Dell™ Latitude™ 2100 Service Manual

Working on Your Computer
Adding and Replacing Parts
Specifications
Diagnostics
Passwords
System Setup

Notes, Cautions, and Warnings

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

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

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

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System Setup

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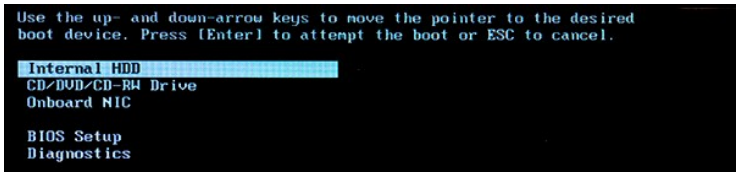
- <F12> Menu
- Entering System Setup

<F12> Menu

Press <F12> when the Dell logo appears to initiate a one-time boot menu with a list of the valid boot devices available to the computer. The devices listed on the boot menu depend on the bootable devices installed in your computer.



This menu is useful when you want to boot to a particular device, or bring up the system diagnostics. Using the boot menu does not make any changes to the boot order stored in the BIOS.

Entering System Setup

Press <F2> to enter System Setup and change the user-definable settings. If you have trouble entering System Setup using this key, press <F2> when the keyboard LEDs first flash.

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Diagnostics

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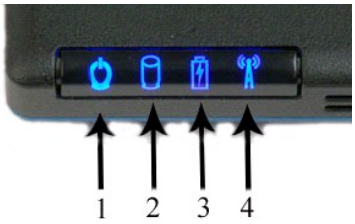
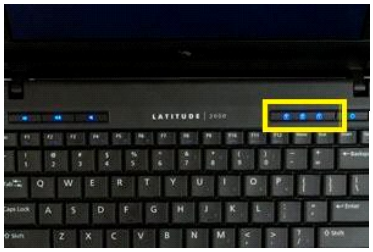
- Diagnostic Light Codes
- Battery Light Codes
- No-POST Light Codes

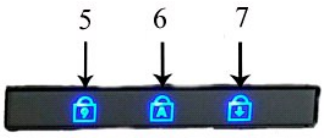
Diagnostic Light Codes

Diagnostic lights are located in two areas of your computer:

- Bottom left of the palm rest
- Top right side of the keyboard







1	power light	2	hard drive activity light
3	battery light	4	wireless networking activity light
5	numeric key light	6	caps lock light
7	scroll lock light		

Battery Light Codes

If your computer is connected to an electrical outlet, the light operates as follows:

- **Solid blue** – The battery is charging.
- **Flashing blue** – The battery is almost fully charged.
- **Fast flashing orange and then solid green** – The battery is in temporary failure.
- **Fast flashing orange** – The battery is in a fatal failure.

If your computer is running on a battery, the light operates as follows:

- **Off** – The battery is adequately charged, or the computer is turned off.
- **Flashing orange** – The battery charge is low.
- **Solid orange** – The battery charge is critically low.
- **Fast flashing orange and then solid green** – The battery is in temporary failure.
- **Fast flashing orange** – The battery is in a fatal failure.

No-POST Codes

The numeric key light, caps lock light, and scroll lock light are also used to diagnose issues that may occur in a no-POST scenario.

Appearance	Description	Next Step
ON-FLASH-FLASH		1. Install supported memory modules.

	No SODIMMs are installed	2. If memory is already present, reseat the module(s) one at time in each slot. 3. Try known good memory from another computer or replace the memory. 4. Replace the system board.
FLASH-ON-ON 	System board error	1. Reseat the processor. 2. Replace the system board. 3. Replace the processor.
FLASH-ON-FLASH 	LCD Panel Error	1. Reseat the LCD cable. 2. Replace the LCD panel. 3. Replace the video card/system board.
OFF-FLASH-OFF 	Memory compatibility error	1. Install compatible memory modules. 2. If two modules are installed, remove one and test. Try the other module in the same slot and test. Test the other slot with both modules. 3. Replace the memory. 4. Replace the system board.
ON-FLASH-ON 	Memory is detected but has errors	1. Reseat the memory. 2. If two modules are installed remove one and test. Try the other module in the same slot and test. Test the other slot with both modules. 3. Replace the memory 4. Replace the system board.
OFF-FLASH-FLASH 	Modem Error	1. Reseat the modem. 2. Replace the modem. 3. Replace the system board.
FLASH-FLASH-FLASH 	System board error	1. Replace the system board.
FLASH-FLASH-OFF 	Option ROM Error	1. Reseat the device. 2. Replace the device. 3. Replace the system board.
OFF-ON-OFF 	Storage device error	1. Reseat the hard drive and optical drive. 2. Test the computer with just the hard drive and just the optical drive. 3. Replace the device that is causing the failure. 4. Replace the system board.
FLASH-FLASH-ON 	Video card error	1. Replace the system board.

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Adding and Replacing Parts

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- Battery
- Access Panel
- Coin-Cell Battery
- Heat Sink
- Hard Drive Bracket
- Display Bezel
- Display Panel
- Display Brackets
- DC Power Cable
- Hinge Cover
- Keyboard
- Memory
- WLAN Card
- Hard Drive
- Display Assembly
- Display LED Board
- Display Cable
- Display Hinges
- System Board
- Internal Card With Bluetooth® Wireless Technology

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Passwords

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- Using a System Password
- Using an Administrator Password
- Using a Hard-Drive Password

Passwords are not enabled at the factory. You must enable this function in System Setup if you wish to use a password. If you forget a password, search **www.support.dell.com** for information on how to clear a password from your computer.

A system password, an administrator password, and a hard drive password all prevent unauthorized access to your computer, although each does so in a different way. The following table identifies types and features of passwords available on your computer.

Type of Password	Features
System	Protects your computer from unauthorized access.
Administrator	Gives system administrators or service technicians access to your computer for repair or reconfiguration. Allows you to restrict access to System Setup in the same way a system password restricts access to your computer. Can be used instead of the system password to protect your computer from unauthorized access.
Hard drive	Helps protect the data on your internal hard drive or external hard drive (if one is being used) from unauthorized access.

Passwords provide a high level of security for data in your computer or hard drive. However, passwords are not foolproof. If you require more security use additional forms of protection such as smart cards, data encryption programs, or PC Card devices with encryption features.

Using a System Password

The system password allows you to protect your computer from unauthorized access. After assigning a system password, you must enter it each time you turn on your computer. The following message appears each time you turn on the computer:

```
Please type in the system or administrator password and press <Enter>.
```

To continue, enter your password (must be no more than eight characters in length). If you do not enter a password within 2 minutes, your computer returns to its previous operating state.

NOTE: If you disable the administrator password, the system password is also disabled.

If you have assigned an administrator password, you can use it instead of the system password. The computer does not specifically prompt you for the administrator password.

Using an Administrator Password

The administrator password is designed to give system administrators or service technicians access to computers for repair or reconfiguration. The administrators or technicians can assign identical administrator passwords to groups of computers, allowing you to assign the system password.

When you set an administrator password, the **Configure Setup** option becomes available in System Setup. The **Configure Setup** option allows you to restrict access to System Setup in the same way that a system password restricts access to the computer. The administrator password can be used instead of the system password. Whenever you are prompted to enter the system password, you can enter the administrator password.

NOTE: If you disable the administrator password, the system password is also disabled.

NOTE: The administrator password provides access to the computer, but it does not provide access to the hard drive when a hard drive password is assigned.

Using a Hard-Drive Password

The hard drive password helps protect the data on your hard drive from unauthorized access. You can also assign a password for an external hard drive (if one is being used) that can be the same as or different from the password for the primary hard drive.

After assigning a hard drive password, you must enter it each time you turn on the computer and each time you restore the computer to normal operation from Standby mode. If the hard drive password is enabled, the following message appears each time you turn on the computer:

```
Hard-disk #***********-****, the system Primary HDD, is
protected by a password authentication system. You cannot
access data on this hard drive without the correct password.
Please type in the hard-disk drive password and press <Enter>.
```

To continue, enter your password (must be no more than eight characters in length). Press <Esc> to return the computer to its previous operating state. If you do not enter a password within 2 minutes, the computer returns to its previous operating state.

If you enter the wrong password, the following message appears:

```
Invalid password
[Press Enter to retry]
```

If you do not enter the correct password in three attempts, the computer tries to start from another bootable device if the **Boot First Device** option in System

Setup is set to allow startup from another device. If the **Boot First Device** option is not set to allow the computer to start from another device, the computer returns to the operating state it was in when you turned it on.

If the hard drive password, the external hard drive password, and the system password are the same, the computer prompts you only for the system password. If the hard drive password is different from the system password, the computer prompts you for both. Two different passwords provide greater security.

NOTE: The administrator password provides access to the computer, but it does not provide access to a hard drive that is protected by a hard drive password.

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Specifications

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- Processor
- Secure Digital (SD) Memory Card Reader
- Memory
- Communications
- Audio
- Keyboard
- Battery
- Physical
- System Information
- Ports and Connectors
- Video
- Display
- Touch Pad
- Camera
- AC Adapter
- Environmental

NOTE: Offerings may vary by region. For more information regarding the configuration of your computer, click **Start** (or **Start** in Windows® XP)→ **Help and Support**, and then select the option to view information about your computer.

Processor	
Processor type	Intel® Atom™ N270
CPU speed	1.60 GHz
Bus speed	533 MHz
L1 cache	32 KB
L2 cache	512 KB

System Information	
System chipset	Intel 94GSE chipset
Data bus width	64 bits
DRAM bus width	64 bits
Processor address bus width	36 bits
Flash EPROM	SPI 32 Mbit

Secure Digital (SD) Memory Card Reader	
Cards supported	SD, SDIO, SD HC, Mini SD (w/adapter)

Memory	
Memory module connectors	two SODIMM sockets
Memory module capacities	1 GB, 2 GB
Memory type	DDR2 800 MHz; non-ECC memory only
Minimum memory	1024 MB
Maximum memory	2048 MB

Ports and Connectors	
Audio	microphone and stereo headphone/speakers connector
Network adapter	RJ-45 connector
USB	three 4-pin USB 2.0-compliant connectors
Video	VGA

Communications	
Modem	external (optional)
Network adapter	10/100/1000 Ethernet LAN on system board
Wireless	WLAN half Mini-Card, WPAN Bluetooth® wireless technology

Video	
Video type	integrated
Video controller	Intel Extreme
Data bus	integrated
Video output	video connector
Video memory	up to 128 MB shared memory

Audio	
Audio type	two-channel high definition audio codec
Audio controller	Realtek ALC272
Stereo conversion	24-bit (stereo digital-to-analog) 24-bit (stereo analog-to-digital)
Interfaces:	
Internal	high definition audio
External	microphone-in connector, stereo headphones/speakers mini-connector
Speakers	two 1-Watt, 4-ohm speakers
Internal speaker amplifier	1-Watt channel into 4 ohms
Internal microphone	single digital microphone
Volume controls	volume control buttons

Display	
Type (active-matrix TFT)	WSVGA or WSGA touch screen
Active area X/Y	303.74 x 189.84 mm
Dimensions:	
Height	125.28 mm (4.93 inches)
Width	222.72 mm (8.76 inches)
Maximum Resolution	1024 x 576
Operating angle	0° (closed) to 135°
Refresh rate	60 Hz
Viewing angles:	
Horizontal	40/40°
Vertical	10/30°
Pixel pitch (WSVGA)	0.2175

Keyboard	
Number of keys	84 (U.S. and U.K.); 85 (Brazil); 87 (Japan)
Layout	QWERTY/AZERTY/Kanji

Touch Pad	
X/Y position resolution (graphics table mode)	240 CPI
Size:	
Width	61.8-mm (2.4-inch) sensor-active area
Height	34.9-mm (1.37-inch) rectangle

Camera (optional)	
Resolution	640 x 480 pixels (VGA)

Battery	
Type	3-cell: 35 Whr 6-cell: 56 Whr
Dimensions:	
Depth	
3-cell lithium-ion battery	204 mm (8.03 inches)
6-cell lithium-ion battery	204 mm (8.03 inches)
Height	
3-cell lithium-ion battery	23.2 mm (0.91 inches)
6-cell lithium-ion battery	42.5 mm (1.67 inches)
Width	
3-cell lithium-ion battery	40.5 mm (1.57 inches)
6-cell lithium-ion battery	48.1 mm (1.89 inches)
Weight	
3-cell lithium-ion battery	0.21 kg (0.41 lbs)
6-cell lithium-ion battery	0.35 kg (0.77 lbs)
Voltage	
3-cell lithium-ion battery	14.8 VDC
6-cell lithium-ion battery	11.1 VDC
Charge time (approximate) for 6-cell lithium-ion battery	
Computer off	approximately 1 hour to 80% capacity approximately 2 hours to 100% capacity
Life span (approximate)	1 year
Temperature range	
Operating	0° to 40°C (32° to 104°F)
Storage	–10° to 65°C (14° to 149°F)
Coin-cell battery	CR-2032

AC Adapter	
Type	65 Watt
Input voltage	100–240 VAC
Input current (maximum)	1.5 A
Input frequency	50–60 Hz
Output current	4.34 A (maximum at 4-sec pulse) 3.34 A (continuous)
Output power	65 Watts
Rated output voltage	19.5 ±1.0 VDC
Temperature range:	
Operating	0° to 35°C (32° to 95°F)
Storage	–30° to 65°C (–22° to 149°F)

Physical	
Height:	
3-cell	39.9–41.5 mm (1.57–1.63 inches)
6-cell	59.15–60.75 mm (2.32–2.39 inches)
Width (3- and 6-cell)	265 mm (10.4 inches)
Depth:	
3-cell	187 mm (7.36 inches)
6-cell	194.63 mm (7.66 inches)
Weight (approximate):	
3-cell	1.42 kg (3.13 lbs)
6-cell	1.57 kg (3.47 lbs)

Environmental	
Temperature range:	
Operating	0° to 35°C (32° to 95°F)

Storage	–40° to 65°C (–40° to 149°F)
Relative humidity (maximum):	
Operating	10% to 90% (non-condensing)
Storage	5% to 95% (non-condensing)
Maximum vibration (using a random-vibration spectrum that simulates user environment):	
Operating	0.66 GRMS
Storage	1.3 GRMS
Maximum shock (measured with hard drive in head-parked position and a 2-ms half-sine pulse):	
Operating	140 G
Storage	163 G
Airborne contaminant level	G2 or lower as defined by ANSI/ISA-S71.04-1985

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Battery

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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.

Removing the Battery

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Slide the battery release latch into the unlocked position.

3. Remove the battery from the computer.

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Keyboard

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NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

Removing the Keyboard

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the two keyboard screws.
4. Open the display to a 145-degree angle and set your computer on its edge atop the work surface.
5. Push a plastic scribe through the screw socket.
6. Lay the computer flat upon the work surface.
7. Starting at the top left corner of the keyboard, separate the keyboard from the computer.
8. Turn over the keyboard.
9. Open the keyboard data cable clip.
10. Disconnect the keyboard data cable.
11. Remove the keyboard from the computer.

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Access Panel

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Removing the Access Panel

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the three access panel screws from the computer.
5. Close the display and turn over the computer.
6. Remove the four access panel screws.
7. Carefully separate the back corner of the access panel from the palm rest plastics.
8. Using a scribe or flathead screwdriver, disengage the plastic clips that secure the back edge of the access panel to the computer.
9. Remove the access panel, making sure to disengage the plastic clips along the front edge of the computer.

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Memory

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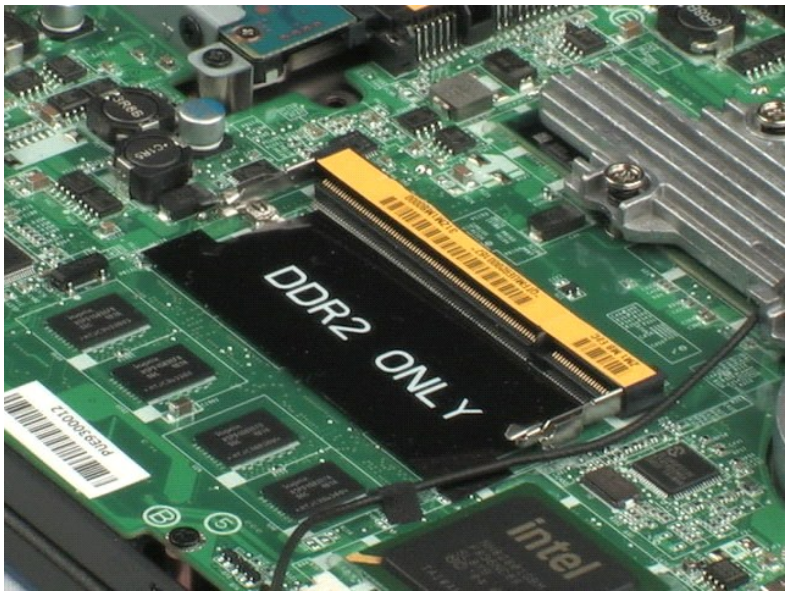
NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Gently pry the retention clips away from the memory module.

6. Remove the memory module from the computer.



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Coin-Cell Battery

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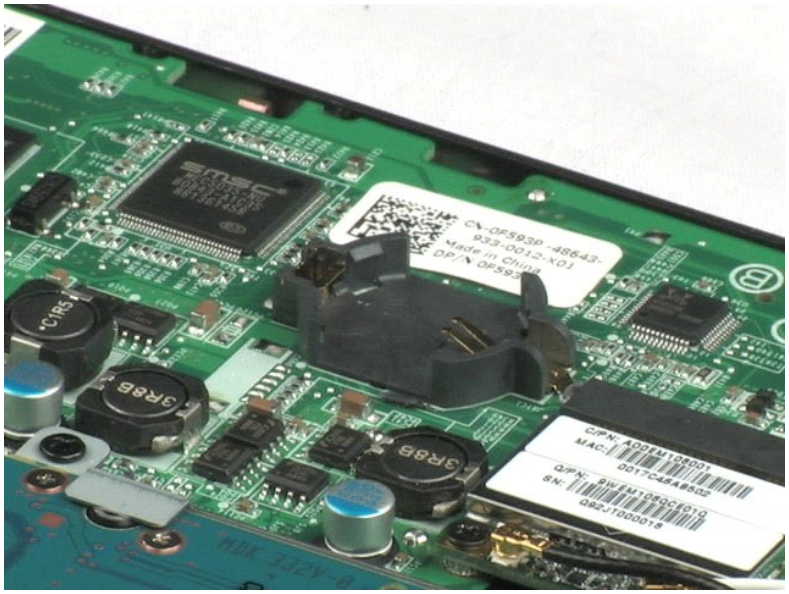
Removing the Coin-Cell Battery

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Using a plastic scribe, gently pry the coin-cell battery from its slot on the system board.
6. Remove the coin-cell battery from the computer.



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Wireless Local Area Network (WLAN) Card

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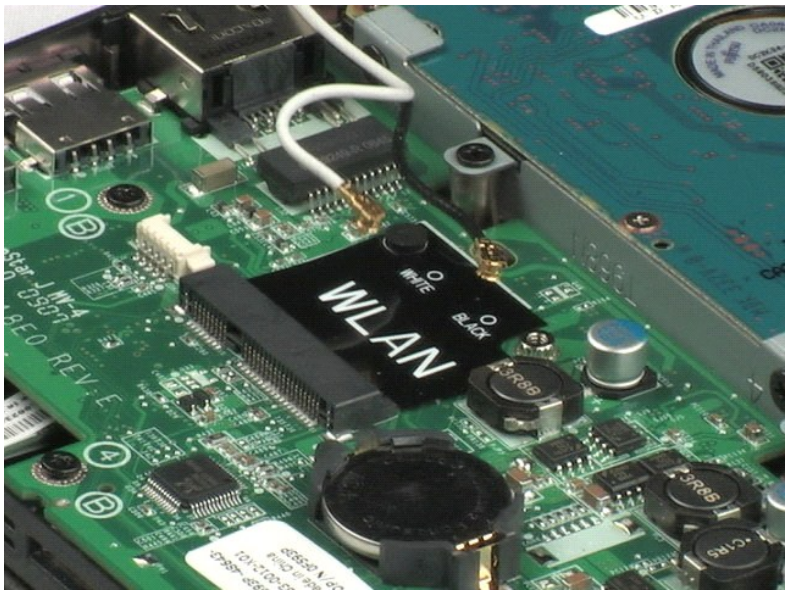
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

Removing the WLAN Card

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Disconnect the WLAN antenna cables from the card.
6. Remove the screw that secures the WLAN module to the computer.
7. Remove the WLAN module from the computer.



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Heat Sink

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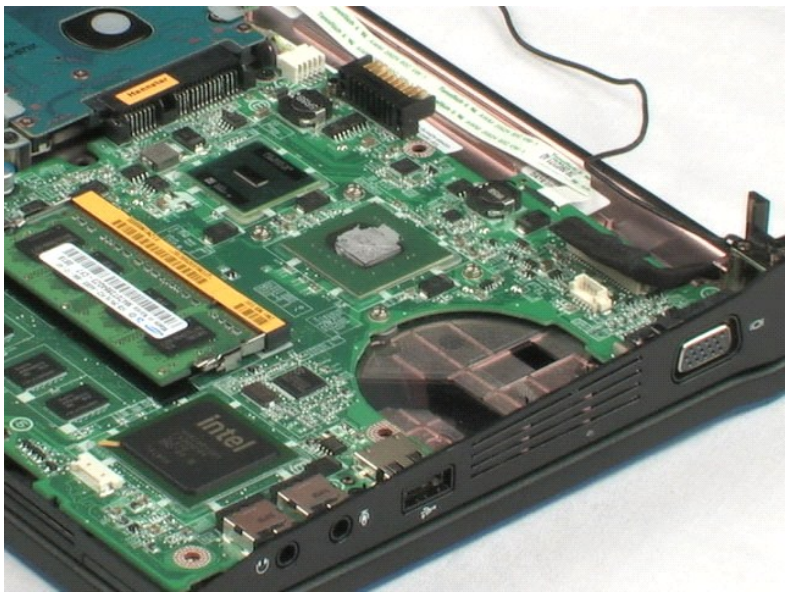
WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

Removing the Heat Sink

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer
5. Disconnect the speaker cable and remove the cable from its routing path.
6. Disconnect the fan power cable from the system board.
7. Loosen the four captive screws on the heat sink.
8. Lift up the heat sink and remove it from the computer.



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Hard Drive

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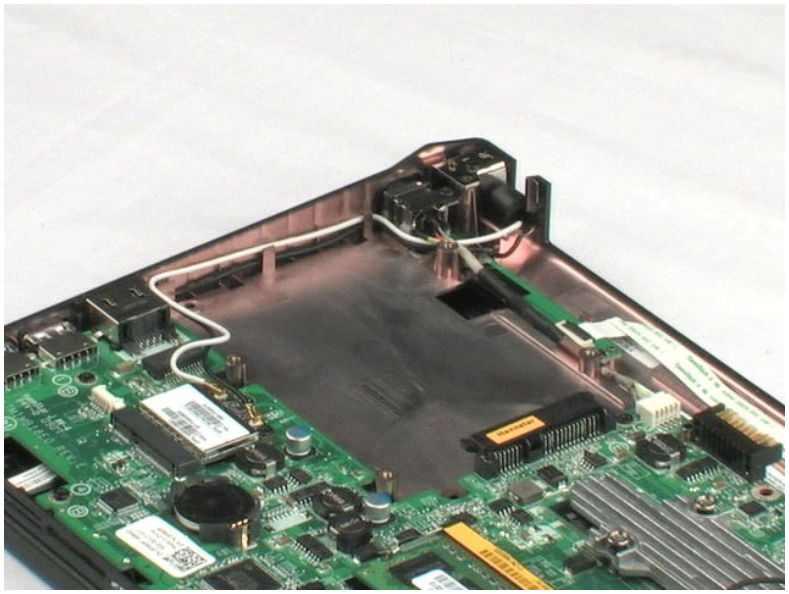
Removing the Hard Drive

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Remove the four screws that secure the hard drive to the computer.
6. Slide the hard drive toward the side of the computer, disengaging the hard drive from the system board.
7. Lift the hard drive and remove it from the computer.



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Hard Drive Bracket

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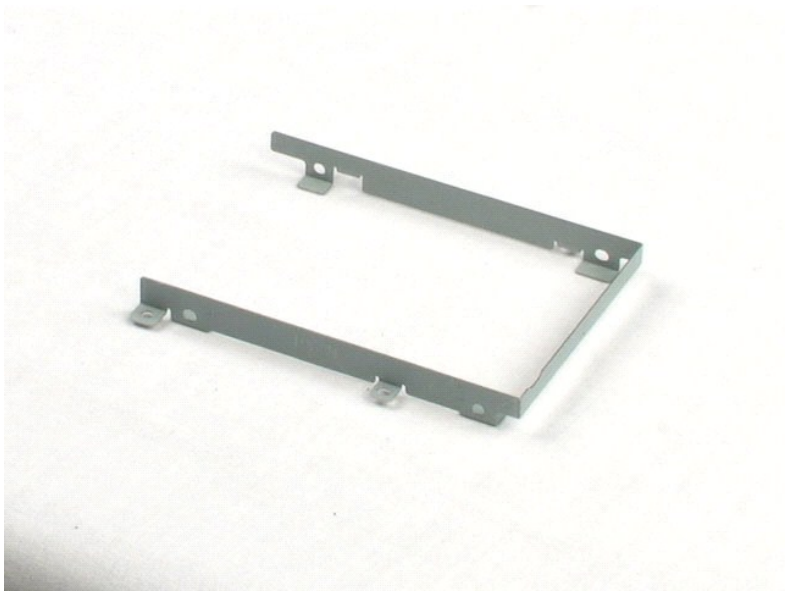
Removing the Hard Drive Bracket

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Remove the hard drive from the computer.
6. Remove the two hard drive bracket screws that secure the hard drive to one side of the bracket.
7. Rotate the hard drive in order to see the screws on the opposite side.
8. Remove the two remaining hard drive bracket screws.
9. Remove the hard drive from the hard drive bracket.



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Display Assembly

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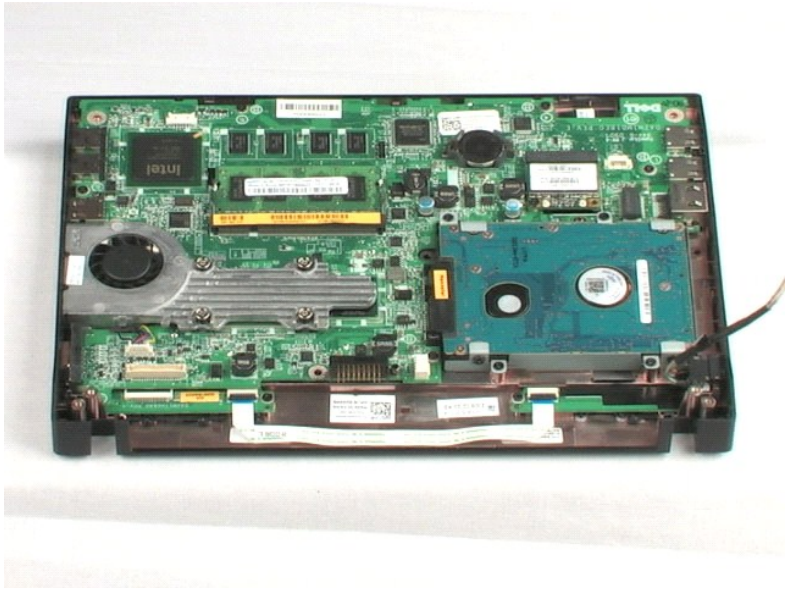
Removing the Display Assembly

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Disconnect the speaker cable from the system board and remove it from its routing path.
6. Disconnect the display data cable from the system board.
7. Disconnect the DC power cable from the system board.
8. Disconnect the antenna cables from the WLAN card and remove the cables from their routing path.
9. Laying the base of the computer on a flat surface, pivot the display assembly into its open position.
10. Remove the two screws the secure the display assembly to the computer.
11. Slide the display assembly toward the base of the computer, then lift the display assembly from the computer.



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Display Bezel

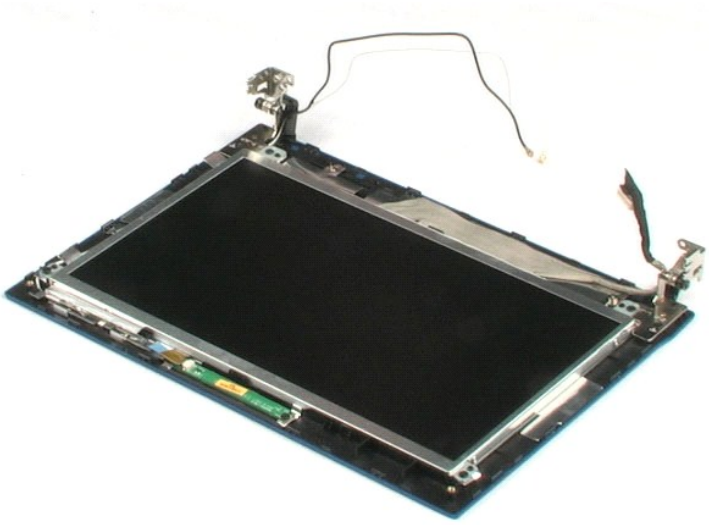
Dell™ Latitude™ 2100 Service Manual

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.

Removing the Display Bezel

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Remove the display assembly from the computer.
6. Using a plastic scribe, pry up and remove the four rubber screw covers from the bezel.
7. Remove the four screws that secure the display bezel to the display assembly.
8. Starting with the top edge of the display bezel, carefully pry away the edge of the display bezel from the center of the display assembly.
9. Remove the display bezel from the display assembly.



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Display LED Board

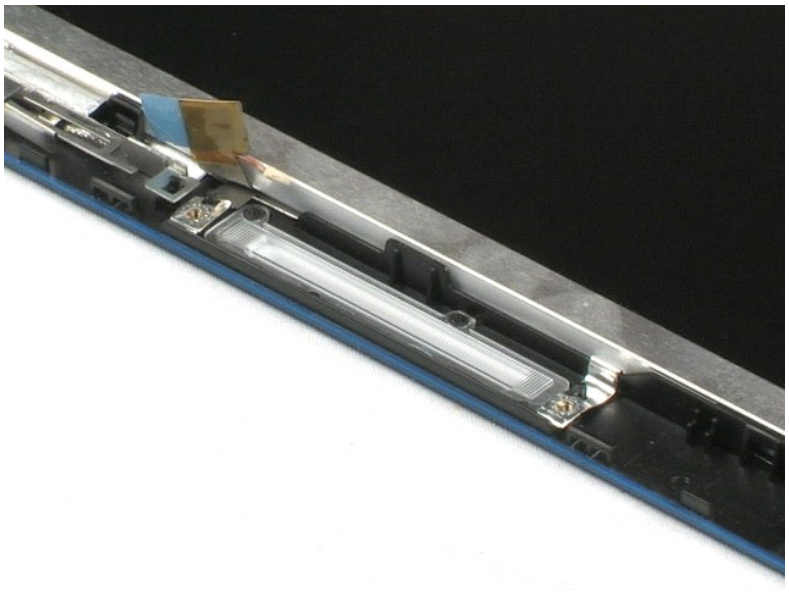
Dell™ Latitude™ 2100 Service Manual

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.

Removing the Display LED Board

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Remove the display assembly from the computer.
6. Remove the display bezel from the display assembly.
7. Disconnect the display LED board data cable from the display LED board.
8. Remove the two screws that secure the display LED board to the display assembly.
9. Remove the display LED board from the display assembly.



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Display Panel

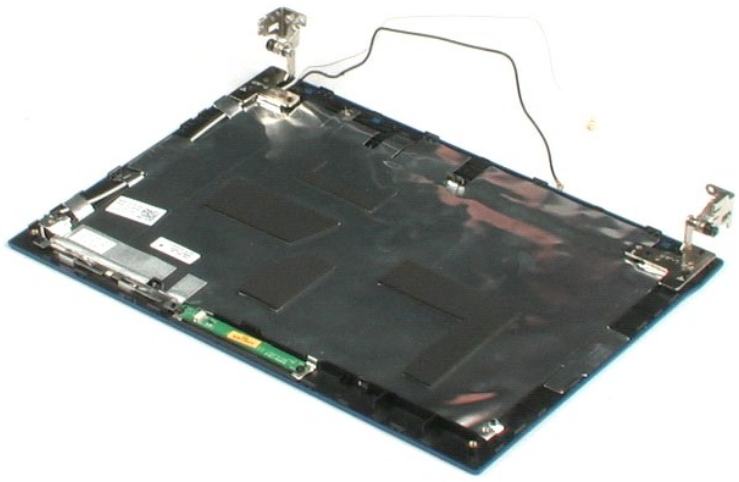
Dell™ Latitude™ 2100 Service Manual

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.

Removing the Display Panel

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Remove the display assembly from the computer.
6. Remove the display bezel from the display assembly.
7. Disconnect the display LED board data cable from the display LED board.
8. Loosen the captive ground cable screw.
9. Remove the four screws that secure the display panel to the display assembly.
10. Remove the display panel from the display assembly.



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Display Cable

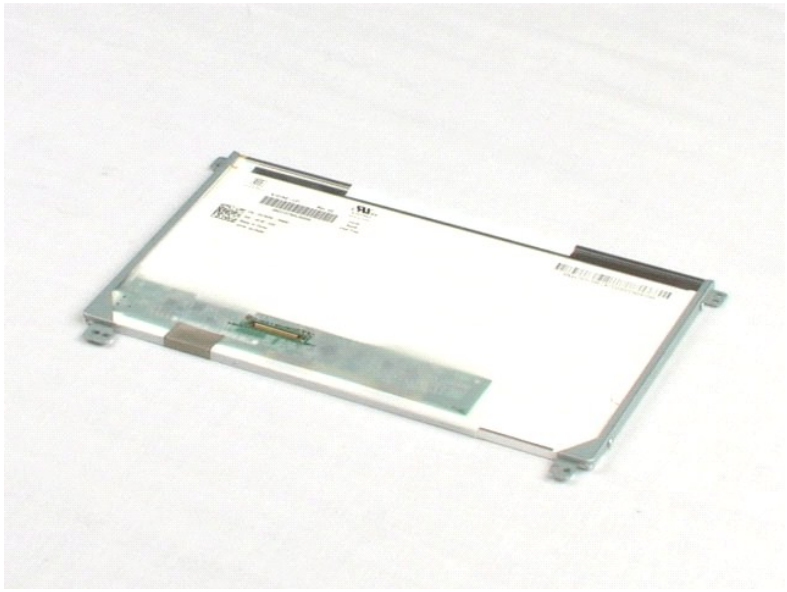
Dell™ Latitude™ 2100 Service Manual

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.

Removing the Display Cable

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Remove the display assembly from the computer.
6. Remove the display bezel from the display assembly.
7. Remove the display panel from the display assembly.
8. Gently peel back the tape that secures the display data cable to the display panel.
9. Disconnect and remove the display data cable from the display panel.



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Display Brackets

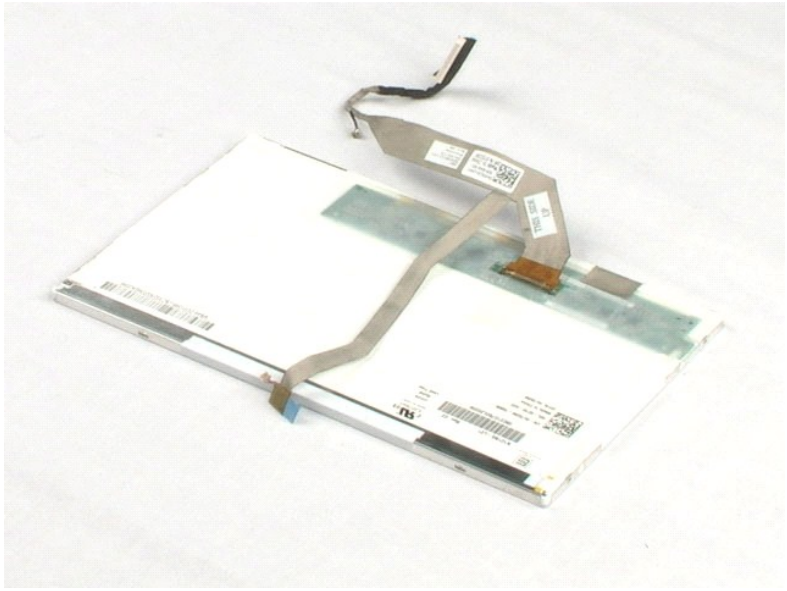
Dell™ Latitude™ 2100 Service Manual

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.

Removing the Display Brackets

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Remove the display assembly from the computer.
6. Remove the display bezel from the display assembly.
7. Remove the display panel from the display assembly.
8. Remove the two screws that secure the display bracket to one side of the display panel.
9. Remove the display bracket from the display panel.
10. Rotate the display panel to access the second bracket.
11. Remove the two screws securing the display bracket to the other side of the display panel.
12. Remove the second display bracket from the display panel.



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System Board

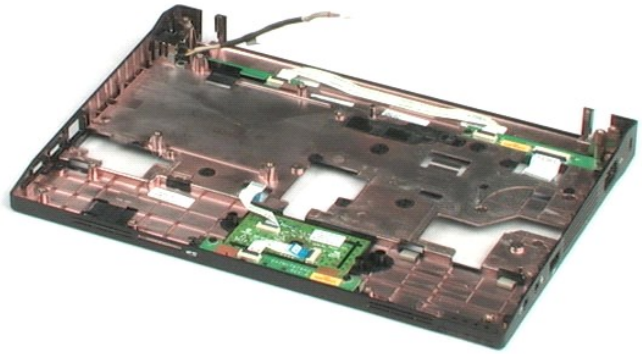
Dell™ Latitude™ 2100 Service Manual

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.

Removing the System Board

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Remove the display assembly from the computer.
6. Open the clip that secures the touch pad cable to the system board.
7. Disconnect the touch pad cable from the system board.
8. Open the clip that secures the button board data cable to the system board.
9. Disconnect the button board data cable from the system board.
10. Turn over the computer.
11. Remove the six screws that secure the system board to the computer chassis.
12. Identify the side of the system board with USB ports attached, then lift that side of the system board from the chassis. Next, remove the system board from the chassis and set it aside on a flat, clean surface.



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DC Power Cable

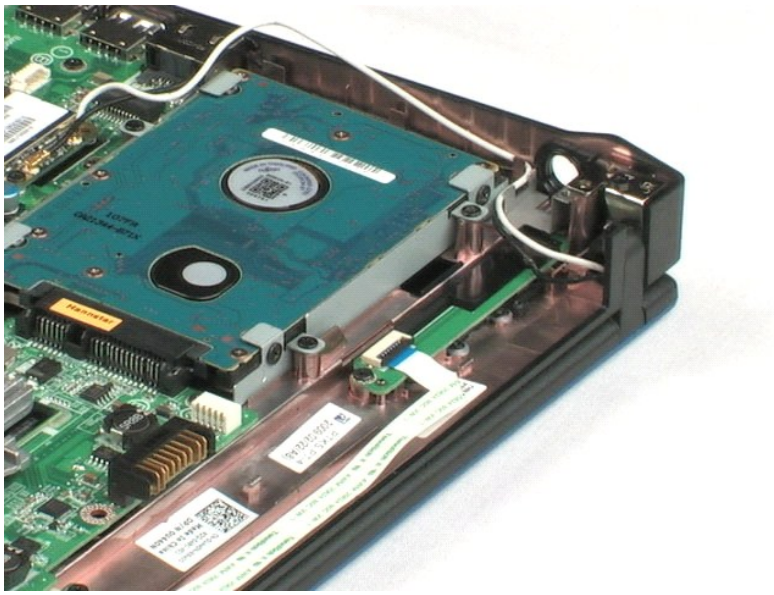
Dell™ Latitude™ 2100 Service Manual

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.

Removing the DC Power Cable

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Disconnect the DC power cable from the system board.
6. Remove the screw that secures the DC power cable connector to the system board.
7. Lift up and remove the DC power cable from the computer.



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Internal Card With Bluetooth® Wireless Technology

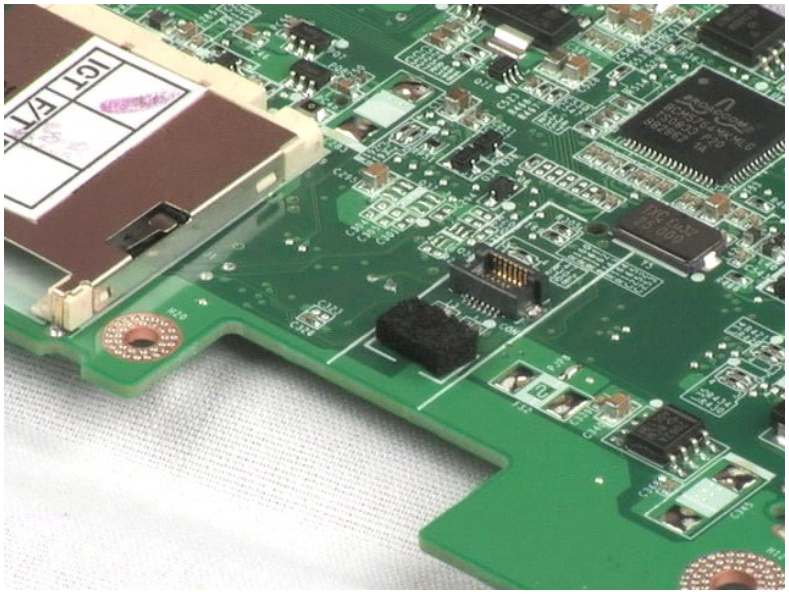
Dell™ Latitude™ 2100 Service Manual

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.

Removing the Bluetooth Card

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Remove the display assembly from the computer.
6. Remove the system board from the computer.
7. Grasp the sides of the Bluetooth module, lift the module to disconnect it from its slot, and remove the Bluetooth module from the computer.



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Display Hinge Cover

Dell™ Latitude™ 2100 Service Manual

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.

Removing the Display Hinge Cover

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Remove the display assembly from the computer.
6. Remove the display bezel from the computer.
7. Pivot and remove the hinge cover from the hinge.
8. Locate the other hinge cover and repeat the previous step.

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Display Hinges

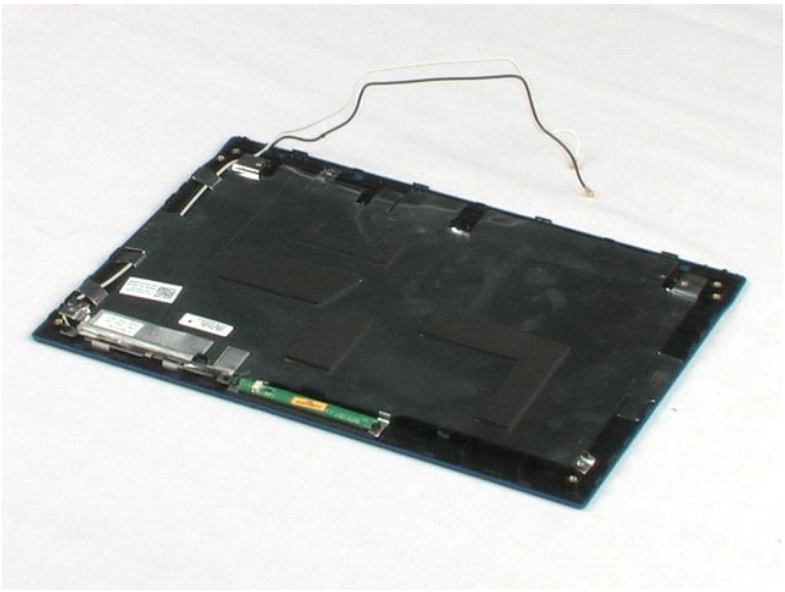
Dell™ Latitude™ 2100 Service Manual

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.

Removing the Display Hinges

NOTE: You may need to install Adobe Flash Player from **Adobe.com** in order to view the illustrations below.

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the battery from the computer.
3. Remove the keyboard from the computer.
4. Remove the access panel from the computer.
5. Remove the display assembly from the computer.
6. Remove the display bezel from the display assembly.
7. Remove the display panel from the display assembly.
8. Remove the screw that secures the display hinge to the display assembly.
9. Lift and remove the display hinge from the display assembly.
10. Repeat the previous procedure to remove the second hinge.



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Working on Your Computer

Dell™ Latitude™ 2100 Service Manual

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

Before Working Inside Your Computer

Use the following safety guidelines to help protect your computer from potential damage and to help to ensure your personal safety. Unless otherwise noted, each procedure included in this document assumes that the following conditions exist:

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

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

NOTE: The color of your computer and certain components may appear differently than shown in this document.

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

1. Ensure that your work surface is flat and clean to prevent the computer cover from being scratched.
2. Turn off your computer (see Turning Off Your Computer).
3. If the computer is connected to a docking device (docked) such as the optional Media Base or Battery Slice, undock it.

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

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

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

7. Remove the main battery (see Removing the Battery).
8. Turn the computer top-side up.
9. Open the display.
10. Press the power button to ground the system board.

CAUTION: To guard against electrical shock, always unplug your computer from the electrical outlet before opening the display.

CAUTION: Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate static electricity, which could harm internal components.

11. Remove any installed ExpressCards or Smart Cards from the appropriate slots.
12. Remove the hard drive (see Removing the Hard Drive).

Recommended Tools

The procedures in this document may require the following tools:

- Small flat-blade screwdriver
- #0 Phillips screwdriver
- #1 Phillips screwdriver
- Small plastic scribe
- Flash BIOS update program CD

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. Shut down the operating system:

- **In Windows Vista®:**

  Click **Start** , then click the arrow in the lower-right corner of the **Start** menu as shown below, and then click **Shut Down**.

- **In Windows® XP:**

  Click **Start→ Turn Off Computer→ Turn Off**.

  The computer turns off after the operating system shutdown process is complete.

2. Ensure that the computer and all attached devices are turned off. If your computer and attached devices did not automatically turn off when you shut down your operating system, press and hold the power button for about 4 seconds to turn them off.

After Working Inside Your Computer

After you complete any replacement procedure, ensure you connect any external devices, cards, and cables before turning 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.

1. Connect any external devices, such as a port replicator, battery slice, or media base, and replace any cards, such as an ExpressCard.
2. Connect any telephone or network cables to your computer.

CAUTION: To connect a network cable, first plug the cable into the network device and then plug it into the computer.

3. Replace the battery.
4. Connect your computer and all attached devices to their electrical outlets.
5. Turn on your computer.

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