Dell Vostro 260/260s Mini-Tower Owner's Manual

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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Contents

Working on Your Computer 1

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 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: Many repairs may only be done by a certified service technician. You should only perform troubleshooting and simple repairs as authorized in your product documentation, or as directed by the online or telephone service and support team. Damage due to servicing that is not authorized by Dell is not covered by your warranty. Read and follow the safety instructions that came with the product.

⚠ 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.

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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).

   ⚠ 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 network cables from the computer.

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

5. Press and hold the power button while the computer is unplugged to ground the system board.

6. Remove the cover.

   ⚠ 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.

Recommended Tools

The procedures in this document may require the following tools:

- Small flat-blade screwdriver
- Phillips screwdriver
- Small plastic scribe
- Flash BIOS update program media

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 7:

     Click **Start** , then click **Shut Down.**
   - 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 6 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.

1. Replace the cover.

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

2. Connect any telephone or network cables to your computer.

3. Connect your computer and all attached devices to their electrical outlets.

4. Turn on your computer.

5. Verify that the computer works correctly by running the Dell Diagnostics.

Cover 2

Removing The Cover

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the screws that secure the cover to the computer.

3. Slide the computer cover towards the back of the computer.

4. Remove the computer cover.
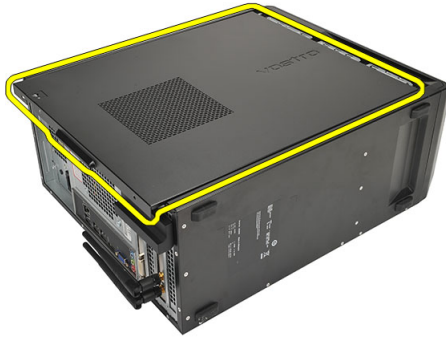
Installing The Cover

1. Place the cover on the chassis.
2. Slide the computer cover towards the front of the computer.
3. Replace the screws that secure the cover to the computer.
4. Follow the procedures in *After Working Inside Your Computer*

Front Bezel

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Removing The Front Bezel

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the *cover*.
3. Pry the front bezel-retention clips away from the chassis.

4. Rotate the bezel away from the computer to release the hooks on the opposite edge of the bezel from the chassis.

Installing The Front Bezel

1. Place the hooks on the notches in the computer.
2. Rotate the front bezel towards the computer.
3. Press the front bezel till the tabs snap into place.
4. Replace the *cover*.
5. Follow the procedures in *After Working Inside Your Computer*.

Expansion Card   4

Removing The Expansion Cards

1. Follow the procedures in *Before Working Inside Your Computer*.

2. Remove the *cover*.

3. Press the release tab on the card-retention latch.

4. Press on the release-lever to release the securing tab from the notch in the card.

5. Ease the card up and out of its connector and remove it from the computer.
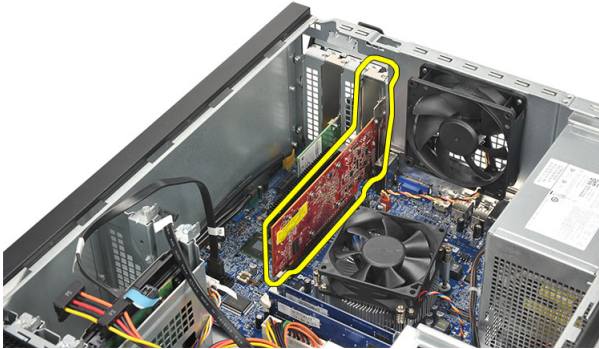
Installing The Expansion Card

1. Place the card into it's socket and press it in till it snaps into place.
2. Secure the expansion card by pushing-in the card-retention latch till it snaps into place.
3. Replace the *cover*.
4. Follow the procedures in *After Working Inside Your Computer*.

Fan 5

Removing The Fan

1. Follow the procedures in *Before Working Inside Your Computer*.

2. Remove the *cover*.

3. Disconnect the fan cable from the system board.
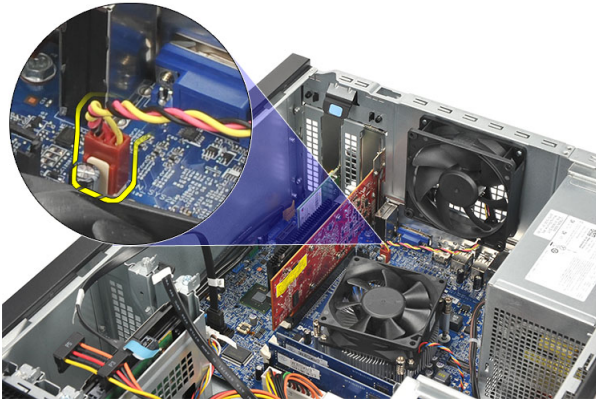
4. Remove the screws that secure the fan to the computer.

5. Remove the fan from the computer.

Installing The Fan

1. Place the fan at it's location on the computer.
2. Replace the screws that secure the fan to the computer.
3. Connect the fan cable to the system board.
4. Replace the *cover*.
5. Follow the procedures in *After Working Inside Your Computer*.

Memory 6

Removing The Memory

1. Follow the procedures in *Before Working Inside Your Computer*.

2. Remove the *cover*.

3. Press down on the memory-retention tabs on each side of the memory module.
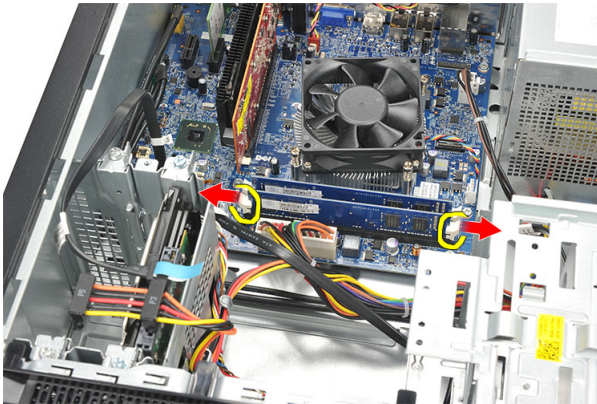
4. Lift the memory module out of the connector on the system board.
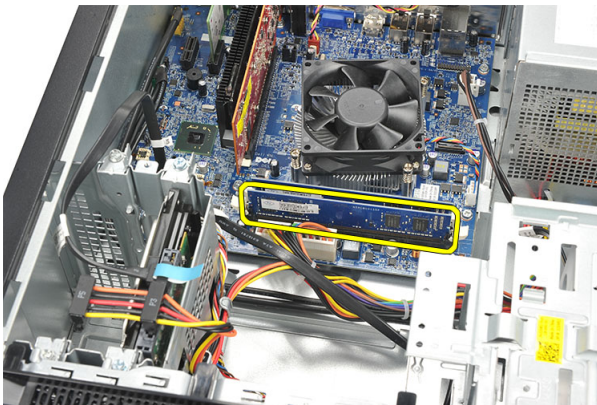
Installing The Memory

1. Press the memory module into it's connector on the system board till it snaps into place.
2. Replace the *cover*.
3. Follow the procedures in *After Working Inside Your Computer*.

Optical Drive

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Removing The Optical Drive

1. Follow the procedures in *Before Working Inside Your Computer*.

2. Remove the *cover*.

3. Disconnect the data cable and power cable from the optical drive.
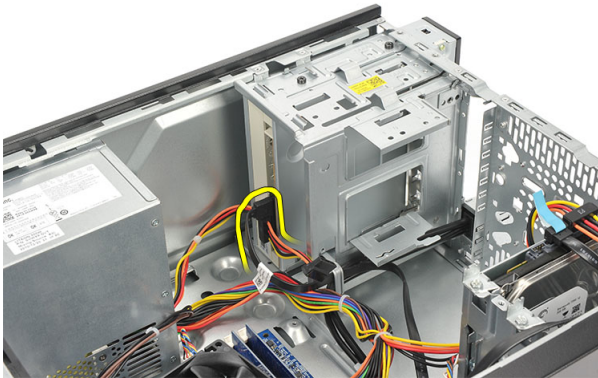
4. Remove the screws that secure the optical drive to the computer.

5. Push the optical drive through the front of the computer.
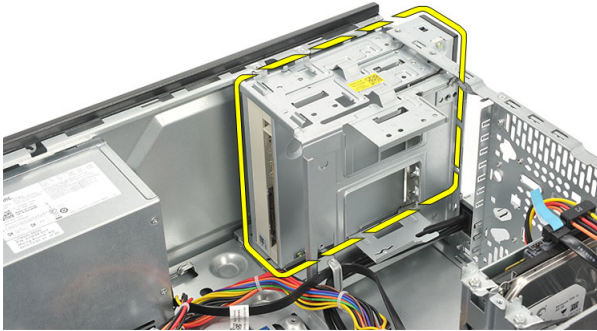
Installing The Optical Drive

1. Push-in the optical drive through the front of the computer.
2. Replace the screws that secure the optical drive to the computer.
3. Connect the data cable and power cable to the optical drive.
4. Replace the *cover*.
5. Follow the procedures in *After Working Inside Your Computer*.

Hard Drive

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Removing The Hard Drive

1. Follow the procedures in *Before Working Inside Your Computer*.

2. Remove the *cover*.

3. Disconnect the SATA cable and power cable from the hard drive.
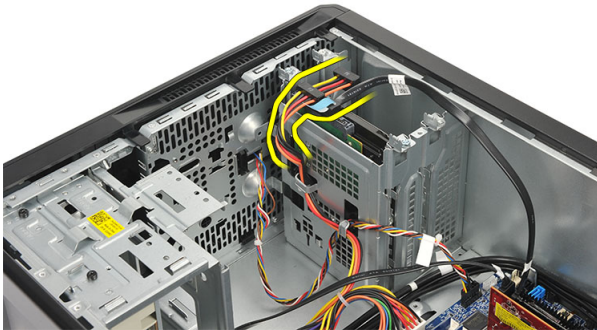
4. Remove the screws that secure the hard drive to the computer.

5. Remove the hard drive from the computer.
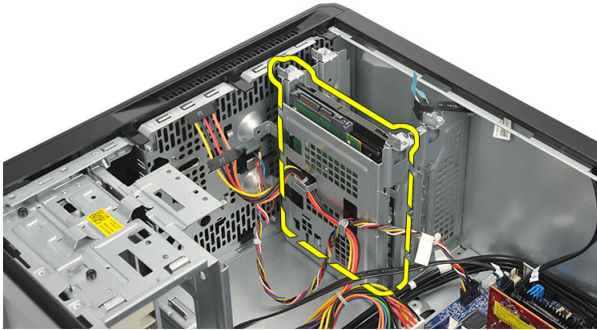
6. Remove the screws that secure the bracket to the hard drive.

Installing The Hard Drive

1. Replace the screws that secure the bracket to the hard drive.

2. Replace the hard drive into the computer.

3. Replace the screws that secure the hard drive to the computer.

4. Connect the SATA cable and power cable to the hard drive.

5. Replace the *cover*.

6. Follow the procedures in *After Working Inside Your Computer*.

# Wireless Local Area Network (WLAN) Card

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Removing The WLAN Card

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the *cover*.
3. Remove the antennae.

4. Press the release tab on the card-retention latch.

5. Grasp the WLAN card by its top corners, and ease it out of it's connector.
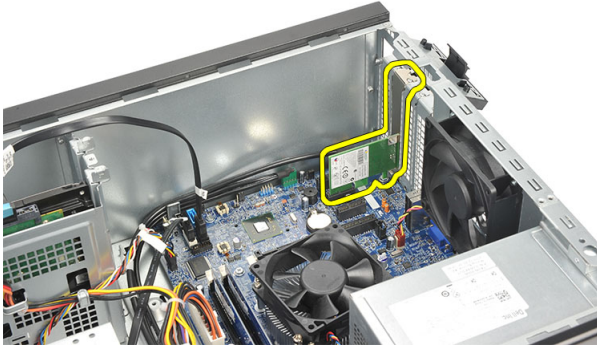
Installing The WLAN Card

1. Place the WLAN card on its connector and push it in, to secure it to the connector.
2. Lock the card-retention latch into it's place.
3. Replace the antennae.
4. Replace the *cover*.
5. Follow the procedures in *After Working Inside Your Computer*.

Multimedia-Card Reader   10

Removing The Multimedia-Card Reader

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the *cover*.
3. Remove the *front bezel*.
4. Disconnect the multimedia-card reader cable from the system board. Disengage the cable from the metal clip(s), if present, that secure(s) the cable along the inside of the computer.
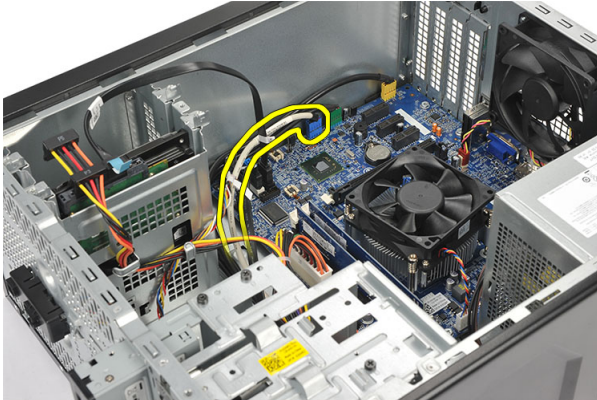
5. Remove the screws that secure the multimedia-card reader into the drive cage.
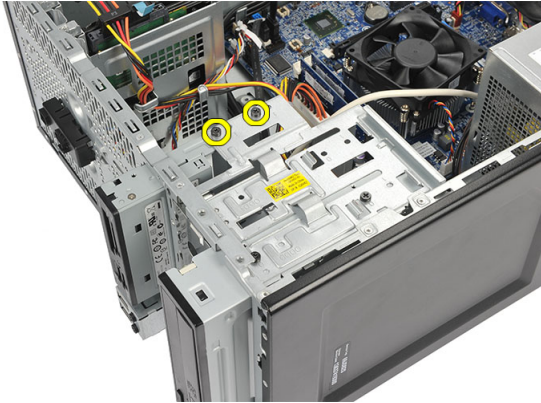
6. Slide the multimedia-card reader out through the front of the computer.
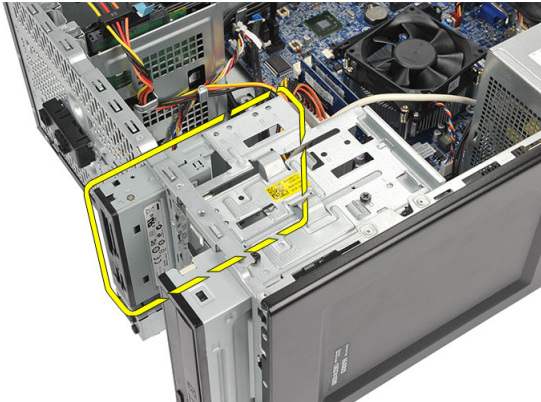
Installing The Multimedia-Card Reader

1. Slide the multimedia-card reader in through the front of the computer.

2. Replace the screws that secure the multimedia-card reader to the drive cage.

3. Route the cable thorough the metal clip(s), if present, that secure(s) the cable along the inside of the computer.

4. Connect the multimedia-card reader cable to the system board.

5. Replace the *front panel*.

6. Replace the *cover*.

7. Follow the procedures in *After Working Inside Your Computer*
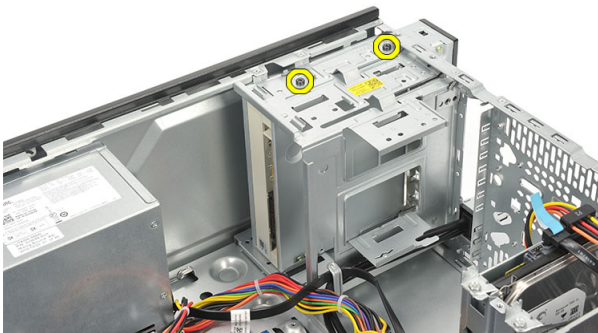
Power Supply   11

Removing The Power Supply

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the *cover*.
3. Disconnect all the power-supply cables connected to the hard drives, optical drives, and system board.
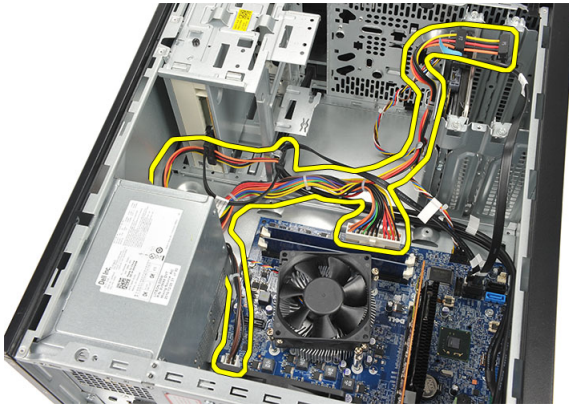
4. Remove the screws that secure the power-supply unit to the computer.

5. Press the release button located on the floor of the system chassis, and then slide the power-supply unit toward the front of the computer.
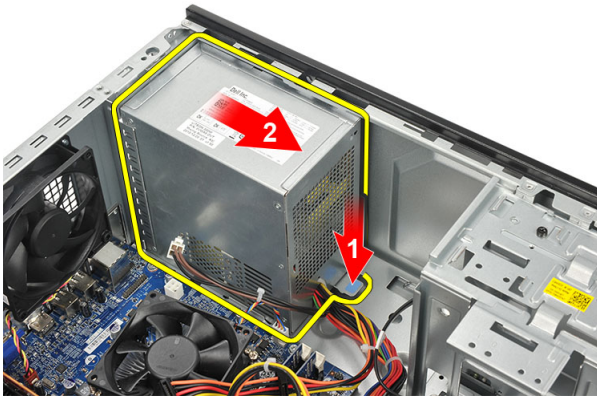
6. Lift the power-supply unit and remove it from the computer.
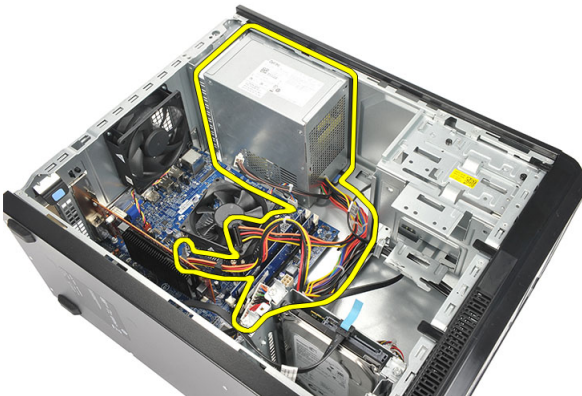
Installing The Power Supply

1. Place the power-supply unit at it's location in the computer.

2. Slide the power-supply unit towards the back of the computer till it snaps into place.

3. Replace the screws that secure the power-supply unit to the computer.

4. Connect the power supply cables to the hard drives, optical drives, and system board.

5. Replace the *cover*.

6. Follow the procedures in *After Working Inside Your Computer*.

Power-Switch Cable

<div align="right">

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Removing The Power Switch Cable

1. Follow the procedures in *Before Working Inside Your Computer*.

2. Remove the *cover*.

3. Disconnect and un-thread the power switch and hard drive LED cable from the system board.
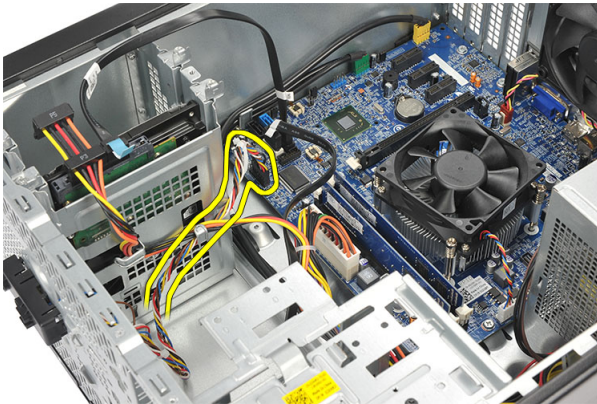
4. Un-clip and remove the tabs holding the power switch/LEDs assembly from the computer.
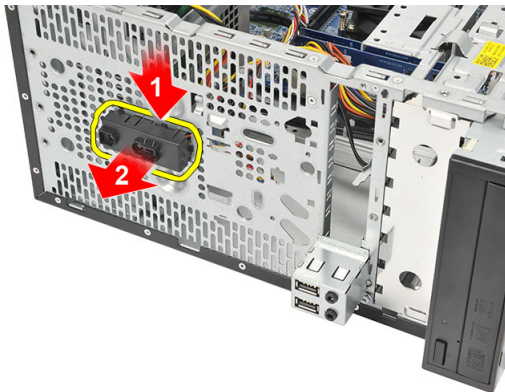
Installing The Power Switch Cable

1. Push the power switch/LEDs assembly into the computer till it snaps into place.
2. Connect the power switch and hard drive LED cable to the system board.
3. Replace the *cover*.
4. Follow the procedures in *After Working Inside Your Computer*.

Input/Output Panel

<div style="text-align: right">13</div>

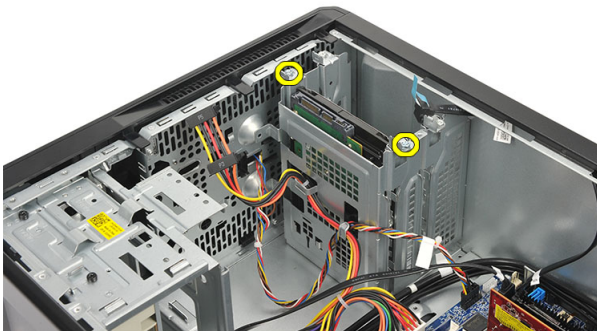## Removing The I/O Panel

1. Follow the procedures in *Before Working Inside Your Computer*.

2. Remove the *cover*.

3. Disconnect the audio cable and USB cable from the system board.
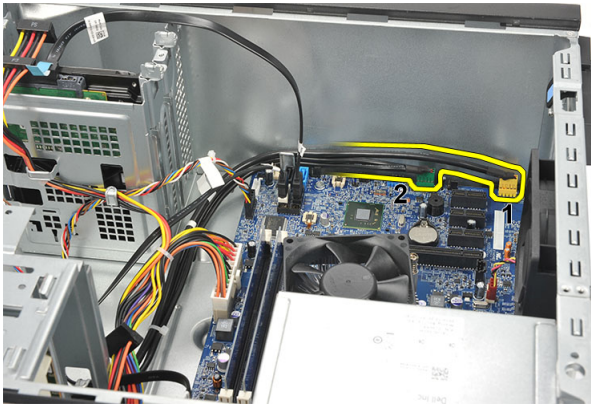
4. Un-thread the cable routing from the metal clips.
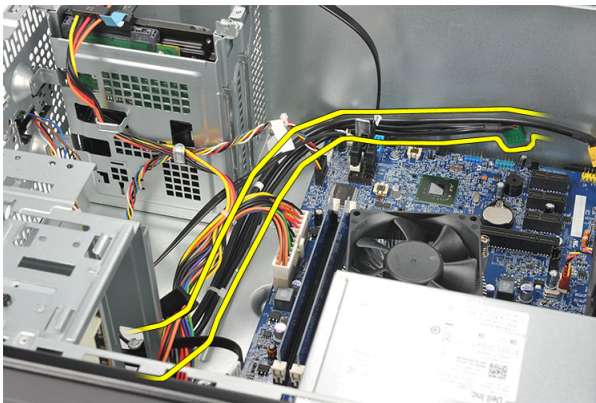
5. Remove the screw that secures the I/O panel to the computer.
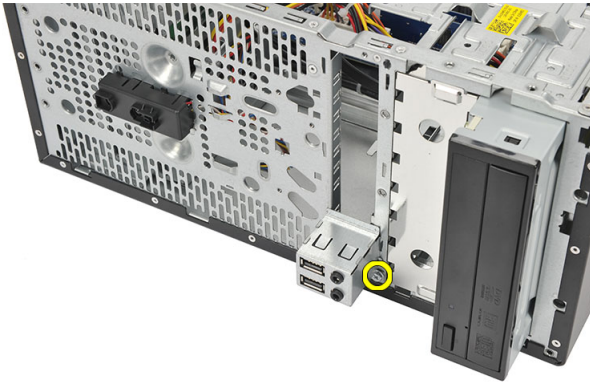
6. Remove the I/O panel from the computer.
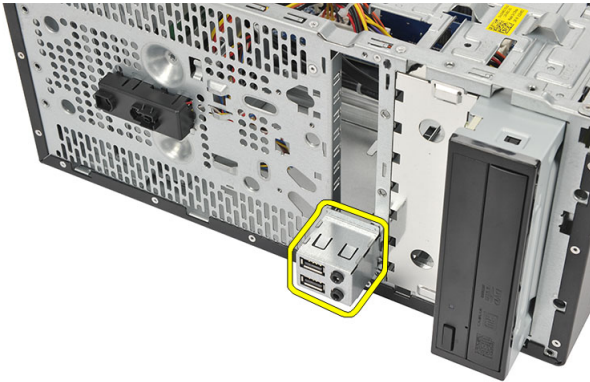
Installing The I/O Panel

1. Place the I/O panel at it's location on the computer.
2. Replace the screw to secure the I/O panel to the computer.
3. Route the cables through the metal clips.
4. Replace the *cover*.
5. Follow the procedures in *After Working Inside Your Computer*.

Processor   14

Removing The Processor

1. Follow the procedures in *Before Working Inside Your Computer*.

2. Remove the *cover*.

3. Disconnect the heat sink and fan assembly cable from the system board.

4. Loosen the captive screws that secures the heat sink and fan assembly to the system board.

5. Lift the heat sink and fan assembly, and remove it from the computer.
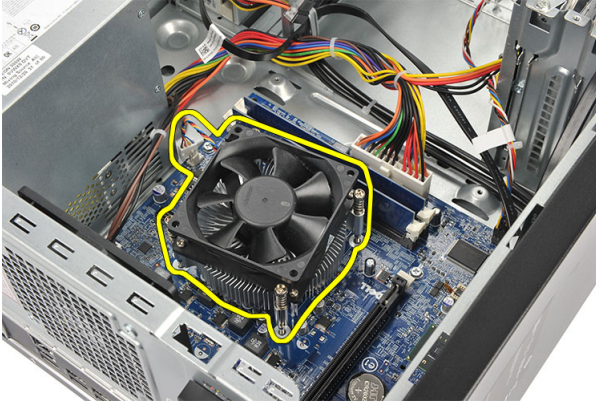
6. Press down on the release lever to move it outward to release it from the retention hook.

7. Lift the processor cover.

8. Lift the processor to remove it from it's socket and place it in an antistatic packaging.

Installing The Processor

1. Align the two notches on the processor and insert it into the socket, the processor should slide in and fit into the socket without any force.

> **NOTE:** The processor is notched at one end with a triangle marking. The same marking is also notched on the processor socket.

2. Press down on the release lever to lock it with the retention hook.
3. Close the processor cover.
4. Place the heat sink and fan assembly on the processor.
5. Tighten the captive screws securing the heat sink and fan assembly to the system board.
6. Connect the heat sink and fan assembly cable to the system board.
7. Replace the *cover*.
8. Follow the procedures in *After Working Inside Your Computer*.

Coin-Cell Battery

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Removing The Coin-Cell Battery

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the *cover*.
3. Press the release latch to pop the coin-cell battery from it's socket.
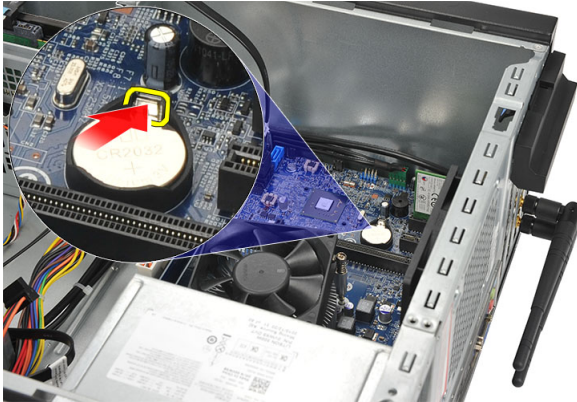
4. Lift the coin-cell battery out of the computer.

Installing The Coin-Cell Battery

1. Place the coin-cell battery in it's socket on the system board.
2. Press the coin-cell battery into the socket till it snap's into place.
3. Replace the *cover*.
4. Follow the procedures in *After Working Inside Your Computer*.

System Board 16

Removing The System Board

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the *cover*.
3. Remove the *memory*.
4. Remove the *fan*.
5. Remove the *processor*.
6. Remove the *expansion card*.
7. Remove the *WLAN card*.
8. Disconnect and un-thread all the cables connected to the system board.
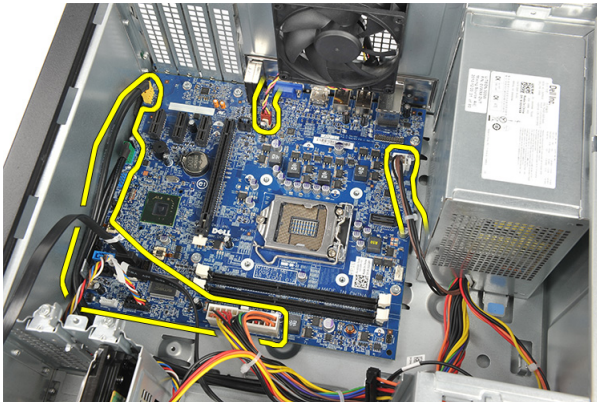
9. Remove the screws that secure the system board to the computer.
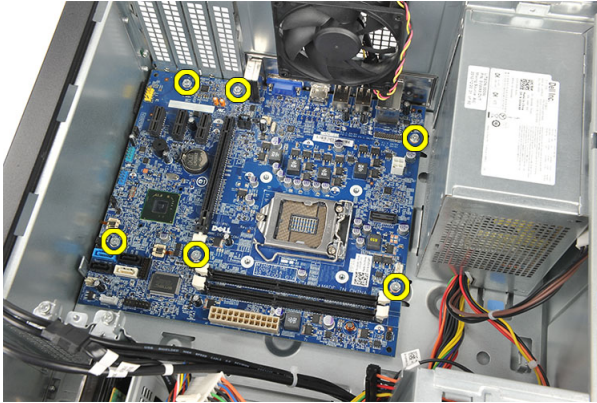
10. Slide the system board towards the front of the computer, and then carefully tilt it to a 45–degrees angle.
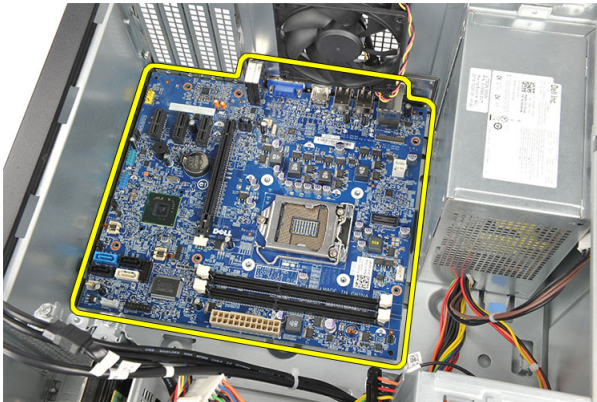
11. Lift the system board out of the computer chassis and place it in an antistatic packaging.

Installing The System Board

1. Place the system board into the computer and then slide it towards the back of the computer.
2. Replace the screws to secure the system board to the computer.
3. Connect all the cables to the system board.
4. Replace the *memory*.
5. Replace the *fan*.
6. Replace the *WLAN card*.
7. Replace the *expansion card*.
8. Replace the *processor*.
9. Replace the *cover*.
10. Follow the procedures in *After Working Inside Your Computer*.

Specifications

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Specifications

✎ **NOTE:** Offerings may vary by region. The following specifications are only those required by law to ship with your computer. For more information regarding the configuration of your computer, click **Start** → **Help and Support** and select the option to view information about your computer.

Processor	
Type	• Intel Core i3 series • Intel Core i5 series • Intel Pentium Dual-Core
L2 cache	up to 6 MB (depending on the processor)

Memory	
Memory module connector	two DIMM slots
Memory module capacity	1 GB, 2 GB, or 4 GB
Type	1333 MHz DDR3 (Non-ECC)
Minimum memory	1 GB
Maximum memory	8 GB

Video	
Video Type:	
Integrated	• Intel HD Graphics (with Intel Pentium Dual-Core CPU-GPU combo) • Intel HD Graphics 2000 (with Intel Core i3/i5 65W and 95W CPU-GPU combo)
Discrete	PCI Express x16 graphics card • AMD Radeon HD 6450 1GB DDR3 (DVI, VGA, HDMI)

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Video

	• AMD Radeon HD 5450 1GB DDR3 (DVI, VGA, HDMI)
	• AMD Radeon HD 6670 1GB DDR3 (DVI, VGA, HDMI)
Integrated video memory	up to 1.7 GB shared video memory (Microsoft Windows Vista and Windows 7)

Audio

Integrated	Integrated 5.1 high-definition audio

Network

Integrated	Realtek 10/100/1000 Mbps Ethernet

System Information

Chipset	Intel H61
BIOS chip (NVRAM)	32 Mb

Expansion Bus

Bus type	• PCI Express 2.0
	• SATA 1.0 and 2.0
	• USB 2.0
	• 8-in-1 media-card reader (for Vostro 260S)
	• 19-in-1 media card reader (optional in Vostro 260)
Bus speed:	
PCI Express	• PCI Express x1-slot (includes mini PCI-Express) support speed – 500 Mbps (Gen 2)
	• PCI Express x16-slot support speed – 8 Gbps (Gen 2)
SATA	1.5/3.0/6.0 Gbps
eSATA	3.0 Gbps

Expansion Bus

USB	480 Mbps

Cards

PCIe x16	one full-height card
PCIe x1	up to three full-height cards

Drives

	Vostro 260	Vostro 260S
Externally accessible:		
5.25 inch drive bays	two	one
Internally accessible:		
3.5 inch drive bays	two	one

External Connectors

Audio:	
Back panel	three connectors
Front Panel	two front-panel connectors for headphone and microphone
Network	one RJ45 connector
USB:	
Front panel	• one USB 2.0 connector • one powered USB 2.0 connector
Back panel	six USB 2.0 connectors
Video	• one 15-hole VGA connector • one 19-pin HDMI connector

Control Lights And Diagnostic Lights

power button light	white light — solid white light indicates power-on state.

Control Lights And Diagnostic Lights

	amber light — solid amber light indicates sleep/stand by state of the computer; blinking amber light indicates a problem with the system board.
drive activity light	white light — blinking white light indicates that the computer is reading data from, or writing data to the hard drive.

Power

Coin-cell battery	3 V CR2032 lithium coin cell
Input voltage	• 100 VAC to 127 VAC • 200 VAC to 240 VAC
Input frequency	50 Hz to 60 Hz
Wattage:	
Vostro 260	300 W
Vostro 260S	250 W
Input current:	
Vostro 260	9.00 A (8.00 A)/4.50 A
Vostro 260S	8.00 A/4.00 A

NOTE: Total power output of +5.50 V and +3.30 V can not exceed 160 W

Maximum heat dissipation:	
Vostro 260	1574 BTU/hr
Vostro 260S	1312 BTU/hr

NOTE: Heat dissipation is calculated by using the power supply wattage rating.

Physical

Vostro 260:	
Height	360.00 mm (14.17 inches)

Physical

Width	175.00 mm (6.89 inches)
Depth	436.30 mm (17.18 inches)
Weight (Minimum)	8.20 Kg (18.08 lb)
Vostro 260S:	
Height	360.00 mm (14.17 inches)
Width	102.00 mm (4.02 inches)
Depth	433.10 mm (17.05 inches)
Weight (Minimum)	7.60 Kg (16.76 lb)

Environmental

Temperature:	
Operating	10 °C to 35 °C (50 °F to 95 °F)
Storage	–40 °C to 65 °C (–40 °F to 149 °F)
Relative humidity	20 % to 80 % (noncondensing)
Altitude:	
Operating	–15.20 m to 3048 m (–50 ft to 10,000 ft)
Storage	–15.20 m to 10,668 m (–50 ft to 35,000 ft)
Airborne contaminant level	G1 as defined by ISA-S71.04–1985

Troubleshooting 18

Diagnostic Power LED Codes

Power LED Light Status	Possible Cause	Troubleshooting Steps
Off	The computer is either turned off or is not receiving power.	• Re-seat the power cable in the power connector on the back of the computer and the electrical outlet. • If the computer is plugged into a power strip, ensure the power strip is plugged into an electrical outlet and is turned on. Also, bypass power protection devices, power strips, and power extension cables to verify the computer turns on properly. • Ensure the electrical outlet is working by testing it with another device, such as a lamp.
Blinking Amber	Computer fails to complete POST or processor failure.	• Remove and then reinstall any cards. • Remove and then reinstall the graphics card, if applicable. • Ensure the power cable is connected to the motherboard and processor.
Steady Amber	Computer is in standby or this is a computer fault error condition, including the power supply. Only the	• Press the power button to bring the computer out of standby mode. • Ensure all power cables are securely connected to the system board.

Power LED Light Status	Possible Cause	Troubleshooting Steps
	+5VSB rail on the power supply is working correctly.	• Ensure the main power cable and front panel cable are securely connected to the system board.
Steady White	The computer is fully functional and in the On state.	If the computer is not responding, do the following: • Ensure the display is connected and turned on. • If the display is connected and turned on, listen for a beep code.

Diagnostic Beep Codes

Beep	Possible Cause	Troubleshooting Steps
1	BIOS ROM checksum in progress of failure.	System board failure, covers BIOS corruption or ROM error
2	No RAM detected	No memory detected
3	• Chipset Error (North and South Bridge Chipset, DMA/IMR/Timer Error for Intel platform); Chipset Error • Time-Of-Day Clock test failure • Gate A20 failure • Super I/O chip failure • Keyboard controller test failure	System board Failure
4	RAM Read/Write failure	Memory failure
5	RTC Power Fail	COMS battery failure
6	Video BIOS Test Failure	Video card failure

Beep	Possible Cause	Troubleshooting Steps
7	Processor Failure	Processor Failure

Diagnostic Error Messages

Error Messages	Description
AUXILIARY DEVICE FAILURE	The touch pad or external mouse may be faulty. For an external mouse, check the cable connection. Enable the **Pointing Device** option in the system setup program.
BAD COMMAND OR FILE NAME	Ensure that you have spelled the command correctly, put spaces in the proper place, and used the correct pathname.
CACHE DISABLED DUE TO FAILURE	The primary cache internal to the microprocessor has failed. *Contact Dell*.
CD DRIVE CONTROLLER FAILURE	The optical drive does not respond to commands from the computer.
DATA ERROR	The hard drive cannot read the data.
DECREASING AVAILABLE MEMORY	One or more memory modules may be faulty or improperly seated. Reinstall the memory modules and, if necessary, replace them.
DISK C: FAILED INITIALIZATION	The hard drive failed initialization. Run the hard drive tests in the Dell Diagnostics.
DRIVE NOT READY	The operation requires a hard drive in the bay before it can continue. Install a hard drive in the hard drive bay.
ERROR READING PCMCIA CARD	The computer cannot identify the ExpressCard. Reinsert the card or try another card.
EXTENDED MEMORY SIZE HAS CHANGED	The amount of memory recorded in non-volatile memory (NVRAM) does not match the memory installed in the computer.

Error Messages	Description
	Restart the computer. If the error appears again, *contact Dell*.
THE FILE BEING COPIED IS TOO LARGE FOR THE DESTINATION DRIVE	The file that you are trying to copy is too large to fit on the disk, or the disk is full. Try copying the file to a different disk or use a larger capacity disk.
A FILENAME CANNOT CONTAIN ANY OF THE FOLLOWING CHARACTERS: \ / : * ? " < > | -	Do not use these characters in filenames.
GATE A20 FAILURE	A memory module may be loose. Reinstall the memory modules and, if necessary, replace them.
GENERAL FAILURE	The operating system is unable to carry out the command. The message is usually followed by specific information. For example, Printer out of paper. Take the appropriate action.
HARD-DISK DRIVE CONFIGURATION ERROR	The computer cannot identify the drive type. Shut down the computer, remove the hard drive, and boot the computer from a optical drive. Then, shut down the computer, reinstall the hard drive, and restart the computer. Run the Hard Disk Drive tests in the Dell Diagnostics.
HARD-DISK DRIVE CONTROLLER FAILURE 0	The hard drive does not respond to commands from the computer. Shut down the computer, remove the hard drive, and boot the computer from a optical drive. Then, shut down the computer, reinstall the hard drive, and restart the computer. If the problem persists, try another drive. Run the Hard Disk Drive tests in the Dell Diagnostics.
HARD-DISK DRIVE FAILURE	The hard drive does not respond to commands from the computer. Shut down the computer, remove the hard drive, and

Error Messages	Description
	boot the computer from a optical drive. Then, shut down the computer, reinstall the hard drive, and restart the computer. If the problem persists, try another drive. Run the **Hard Disk Drive** tests in the **Dell Diagnostics**.
HARD-DISK DRIVE READ FAILURE	The hard drive may be defective. Shut down the computer, remove the hard drive, and boot the computer from a optical. Then, shut down the computer, reinstall the hard drive, and restart the computer. If the problem persists, try another drive. Run the **Hard Disk Drive** tests in the Dell Diagnostics.
INSERT BOOTABLE MEDIA	The operating system is trying to boot to non-bootable media, such as a floppy disk or optical drive. Insert bootable media.
INVALID CONFIGURATION INFORMATION-PLEASE RUN SYSTEM SETUP PROGRAM	The system configuration information does not match the hardware configuration. The message is most likely to occur after a memory module is installed. Correct the appropriate options in the system setup program.
KEYBOARD CLOCK LINE FAILURE	For external keyboards, check the cable connection. Run the **Keyboard Controller** test in the **Dell Diagnostics**.
KEYBOARD CONTROLLER FAILURE	For external keyboards, check the cable connection. Restart the computer, and avoid touching the keyboard or the mouse during the boot routine. Run the **Keyboard Controller** test in the **Dell Diagnostics**.
KEYBOARD DATA LINE FAILURE	For external keyboards, check the cable connection. Run the**Keyboard Controller** test in the **Dell Diagnostics**.
KEYBOARD STUCK KEY FAILURE	For external keyboards or keypads, check the cable connection. Restart the

Error Messages	Description
	computer, and avoid touching the keyboard or keys during the boot routine. Run the **Stuck Key** test in the **Dell Diagnostics**.
LICENSED CONTENT IS NOT ACCESSIBLE IN MEDIADIRECT	Dell MediaDirect cannot verify the Digital Rights Management (DRM) restrictions on the file, so the file cannot be played.
MEMORY ADDRESS LINE FAILURE AT ADDRESS, READ VALUE EXPECTING VALUE	A memory module may be faulty or improperly seated. Reinstall the memory modules and, if necessary, replace them.
MEMORY ALLOCATION ERROR	The software you are attempting to run is conflicting with the operating system, another program, or a utility. Shut down the computer, wait 30 seconds, and then restart it. Try to run the program again. If the error message still appears, see the software documentation.
MEMORY DOUBLE WORD LOGIC FAILURE AT ADDRESS, READ VALUE EXPECTING VALUE	A memory module may be faulty or improperly seated. Reinstall the memory modules and, if necessary, replace them.
MEMORY ODD/EVEN LOGIC FAILURE AT ADDRESS, READ VALUE EXPECTING VALUE	A memory module may be faulty or improperly seated. Reinstall the memory modules and, if necessary, replace them.
MEMORY WRITE/READ FAILURE AT ADDRESS, READ VALUE EXPECTING VALUE	A memory module may be faulty or improperly seated. Reinstall the memory modules and, if necessary, replace them.
NO BOOT DEVICE AVAILABLE	The computer cannot find the hard drive. If the hard drive is your boot device, ensure that the drive is installed, properly seated, and partitioned as a boot device.
NO BOOT SECTOR ON HARD DRIVE	The operating system may be corrupted, *contact Dell*.
NO TIMER TICK INTERRUPT	A chip on the system board may be malfunctioning. Run the **System Set** tests in the**Dell Diagnostics**.

Error Messages	Description
NOT ENOUGH MEMORY OR RESOURCES. EXIT SOME PROGRAMS AND TRY AGAIN	You have too many programs open. Close all windows and open the program that you want to use.
OPERATING SYSTEM NOT FOUND	Reinstall the hard drive (see your *Owner's Manual* at support.dell.com). If the problem persists, *contact Dell*.
OPTIONAL ROM BAD CHECKSUM	The optional ROM has failed. *Contact Dell*.
SECTOR NOT FOUND	The operating system cannot locate a sector on the hard drive. You may have a defective sector or corrupted FAT on the hard drive. Run the Windows error-checking utility to check the file structure on the hard drive. See Windows Help and Support for instructions (click Start > Help and Support). If a large number of sectors are defective, back up the data (if possible), and then reformat the hard drive.
SEEK ERROR	The operating system cannot find a specific track on the hard drive.
SHUTDOWN FAILURE	A chip on the system board may be malfunctioning. Run the **System Set** tests in the *contact Dell*.
TIME-OF-DAY CLOCK LOST POWER	System configuration settings are corrupted. Connect your computer to an electrical outlet to charge the battery. If the problem persists, try to restore the data by entering the system setup program, then immediately exit the program. If the message reappears, *contact Dell*.
TIME-OF-DAY CLOCK STOPPED	The reserve battery that supports the system configuration settings may require recharging. Connect your computer to an electrical outlet to charge the battery. If the problem persists, contact Dell.

Error Messages	Description
TIME-OF-DAY NOT SET-PLEASE RUN THE SYSTEM SETUP PROGRAM	The time or date stored in the system setup program does not match the system clock. Correct the settings for the **Date and Time** options.
TIMER CHIP COUNTER 2 FAILED	A chip on the system board may be malfunctioning. Run the **System Set tests** in the **Dell Diagnostics**.
UNEXPECTED INTERRUPT IN PROTECTED MODE	The keyboard controller may be malfunctioning, or a memory module may be loose. Run the **System Memory** tests and the **Keyboard Controller** test in the *contact Dell*.
X:\ IS NOT ACCESSIBLE. THE DEVICE IS NOT READY	Insert a disk into the drive and try again.
WARNING: BATTERY IS CRITICALLY LOW	The battery is running out of charge. Replace the battery, or connect the computer to an electrical outlet; otherwise, activate hibernate mode or shut down the computer.

System Error Messages

System Message	Description
Alert! Previous attempts at booting this system have failed at checkpoint [nnnn]. For help in resolving this problem, please note this checkpoint and contact Dell Technical Support	The computer failed to complete the boot routine three consecutive times for the same error.
CMOS checksum error	Possible motherboard failure or Real-time clock (RTC) battery low.
CPU fan failure	CPU fan has failed
System fan failure	System fan has failed
Hard-disk drive failure	Possible hard disk drive failure during POST

System Message	Description
Keyboard failure	Keyboard failure or loose cable. If reseating the cable does not solve the problem, replace the keyboard.
No boot device available	No bootable partition on hard disk drive, the hard disk drive cable is loose, or no bootable device exists. • If the hard drive is your boot device, ensure that the cables are connected and that the drive is installed properly and partitioned as a boot device. • Enter system setup and ensure that the boot sequence information is correct.
No timer tick interrupt	A chip on the system board might be malfunctioning or motherboard failure.
USB over current error	Disconnect the USB device. The USB device needs more power for it to function properly. Use an external power source to connect the USB device, or if the device has two USB cables, connect both of them.
CAUTION - Hard Drive SELF MONITORING SYSTEM has reported that a parameter has exceeded its normal operating range. Dell recommends that you back up your data regularly. A parameter out of range may or may not indicate a potential hard drive problem	S.M.A.R.T error, possible hard disk drive failure

System Setup

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System Setup Overview

System Setup allows you to:

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

Before you use System Setup, it is recommended that you write down the System Setup screen information for future reference.

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

Enter System Setup

1. Turn on (or restart) your computer.

2. When the blue DELL logo is displayed, you must watch for the F2 prompt to appear.

3. Once the F2 prompt appears, 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 to display, and then press <F2> . If you press <F2> before you are prompted, this keystroke will be lost.

4. 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.

System Setup Screens

Menu — Appears on top of the System Setup window. This field provides a menu to access the System Setup options. Press < Left Arrow > and < Right Arrow > keys to navigate. As a **Menu** option is highlighted, the **Options List** lists the options that define the hardware installed on your computer.

Options List — Appears on the left side of the System Setup window. The field lists features that define the configuration of your computer, including installed hardware, power conservation, and security features. Scroll up and down the list with the up- and down-arrow keys. As an option is highlighted, the **Options Field** displays the option's current and available settings.

Options Field — Appears on the right side of **Dell Diagnostics** and contains information about each option listed in the **Dell Diagnostics**. In this field you can view information about your computer and make changes to your current settings. Press < Enter> to make changes to your current settings. Press <ESC> to return to the **Dell Diagnostics**.

Dell Diagnostics — Appears on the right side of the System Setup window and contains help information about the option selected in **Dell Diagnostics**.

> NOTE: Not all settings listed in the Options Field are changeable.

Dell Diagnostics — Appears below the **Dell Diagnostics** and lists keys and their functions within the active system setup field.

Use the following keys to navigate through the System Setup screens:

Keystroke	Action
< F2 >	Displays information on any selected item in the System Setup.
< Esc >	Exit from current view or switch the current view to the **Dell Diagnostics** page in the System Setup.
< Up Arrow > or < Down Arrow >	Select an item to display.
< Left Arrow > or < Right Arrow >	Select a menu to display.
– or +	Change existing item value.
< Enter >	Select the sub menu or execute command.
< F9 >	Load setup default.
< F10 >	Save current configuration and exit System Setup.

System Setup Option

Main

System Information	Displays the computer model number.
BIOS Version	Displays the BIOS revision.
Build Date	Displays the date the system BIOS was built.
System Date	Re-sets the date on the computer's internal calendar.
System Time	Re-sets the time on the computer's internal clock.
Service Tag	Displays the service tag of your computer.
Asset Tag	Displays the asset tag of your computer (if available).
Processor Information	
Processor Type	Displays the type of processor.
L2 Cache Size	Displays the processor L2 cache size.
L3 Cache Size	Displays the processor L3 cache size.
Memory Information	
Memory Installed	Displays the total computer memory.
Memory Speed	Displays the memory speed.
Memory Technology	Displays the type and technology.
Device Information	
SATA 0	Displays the model number and capacity of the hard drive.
SATA 1	Displays the model number and capacity of the hard drive.
SATA 2	Displays the model number and capacity of the hard drive.
SATA 3	Displays the model number and capacity of the hard drive.

Advanced

CPU Configuration

Hyper-threading	Enable or disable processor hyper-threading.	Default: Enabled
Limit CPUID Value	Enable or disable the Limit CPUID Value feature.	Default: Enabled
CPU XD Support	Enable or disable the CPU XD feature.	Default: Enabled
Intel Virtualization Technology	Enable or disable the Intel Virtualization feature.	Default: Enabled
Intel SpeedStep	Enable or disable the Intel SpeedStep feature.	Default: Enabled
CPU C6 Report	Enable or disable the processor power saving report to the operating system.	Default: Enabled

System Configuration

Onboard Audio Controller	Enable or disable the onboard audio controller.	Default: Enabled
Onboard LAN Controller	Enable or disable the onboard LAN controller.	Default: Enabled
Onboard LAN Boot ROM	Enable or disable the onboard LAN boot ROM.	Default: Disabled
USB Controller	Enable or disable the USB controller.	Default: Enabled
USB Storage Boot Function	Enable or disable the option to boot through a USB device	Default: Enabled

Power Management

Restore AC Power Loss	Specifies how the computer will behave when AC power is restored after an AC power loss.	Default: Power Off
Wake on Lan from S4/S5	Allows the computer to be remotely turned on.	Default: Enabled

CPU Configuration

Auto Power On	Enable or disable the computer to power on automatically. You can further specify the date and time the computer power on.	Default: Disabled

Post Behaviour

NumLock Key	Enable or disable the NumLock State light during POST.	Default: On
Keyboard Error Report	Enable or disable the Keyboard Error Report to be displayed during POST.	Default: Enabled

Boot

Set Boot Priority	Specifies the order of different devices in which the computer will boot through at start up.
Hard Disk Drives	Specify which hard drive the computer can boot through.
CD/DVD ROM Drives	Specify which CD/DVD the computer can boot through.

Security

Unlock Setup Status	Specifies whether the BIOS can be edited.
Admin Password Status	Specifies whether an administrator password has been assigned.
System Password Status	Specifies whether a system password has been assigned.
Admin Password	Allows you to change or delete the administrator password.

Exit

This section allows you to save, discard, and load default settings before exiting from System Setup.

Contacting Dell 20

Contacting Dell

📝 **NOTE:** If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

1. Visit **support.dell.com**.
2. Select your support category.
3. If you are not a U.S. customer, select your country code at the bottom of the page, or select **All** to see more choices.
4. Select the appropriate service or support link based on your need.