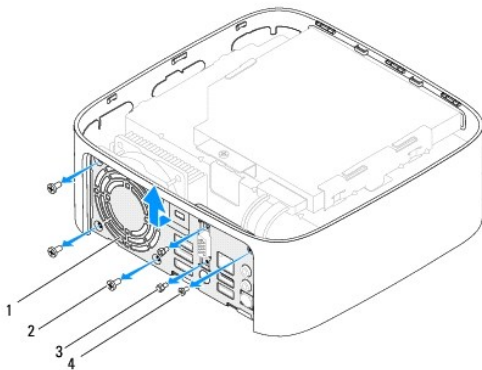
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CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

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).

Removing the I/O Bracket

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the bottom cover (see [Removing the Bottom Cover](#)).
5. Remove the I/O bezel (see [Removing the I/O Bezel](#)).
6. Remove the three screws that secure the chassis fan to the I/O bracket.
7. Using a hex nut driver, remove the two hex nut screws that secure the VGA connector to the I/O bracket.
8. Remove the screw that secures the I/O bracket to the chassis.
9. Release the I/O bracket out of the computer cover and lift the I/O bracket out of the computer.




1	I/O bracket	2	chassis fan screws (3)
3	hex nut screws (2)	4	I/O bracket screw

Replacing the I/O Bracket

1. Follow the procedures in [Before You Begin](#).
2. Align and insert the tabs on the bottom of the I/O bracket into the slots on the chassis.

3. Replace the screw that secures the I/O bracket to the chassis.
4. Using a hex nut driver, replace the two hex nut screws that secure the VGA connector to the I/O bracket.
5. Replace the three screws that secure the chassis fan to the I/O bracket.
6. Replace the I/O bezel (see [Replacing the I/O Bezel](#)).
7. Replace the bottom cover (see [Replacing the Bottom Cover](#)).
8. Replace the top bracket (see [Replacing the Top Bracket](#)).
9. Replace the top cover (see [Replacing the Top Cover](#)).

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

10. Connect your computer and all attached devices to electrical outlets, and turn them on.

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I/O Bezel

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- [Replacing the I/O Bezel](#)

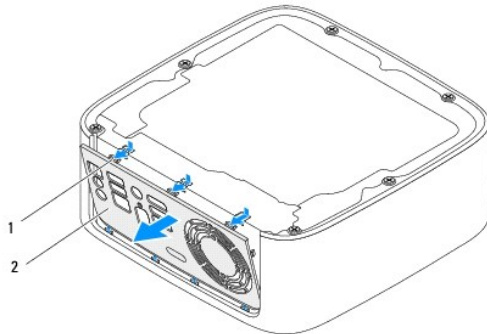
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

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).

Removing the I/O Bezel

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the bottom cover (see [Removing the Bottom Cover](#)).
4. Press to release the tabs on the bottom of the I/O bezel from the slots on the chassis and lift the I/O bezel out of the computer.



1	tabs (3)	2	I/O bezel
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Replacing the I/O Bezel

1. Follow the procedures in [Before You Begin](#).
2. Align the tabs on the I/O bezel with the slots on the computer and snap the I/O bezel into place.
3. Replace the bottom cover (see [Replacing the Bottom Cover](#)).
4. Replace the top cover (see [Replacing the Top Cover](#)).

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.

5. Connect your computer and all attached devices to electrical outlets, and turn them on.

Infrared Board

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

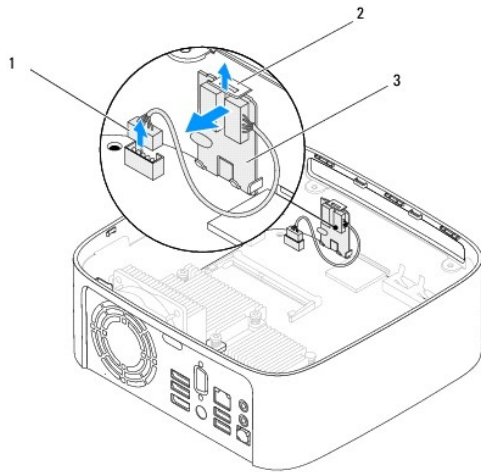
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

CAUTION: 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).

Removing the Infrared Board

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the optical drive (see [Removing the Optical Drive](#)).
5. Remove the drive bay (see [Removing the Drive Bay](#)).
6. Disconnect the infrared cable from the infrared connector on the system board.
7. Lift the release latch and remove the infrared board from the slot on the chassis.




1	infrared cable connector	2	release latch
3	infrared board		

Replacing the Infrared Board

1. Follow the procedures in [Before You Begin](#).
2. Replace the infrared board in the slot, and press it in, until it clicks into place.
3. Connect the infrared cable to the infrared connector on the system board (see [System Board Components](#)).

4. Replace the drive bay (see [Replacing the Drive Bay](#)).
5. Replace the optical drive (see [Replacing the Optical Drive](#)).
6. Replace the top bracket (see [Replacing the Top Bracket](#)).
7. Replace the top cover (see [Replacing the Top Cover](#)).

 **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. Connect your computer and devices to electrical outlets, and then turn them on.
-

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Memory Module(s)

Dell™ Inspiron™ 410 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).
-

Removing the Memory Module(s)

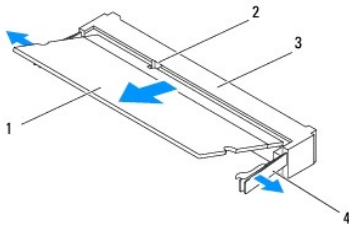
1. Follow the procedures in [Before You Begin](#).
2. To remove the memory module from the top memory-module connector (DIMM1):
 - a. Remove the top cover (see [Removing the Top Cover](#)).
 - b. Remove the top bracket (see [Removing the Top Bracket](#)).
 - c. Remove the optical drive (see [Removing the Optical Drive](#)).
 - d. Remove the drive bay (see [Removing the Drive Bay](#)).

To remove the memory module from the bottom memory-module connector (DIMM2):

- a. Remove the bottom cover (see [Removing the Bottom Cover](#)).

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

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



1	memory module	2	tab
3	memory-module connector	4	securing clips (2)


Replacing the Memory Module(s)


1. Follow the procedures 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 slot 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.
4. If you replaced the memory module in the top memory-module connector (DIMM1):
 - a. Replace the drive bay (see [Replacing the Drive Bay](#)).

- b. Replace the optical drive (see [Replacing the Optical Drive](#)).
- c. Replace the top bracket (see [Replacing the Top Bracket](#)).
- d. Replace the top cover (see [Replacing the Top Cover](#)).

If you replaced the memory module in the bottom memory-module connector (DIMM2):

- a. Replace the bottom cover (see [Replacing the Bottom Cover](#)).

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

 **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.

5. Connect your computer and all attached devices to electrical outlets, and then turn them on. If the message appears stating that memory size has changed, press <F1> to continue.
6. Log on to your computer.
7. To verify that the memory is installed correctly:

Windows Vista®:

Click the **Start** button  → **Control Panel** → **System and Maintenance**.

Windows 7:

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

8. Check the amount of memory (RAM) listed.

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Optical Drive

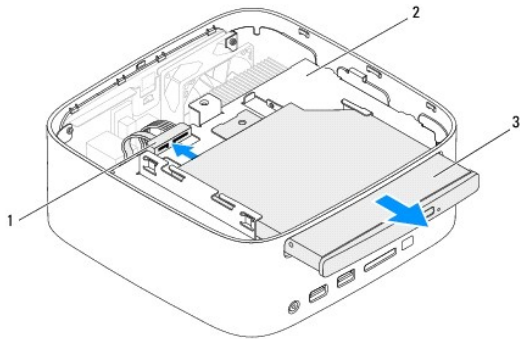
Dell™ Inspiron™ 410 Service Manual

- [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).
-

Removing the Optical Drive

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Disconnect the optical-drive cable from the connector on the optical drive.
5. Push and slide the optical drive out through the front of the computer.



1	optical-drive cable connector	2	drive bay
3	optical drive		

Replacing the Optical Drive

1. Follow the procedures in [Before You Begin](#).
2. Slide the optical drive into the drive bay.
3. Connect the optical-drive cable to the connector on the optical drive.
4. Replace the top bracket (see [Replacing the Top Bracket](#)).
5. Replace the top cover (see [Replacing the Top Cover](#)).

- 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. Connect your computer and all attached devices to electrical outlets, and turn them on.

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Processor

Dell™ Inspiron™ 410 Service Manual

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

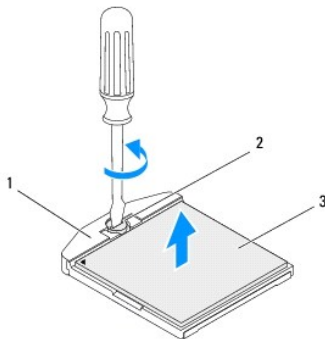
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- CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).
-

Removing the Processor

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the optical drive (see [Removing the Optical Drive](#)).
5. Remove the drive bay (see [Removing the Drive Bay](#)).
6. 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 module when removing or replacing the processor module, press to apply slight pressure to the center of the processor module while turning the cam screw.

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	ZIF-socket cam screw
3	processor module		

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

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

8. Lift the processor module off the ZIF socket.
-

Replacing the Processor

CAUTION: If a new processor module 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.

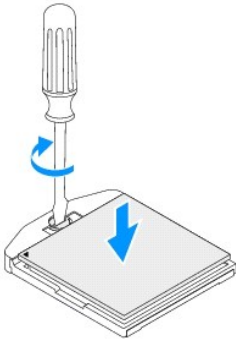
1. Follow the procedures in [Before You Begin](#).
2. Align the pin-1 corner of the processor module with the pin-1 corner of the ZIF socket, then place the processor module.

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.

3. When the processor module is properly seated, all four corners are aligned at the same height. If one or more corners of the processor module are higher than the others, the processor 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.

4. Tighten the ZIF socket by turning the cam screw clockwise to secure the processor module to the system board.



5. Replace the processor heat sink (see [Replacing the Processor Heat Sink](#)).
6. Replace the drive bay (see [Replacing the Drive Bay](#)).
7. Replace the optical drive (see [Replacing the Optical Drive](#)).
8. Replace the top bracket (see [Replacing the Top Bracket](#)).
9. Replace the top cover (see [Replacing the Top Cover](#)).

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

10. Connect your computer and all attached devices to electrical outlets, and then turn them on.


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Power-Button Bracket

Dell™ Inspiron™ 410 Service Manual

- [Removing the Power-Button Bracket](#)
- [Replacing the Power-Button Bracket](#)

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

 **CAUTION:** 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).

Removing the Power-Button Bracket

1. Follow the procedures in [Before You Begin](#).
 2. Remove the top cover (see [Removing the Top Cover](#)).
 3. Remove the top bracket (see [Removing the Top Bracket](#)).
 4. Remove the optical drive (see [Removing the Optical Drive](#)).
 5. Remove the drive bay (see [Removing the Drive Bay](#)).
 6. Disconnect the power-button cable from the connector on the system board and lift the power-button bracket off the drive bay.
-

Replacing the Power-Button Bracket

1. Follow the procedures in [Before You Begin](#).
2. Connect the power-button cable to the power-button connector on the system board (see [System Board Components](#)).
3. Replace the drive bay (see [Replacing the Drive Bay](#)).
4. Replace the optical drive (see [Replacing the Optical Drive](#)).
5. Replace the top bracket (see [Replacing the Top Bracket](#)).
6. Replace the top cover (see [Replacing the Top Cover](#)).

 **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.

7. Connect your computer and all attached devices to electrical outlets, and turn them on.
-

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Chassis Fan

Dell™ Inspiron™ 410 Service Manual

- [Removing the Chassis Fan](#)
- [Replacing the Chassis Fan](#)

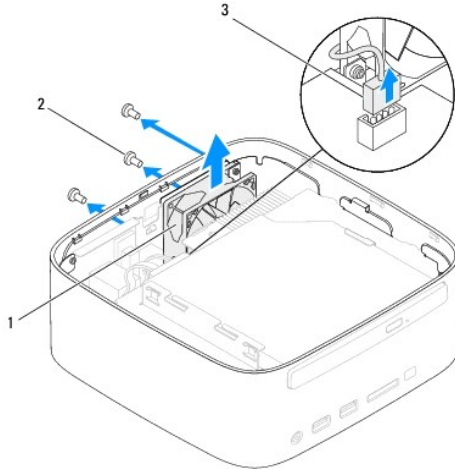
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CAUTION: Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

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).

Removing the Chassis Fan

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).
4. Remove the I/O bezel (see [Removing the I/O Bezel](#)).
5. Disconnect the chassis fan cable from the connector on the system board (see [System Board Components](#)).
6. Remove the three screws that secure the chassis fan to the I/O bracket.
7. Lift the chassis fan away from the computer.




1	chassis fan	2	screws (3)
3	chassis fan cable connector		

Replacing the Chassis Fan

1. Follow the procedures in [Before You Begin](#).
2. Align the screw holes on the chassis fan with the screw holes on the I/O bracket.
3. Replace the three screws that secure the chassis fan to the I/O bracket.

4. Connect the chassis fan cable to the connector on the system board (see [System Board Components](#)).
5. Replace the I/O bezel (see [Replacing the I/O Bezel](#)).
6. Replace the top bracket (see [Replacing the Top Bracket](#)).
7. Replace the top cover (see [Replacing the Top Cover](#)).

 **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. Connect your computer and all attached devices to electrical outlets, and turn them on.
-

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System Board

Dell™ Inspiron™ 410 Service Manual

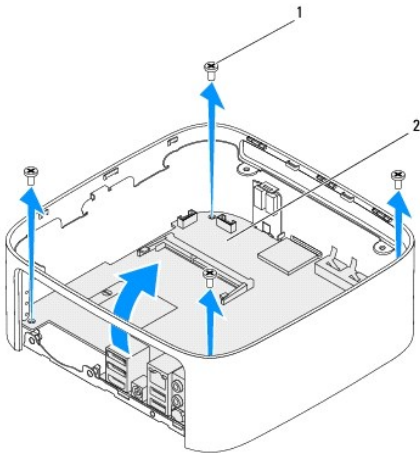
- [Removing the System Board](#)
- [Replacing the System Board](#)
- [Entering the Service Tag in the BIOS](#)

-  **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:** Handle components and cards by their edges, and avoid touching pins and contacts.
-  **NOTE:** The system board's BIOS chip contains the Service Tag, which is also visible on a barcode label on the computer.
-

Removing the System Board

1. Follow the procedures in [Before You Begin](#).
 2. Remove the top cover (see [Removing the Top Cover](#)).
 3. Remove the top bracket (see [Removing the Top Bracket](#)).
 4. Remove the bottom cover (see [Removing the Bottom Cover](#)).
 5. Remove the optical drive (see [Removing the Optical Drive](#)).
 6. Remove the drive bay (see [Removing the Drive Bay](#)).
 7. Remove the power-button bracket (see [Removing the Power-Button Bracket](#)).
 8. Remove the infrared board (see [Removing the Infrared Board](#)).
 9. Remove the coin-cell battery (see [Removing the Coin-Cell Battery](#)).
 10. Remove the I/O bezel (see [Removing the I/O Bezel](#)).
 11. Remove the chassis fan (see [Removing the Chassis Fan](#)).
 12. Remove the I/O bracket (see [Removing the I/O Bracket](#)).
 13. Remove the memory module(s) (see [Removing the Memory Module\(s\)](#)).
 14. Remove the Mini-Card (see [Removing the Mini-Card](#)).
 15. Remove the processor heat sink (see [Removing the Processor Heat Sink](#)).
 16. Remove the processor (see [Removing the Processor](#)).
 17. Remove the graphics card (see [Removing the Graphics Card](#)).
-  **NOTE:** Make note of the cable routing before disconnecting the cables from the system board.
18. Disconnect all the cables connected to the system board.
 19. Remove the four screws that secure the system board to the chassis.
 20. Push the system board from the bottom to release the system board from the chassis.
 21. Slide the system board to the back of the chassis to release the connectors on the system board from the slots on the chassis.


- Lift the system board away from the computer.



1	screws (4)	2	system board
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Replacing the System Board

- Follow the procedures in [Before You Begin](#).
- Align the connectors on the system board with the slots on the chassis and slide the system board in place.
- Replace the four screws that secure the system board to the chassis.
- Replace the graphics card (see [Replacing the Graphics Card](#)).
- Replace the processor (see [Replacing the Processor](#)).
- Replace the processor heat sink (see [Replacing the Processor Heat Sink](#)).
- Replace the Mini-Card (see [Replacing the Mini-Card](#)).
- Connect all the cables to the system board.
- Replace the memory module(s) (see [Replacing the Memory Module\(s\)](#)).
- Replace the I/O bracket (see [Replacing the I/O Bracket](#)).
- Replace the chassis fan (see [Replacing the Chassis Fan](#)).
- Replace the I/O bezel (see [Replacing the I/O Bezel](#)).
- Replace the coin-cell battery (see [Replacing the Coin-Cell Battery](#)).
- Replace the infrared board (see [Replacing the Infrared Board](#)).
- Replace the power-button bracket (see [Replacing the Power-Button Bracket](#)).
- Replace the drive bay (see [Replacing the Drive Bay](#)).
- Replace the optical drive (see [Replacing the Optical Drive](#)).
- Replace the bottom cover (see [Replacing the Bottom Cover](#)).
- Replace the top bracket (see [Replacing the Top Bracket](#)).
- Replace the top cover (see [Replacing the Top Cover](#)).

 **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.

21. Turn on the computer.

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

22. Enter the Service Tag (see [Entering the Service Tag in the BIOS](#)).

Entering the Service Tag in the BIOS

1. Turn on the computer.
 2. Press <F2> during POST to enter the system setup utility.
 3. Navigate to the **Main** tab and enter the Service Tag in the **Service Tag Setting** field.
-

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System Setup Utility


Dell™ Inspiron™ 410 Service Manual


- [Overview](#)
- [Clearing Forgotten Passwords and CMOS Settings](#)
- [Flashing the BIOS](#)

Overview

Use the system setup utility to:


- 1 Change the system configuration information after you add, change, or remove any hardware in your computer
- 1 Set or change a user-selectable option such as the user password
- 1 Read the current amount of memory or set the type of hard drive installed

 **CAUTION:** Unless you are an expert computer user, do not change the settings for this program. Certain changes can make your computer work incorrectly.

 **NOTE:** Before you change system setup, it is recommended that you write down the system setup screen information for future reference.

Entering the System Setup Utility

1. Turn on (or restart) your computer.
2. When the DELL™ logo is displayed, watch for the F2 prompt to appear and then press <F2> immediately.


 **NOTE:** The F2 prompt indicates that the keyboard has initialized. This prompt can appear very quickly, so you must watch for it, and then press <F2>. If you press <F2> before the F2 prompt, this keystroke will be lost. If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft® Windows® desktop. Then, shut down your computer (see [Turning Off Your Computer](#)) and try again.

System Setup Screens

The system setup screen displays current or changeable configuration information for your computer. Information on the screen is divided into three areas: the **setup item**, active **help screen**, and **key functions**.

<p>Setup Item — This field appears on the left side of the system setup window. The field is a scrollable list containing features that define the configuration of your computer, including installed hardware, power conservation, and security features.</p> <p>Scroll up and down the list with the up- and down-arrow keys. As an option is highlighted, the Help Screen displays more information about that option and available settings.</p>	<p>Help Screen — This field appears on the right side of the system setup window and contains information about each option listed in the Setup Item. In this field you can view information about your computer and make changes to your current settings.</p> <p>Press the up-arrow and down-arrow keys to highlight an option. Press <Enter> to make that selection active and return to the Setup Item.</p> <p>NOTE: Not all settings listed in the Setup Item are changeable.</p>
<p>Key Functions — This field appears below the Help Screen and lists keys and their functions within the active system setup field.</p>	

System Setup Options

 **NOTE:** Depending on your computer and installed devices, the items listed in this section may appear, or may not appear exactly as listed.

System Info	
BIOS Info	Displays the BIOS version and date.
System	Displays the computer model number.
Service Tag	Displays the service tag of the computer.
Asset Tag	Displays the asset tag for the computer, if present.
Processor Type	Displays the processor type.
CPU speed	Displays the speed of the CPU.
Processor L1 Cache	Displays the amount of processor Level 1 cache.


Processor L2 Cache	Displays the amount of processor Level 2 cache.
Memory Installed	Indicates the amount of installed memory.
Memory Available	Indicates the amount of available memory.
Memory Speed	Indicates the frequency of installed memory.
Memory Technology	Indicates the type of installed memory.
Standard CMOS Features	
System Time	Displays current time in the format (hh:mm:ss).
System Date	Displays current date in the format (mm:dd:yyyy).
SATA 1	Displays the SATA drives connected to the SATA 1 connector.
SATA 2	Displays the SATA drives connected to the SATA 2 connector.
ESATA1	Displays the ESATA drives connected to the ESATA 1 connector
ESATA2	Displays the ESATA drives connected to the ESATA 2 connector
Advanced BIOS Features	
CPU Feature	<ul style="list-style-type: none"> 1 AMD Cool 'N' Quiet — Enabled; Disabled (Enabled by default) 1 Secure Virtual Machine Mode — Enabled; Disabled (Enabled by default)
USB Device Setting	<ul style="list-style-type: none"> 1 USB Operation Mode — HiSpeed; FullSpeed (HiSpeed by default)
Advanced Chipset Features	
Onboard Audio Controller	Enabled; Disabled (Enabled by default)
SATA Mode	AHCTI; ATA (ATA by default)
Onboard LAN Controller	Enabled; Disabled (Enabled by default)
Onboard LAN Boot ROM	Enabled; Disabled (Disabled by default)
Boot Device Configuration	
Boot Settings Configuration	<ul style="list-style-type: none"> 1 Fast Boot — Enabled; Disabled (Enabled by default) 1 Numlock Key — On; Off (On by default) 1 Keyboard Errors — Report; Do Not Report (Report by default)
Hard Disk Boot Priority	Used to set the device priority of hard drives. The items displayed are dynamically updated according to the hard drives detected.
1st Boot Device	Removable Dev.; Hard Drive; CD/DVD; Network; USB; Disabled (Hard Drive by default)
2nd Boot Device	Removable Dev.; Hard Drive; CD/DVD; Network; USB; Disabled (USB by default)
3rd Boot Device	Removable Dev.; Hard Drive; CD/DVD; Network; USB; Disabled (CD/DVD by default)
4th Boot Device	Removable Dev.; Hard Drive; CD/DVD; Network; USB; Disabled (Removable Dev. by default)
5th Boot Device	Removable Dev.; Hard Drive; CD/DVD; Network; USB; Disabled (Network by default)
Power Management Setup	
Remote Wake Up	Enabled; Disabled (Enabled by default)
AC Recovery	Power Off; Power On; Last Power State (Power Off by default)
Auto Power On	Enabled; Disabled (Disabled by default)
Auto Power On Date	0
Auto Power On Time	0:00:00
BIOS Security Features	
Set Supervisor Password	Press <Enter> to set the supervisor password.
User Access Level	No Access; View Only; Limited; Full Access (Full Access by default)
Set User Password	Press <Enter> to set the user password.
Password Check	Setup; Always (Setup by default)

Boot Sequence

This feature allows you to change the boot sequence for devices.

Boot Options

1. **Hard Drive** — The computer attempts to boot from the primary hard drive. If no operating system is on the drive, the computer generates an error message.
1. **USB Flash Device** — Insert the memory device into a USB port and restart the computer. When **F12 = Boot Options** appears in the lower-right corner of the screen, press <F12>. The BIOS detects the device and adds the USB flash option to the boot menu.

 **NOTE:** To boot to a USB device, the device must be bootable. To ensure that your device is bootable, check the device documentation.

1. **CD/DVD Drive** — The computer attempts to boot from the CD/DVD drive. If no CD/DVD is in the drive, or if the CD/DVD has no operating system, the computer generates an error message.

Changing Boot Sequence for the Current Boot

You can use this feature to change the current boot sequence, for example, to boot from the CD/DVD drive to run the Dell Diagnostics on the *Drivers and Utilities* media. On completion of diagnostic tests, the previous boot sequence is restored.

1. If you are booting to a USB device, connect the USB device to a USB connector.
2. Turn on (or restart) your computer.
3. When **F2 = Setup**, **F12 = Boot Options** appears in the lower-right corner of the screen, press <F12>.

If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft Windows desktop. Then shut down your computer and try again.

The **Boot Device Menu** appears, listing all available boot devices.


4. On the **Boot Device Menu** choose the device you want to boot from.

For example, if you are booting to a USB memory key, highlight **USB Flash Device** and press <Enter>.

 **NOTE:** To boot to a USB device, the device must be bootable. To ensure your device is bootable, check the device documentation.


Changing Boot Sequence for Future Boots


1. Enter the system setup utility (see [Entering the System Setup Utility](#)).
2. Use the arrow keys to highlight the **Boot** menu option and press <Enter> to access the menu.


 **NOTE:** Write down your current boot sequence in case you want to restore it.


3. Press the up- and down-arrow keys to move through the list of devices.
4. Press plus (+) or minus (-) to change the boot priority of the device.


Clearing Forgotten Passwords and CMOS Settings

 **WARNING:** Before you begin any of the procedures in this section, follow the safety instructions that shipped with your computer.

 **WARNING:** The computer must be disconnected from the electrical outlet to clear the CMOS setting.

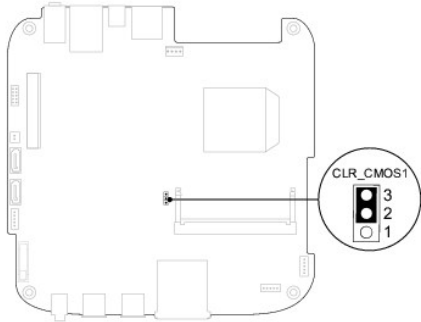
 **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

 **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:** Clearing the CMOS settings will also clear the passwords.

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the top bracket (see [Removing the Top Bracket](#)).

4. Remove the optical drive (see [Removing the Optical Drive](#)).
5. Remove the drive bay (see [Removing the Drive Bay](#)).
6. Locate the 3-pin CMOS jumper on the system board (see [System Board Components](#)).
7. Remove the 2-pin jumper plug from pins 2 and 3 and fix it on pins 1 and 2.
8. Wait for approximately five seconds to clear the CMOS settings and passwords.
9. Remove the 2-pin jumper plug from pins 1 and 2 and replace it on pins 2 and 3.



10. Replace the drive bay (see [Replacing the Drive Bay](#)).
11. Replace the optical drive (see [Replacing the Optical Drive](#)).
12. Replace the top bracket (see [Replacing the Top Bracket](#)).
13. Replace the top cover (see [Replacing the Top Cover](#)).

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.

14. Connect your computer and devices to electrical outlets, and turn them on.

Flashing the BIOS

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 the Dell Support website at support.dell.com.
3. Click **Drivers & Downloads**→ **Select Model**.
4. Locate the BIOS update file for your computer:


NOTE: The Service Tag for your computer is located 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 5](#).

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**.
 5. A list of results appear on the screen. Click **BIOS**.
 6. Click **Download Now** to download the latest BIOS file.
The **File Download** window appears.
 7. Click **Save** to save the file on your desktop. The file downloads to your desktop.
 8. Click **Close** if the **Download Complete** window appears.
The file icon appears on your desktop and is titled the same as the downloaded BIOS update file.
 9. Double-click the file icon on the desktop and follow the instructions on the screen.
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Technical Overview

Dell™ Inspiron™ 410 Service Manual

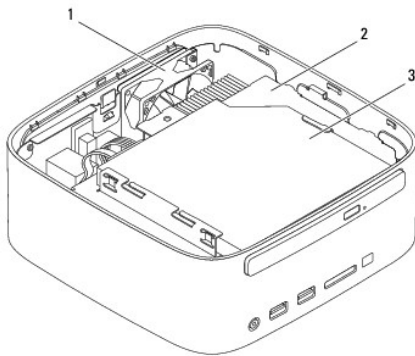
- [Inside View](#)
- [System Board Components](#)

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).

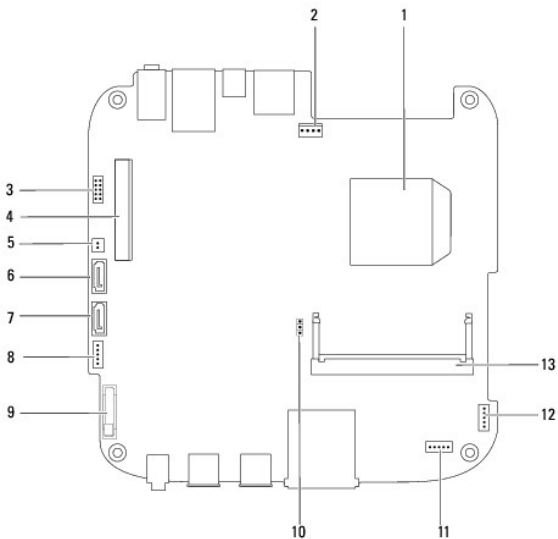
Inside View



1	chassis fan	2	drive bay
3	optical drive		

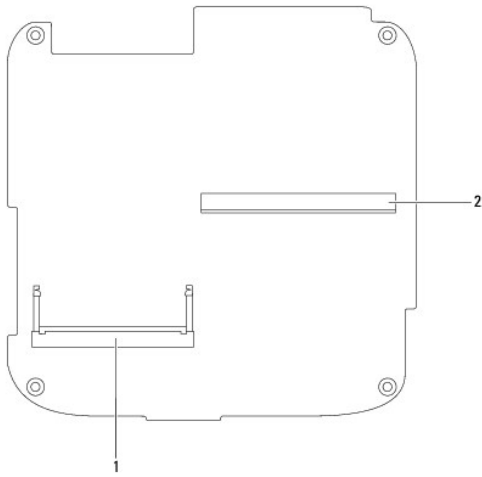
System Board Components

Top View



1	processor	2	chassis fan connector (SYSFAN1)
3	VGA connector	4	wireless Mini-card connector
5	optical drive power connector (ODD_PWR1)	6	SATA drive connector (SATA1)
7	SATA drive connector (SATA2)	8	SATA power connector (SATAPWR1)
9	coin-cell battery socket (BAT1)	10	CMOS jumper (CMOS1)
11	infrared connector	12	power button connector
13	memory-module connector (DIMM1)		

Bottom View



1	memory-module connector (DIMM2)	2	graphics card connector
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Top Bracket

Dell™ Inspiron™ 410 Service Manual

- [Removing the Top Bracket](#)
- [Replacing the Top Bracket](#)

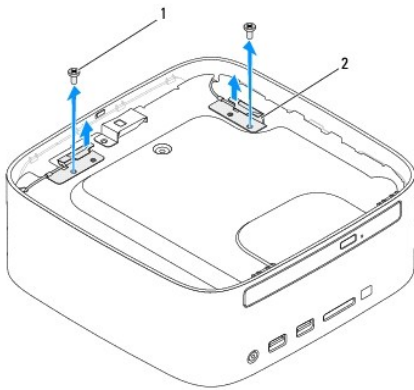
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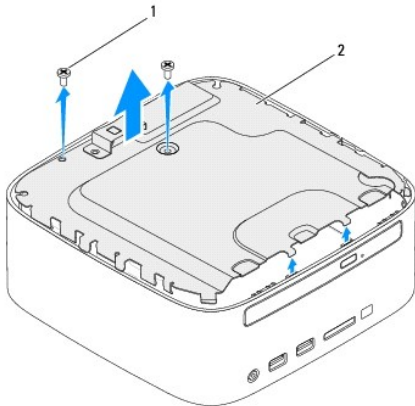
Removing the Top Bracket

1. Follow the procedures in [Before You Begin](#).
2. Remove the top cover (see [Removing the Top Cover](#)).
3. Remove the two screws that secure the wireless antennas to the top bracket.



1	screws (2)	2	wireless antennas (2)
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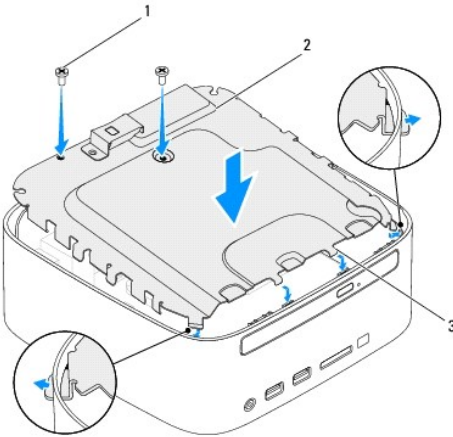
4. Remove the two screws that secure the top bracket to the chassis.
5. Lift the top bracket away from the computer.



1	screws (2)	2	top bracket
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Replacing the Top Bracket

1. Follow the procedures in [Before You Begin](#).
2. Align the tabs on the top bracket with the slots on the chassis.
3. Replace the two screws that secure the top bracket to the chassis.



1	screw (2)	2	top bracket
3	tabs (4)		

4. Align the screw holes on the wireless antennas with the screw holes on the top bracket.
5. Replace the two screws that secure the wireless antennas to the top bracket.
6. Replace the top cover (see [Replacing the Top Cover](#)).

⚠ 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.

7. Connect your computer and all attached devices to electrical outlets, and turn them on.

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Top Cover

Dell™ Inspiron™ 410 Service Manual

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

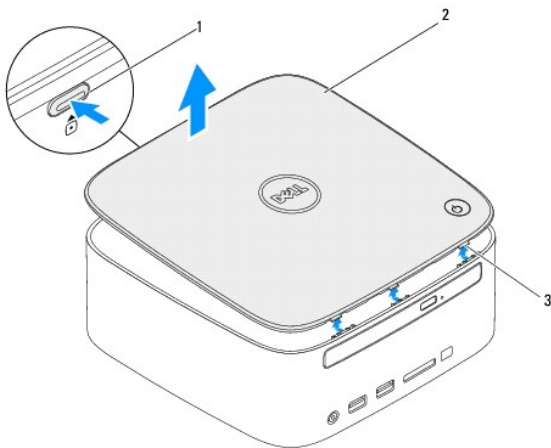
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

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).

Removing the Top Cover

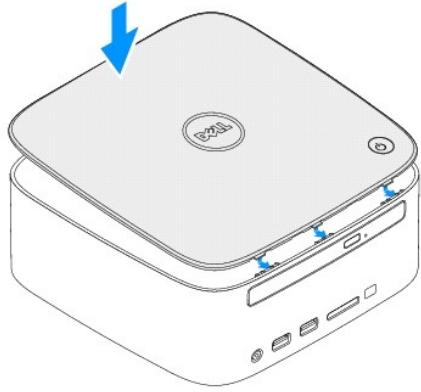
1. Follow the procedures in [Before You Begin](#).
2. Press the top cover release button at the back of the computer. The top cover will pop up.
3. Lift the top cover away from the computer.



1	top cover release button	2	top cover
3	tabs (3)		

Replacing the Top Cover

1. Follow the procedures in [Before You Begin](#).
2. Align the tabs on the top cover with the slots on the computer and snap the top cover into place.



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