

Dell Vostro 3250 Owner's Manual

Regulatory Model: D13S
Regulatory Type: D13S001



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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2016 - 12

Rev. A01

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Working on 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 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:** Disconnect all power sources before opening the computer cover or panels. After you finish working inside the computer, replace all covers, panels, and screws before connecting to the power source.

 **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.

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.

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. Turning off your computer (Windows 8.1):
 - Using a touch enabled device:
 - a. Swipe in from the right edge of the screen, opening the **Charms** menu and select **Settings**.
 - b. Select  and then select **Shut down**.
or
 - a. On the **Home** screen, touch  and then select **Shut down**.
 - Using a mouse:
 - a. Point to upper-right corner of the screen and click **Settings**.
 - b. Click  and then select **Shut down**.
or
 - a. On the **Home** screen, click  and then select **Shut down**.
2. Turning off your computer (Windows 7):
 - a. Click .
 - b. Click **Shut Down**.
or
 - a. Click .
 - b. Click the arrow in the lower-right corner of the **Start** menu, and then click **Log off**.
3. 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.

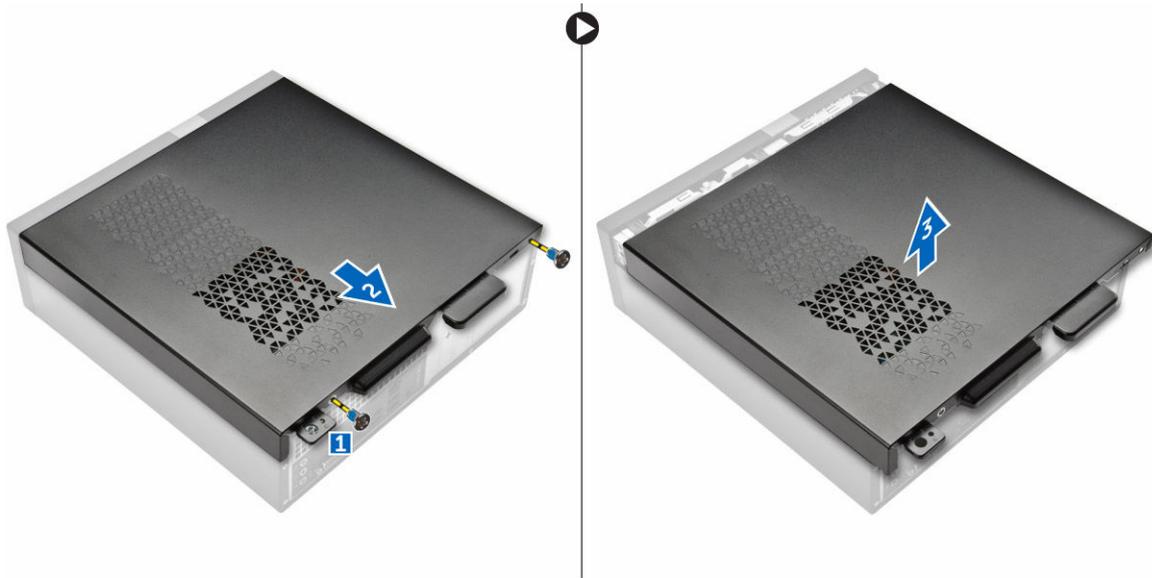
After working inside your computer

After you complete any replacement procedure, ensure that 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. If required, verify that the computer works correctly by running **Dell Diagnostics**.

Removing the cover

1. Follow the procedures in [Before Working Inside Your Computer](#).
2. Follow the steps to remove the cover:
 - a. Remove the screws that secure the cover to the computer [1].
 - b. Slide the computer cover towards the back of the computer [2].
 - c. Lift and remove the cover from the computer [3].

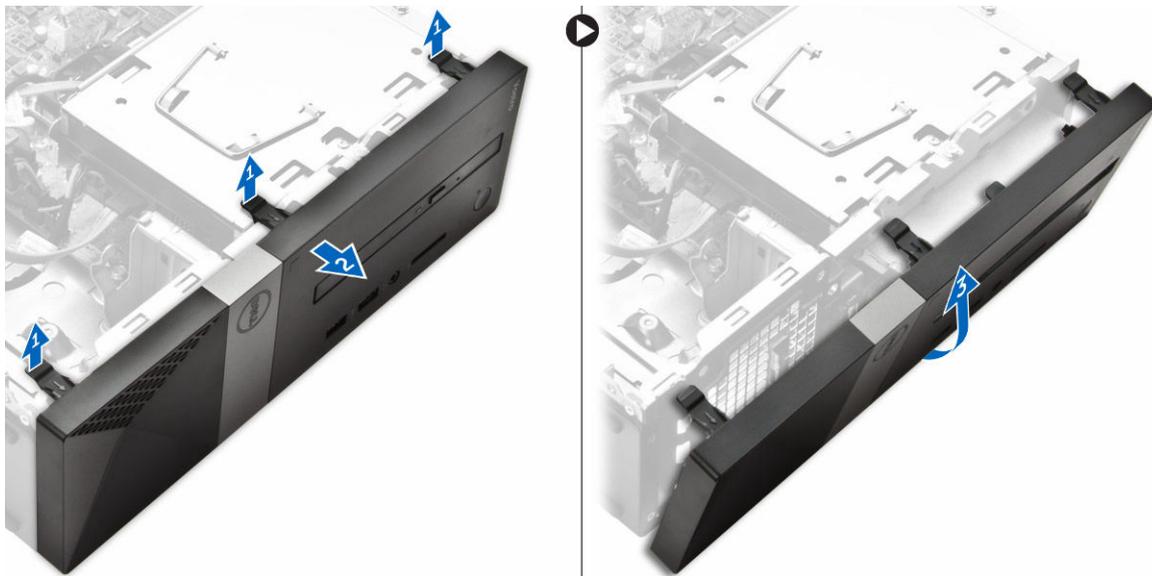


Installing the cover

1. Slide the cover from the back of the computer, until the latches snap-in.
2. Tighten the screws to secure the cover.
3. Follow the procedures in [After Working Inside Your Computer](#)

Removing the front bezel

1. Follow the procedures in [Before Working Inside Your Computer](#).
2. Remove [cover](#).
3. Follow the steps to remove the cover:
 - a. Lift the tabs [1] and pull the front bezel [2].
 - b. Lift up the front bezel to remove it from the computer [3].

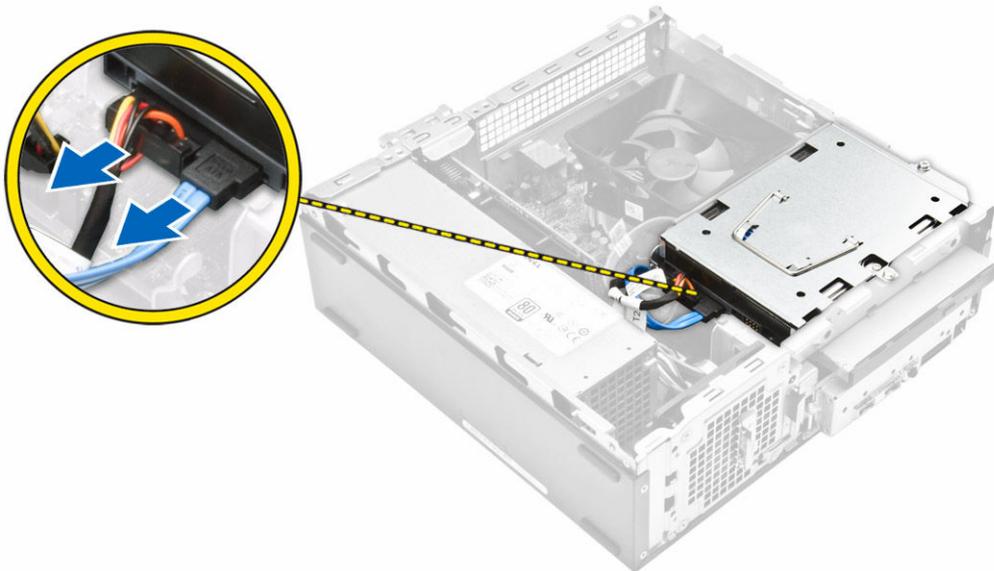


Installing the front bezel

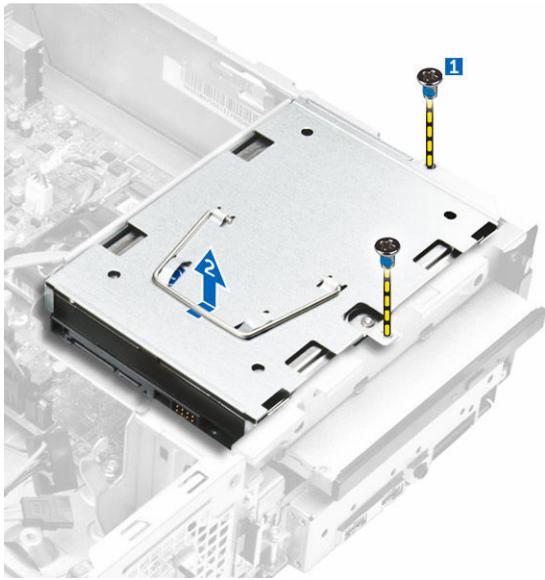
1. Hold the bezel and ensure that the hooks on the tabs snap into the notches on the computer.
2. Rotate the front bezel toward the front of the computer.
3. Press the front bezel until the tabs snap in.
4. Install the [cover](#).
5. Follow the procedures in [After Working Inside Your Computer](#).

Removing the hard drive assembly

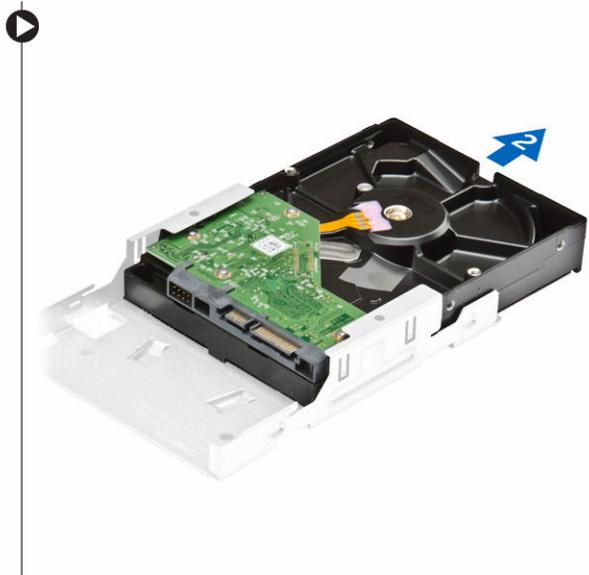
1. Follow the procedures in [Before Working Inside Your Computer](#).
2. Remove:
 - a. [cover](#)
 - b. [front bezel](#)
3. Disconnect the power and the data cables from the hard drive.



4. Follow the steps to remove the hard drive assembly:
 - a. Remove the screws that secure the hard drive to the drive bay [1].
 - b. Lift the drive bay handle [2] and slide it from the drive bay [3].



5. Follow the steps to remove hard-drive bracket:
- Remove the screws that secure the hard drive to the bracket [1].
 - Slide the hard-drive from the bracket [2].



NOTE: Remove the hard-drive bracket only if you are replacing with a new hard drive. Otherwise, if hard drive removal is only a pre-requisite to remove other components, then ignore Step 5.

Installing the hard drive assembly

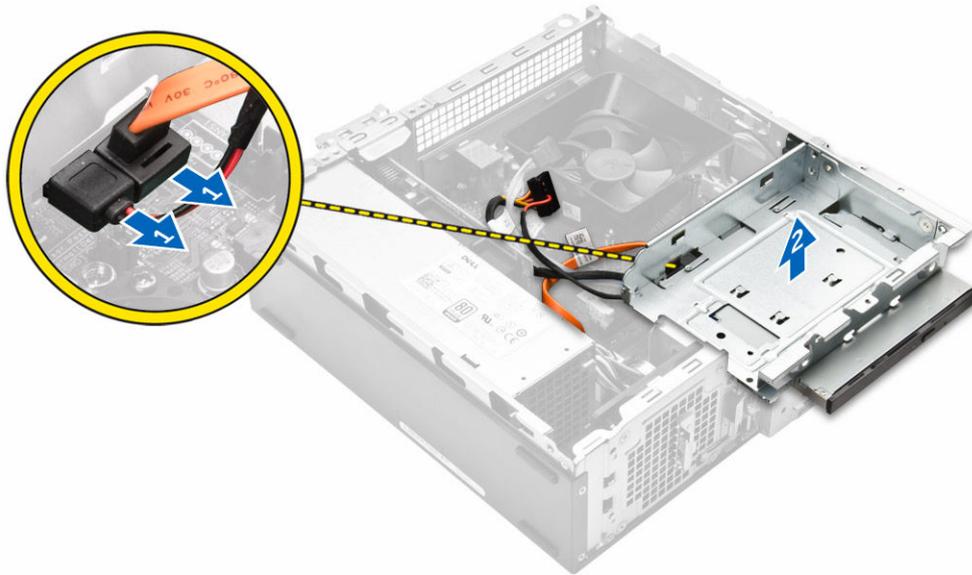
- Slide the hard drive into the bracket.
- Tighten the screws to secure the hard drive to the bracket.
- Holding the handle, slide the hard-drive assembly into the drive bay.
- Tighten the screws to secure the hard-drive assembly to the computer.
- Connect the data and power cables to the hard drive.
- Install:
 - [front bezel](#)
 - [cover](#)



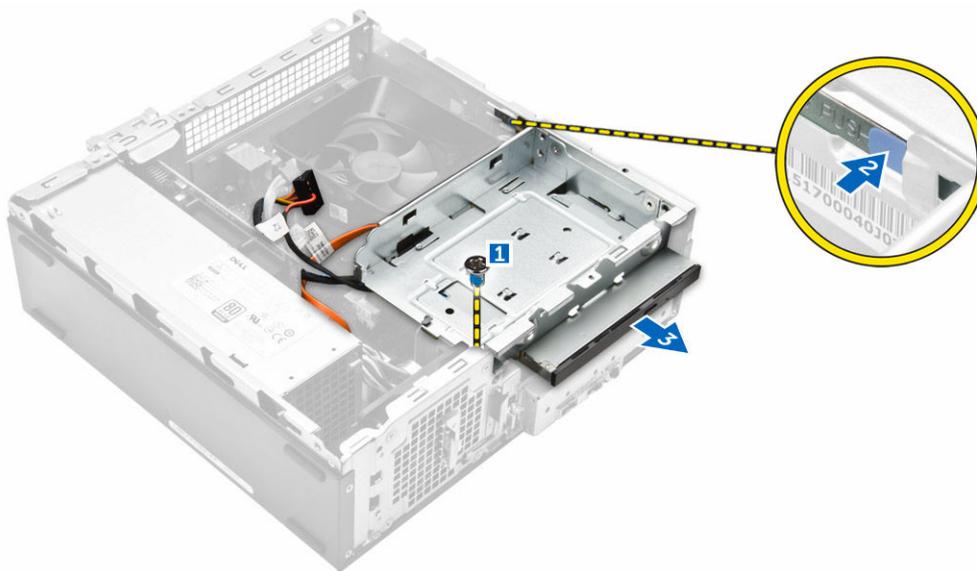
7. Follow the procedures in [After Working Inside Your Computer](#).

Removing the optical drive

1. Follow the procedures in [Before Working Inside Your Computer](#).
2. Remove:
 - a. [cover](#)
 - b. [front bezel](#)
 - c. [hard drive assembly](#)
3. Follow the steps to release the optical drive:
 - a. Disconnect the power and the data cables from the optical drive [1].
 - b. Remove the screw that secures the optical drive to the drive bay [2].



4. Follow the steps to remove the optical drive:
 - a. Press the blue tab to loosen the optical drive [1].
 - b. Slide the optical drive [2] and lift it up to remove it from the chassis [3].



5. Follow the steps to remove the bracket from the optical drive.

- a. Remove the screws that secure the bracket to the optical drive.
- b. Slide the optical drive from the bracket.



NOTE: Remove the optical-drive bracket only if you are replacing with a new optical drive. Otherwise, if optical drive removal is only a pre-requisite to remove other components, then ignore Step 5 and Step 6

Installing the optical drive

1. Slide the optical drive into the drive bay until it snaps.
2. Tighten the screw to secure the drive to the chassis.
3. Connect the data and power cables to the optical drive.
4. Install:
 - a. [hard drive assembly](#)
 - b. [front bezel](#)
 - c. [cover](#)
5. Follow the procedures in [After Working Inside Your Computer](#).

Removing the heat sink fan cover

1. Follow the procedures in [Before Working Inside Your Computer](#).
2. Remove:
 - a. [cover](#)
 - b. [front bezel](#)
 - c. [hard drive assembly](#)
 - d. [optical drive](#)
3. Follow the steps to remove the heat sink fan cover:
 - a. Pry the plastic notches that secure the fan cover in an outward direction [1].
 - b. Remove the fan cover from the heat sink assembly.

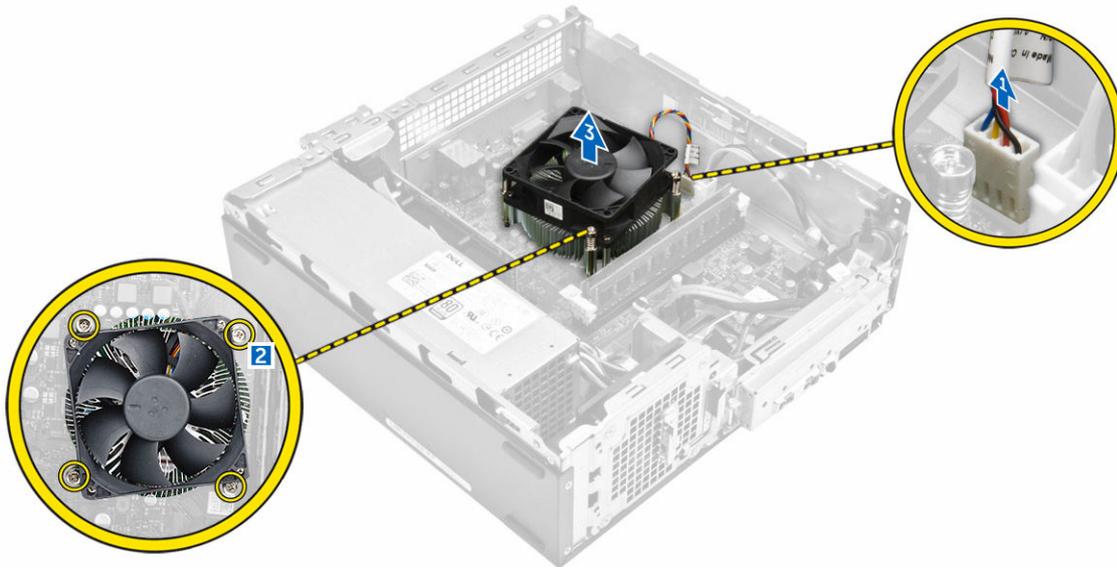


Installing the heat sink fan cover

1. Align the tabs on the fan cover with the slots on the heat sink.
2. Lower the fan cover onto the heat sink until it is firmly seated.
3. Install the [cover](#).
4. Follow the procedure in [After Working Inside Your Computer](#).

Removing the heat sink assembly

1. Follow the procedures in [Before Working Inside Your Computer](#).
2. Remove:
 - a. [cover](#)
 - b. [front bezel](#)
 - c. [hard drive assembly](#)
 - d. [optical drive](#)
 - e. [heat sink fan cover](#)
3. Follow the steps to remove the heatsink assembly:
 - a. Disconnect the heat sink assembly cable from the system board [1].
 - b. Remove the screws to loosen the processor fan and the heat sink [2].
 - c. Lift up the heat sink and remove it from the chassis [3].

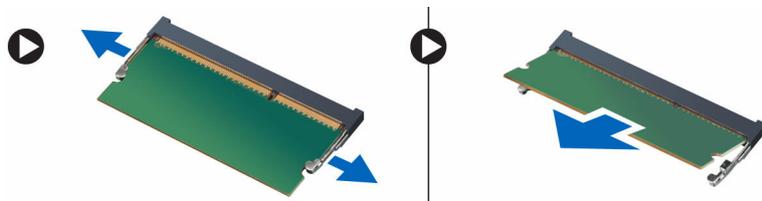


Installing the heat sink assembly

1. Place the heat sink assembly in the slot by aligning with the screw holders.
2. Tighten the screws to secure the heat sink assembly to the system board.
3. Connect the heat sink assembly cable to the system board.
4. Install:
 - a. [heat sink fan cover](#)
 - b. [optical drive](#)
 - c. [hard drive assembly](#)
 - d. [front bezel](#)
 - e. [cover](#)
5. Follow the procedures in [After Working Inside Your Computer](#).

Removing the memory

1. Follow the procedures in [Before Working Inside Your Computer](#).
2. Remove the [cover](#).
3. Pry the securing clips away from the memory module until it pops up. Remove the memory module from its socket on the system board.



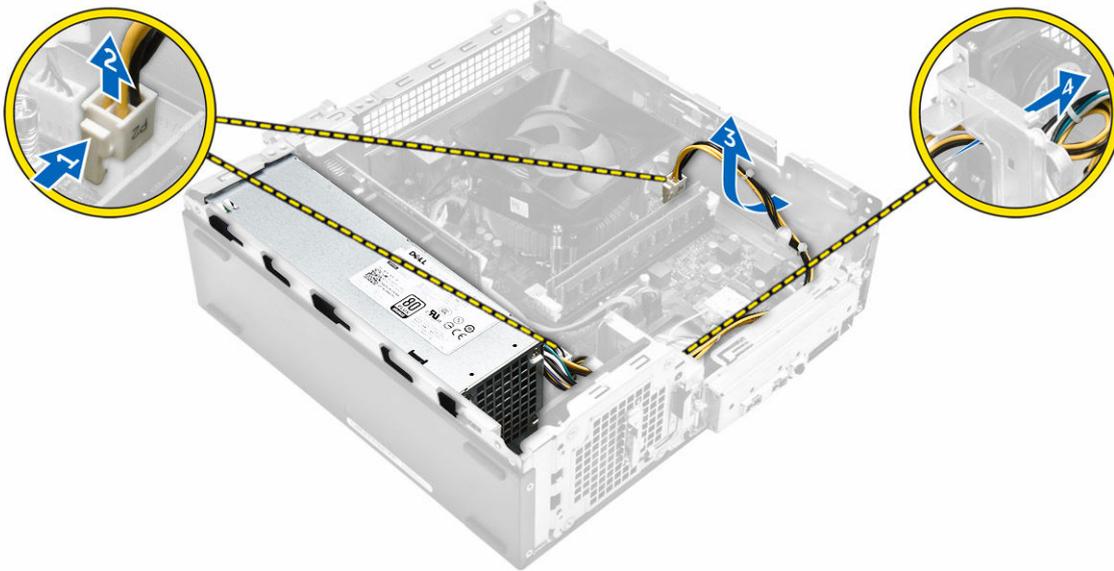
Installing the memory

1. Align the notch on the memory card with the tab in the memory connector.
2. Insert the memory module into the memory socket and press until it clicks into place.
3. Install the [cover](#).
4. Follow the procedures in [After Working Inside Your Computer](#).

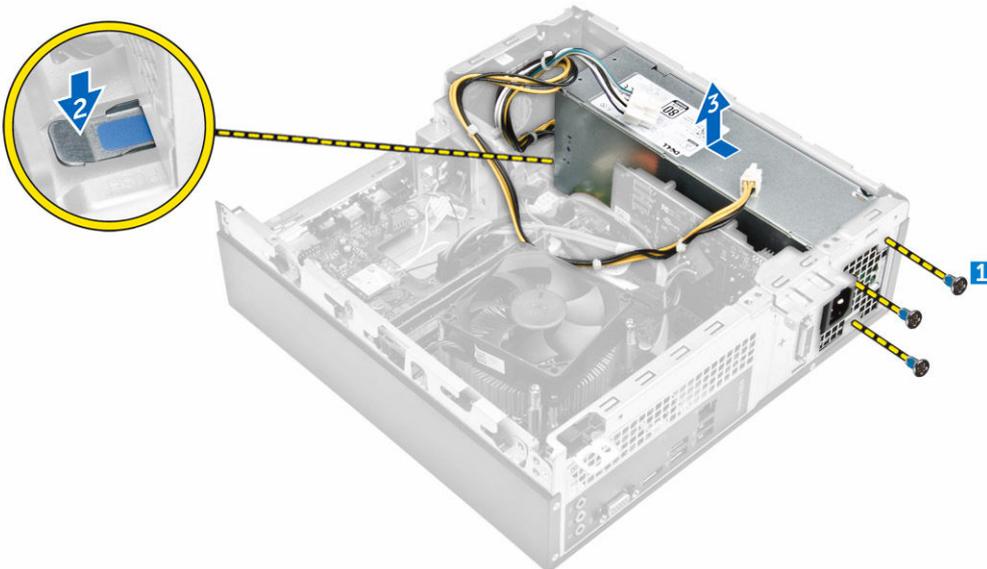


Removing the power supply unit

1. Follow the procedures in [Before Working Inside Your Computer](#).
2. Remove:
 - a. [cover](#)
 - b. [front bezel](#)
 - c. [hard drive assembly](#)
 - d. [optical drive](#)
3. Perform the following steps to remove the power supply unit (PSU) from the computer:
 - a. Disconnect the PSU cables from the connectors on the system board [1, 2].
 - b. Unroute the PSU cables from the holder [3,4].



4. Perform the following steps to remove the PSU:
 - a. Remove the screws that secure the PSU [1].
 - b. Press the blue PSU release tab to release the PSU [2].
 - c. Slide and remove the PSU from the computer [3].



Installing the power supply unit (PSU)

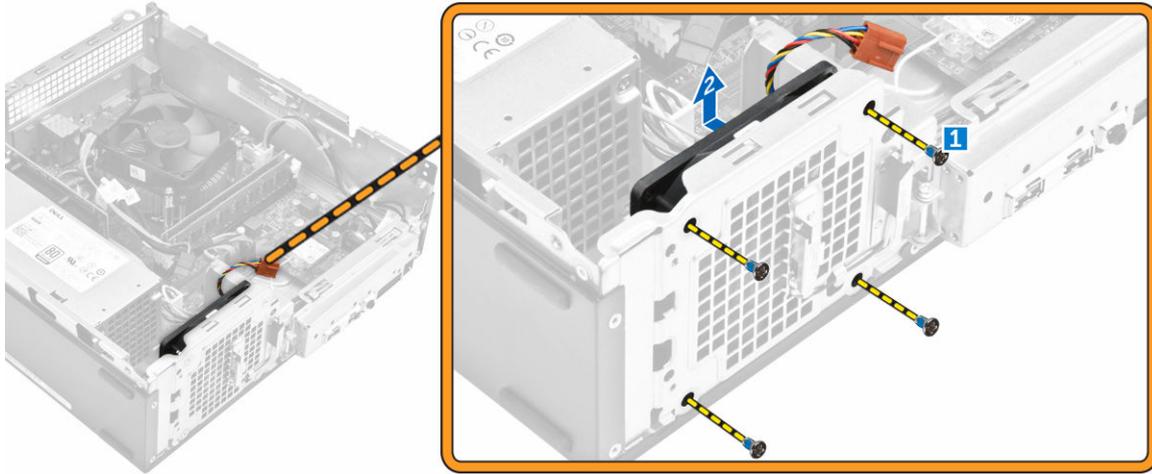
1. Slide the PSU towards the back of the computer until it snaps into place.
2. Replace the screws to secure the power supply unit to the computer.
3. Route the PSU cables through the placeholder.
4. Connect the PSU cables to their connectors on the system board.
5. Install:
 - a. [optical drive](#)
 - b. [hard drive assembly](#)
 - c. [front bezel](#)
 - d. [cover](#)
6. Follow the procedures in [After Working Inside Your Computer](#).

Removing the system fan

1. Follow the procedures in [Before Working Inside Your Computer](#).
2. Remove:
 - a. [cover](#)
 - b. [front bezel](#)
 - c. [hard drive assembly](#)
 - d. [optical drive](#)
3. Perform the following steps to remove the system fan from the computer:
 - a. Disconnect the system-fan cable from the connector on the system board [1].
 - b. Unroute the system fan cable [2].



4. Remove the screws that secure the system fan to the computer chassis and remove it from the computer. [1,2]

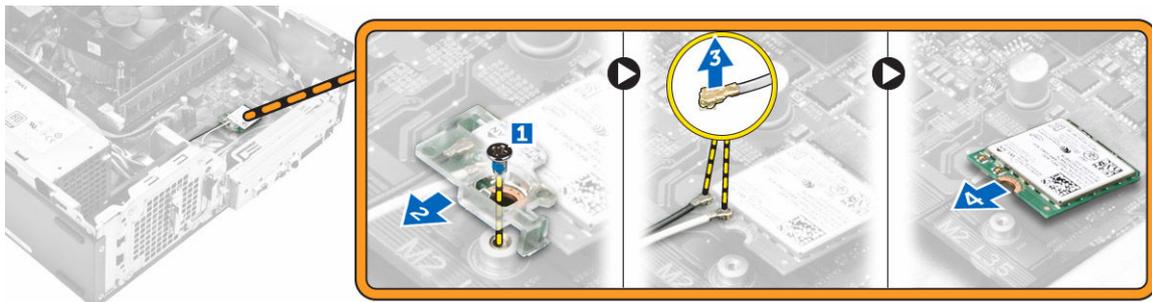


Installing the system fan

1. Place the system fan on the computer.
2. Tighten the screws to secure the system fan to the computer.
3. Connect the system-fan cable to the connector on the system board.
4. Install:
 - a. [optical drive](#)
 - b. [hard drive assembly](#)
 - c. [front bezel](#)
 - d. [cover](#)
5. Follow the procedures in [After Working Inside Your Computer](#).

Removing the WLAN card

1. Follow the procedures in [Before Working Inside Your Computer](#).
2. Remove:
 - a. [cover](#)
 - b. [front bezel](#)
 - c. [hard drive assembly](#)
 - d. [optical drive](#)
3. Perform the following steps to remove the WLAN card from the computer:
 - a. Remove the screw to release the plastic tab that secures the WLAN card to the computer. [1][2]
 - b. Disconnect the WLAN cables from the connectors on the WLAN card. [3]
 - c. Remove the WLAN card from its connector on the system board. [4]

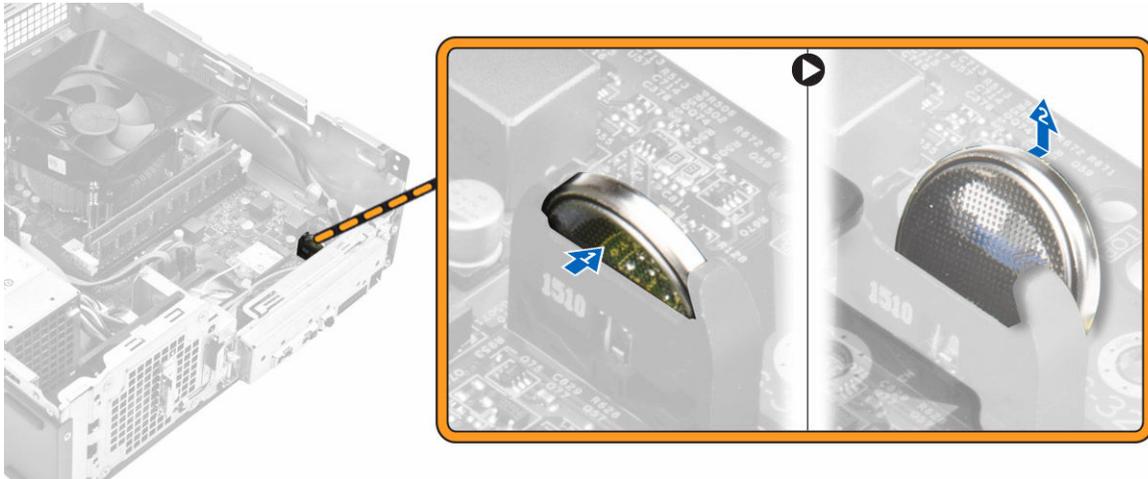


Installing the WLAN card

1. Insert the WLAN card to the connector on the system board.
2. Connect the WLAN cables to the connectors on the WLAN card.
3. Place the plastic tab and tighten the screw to secure the WLAN card to the system board.
4. Install:
 - a. [optical drive](#)
 - b. [hard drive assembly](#)
 - c. [front bezel](#)
 - d. [cover](#)
5. Follow the procedures in [After Working Inside Your Computer](#).

Removing the coin cell battery

1. Follow the procedures in [Before Working Inside Your Computer](#).
2. Remove:
 - a. [cover](#)
 - b. [front bezel](#)
 - c. [hard drive assembly](#)
 - d. [optical drive](#)
3. Perform the following steps to remove the coin-cell battery:
 - a. Press the coin-cell battery [1].
 - b. Lift the coin-cell battery out of the computer. [2]



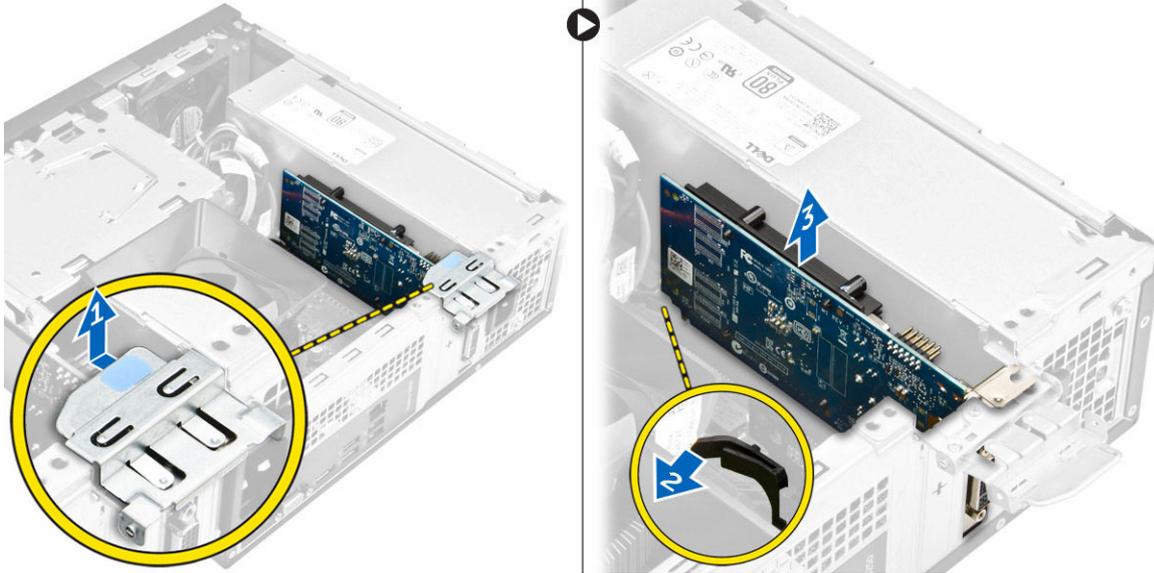
Installing the coin cell battery

1. Insert the coin cell battery in the slot on the system board.
2. Press the coin cell battery downward until it snaps in.
3. Install:
 - a. [optical drive](#)
 - b. [hard drive assembly](#)
 - c. [front bezel](#)
 - d. [cover](#)
4. Follow the procedures in [After Working Inside Your Computer](#).



Removing the expansion card

1. Follow the procedures in [Before Working Inside Your Computer](#).
2. Remove:
 - a. [cover](#)
 - b. [front bezel](#)
3. Perform the following steps to remove the expansion card:
 - a. Pull the metal tab to release the expansion card. [1]
 - b. Push the tab forward [2] and remove the expansion card from the slot on the computer [3].



Installing the expansion card

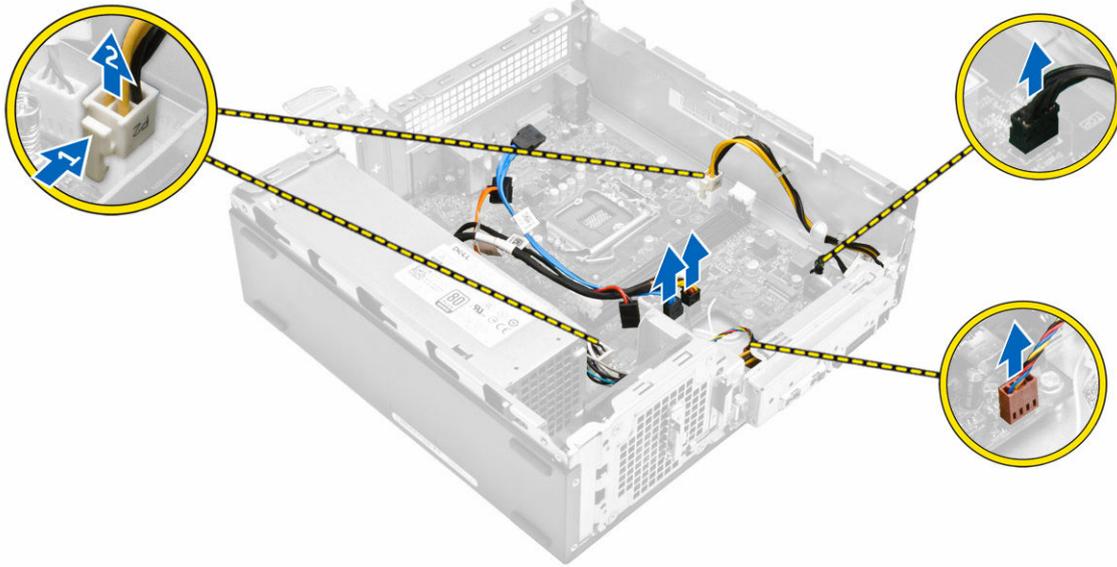
1. Insert the expansion card on the slot.
2. Push the card- retention latch to secure the secure the expansion card.
3. Push the metal tab until it snaps in place.
4. Install:
 - a. [front bezel](#)
 - b. [cover](#)
5. Follow the procedures in [After Working Inside Your Computer](#).

Removing the system board

1. Follow the procedures in [Before Working Inside Your Computer](#).
2. Remove:
 - a. [cover](#)
 - b. [front bezel](#)
 - c. [hard drive assembly](#)
 - d. [optical drive](#)
 - e. [heat sink fan assembly](#)
 - f. [heat sink](#)
 - g. [memory](#)
 - h. [coin cell battery](#)

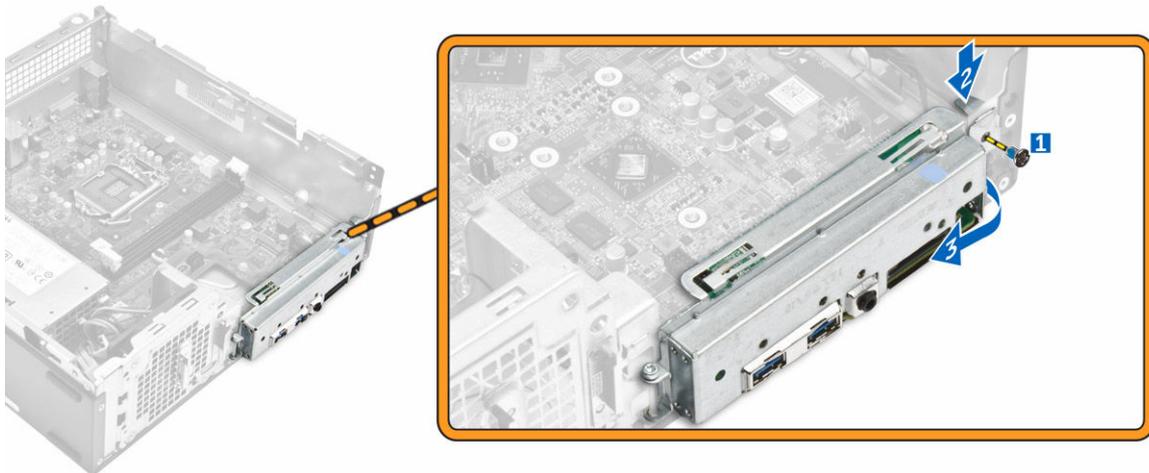
- i. [WLAN card](#)
- j. [expansion cards](#)

3. Disconnect the cables from the system board:



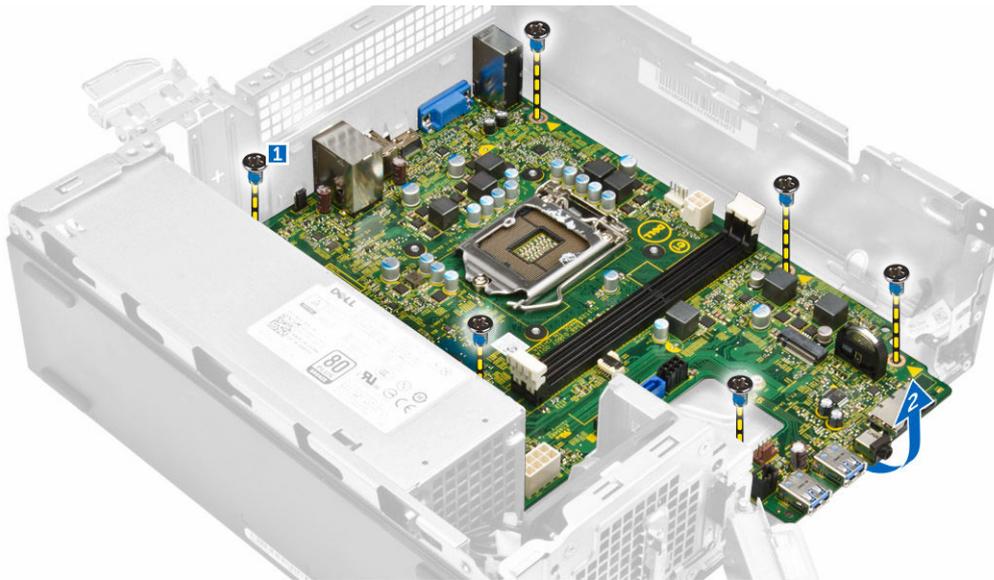
4. Follow the steps to release the I/O panel:

- a. Remove the screw that secures the I/O panel to the chassis [1].
- b. Press the tab to release the I/O panel from the chassis [2].
- c. Pull the I/O panel to release the I/O panel.



5. Follow the steps to remove the system board:

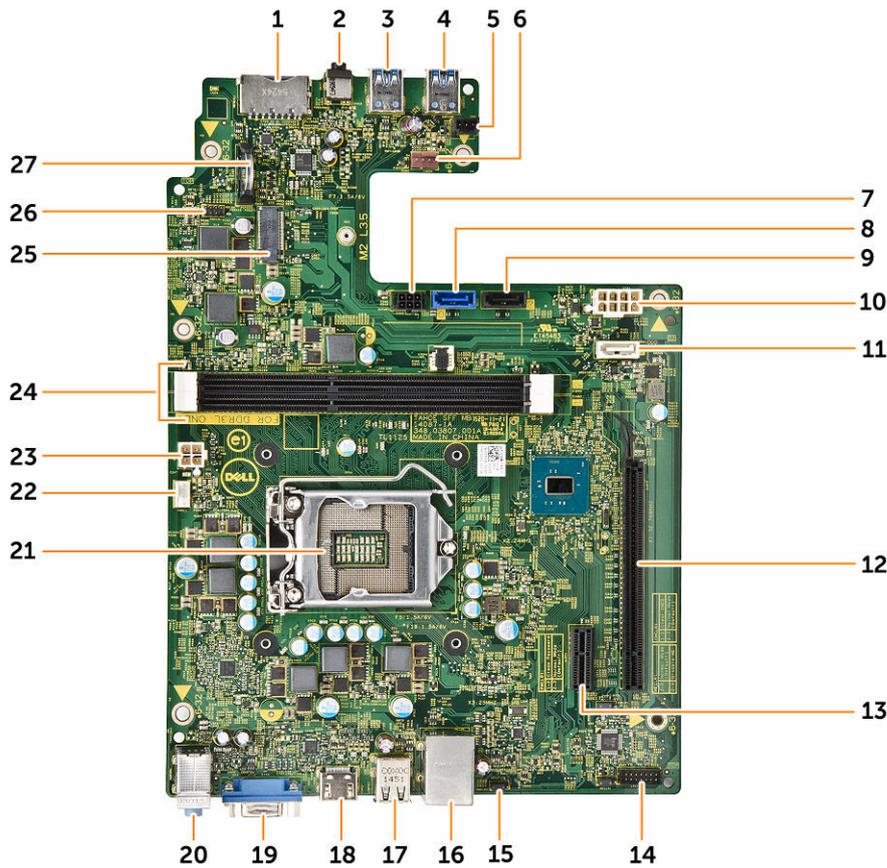
- a. Remove the screws that secure system board to the chassis [1].
- b. Lift the system board from the chassis.



Installing the system board

1. Insert the system board and ensure that ports are aligned to the holes on the back panel.
2. Push the I/O panel to its original position until it snaps in.
3. Tighten the screw to secure the I/O panel to the chassis.
4. Connect the cables to the system board.
5. Install:
 - a. [expansion card](#)
 - b. [WLAN card](#)
 - c. [coin cell battery](#)
 - d. [memory](#)
 - e. [heat sink assembly](#)
 - f. [heat sink fan cover](#)
 - g. [optical drive](#)
 - h. [hard drive assembly](#)
 - i. [front bezel](#)
 - j. [cover](#)
6. Follow the procedures in [After Working Inside Your Computer](#).

System Board Layout



- | | |
|---------------------------------|---|
| 1. SD card connector | 2. Headset jack |
| 3. USB 3.0 connector | 4. USB 3.0 connector |
| 5. Light Bar connector | 6. System FAN connector |
| 7. SATA power connector | 8. SATA connector |
| 9. SATA connector | 10. FPSU connector |
| 11. SATA connector | 12. PCIe16 slot |
| 13. PCIe1 slot | 14. Clear CMOS Jumper |
| 15. Password clear jumper | 16. Network connector |
| 17. USB 2.0 connector | 18. USB2 3.0 connector |
| 19. HDMI connector | 20. Line-in, line-out and microphone connectors |
| 21. Processor socket | 22. CPU fan connector |
| 23. PSU connector | 24. Memory slot |
| 25. NGFF cslot | 26. power-switch connector |
| 27. Coin-cell battery connector | |

Troubleshooting your computer

You can troubleshoot your computer using indicators like diagnostic lights, beep codes, and error messages during the operation of the computer.

Diagnostic power LED codes

Table 1. Diagnostic power LED codes

Power LED light status	Possible cause	Troubleshooting steps
Off	The computer is either turned off or is not receiving power or in Hibernation mode.	<ul style="list-style-type: none"> 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 that 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 that the computer turns on properly. Ensure the electrical outlet is working by testing it with another device, such as a lamp.
Steady/blinking amber	Computer fails to complete POST or processor failure.	<ul style="list-style-type: none"> Remove and reinstall any cards. Remove and reinstall the graphics card, if applicable. Ensure the power cable is connected to the system board and processor.
Slow Blinking white light	Computer is in sleep mode.	<ul style="list-style-type: none"> Press the power button to bring the computer out of the sleep mode. Ensure all power cables are securely connected to the system board. Ensure the main power cable and front panel cable are connected to the system board.
Steady white	The computer is fully functional and in the On state.	<p>If the computer is not responding, do the following:</p> <ul style="list-style-type: none"> Ensure the display is connected and turned on.

Power LED light status	Possible cause	Troubleshooting steps
		<ul style="list-style-type: none"> If the display is connected and turned on, listen for a beep code.

Diagnostic error messages

Table 2. Diagnostic error messages

Error messages	Description
AUXILIARY DEVICE FAILURE	The touchpad 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 path name.
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 or, if necessary, replace them.
DISK C: FAILED INITIALIZATION	The hard drive failed initialization. Run the hard drive tests in 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 module installed in the computer. 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 module or, if necessary, replace it.
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



Error messages	Description
HARD-DISK DRIVE CONTROLLER FAILURE 0	an optical drive. Then, shut down the computer, reinstall the hard drive, and restart the computer. Run the Hard Disk Drive tests in 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 boot the computer from an 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 Dell Diagnostics .
HARD-DISK DRIVE READ FAILURE	The hard drive does not respond to commands from the computer. Shut down the computer, remove the hard drive, and boot the computer from an 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 Dell Diagnostics .
INSERT BOOTABLE MEDIA	The hard drive may be defective. Shut down the computer, remove the hard drive, and boot the computer from an 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 Dell Diagnostics .
INVALID CONFIGURATION INFORMATION-PLEASE RUN SYSTEM SETUP PROGRAM	The operating system is trying to boot to non-bootable media, such as an optical drive. Insert bootable media.
KEYBOARD CLOCK LINE FAILURE	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 CONTROLLER FAILURE	For external keyboards, check the cable connection. Run the Keyboard Controller test in Dell Diagnostics .
KEYBOARD DATA LINE 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 Dell Diagnostics .
KEYBOARD STUCK KEY FAILURE	For external keyboards, check the cable connection. Run the Keyboard Controller test in Dell Diagnostics .
LICENSED CONTENT IS NOT ACCESSIBLE IN MEDIADIRECT	For external keyboards or keypads, check the cable connection. Restart the computer, and avoid touching the keyboard or keys during the boot routine. Run the Stuck Key test in Dell Diagnostics .
MEMORY ADDRESS LINE FAILURE AT ADDRESS, READ VALUE EXPECTING VALUE	Dell MediaDirect cannot verify the Digital Rights Management (DRM) restrictions on the file, so the file cannot be played.
MEMORY ALLOCATION ERROR	A memory module may be faulty or improperly seated. Reinstall the memory module or, if necessary, replace it.
	The software you are attempting to run is conflicting with the operating system, another program, or a utility. Shut down the computer, wait for 30 seconds, and then restart it. Run the program again. If the error message still appears, see the software documentation.

Error messages	Description
MEMORY DOUBLE WORD LOGIC FAILURE AT ADDRESS, READ VALUE EXPECTING VALUE	A memory module may be faulty or improperly seated. Reinstall the memory module or, if necessary, replace it.
MEMORY ODD/EVEN LOGIC FAILURE AT ADDRESS, READ VALUE EXPECTING VALUE	A memory module may be faulty or improperly seated. Reinstall the memory module or, if necessary, replace it.
MEMORY WRITE/READ FAILURE AT ADDRESS, READ VALUE EXPECTING VALUE	A memory module may be faulty or improperly seated. Reinstall the memory module or, if necessary, replace it.
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 Dell Diagnostics .
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 operating system. 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 File Allocation Table (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 format 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 Dell Diagnostics . If the message reappears, 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.
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 Dell Diagnostics .



Error messages	Description
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 Dell Diagnostics or Contact Dell .
X:\ IS NOT ACCESSIBLE. THE DEVICE IS NOT READY	Insert a disk into the drive and try again.

System error messages

Table 3. 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	RTC is reset, BIOS Setup default has been loaded.
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.
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. <ul style="list-style-type: none"> • 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.
NOTICE - 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 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.**

Accessing System Setup

1. Turn on (or restart) your computer.
2. After the white Dell logo appears, press F2 immediately.

The System Setup page is displayed.

 **NOTE: If you wait too long and the operating system logo appears, wait until you see the desktop. Then, shut down or restart your computer and try again.**

 **NOTE: After the Dell logo appears, you can also press F12 and then select BIOS setup.**

System Setup Options

Table 4. — Main

System Time	Displays the system time. Allows you to reset the time on the computer's internal clock.
System Date	Displays the system date. Allows you to reset the date on the computer's internal calendar.
BIOS Version	Displays the BIOS revision.
Product Name	Displays the computer model number
Service Tag	Displays the service tag of your computer.
Asset Tag	Displays the asset tag of your computer (if available).
CPU Type	Displays the type of processor.
CPU Speed	Displays the speed of the processor
CPU ID	Displays the processor ID
CPU Cache	Displays the L1 and L2 cache size of the processor
SATA 0	Displays the model number and capacity of the hard drive.
SATA 1	Displays the model number and capacity of the hard drive.
AC Adapter Type	Displays the type of adapter.



System Memory	Displays the size of the memory installed.
Memory Speed	Displays the speed of the memory installed

Table 5. — Advanced

Intel (R) SpeedStep (TM)	Allows you to enable or disable the Intel SpeedStep technology. Default: Enabled
Virtualization	Allows you to enable or disable the virtualization feature. Default: Enabled
Integrated NIC	Allows you to enable to disable the integrated network Default: Enabled
SATA Operation	Allows you to change the SATA mode Default: AHCI
Adapter Warnings	Allows you to enable or disable the Adapter warnings Default: Enabled
Internal WLAN	Allows you to enable or disable the internal WLAN feature. Default: Enabled
Optical Device	Allows you to enable or disable boot option. Default: Disabled
USB Configuration	Allows you to enable or disable the USB ports. Front USB Ports: Enabled Rear USB Ports: Enabled USB debug: Enabled
Power Options	Allows you to modify the power options. Wake up by Integrated LAN/WLAN: Disabled AC Recovery: Power Off Deep Sleep Control: Enabled in S4 and S5 modes Auto Power On: Disabled Auto Power On Mode: Allows you to select the day (Default: disabled) Auto Power On Date: Allows you to select the date Auto Power On Time: Allows you to select the time
SMART Settings	Allows you to enable to enable or disable the SMART feature. Default: Disabled

Table 6. — Security

Unlock Setup Status	Allows you to lock or unlock the system setup.
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	Default: Unlocked
Admin Password Status	Displays the status indicating if the Administrator password is set. Default: Not Set
System Password Status	Displays the status indicating if the System password is set. Default: Not Set
HDD Password Status	Displays the status indicating if the System password is set. Default: Not Set
Asset Tag	
Admin Password	
HDD Password	
Password Change	Allows you to set the option to change password. Default: Permitted
Password Bypass	Allows you to set the option to bypass the password. Default: Disabled
Secure Boot Mode	Allows you to enable to disable the Secure Boot Control. Default: Standard
HDD Protection	Allows you to modify the HDD protection feature. Default: Enabled

Table 7. — Boot

Boot List Option	Displays the boot modes Default: UEFI File Browser Add Boot Option and File Browser Del Boot Option are enabled
Secure Boot	Allows you to enable or disable the Secure Boot control. Default: Enabled
Legacy Option ROMs	Allows you to load the legacy option ROMs. Default: Disabled
Boot Option Priorities	Displays the boot option priorities. Boot Option # 1: Windows Boot Manager Boot Option # 2: Onboard NIC (IPV4) Boot Option #3: Onboard NIC (IPV6)

Table 8. — Exit

Save Changes and Reset	Allows you to save or rest the changes made to the system setup 1. Allows you to discard the changes made to the system setup
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2. Allows you to restore the system setup options to default
3. Allows you to discard the changes made to the system setup
4. Allows you to save the changes made to the system setup

Specifications

 **NOTE:** Offerings may vary by region. The following specifications are only those required by law to ship with your computer. For more information about the configuration of your computer, go to [Help and Support](#) in your Windows operating system and select the option to view information about your computer.

Table 9. — Processor

Type	<ul style="list-style-type: none"> • Intel Celeron • Intel Pentium • 6th Generation Intel Core i3 Processor • 6th Generation Intel Core i5 Processor • 6th Generation Intel Core i7 Processor
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Table 10. — System Information

Chipset	Intel H110
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Table 11. — Memory

Memory module connector	two UDIMM slot
Memory module capacity	2 GB, 4 GB, and 8 GB
Type	1600 MHz DDR3L (non-ECC)
Minimum memory	2 GB
	 NOTE: Depending on the operating system installed, the requirement of the minimum memory might vary.
Maximum memory	16 GB
	 NOTE: Each UDIMM slot supports a maximum of 8 GB memory.

Table 12. — Video

Type	
Integrated Controller	Intel HD graphics
Integrated video memory	shared system memory
Discrete video	PCI express x16 graphics card <ul style="list-style-type: none"> • NVIDIA GEFORCE GT705

Table 13. — Audio

Type	Integrated 5.1 high-definition audio
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Table 14. — Communication

Type	<ul style="list-style-type: none"> • Ethernet 10/100/1000 Mbps Ethernet controller integrated on system board • Wireless —Up to Wi-Fi 802.11ac • Bluetooth 4.0
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Table 15. — Expansion Bus

Bus speed	SATA	6 Gbps for hard drive; 3 Gbps for optical drive
	USB 2.0	480 Mbps
	USB 3.0	5 Gbps

Table 16. — Drives

Type		
Externally Accessible	5–25 inch optical drive bays	one
Internally Accessible	3.5–inch/2.5–inch drive bays	One 3.5-inch or Two 2.5-inch drive bays

Table 17. — Cards

Type		Card
	PCIe	<ul style="list-style-type: none"> • one PCIe x16 full height card • one PCIe x1 full height card
	M2 Slot	one M.2 card slot for Wi-Fi and Bluetooth combo card

Table 18. — External Connectors

Audio	Back panel	three
	Front Panel	one headset connector
Network		one RJ-45 connector
USB	Back panel	four USB 2.0 connectors
	Front Panel	two USB 3.0 connectors
Video		<ul style="list-style-type: none"> • one 15-hole VGA connector • one 19-pin HDMI connector
Memory-card reader		one

Table 19. — Control Lights And Diagnostic Lights

power button light	<ul style="list-style-type: none"> · white light — solid white light indicates power-on state ; blinking white light indicates sleep/stand-by state of the computer. · amber light —solid amber light indicates boot failure - System Power Error; blinking amber light indicates boot failure - System Power OK .
drive activity light	white light — blinking white light indicates that the computer is reading data from, or writing data to the hard drive.

Table 20. — Power

Coin-cell battery	3 V CR2032 lithium coin-cell
Input voltage	100 VAC — 240 VAC
Input frequency	50 Hz — 60 Hz
Input current	1.7 A / 2.5 A
Output current	3.34 A / 4.62 A
Maximum heat dissipation	

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

Table 21. — Physical Dimensions of Chassis

Height	293.1 mm (11.54 inches)
Width	92.60 mm (3.65 inches)
Depth	314.5 mm (12.38 inches)
Weight (Minimum)	3.17 kg (6.99 pounds)

Table 22. — Environmental Specifications

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 % (non-condensing)
Altitude	Operating	-15.20 m to 5000 m (-50 ft to 10,000 ft)
	Storage	-15.20 m to 10668 m (-50 ft to 35,000 ft)
Airborne contaminant level		G1 as defined by ISA-S71.04-1985



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. Go to **Dell.com/support**.
2. Select your support category.
3. Verify your country or region in the **Choose a Country/Region** drop-down list at the bottom of the page.
4. Select the appropriate service or support link based on your need.