Dell OptiPlex 7440 All-In-One
Owner's Manual

Regulatory Model: W11C
Regulatory Type: W11C001

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.

Copyright © 2015 Dell Inc. All rights reserved. This product is protected by U.S. and international copyright and intellectual property laws. Dell™ and the Dell logo are trademarks of Dell Inc. in the United States and/or other jurisdictions. All other marks and names mentioned herein may be trademarks of their respective companies.

2015 - 10

Rev. A00

Contents

1 Working on your computer....6

Before working inside your computer....6
Recommended tools....7
Turning off your computer....7
After working inside your computer....8
Important Information....8

2 Removing and installing components....9

Removing the stand....9
Installing the stand....10
Removing the cable cover....10
Installing the cable cover....11
Removing the back cover....11
Installing the back cover....12
Removing the speaker cover....12
Installing the speaker cover....13
Removing the hard-drive assembly....14
Installing the hard-drive assembly....15
Removing the optical-drive assembly....15
Installing the optical-drive assembly....16
Removing the system-board shield....16
Installing the system-board shield....17
Removing the heat sink....17
Installing the heat sink....18
Removing the WLAN card....18
Installing the WLAN card....19
Removing the speaker module....19
Installing the speakers....20
Removing the converter board....20
Installing the converter board....21
Removing the Power Supply Unit (PSU)....22
Installing the Power Supply Unit (PSU)....23
Removing the VESA mount bracket....24
Installing the VESA mount bracket....24
Removing the processor fan....25
Installing the processor fan....25
Removing the memory module....26
Installing the memory module....26

Removing the intrusion switch....26
Installing the intrusion switch....27
Removing the power and On-Screen Display (OSD) buttons board....28
Installing the power and OSD buttons board....28
Removing the coin cell battery....29
Installing the coin cell battery....29
Removing the processor....29
Installing the processor....30
Removing the system board....30
System Board Layout....33
Installing the system board....34
Removing the display assembly....35
Installing the display assembly....36

3 System setup....38
Boot Sequence....38
Navigation keys....38
System setup options....39
General screen options....39
System configuration screen options....40
Security screen options....42
Secure boot screen options....44
Performance screen options....45
Power management screen options....46
POST behavior screen options....47
Virtualization support screen options....48
Wireless screen options....48
Maintenance screen options....48
Cloud desktop screen options....49
Updating the BIOS....50
System and setup password....51
Assigning a system password and setup password....51
Deleting or changing an existing system and/or setup password....52

4 Technical specifications....53
System specifications....53
Memory specifications....53
Video specifications....54
Audio specifications....54
Communication specifications....54
Cards specifications....55
Display specifications....55

Drives specifications....55
Port and connector specifications....55
Power specifications....56
Camera (optional) specifications....56
Stand specifications....56
Physical specifications....57
Environmental specifications....57

5 Contacting Dell....59

1

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.

Recommended tools

The procedures in this document require the following tools:

- Small flat blade screwdriver
- Phillips screwdriver
- Small plastic scribe

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:
   - In Windows 10 (using a touch enabled device or mouse):
     1. Click or tap .
     2. Click or tap ⏻ and then click or touch **Shut down**.
   - In Windows 8 (using a touch enabled device):
     1. Swipe in from the right edge of the screen, opening the **Charms** menu and select **Settings**.
     2. Tap ⏻ and then tap **Shut down**
   - In Windows 8 (using a mouse):
     1. Point to upper-right corner of the screen and click **Settings**.
     2. Click ⏻ and then click **Shut down**.
   - In Windows 7:
     1. Click **Start**.
     2. Click **Shut Down**.

     or

     1. Click **Start**.
     2. Click the arrow in the lower-right corner of the **Start** menu and then click **Log off**.
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 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**.

Important Information

NOTE: Avoid using the touchscreen in dusty, hot, or humid environments.

NOTE: Sudden change in temperature may cause condensation on the inner surface of the glass screen, which will disappear after a short time and does not affect normal usage.

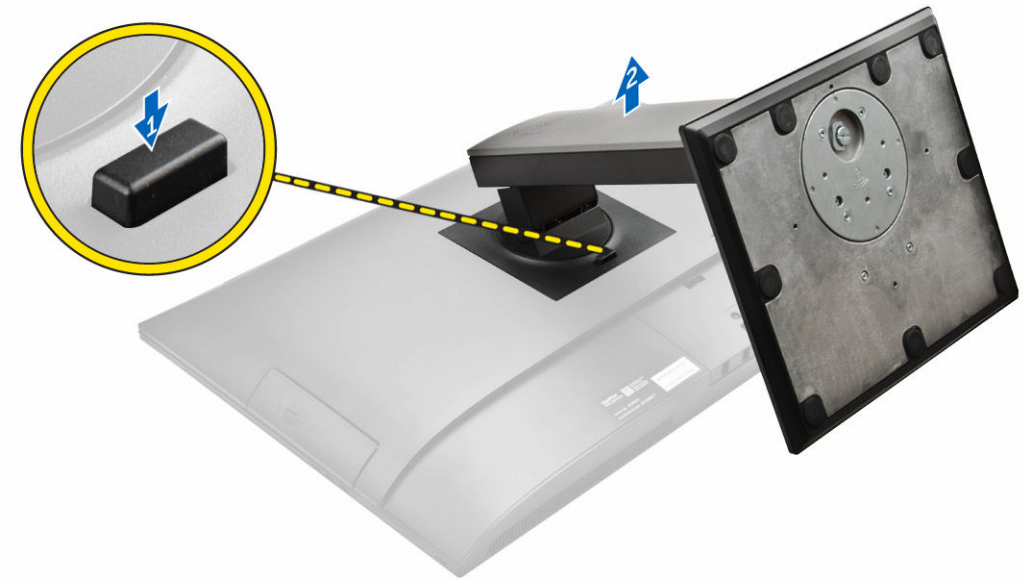
2

Removing and installing components

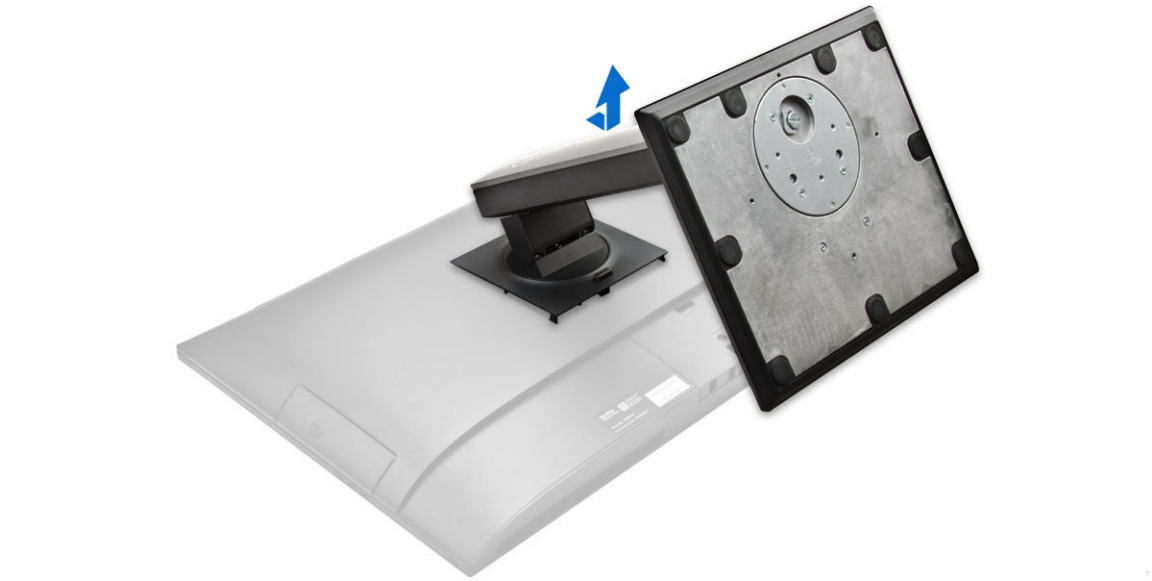
This section provides detailed information on how to remove or install the components from your computer.

Removing the stand

1. Follow the procedure in Before Working Inside Your Computer.
2. Place the computer on a flat surface with the display side facing downwards.
3. Perform the following steps as shown in the illustration:
   a. Press the tab on the cover to release the stand [1].
   b. Lift the stand upwards [2].



4. Slide the stand and lift it away from the back cover.

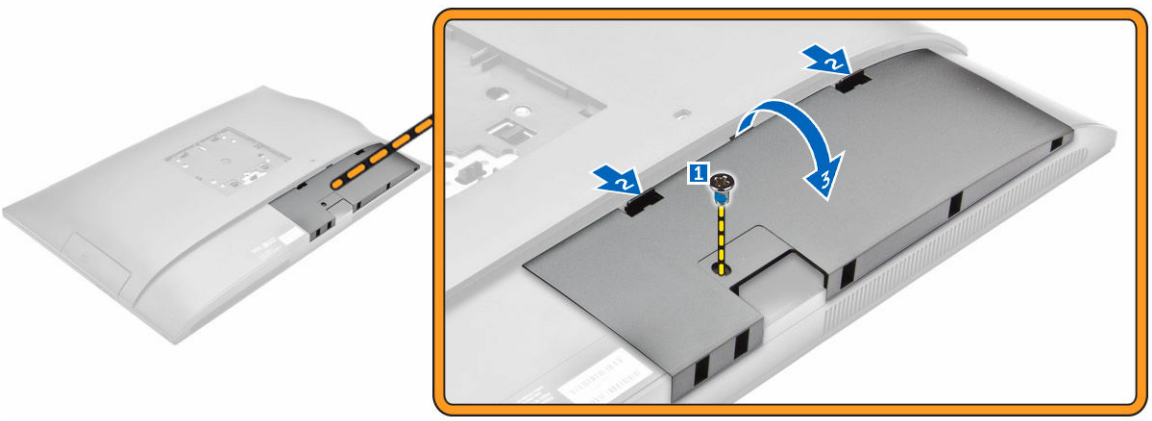


Installing the stand

1. Align the stand and slide it on the back of the computer.
2. Press the cover attached to the stand, until it snaps in.
3. Follow the procedure in After Working Inside Your Computer.

Removing the cable cover

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the stand.
3. Perform the following steps as shown in the illustration:
   a. Remove the screw that secures the cable cover [1].
   b. Push the release tabs to release the cable cover and lift the back cover from the computer [2].
   c. Lift the cable cover and remove it away from the computer [3].

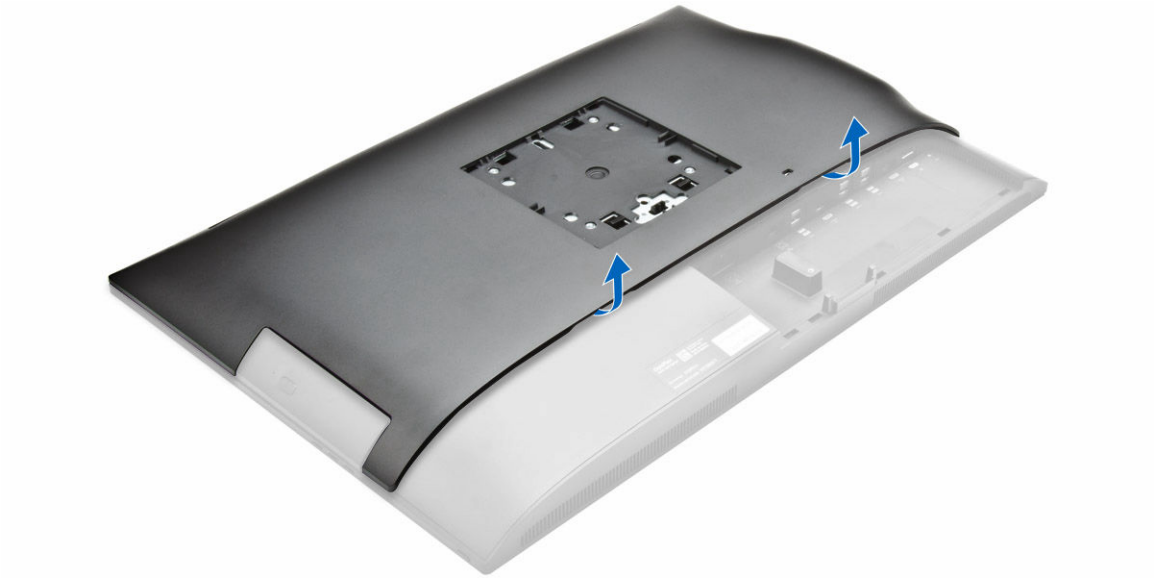


Installing the cable cover

1. Align the notches on the cable cover to the holes on the computer and press down, until it snaps in.
2. Tighten the screw to secure the cable cover to the computer.
3. Install the stand.
4. Follow the procedures in After Working Inside Your Computer.

Removing the back cover

1. Follow the procedures in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. cable cover
3. Pry the edges of the back cover to release it from the computer.



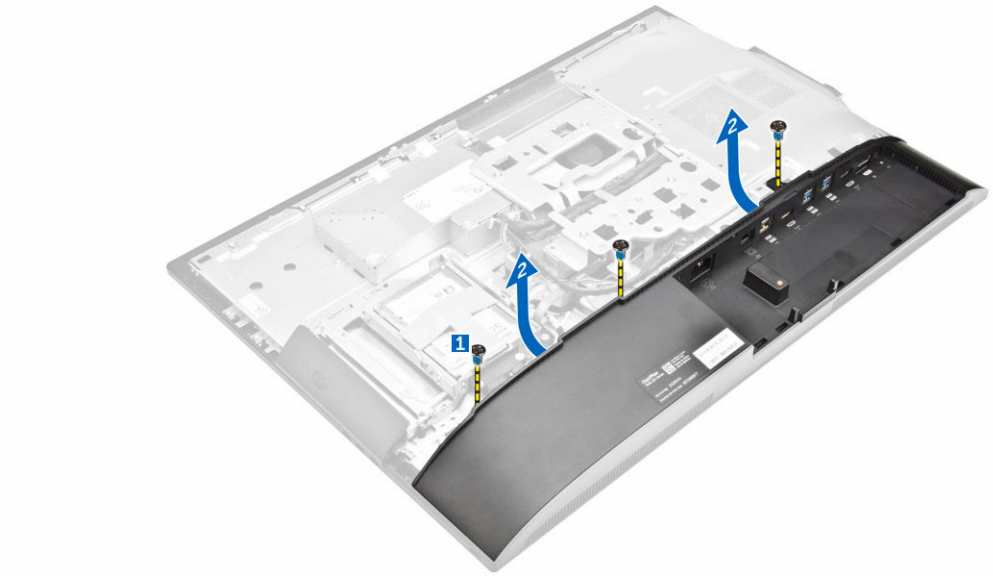
4. Lift the back cover from the computer.

Installing the back cover

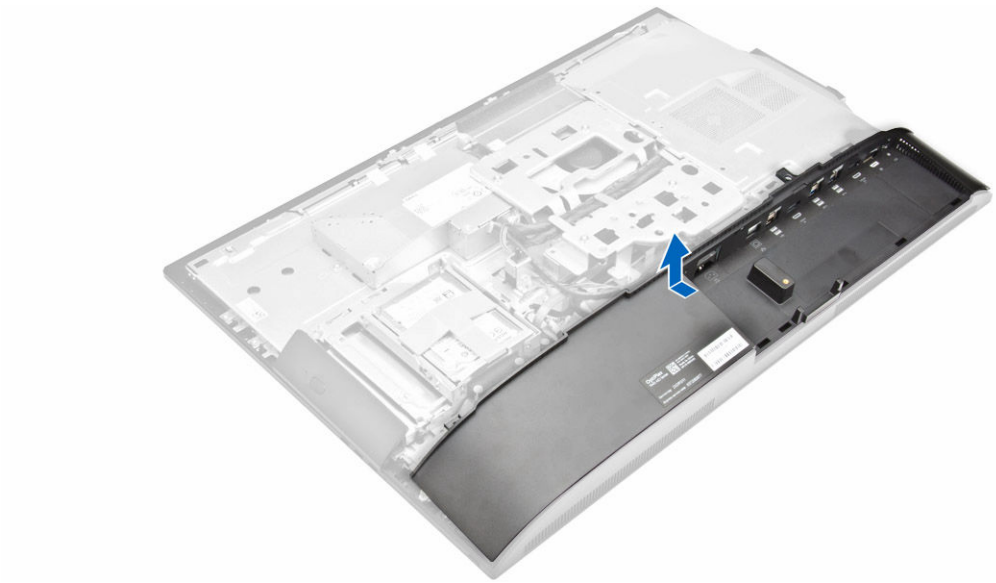
1. Align the notches on the back cover to the holes on the computer and press it until it snaps in.
2. Install the:
   a. cable cover
   b. stand
3. Follow the procedure in After Working Inside Your Computer.

Removing the speaker cover

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. cable cover
   c. back cover
3. Perform the following steps as shown in the illustration:
   a. Remove the screws that secure the speaker cover to the computer [1].
   b. Slide the speaker cover to release it from the computer [2].



4. Slide and remove the speaker cover from the computer.

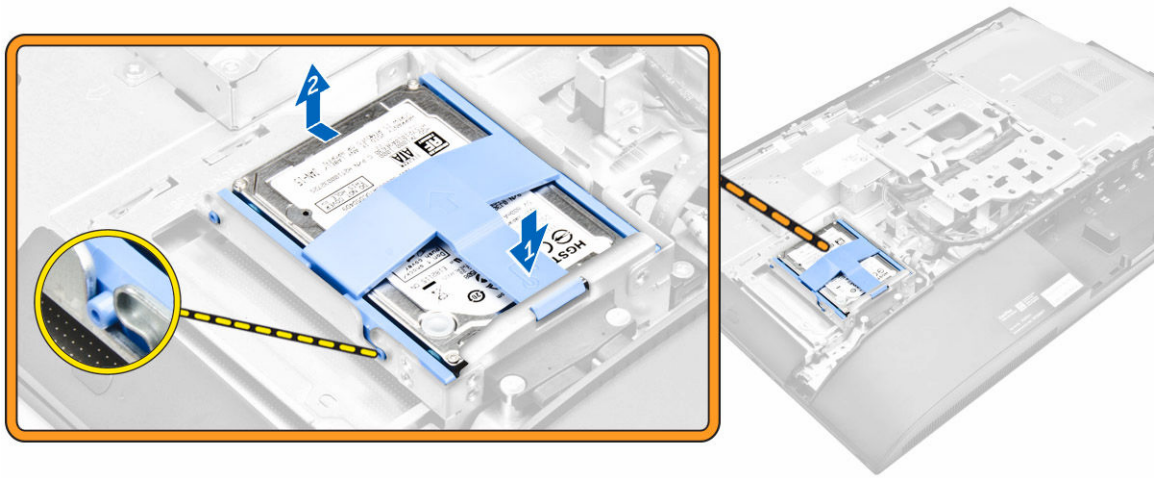


Installing the speaker cover

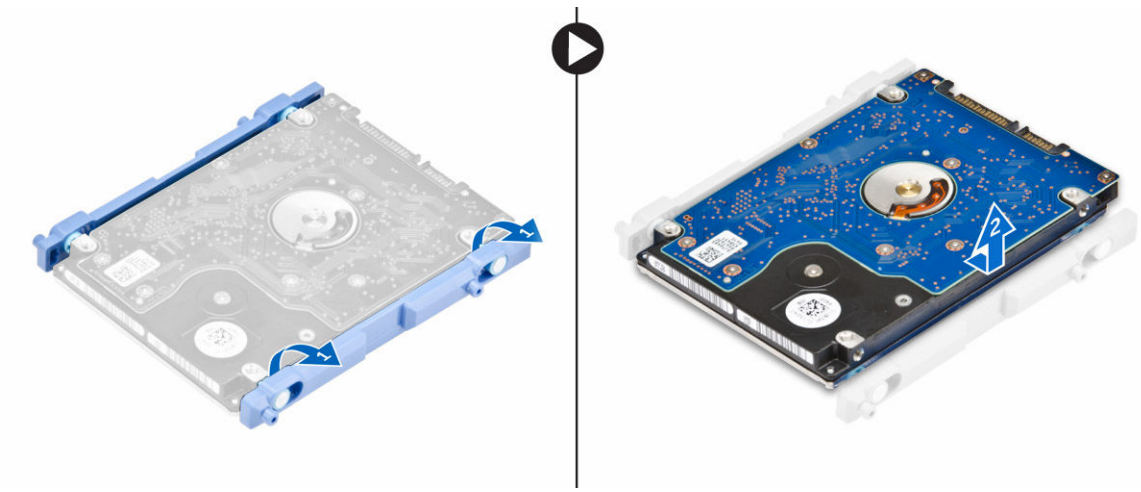
1. Align the speaker cover to its position on the back of the computer.
2. Tighten the screws to secure the speaker cover to the computer.
3. Install the:
   a. back cover
   b. cable cover
   c. stand
4. Follow the procedure in After Working Inside Your Computer.

Removing the hard-drive assembly

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
3. Perform the following steps as shown in the illustration:
   a. Press the tab on the bracket and slide the hard-drive assembly until the tabs are released from either side of the assembly [1].
   b. Slide the hard-drive assembly upwards to remove it from the computer [2].



4. Perform the following steps as shown in the illustration:
   a. Pry the edges of the bracket to release the hard drive [1].
   b. Slide the hard drive and lift it away from the bracket [2].

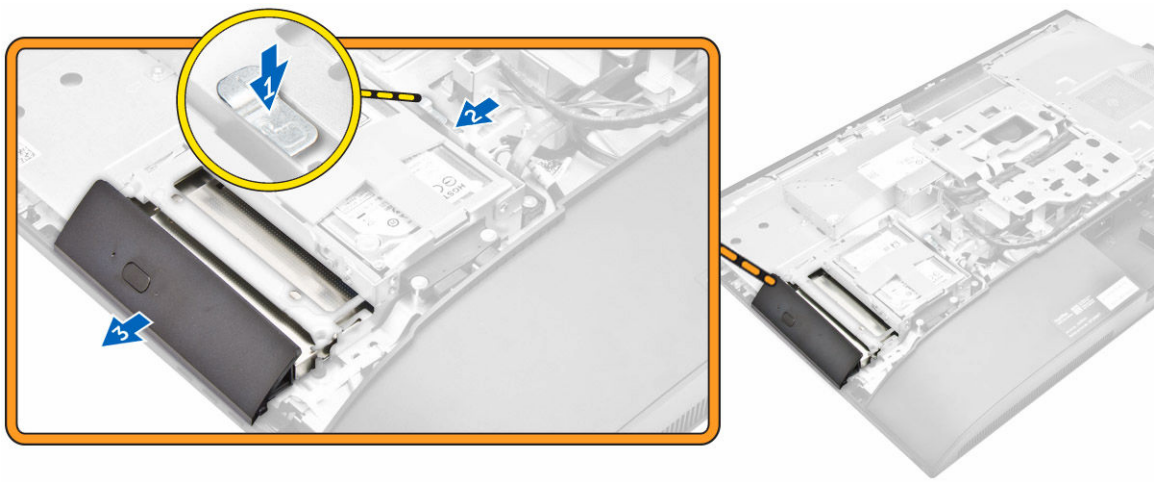


Installing the hard-drive assembly

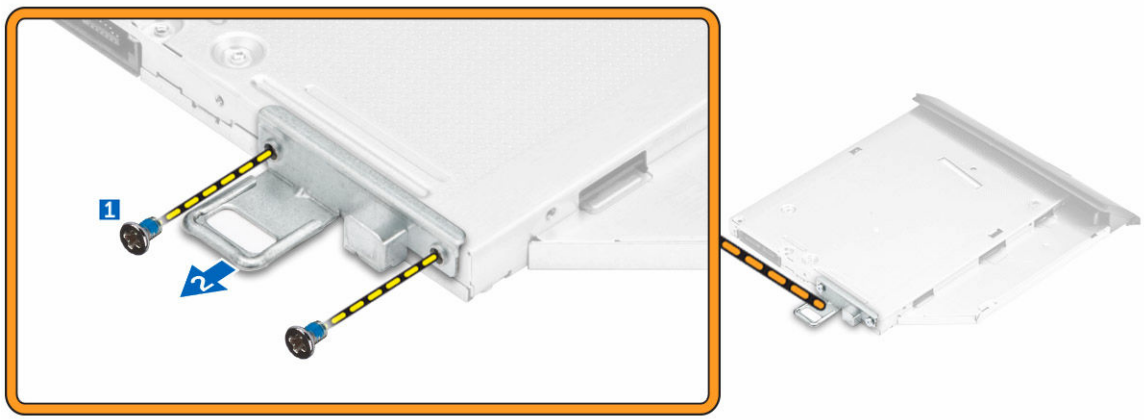
1. Align the hard drive until the notches are aligned and the hard drive is secured in the bracket.
2. Place the hard drive on the hard-drive cage, until the notches are aligned and it snaps in.
3. Install:
   a. back cover
   b. stand
4. Follow the procedure in After Working Inside Your Computer.

Removing the optical-drive assembly

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
3. Perform the following steps as shown in the illustration:
   a. Press the securing tab at the base of the drive to release the optical drive [1].
   b. Push the back side of the optical drive [2].
   c. Slide the optical-drive assembly outward to remove it away from the computer [3].



4. Perform the following steps as shown in the illustration:
   a. Remove the screws that secure the optical-drive bracket [1].
   b. Remove the bracket away from the optical drive [2].

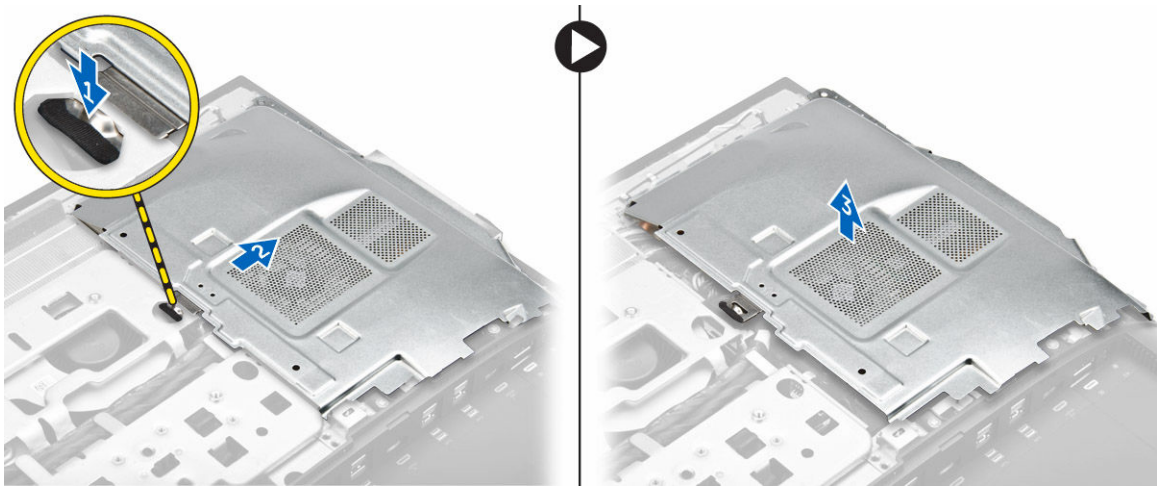


Installing the optical-drive assembly

1. Tighten the screws to secure the bracket to the optical drive.
2. Insert the optical-drive assembly into the drive slot, until it snaps in.
3. Install the:
   a. back cover
   b. stand
4. Follow the procedure in After Working Inside Your Computer.

Removing the system-board shield

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
3. Perform the following steps as shown in the illustration:
   a. Press the securing tab to release the system-board shield from the slots on the computer [1].
   b. Slide the system-board shield away from the computer [2].
   c. Lift the system-board shield from the computer [3].

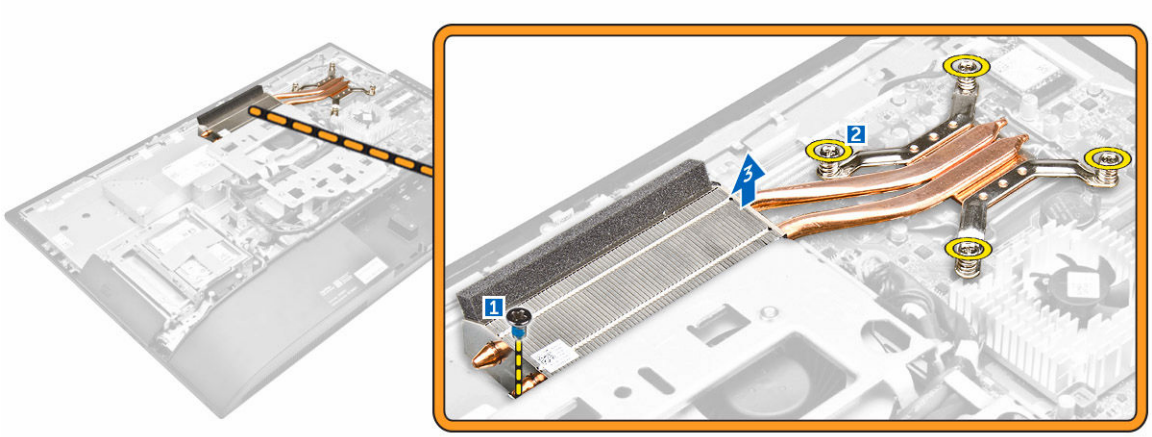


Installing the system-board shield

1. Align and slide the system-board shield until it snaps in.
2. Install the:
   a. back cover
   b. stand
3. Follow the procedure in After Working Inside Your Computer.

Removing the heat sink

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
   c. system-board shield
3. Perform the following steps as shown in the illustration:
   a. Remove the screws that secure the heat sink module to the chassis [1, 2].
   b. Lift up the heat sink assembly and remove it from the computer [3].

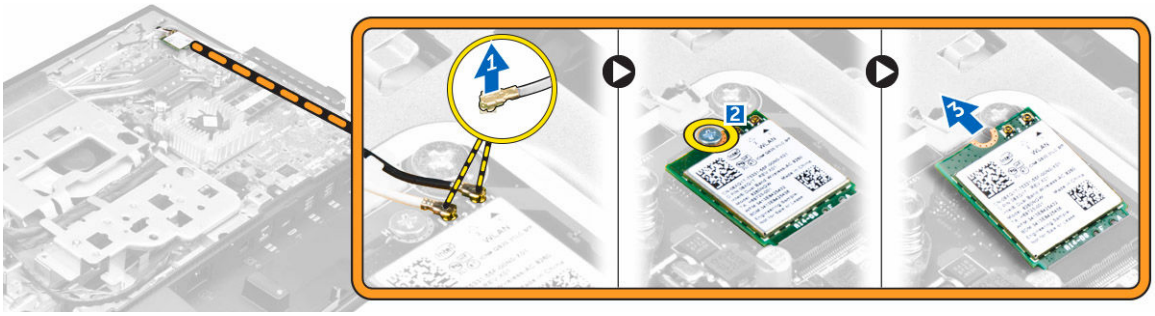


Installing the heat sink

1. Align and place the heat sink in the slot.
2. Tighten the screws to secure the heat sink to the computer.
3. Install the:
   a. system-board shield
   b. back cover
   c. stand
4. Follow the procedure in After Working Inside Your Computer.

Removing the WLAN card

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
   c. system-board shield
3. Perform the following steps as shown in the illustration:
   a. Disconnect the antenna cables from the connectors on the WLAN card [1].
   b. Remove the screw that secures the WLAN card to the system board [2].
   c. Hold the WLAN card and pull it from the connector on the system board [3].

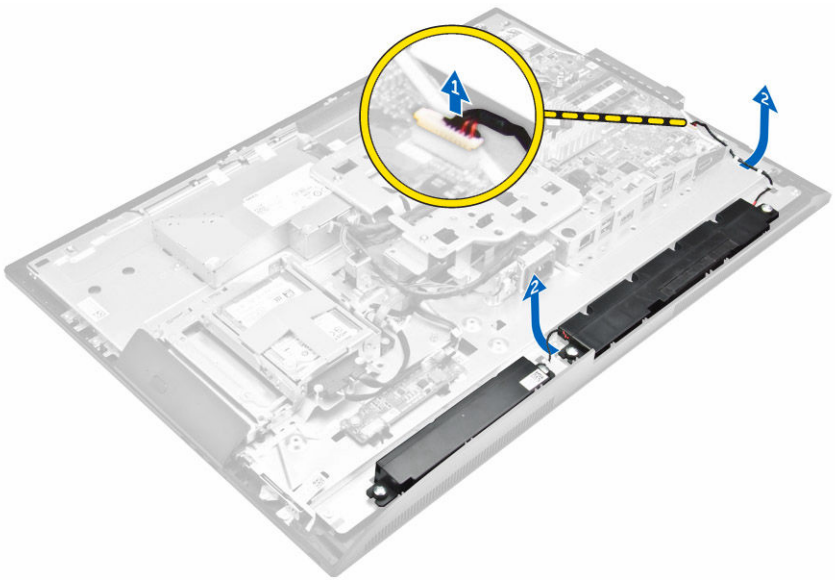


Installing the WLAN card

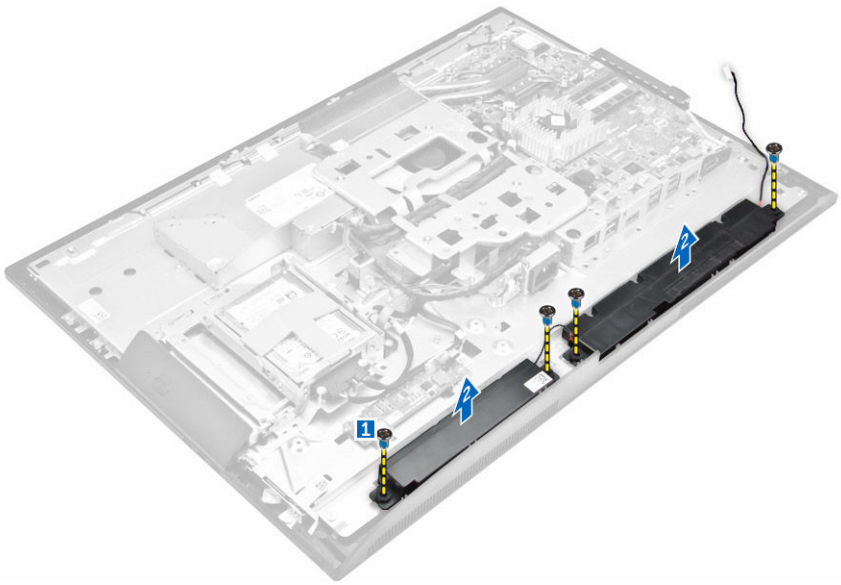
1. Align the WLAN card to the connector on the system board.
2. Tighten the screw to secure the WLAN card to the system board.
3. Connect the antenna cables to the connectors on the WLAN card.
4. Install the:
   a. system-board shield
   b. back cover
   c. stand
5. Follow the procedure in After Working Inside Your Computer.

Removing the speaker module

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
   c. cable cover
   d. speaker cover
   e. system-board shield
3. Perform the following steps as shown in the illustration:
   a. Disconnect the speaker cable from the connector on the system board [1].
   b. Unthread the speaker cables from the retention clips [2].



4. Perform the following steps as shown in the illustration:
   a. Remove the screws that secure the speaker module to the chassis [1].
   b. Lift the speaker module and remove it from the chassis [2].

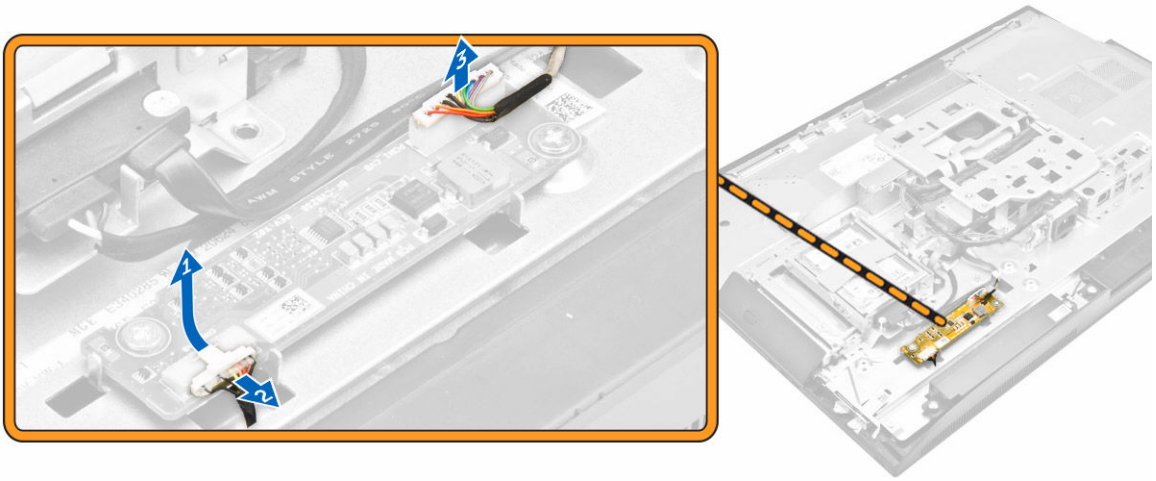


Installing the speakers

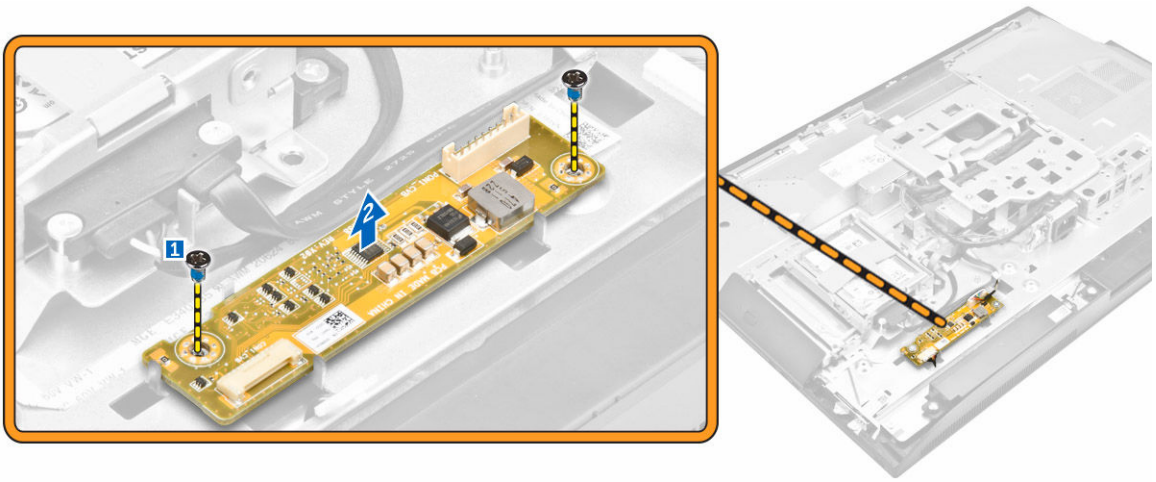
1. Align the speaker module on the slot in the chassis.
2. Tighten the screws to secure the speaker to the chassis.
3. Thread the speaker cables via the clips.
4. Connect the speaker cable to the connector on the system board.
5. Install:
   a. system-board shield
   b. speaker cover
   c. back cover
   d. cable cover
   e. stand
6. Follow the procedure in system-board shield.

Removing the converter board

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
   c. cable cover
   d. speaker cover
3. Perform the following steps as shown in the illustration:
   a. Disconnect the convertor-board cable from the converter board [1, 2].
   b. Disconnect the display-backlight cable from the converter board [3].



4. Perform the following steps as shown in the illustration:
   a. Remove the screws that secure the converter board to the chassis [1].
   b. Lift the converter board away from the chassis [2].

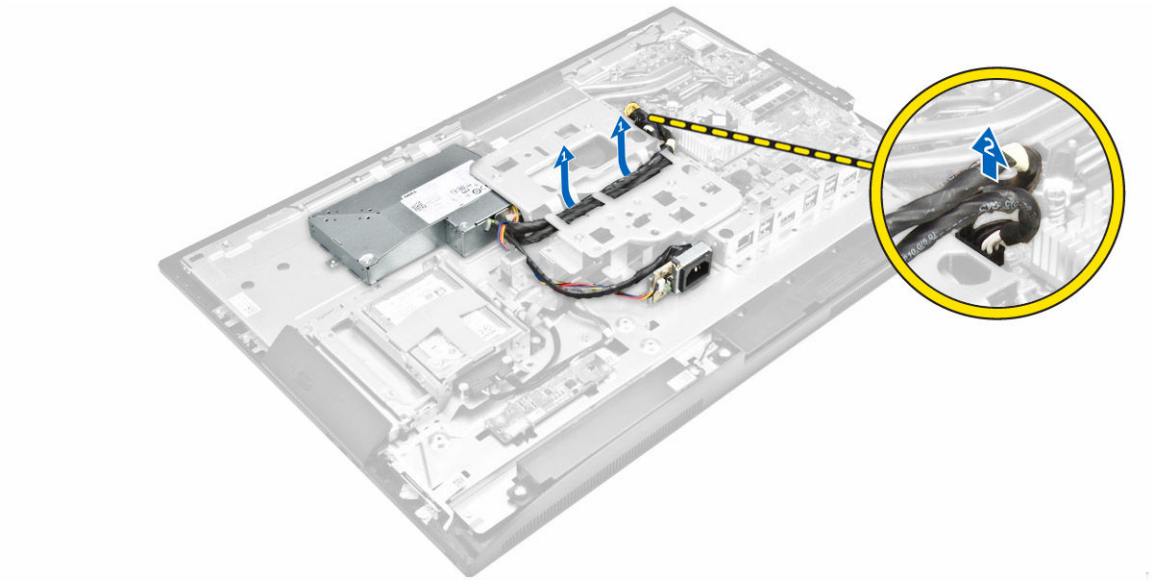


Installing the converter board

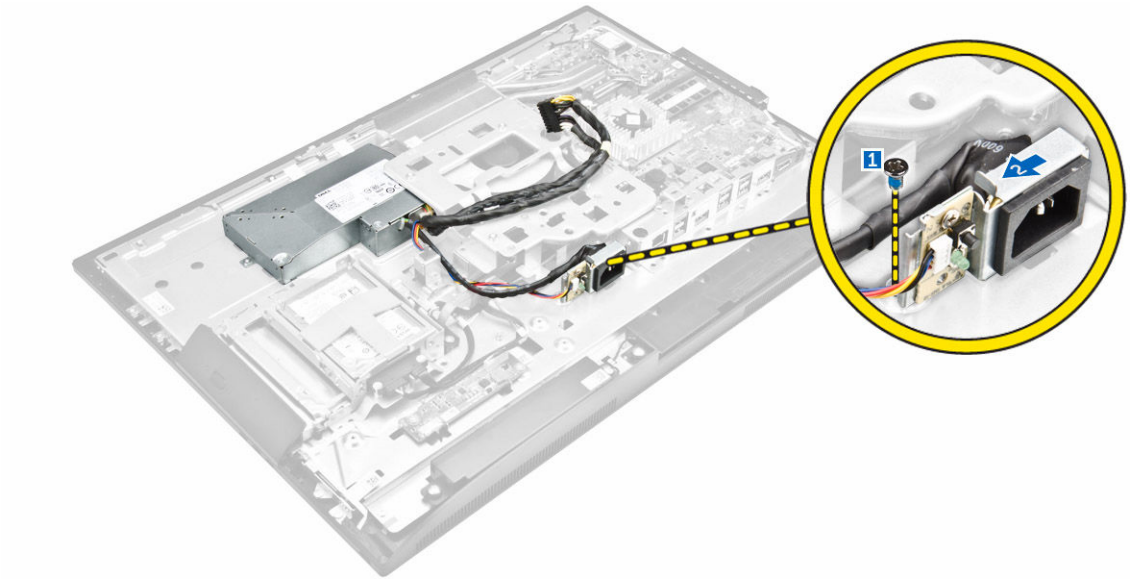
1. Place the convertor board in its slot.
2. Tighten the screws to secure the converter board to the chassis.
3. Connect the converter-board cable and display-backlight cable to the connectors on the converter board.
4. Install the:
   a. speaker cover
   b. cable cover
   c. back cover
   d. stand
5. Follow the procedure in After Working Inside Your Computer.

Removing the Power Supply Unit (PSU)

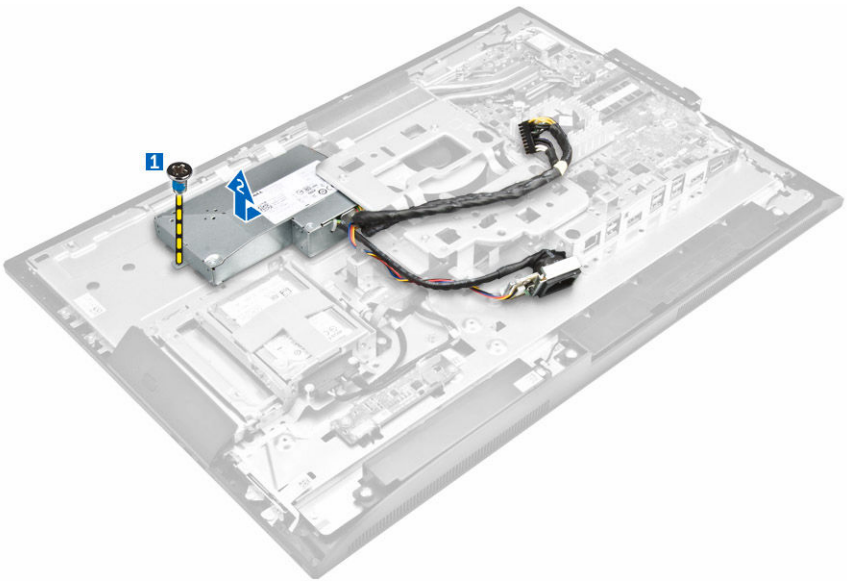
1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
   c. cable cover
   d. speaker cover
   e. system-board shield
3. Perform the following steps as shown in the illustration:
   a. Unthread the power-supply cables from the retention clips in the chassis [1].
   b. Disconnect the power-supply cable from the connector on the system board [2].



4. Perform the following steps as shown in the illustration:
   a. Remove the screw that secures the power-supply socket to the chassis [1].
   b. Slide the socket to remove it from the computer [2].



5. Perform the following steps as shown in the illustration:
   a. Remove the screw that secure the PSU to the chassis [1].
   b. Slide the PSU and lift it away from the chassis [2].



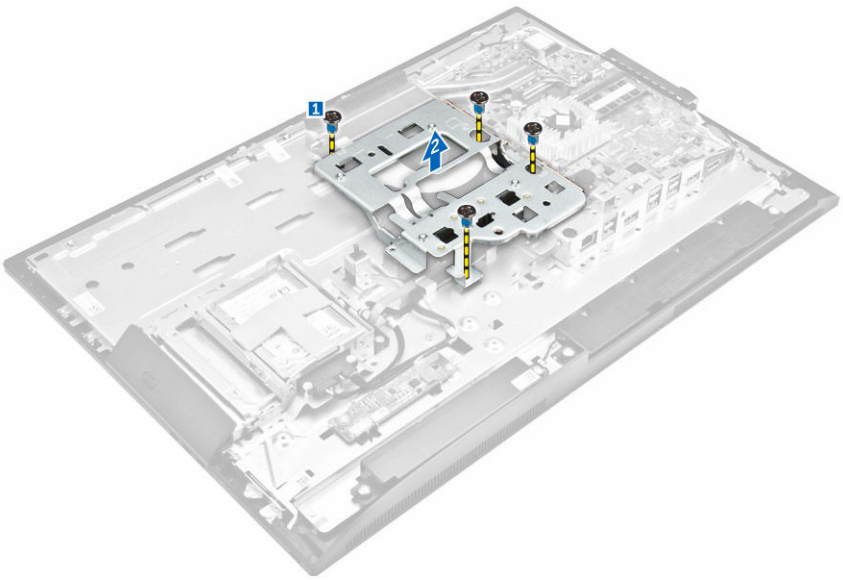
Installing the Power Supply Unit (PSU)

1. Place the PSU on the chassis.
2. Tighten the screw to secure the PSU to the chassis.
3. Place the socket in the slot on the chassis.
4. Tighten the screw to secure the power supply socket to the chassis.
5. Thread the power-supply cable on the retention clips in the chassis.
6. Connect the power-supply cables to the connectors on the system board.

7. Install the:
   a. system-board shield
   b. speaker cover
   c. cable cover
   d. back cover
   e. stand
8. Follow the procedure in After Working Inside Your Computer.

Removing the VESA mount bracket

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
   c. system-board shield
   d. power-supply unit
3. Perform the following steps as shown in the illustration:
   a. Remove the screws that secure the VESA mount bracket to the computer [1].
   b. Lift the bracket away from the computer [2].



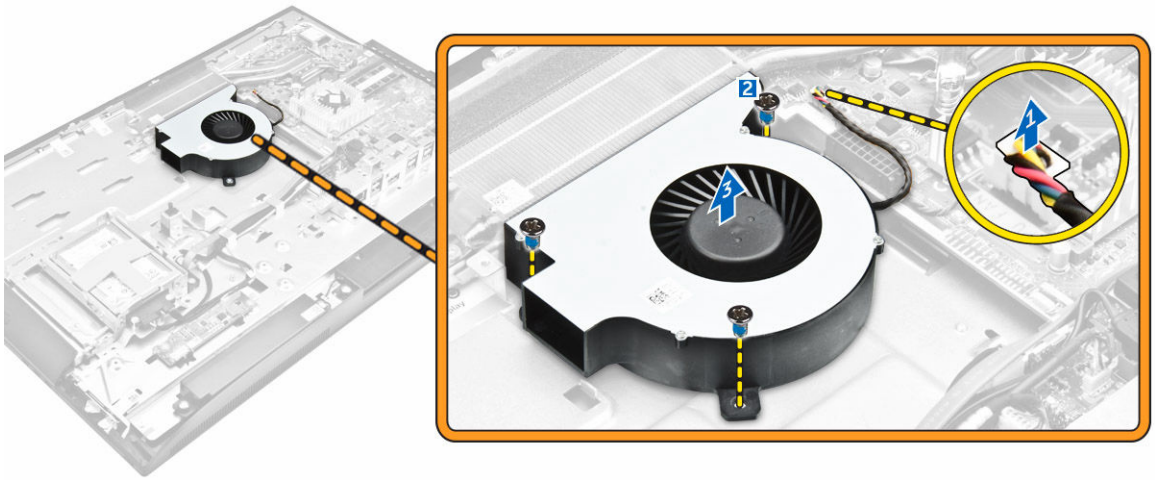
Installing the VESA mount bracket

1. Align and place the bracket in the slot on the computer.
2. Tighten the screws that secure the VESA mount bracket to the computer.
3. Install the:
   a. power-supply unit
   b. system-board shield
   c. back cover
   d. stand

4. Follow the procedure in After Working Inside Your Computer.

Removing the processor fan

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
   c. system-board shield
   d. power-supply unit
   e. VESA mount bracket
3. Perform the following steps as shown in the illustration:
   a. Disconnect the processor-fan cable from the connector on the system board [1].
   b. Remove the screws that secure the processor fan to the computer [2].
   c. Lift the processor fan away from the computer [3].

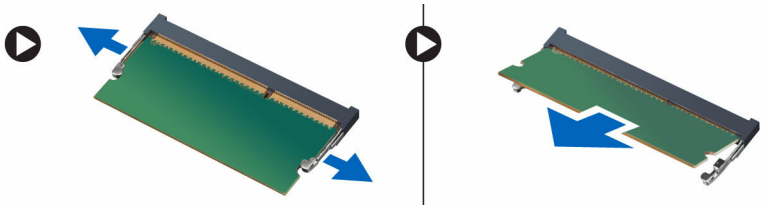


Installing the processor fan

1. Align and place the processor fan in the slot on the chassis.
2. Tighten the screws to secure the processor fan to the system board.
3. Connect the processor-fan cable to the connector on the system board.
4. Install the:
   a. VESA mount bracket
   b. power-supply unit
   c. system-board shield
   d. back cover
   e. stand
5. Follow the procedure in After Working Inside Your Computer.

Removing the memory module

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
   c. system-board shield
3. Pry the retention clips away from the memory module until it pops-up. Lift and remove the memory module from its connector.

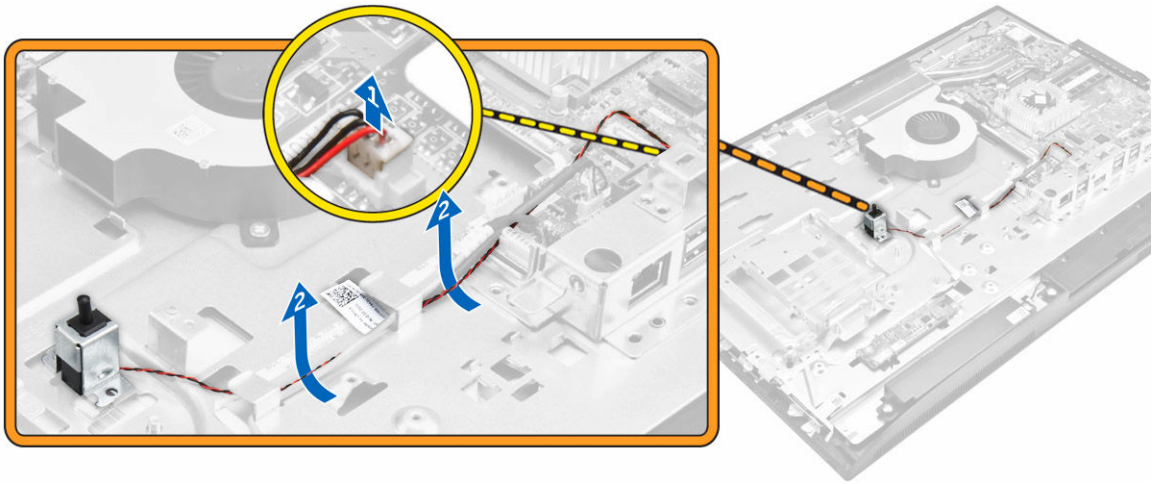


Installing the memory module

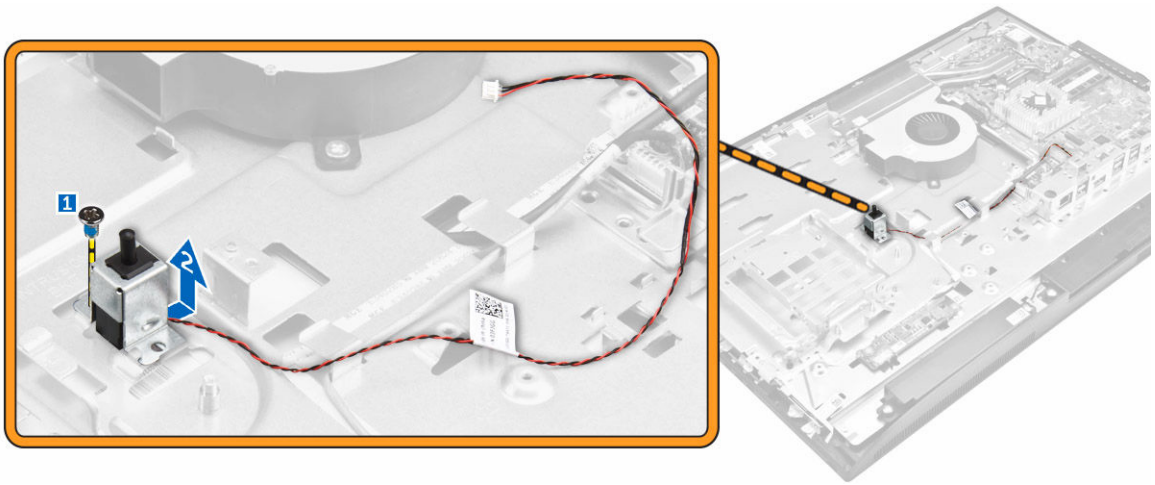
1. Align the notch on the memory-card with the tab in the system-board connector.
2. Press down on the memory module until the release clips spring back to secure them in place.
3. Install the:
   a. system-board shield
   b. back cover
   c. stand
4. Follow the procedure in After Working Inside Your Computer.

Removing the intrusion switch

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
   c. VESA mount bracket
   d. system-board shield
3. Perform the following instructions as shown in the illustration:
   a. Disconnect the intrusion-switch cable from the connector on the system board [1].
   b. Unthread the intrusion-switch cable from the retention clips on the computer [2].



4. Perform the following instructions as shown in the illustration:
   a. Remove the screw that secures the intrusion switch to the chassis [1].
   b. Slide and lift the intrusion switch to remove it from the computer [2].

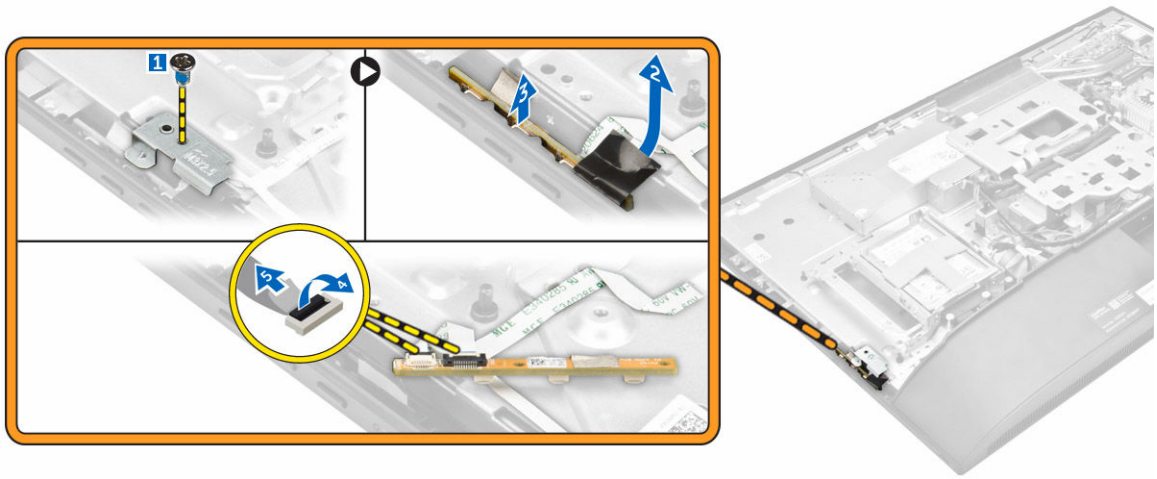


Installing the intrusion switch

1. Place the intrusion switch in the slot on the computer.
2. Tighten the screw to secure the intrusion switch to the chassis.
3. Thread the cable along the retention clips on the chassis.
4. Connect the intrusion-switch cable to the connector on the system board.
5. Install:
   a. system-board shield
   b. VESA mount bracket
   c. back cover
   d. stand
6. Follow the procedures in After Working Inside Your Computer.

Removing the power and On-Screen Display (OSD) buttons board

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
3. Perform the following steps as shown in the illustration:
   a. Remove the screw to remove the metal plate that secures the power and OSD buttons board to the computer [1].
   b. Peel off the tape from the OSD buttons board [2].
   c. Remove the power and OSD buttons board from the chassis [3].
   d. Disconnect the cables from the power and OSD buttons board to release the board from the computer [4, 5].



Installing the power and OSD buttons board

1. Connect the power cable and the OSD buttons cable to the power and OSD buttons board.
2. Affix the tape on the OSD buttons board.
3. Insert the power and OSD buttons board into the slot.
4. Align the metal plate on the power and OSD buttons board.
5. Tighten the screw to secure the power and OSD buttons board.
6. Install the:
   a. back cover
   b. stand
7. Follow the procedure in After Working Inside Your Computer.

Removing the coin cell battery

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
   c. system-board shield
3. Press the latch to release the coin cell battery and remove it from the computer.

Installing the coin cell battery

1. Insert the coin cell battery into its slot on the system board, until it fits securely.
2. Install the:
   a. system-board shield
   b. back cover
   c. stand
3. Follow the procedure in After Working Inside Your Computer.

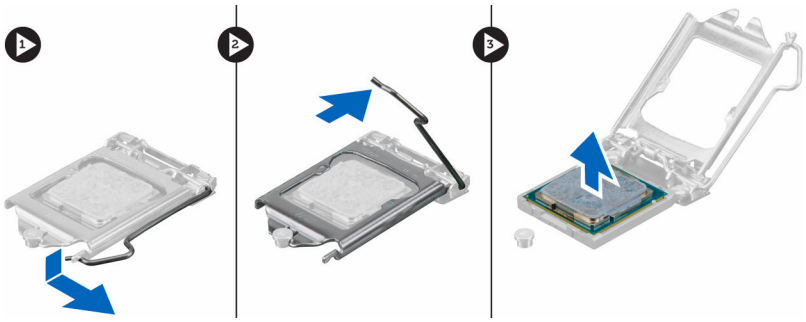
Removing the processor

1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
   c. VESA mount bracket
   d. system-board shield
   e. heatsink
3. Press the Lift the processor cover and remove the processor from its socket.
   a. Release the socket lever by pushing the lever down and out from under the tab on the processor shield [1].
   b. Lift the lever upward and lift the processor shield [2].

      CAUTION: The processor socket pins are fragile and can be permanently damaged. Be careful not to bend the pins in the processor socket when removing the processor out of the socket.

   c. Lift the processor out of the socket [3].

NOTE: After removing the processor, place it in an antistatic container for reuse, return, or temporary storage. Do not touch the bottom of the processor to avoid damage to the processor contacts. Touch only the side edges of the processor.



Installing the processor

1. Align the processor with the socket keys.

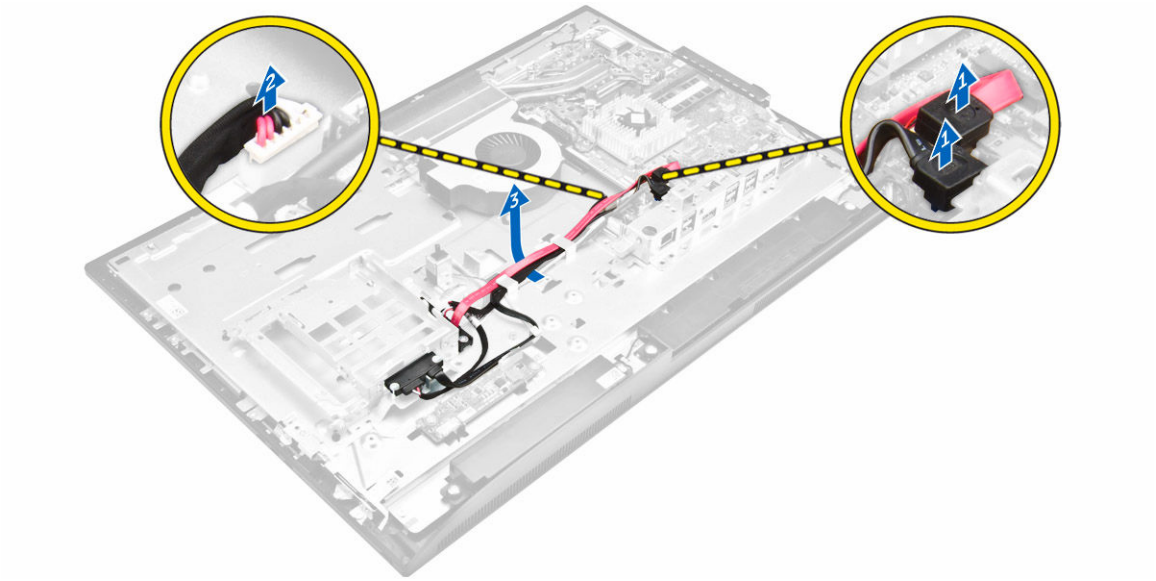
   CAUTION: Do not use force to seat the processor. When the processor is positioned correctly, it engages easily into the socket.
2. Align the pin-1 indicator of the processor with the triangle on the socket.
3. Place the processor on the socket such that the slots on the processor align with the socket keys.
4. Close the processor shield by sliding it under the retention screw.
5. Lower the socket lever and push it under the tab to lock it.
6. Install:
   a. heatsink
   b. system-board shield
   c. VESA mount bracket
   d. back cover
   e. stand
7. Follow the procedure in After Working Inside Your Computer.

Removing the system board

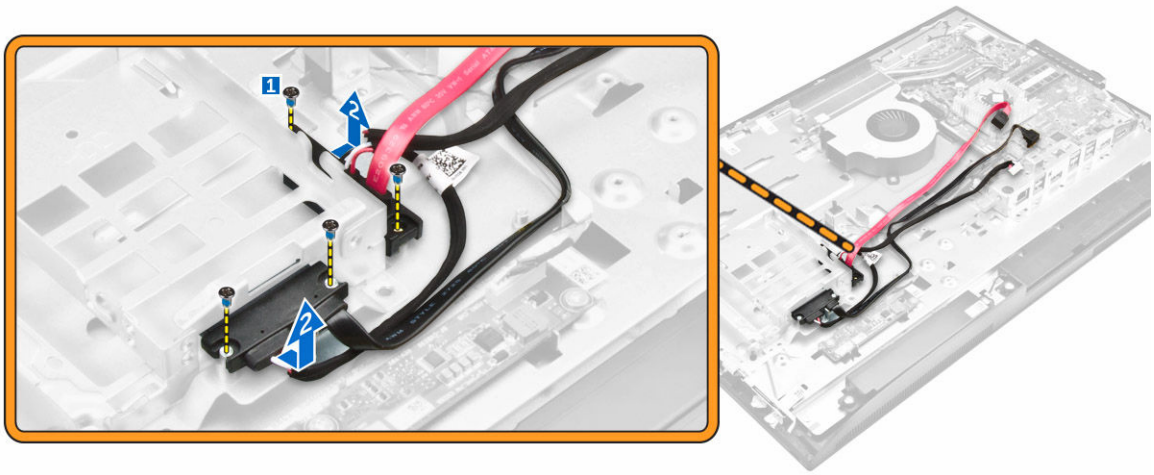
1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
   c. cable cover
   d. speaker cover
   e. VESA mount bracket
   f. system-board shield
   g. memory
   h. optical drive
   i. hard drive
   j. heatsink
   k. power-supply unit
   l. converter board

m. processor fan

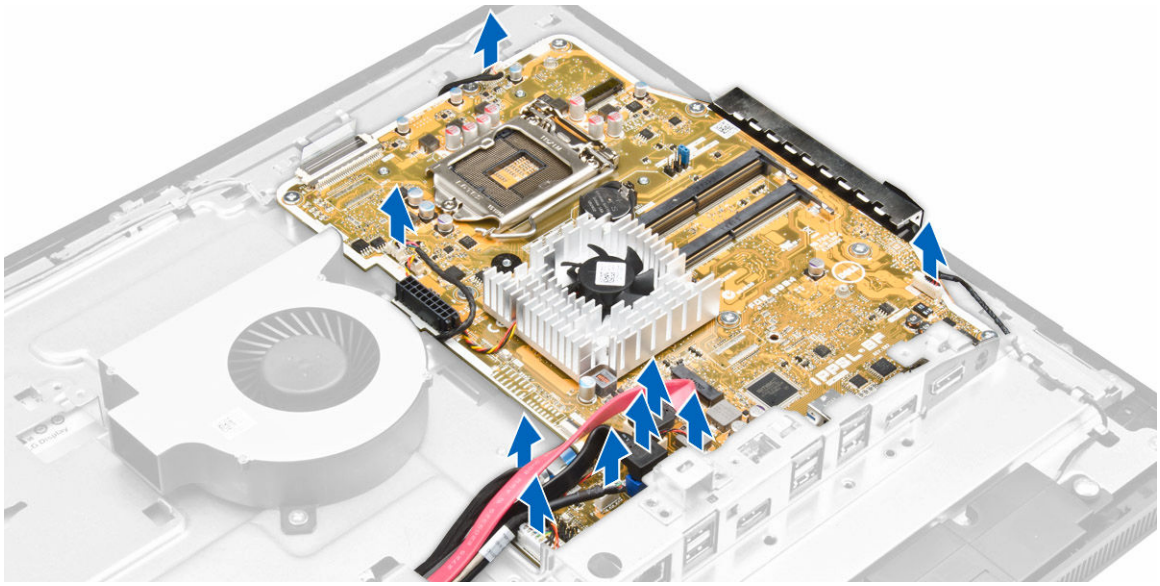
3. Perform the following steps as shown in the illustration:
   a. Disconnect the optical-drive cable and hard-drive cable from the connectors on the system board [1].
   b. Disconnect the touch pad cable from the connector on the system board [2].
   c. Unthread the cable from the retention clips of the computer [3].



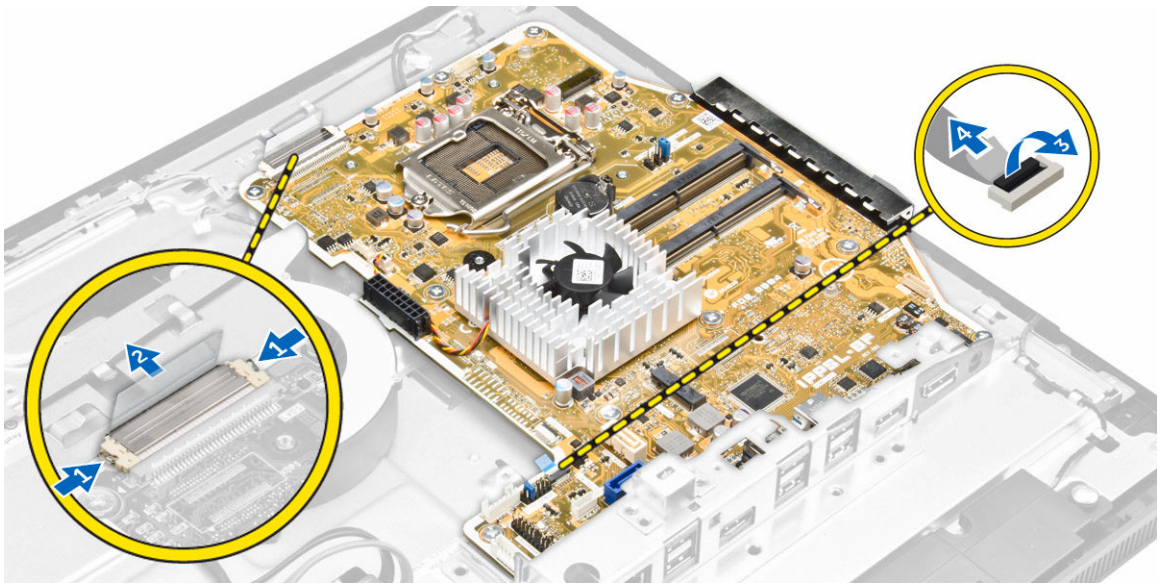
4. Perform the following steps as shown in the illustration:
   a. Remove the screws that secure the optical-drive cable and hard-drive cable to the system [1].
   b. Disconnect the optical-drive cable and hard-drive cable [2].



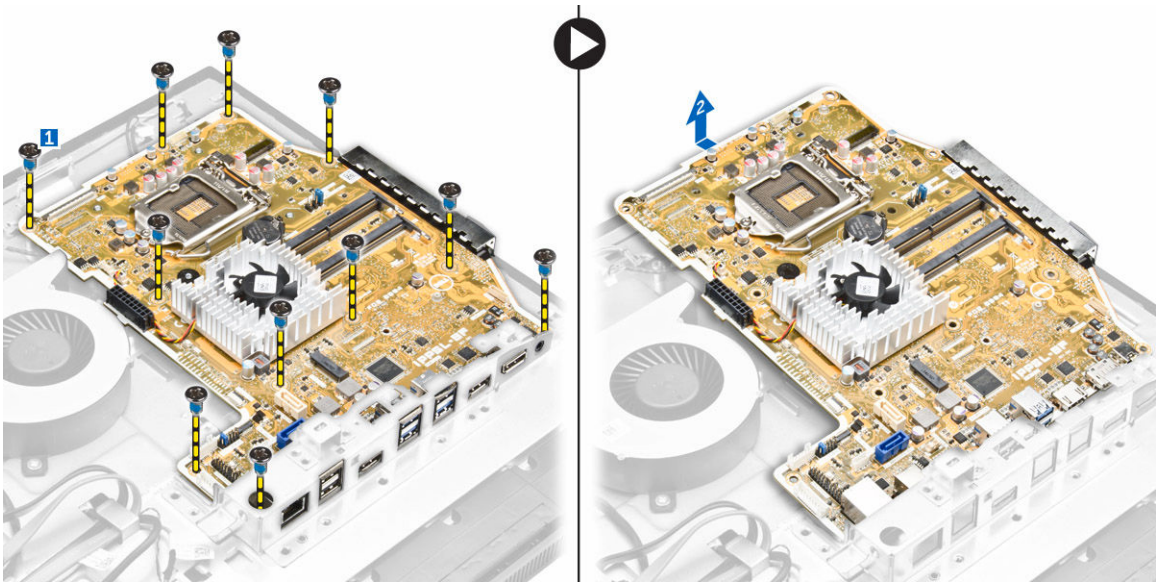
5. Disconnect all the cables that are connected to the system board.



6. Perform the following steps as shown in the illustration:
   a. Press the latches on either side of the connector and pull the LVDS cable to disconnect it from the system board [1,2].
   b. Lift the latch and disconnect the cable from the connector [3,4].

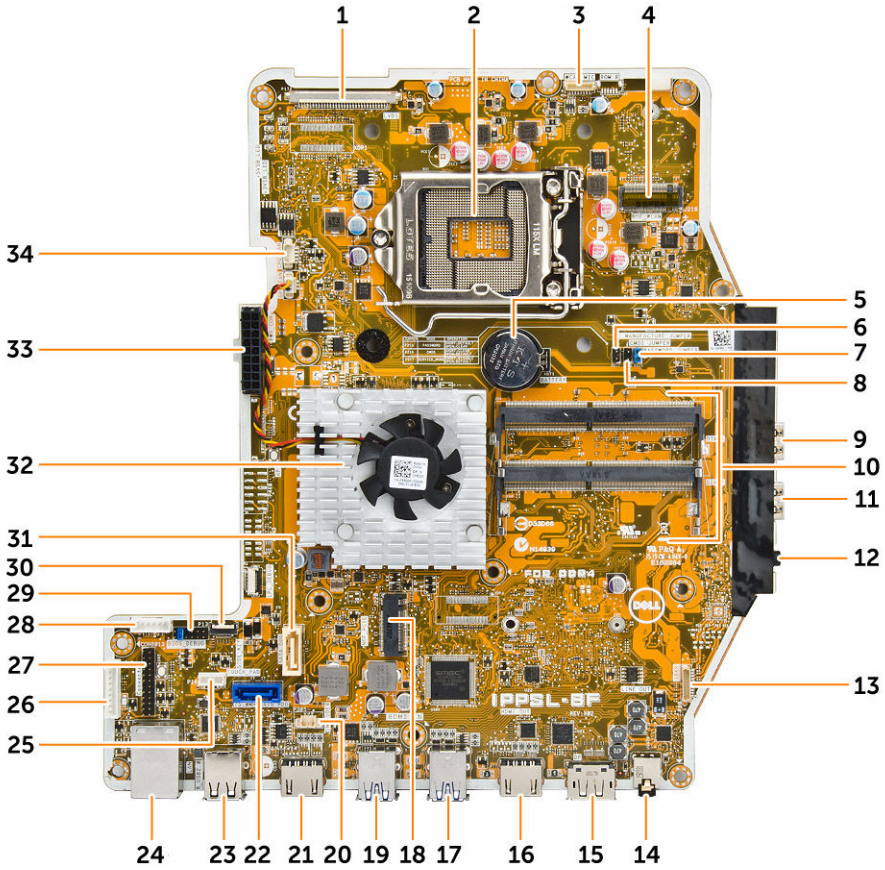


7. Perform the following steps as shown in the illustration.
   a. Remove the screws that secure the system board to the chassis [1].
   b. Slide the system board and lift it away from the chassis [2].



System Board Layout

The following image displays the system board layout of the computer.



1. LVDS connector
2. processor socket
3. camera connector
4. WLAN connector
5. coin-cell battery
6. jumper connector
7. jumper connector
8. jumper connector
9. USB 3.0 connector
10. memory connectors (SODIMM sockets)
11. USB 3.0 connector
12. audio connector
13. speaker connector
14. audio connector
15. DisplayPort connector
16. HDMI-out connector
17. USB 3.0 connector
18. M.2 SSD slot
19. USB 3.0 connector
20. intrusion-switch connector
21. HDMI-in connector
22. hard-drive connector
23. USB 2.0 connector
24. ethernet connector
25. touchpad connector
26. convertor-board connector
27. Windows serial debug connector
28. HDD/ODD power connector
29. SPI-debug connector
30. Side key board connector
31. optical-drive connector
32. heat sink
33. power-supply connector
34. processor-fan connector

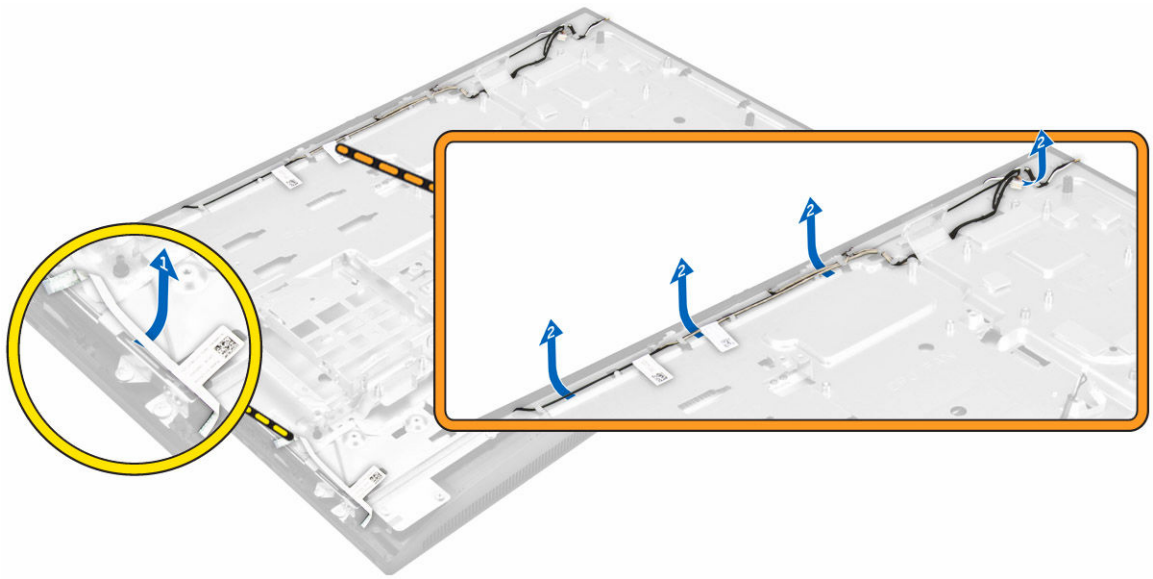
Installing the system board

1. Place the system board on the computer.
2. Connect all the cables to the system board.
3. Tighten the screws to secure the system board to the base panel.
4. Connect the optical-drive cable and hard-drive cable to the system and thread the cables through the retention clips.
5. Install:
   a. processor fan
   b. converter board
   c. power-supply unit
   d. heatsink
   e. hard drive
   f. optical drive
   g. memory
   h. system-board shield
   i. VESA mount bracket
   j. cable cover
   k. speaker cover
   l. back cover
   m. stand
6. Follow the procedure in After Working Inside Your Computer.

Removing the display assembly

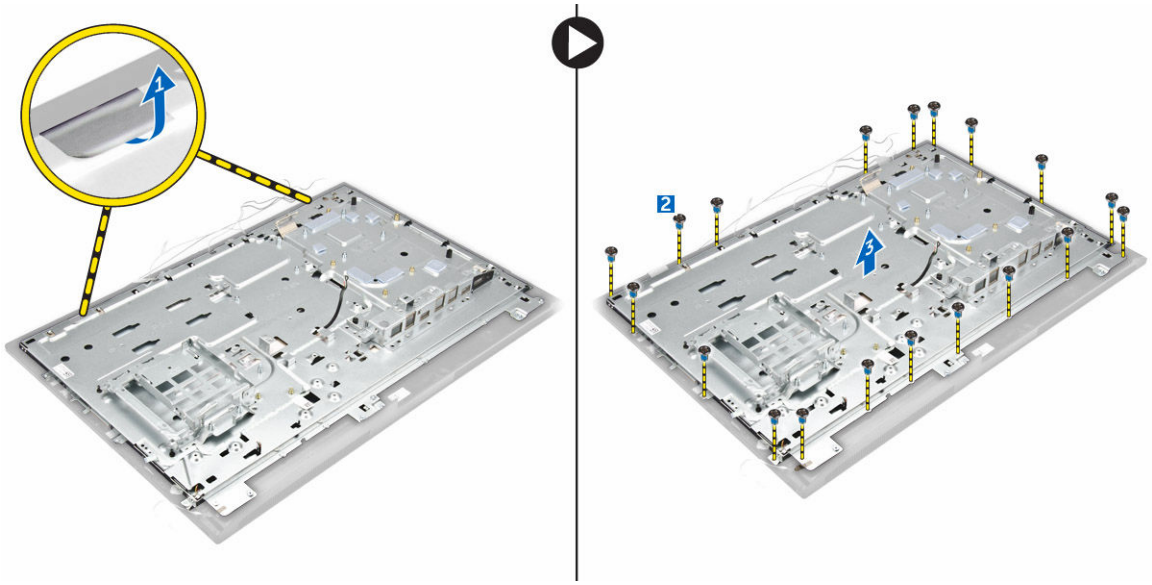
1. Follow the procedure in Before Working Inside Your Computer.
2. Remove the:
   a. stand
   b. back cover
   c. cable cover
   d. speaker cover
   e. VESA mount bracket
   f. system-board shield
   g. WLAN card
   h. optical drive
   i. hard drive
   j. intrusion switch
   k. power and OSD buttons board
   l. converter board
   m. power-supply unit
   n. heatsink
   o. processor fan
   p. speakers
   q. system board

   NOTE: These instructions are valid only for non-touch computers. For touch computers, the display panel should be disassembled in a clean-room environment.
3. Perform the following steps as shown in the illustration:
   a. Remove the power-switch cable from the retention clip [1].
   b. Unthread the camera cable from the retention clips on the display panel [2].

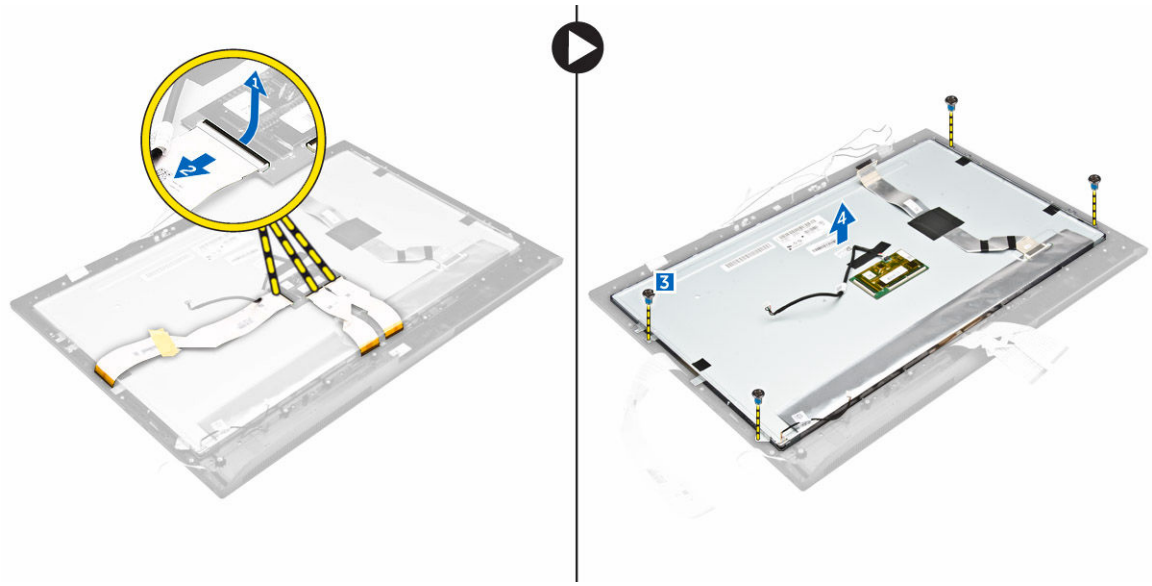


4. Perform the following steps as shown in the illustration:
   a. Peel off the tape to access the cables [1].

b. Remove the screws that secure the base panel to the chassis [2].
c. Lift the display-panel base from the display bezel [3].



5. Perform the following steps as shown in the illustration:
   a. Lift the latch and disconnect the cables [1,2].
   b. Remove the screws that secure the display assembly to the chassis [3].
   c. Lift the display assembly away from the computer [4].



Installing the display assembly

1. Tighten the screws to secure the display bracket to the display panel.
2. Place the display panel on the chassis.
3. Affix the tape on the display panel.

4. Align all the cables through their retention clips on the display panel.
5. Tighten the screws to secure the latches to the computer.
6. Install the:
   a. system board
   b. speakers
   c. processor fan
   d. heatsink
   e. power-supply unit
   f. converter board
   g. power and OSD buttons board
   h. intrusion switch
   i. hard drive
   j. optical drive
   k. WLAN card
   l. system-board shield
   m. VESA mount bracket
   n. speaker cover
   o. cable cover
   p. back cover
   q. stand
7. Follow the procedure in After Working Inside Your Computer.

3

System setup

System Setup enables you to manage your computer hardware and specify BIOS level options. From the System Setup, you can:

- Change the NVRAM settings after you add or remove hardware
- View the system hardware configuration
- Enable or disable integrated devices
- Set performance and power management thresholds
- Manage your computer security

Boot Sequence

Boot Sequence allows you to bypass the System Setup-defined boot device order and boot directly to a specific device (for example: optical drive or hard drive). During the Power-on Self Test (POST), when the Dell logo appears, you can:

- Access System Setup by pressing F2 key
- Bring up the one-time boot menu by pressing F12 key

The one-time boot menu displays the devices that you can boot from including the diagnostic option. The boot menu options are:

- Removable Drive (if available)
- STXXXX Drive

  NOTE: XXX denotes the SATA drive number.
- Optical Drive
- Diagnostics

  NOTE: Choosing Diagnostics, will display the **ePSA diagnostics** screen.

The boot sequence screen also displays the option to access the System Setup screen.

Navigation keys

The following table displays the system setup navigation keys.

NOTE: For most of the System Setup options, changes that you make are recorded but do not take effect until you restart the system.

Table 1. Navigation keys

Keys	Navigation
Up arrow	Moves to the previous field.
Down arrow	Moves to the next field.
Enter	Allows you to select a value in the selected field (if applicable) or follow the link in the field.
Spacebar	Expands or collapses a drop-down list, if applicable.
Tab	Moves to the next focus area. NOTE: For the standard graphics browser only.
Esc	Moves to the previous page till you view the main screen. Pressing Esc in the main screen displays a message that prompts you to save any unsaved changes and restarts the system.
F1	Displays the System Setup help file.

System setup options

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

General screen options

This section lists the primary hardware features of your computer.

Option	Description
System Information	• System Information: Displays BIOS Version, Service Tag, Asset Tag, Ownership Tag, Ownership Date, Manufacture Date, and the Express Service Code. • Memory Information: Displays Memory Installed, Memory Available, Memory Speed, Memory Channels Mode, Memory Technology, DIMM A Size, DIMM B Size. • PCI information: Displays SLOT 1 and SLOT 2 • Processor Information: Displays Processor Type, Core Count, Processor ID, Current Clock Speed, Minimum Clock Speed, Maximum Clock Speed, Processor L2 Cache, Processor L3 Cache, HT Capable, and 64-Bit technology. • Device Information: Displays SATA-0, SATA-1, LOM MAC Address, Video Controller, dGPU Video Controller, Audio Controller, Wi Fi Device, and Bluetooth Device.
Boot Sequence	Boot Sequence: Allows you to specify the order in which the computer attempts to find an operating system. To change the boot order, select the device that you want to change in the list, which is available on the right-hand side. After you select the device, click up or down arrows or use your keyboard Page Up or Page Down keys to change the boot options order. You can also select or de-select from the list using

Option	Description
	the check-boxes available on the left hand side. You should enable the Legacy Option ROMs to setup the Legacy boot mode. This Legacy boot mode is not allowed when you enable the Secure Boot. The options are: • Boot Sequence - By default, the Windows Boot Manager check box is selected. NOTE: The default option might differ based on the operating system of your computer. • Boot List Option - The list options are Legacy and UEFI. By default, the option UEFI is selected. NOTE: The default option might differ based on the operating system of your computer. • Add Boot Option - Enables you to add a boot option. • Delete Boot Option - Enables you to delete an existing boot option. • View - Enables you to view the current boot option in the computer. • Restore Settings - Restores the default settings of the computer. • Save Settings - Saves the settings of the computer. • Apply - Enables you to apply the settings. • Exit - Exits and starts the computer.
Boot List Options	Allows you to change the boot list option: • Legacy • UEFI (enabled by default)
Advanced Boot Options	This option allows you the legacy option ROMs to load. By default, the **Enable Legacy Option ROMs** is disabled. • Restore Settings - Restores the default settings of the computer • Save Settings - Saves the settings of the computer • Apply - Enables you to apply the settings • Exit - Exits and starts the computer
Date/Time	Allows you to change the date and time.

System configuration screen options

Option	Description
Integrated NIC	If you enable UEFI network stack, UEFI network protocols will be available. UEFI network allows pre-os and early os networking features to use NICs that are enabled. This may be used without PXE turned on. When you enable Enabled w/

Option	Description
	PXE, the type of PXE boot (Legacy PXE or UEFI PXE) depends on the current boot mode and type of option ROMs in use. The UEFI Network Stack is required in order to have UEFI PXE functionality fully enabled. • Enabled UEFI Network Stack - This option is disabled by default. Allows you to configure the integrated network controller. The options are: • Disabled • Enabled • Enabled w/PXE: This option is enabled by default. • Enabled w/Cloud Desktop NOTE: Depending on the computer and its installed devices, the items listed in this section may or may not appear.
SATA Operation	Allows you to configure the internal SATA hard-drive controller. The options are: • Disabled • AHCI • RAID On: This option is enabled by default.
Drives	Allows you to configure the SATA drives on board. All drives are enabled by default. The options are: • SATA-0 • SATA-1 • SATA-4 • M.2 PCIe SSD-0
SMART Reporting	This field controls whether hard drive errors for integrated drives are reported during system startup. This technology is part of the SMART (Self Monitoring Analysis and Reporting Technology) specification. This option is disabled by default. • Enable SMART Reporting
USB Configuration	This field configures the integrated USB controller. If Boot Support is enabled, the system is allowed to boot any type of USB Mass Storage Devices (HDD, memory key, floppy). If USB port is enabled, device attached to this port is enabled and available for OS. If USB port is disabled, the OS cannot see any device attached to this port. The options are: • Enable USB Boot Support • Enable Rear USB Ports: Include options for 6 ports • Enable Side USB Ports: Include options for 2 ports

Option	Description
	All the options are enabled by default. NOTE: USB keyboard and mouse always work in the BIOS setup irrespective of these settings.
Rear USB Configuration	This field allows you to enable or disable rear USB ports. • Enable/Disable Rear USB Ports
Side USB Configuration	This field allows you to enable or disable side USB ports. • Enable/Disable Side USB Ports
USB PowerShare	This field configures the USB PowerShare feature behavior. This option allows you to charge external devices using the stored system battery power through the USB PowerShare port.
Audio	This field enables or disables the integrated audio controller. By default, the **Enable Audio** option is selected. The options are: • Enable Microphone (by default enable) • Enable Internal Speaker (by default enable)
OSD Button Management	This field allows you to enable or disable the OSD (On-Screen Display) buttons on the All-In-One system. • Disable OSD buttons: This option is unchecked by default.
Touchscreen	This option allows you to enable or disable touchscreen.
Miscellaneous Devices	Allows you to enable or disable the following devices: • Enable Camera (enabled by default) • Enable Media Card (enabled by default) • Disable Media Card

Security screen options

Option	Description
Admin Password	Allows you to set, change, or delete the administrator (admin) password. NOTE: You must set the admin password before you set the system or hard drive password. Deleting the admin password automatically deletes the system password and the hard drive password. NOTE: Successful password changes take effect immediately. Default setting: Not set

Option	Description
System Password	Allows you to set, change or delete the system password. NOTE: Successful password changes take effect immediately. Default setting: Not set
Internal HDD-0 Password	Allows you to set, change or delete the system's internal hard disk's password. Default setting: Not set NOTE: Successful password changes take effect immediately.
Strong Password	Allows you to enforce the option to always set strong passwords. Default Setting: Enable Strong Password is not selected. NOTE: If Strong Password is enabled, Admin and System passwords must contain at least one uppercase character, one lowercase character and be at least 8 characters long.
Password Configuration	Allows you to determine the minimum and maximum length of Administrator and System passwords.
Password Bypass	Allows you to enable or disable the permission to bypass the System and the Internal HDD password, when they are set. The options are: • Disabled • Reboot bypass Default setting: Disabled
Password Change	Allows you to enable the disable permission to the System and Hard Drive passwords when the admin password is set. Default setting: **Allow Non-Admin Password Changes** is selected.
TPM 1.2 Security	Allows you to enable the Trusted Platform Module (TPM) during POST. This option is enabled by default. The options are: • Clear • PPI Bypass for Enabled Commands • PPI Bypass for Disabled Commands • Attestation Enable • Key Storage Enable • SHA - 256 NOTE: Activation, deactivation, and clear options are not affected if you load the setup program's default values. Changes to this option take effect immediately.
Computrace (R)	Allows you to activate or disable the optional Computrace software The options are:

Option	Description
	• Deactivate • Disable • Activate NOTE: The Activate and Disable options will permanently activate or disable the feature and no further changes will be allowed Default setting: Deactivate
Chassis Intrusion	This field controls the chassis intrusion feature. The options are: • Disabled • Enabled Default setting: Disabled
CPU XD Support	Allows you to enable or disable the Execute Disable mode of the processor. Enable CPU XD Support (default)
OROM Keyboard Access	Allows you to set an option to enter the Option ROM Configuration screens using hotkeys during boot. The options are: • Enabled • One Time Enable • Disabled Default setting: Enable
Admin Setup Lockout	Allows you to enable or disable the option to enter setup when an admin password is set. • Enable Admin Setup Lockout - This option is disabled by default.
HDD Protection Support	Allows you to enable or disable the HDD Protection feature. • HDD Protection Support - This option is disabled by default.

Secure boot screen options

Option	Description
Secure Boot Enable	This option enables or disables the **Secure Boot** feature. • Disabled • Enabled Default setting: Enabled.

Option	Description
Expert Key Management	Allows you to manipulate the security key databases only if the system is in Custom Mode. The **Enable Custom Mode** option is disabled by default. The options are: • PK • KEK • db • dbx If you enable the **Custom Mode**, the relevant options for **PK, KEK, db, and dbx** appear. The options are: • **Save to File**—Saves the key to a user-selected file • **Replace from File**—Replaces the current key with a key from a user-selected file • **Append from File**—Adds a key to the current database from a user-selected file • **Delete**—Deletes the selected key • **Reset All Keys**—Resets to default setting • **Delete All Keys**—Deletes all the keys NOTE: If you disable the **Custom Mode**, all the changes made will be erased and the keys will restore to default settings.

Performance screen options

Option	Description
Multi Core Support	Specifies whether the process will have one or all cores enabled. The performance of some applications will improve with the additional cores. • All - This option is enabled by default • 1 • 2 • 3
Intel SpeedStep	Allows you to enable or disable the Intel SpeedStep feature. • Enable Intel SpeedStep Default setting: The option is enabled.
C-States Control	Allows you to enable or disable the additional processor sleep states. • C states Default setting: The option is enabled.

Option	Description
Limit CPUID Value	Allows you to limit the maximum value of the Standard CPUID Fuction support. Some operation systems will not complete installation when maximum CPUID Function supported is greater than 3. • Enable CPUID Limit - This option is disabled by default.
Intel TurboBoost	Allows you to enable or disable the Intel TurboBoost mode of the processor. • Enable Intel TurboBoost Default setting: The option is enabled.

Power management screen options

Option	Description
AC Recovery	Specifies how the computer will respond when AC power is applied after an AC power loss. You can set the AC Recovery to: • Power Off (default) • Power On • Last Power State
Auto On Time	Allows you to set the time at which the computer must turn on automatically. The options are: • Disabled • Every Day • Weekdays • Select Days Default setting: Disabled NOTE: This feature does not work if you turn off your computer using the switch on a power strip or surge protector or if Auto Power is set to disabled.
Deep Sleep Control	Allows you to define the controls when Deep Sleep is enabled. • Disabled • Enabled in S5 only • Enabled in S4 and S5 – This option is enabled by default.
Fan Control Override	Controls the speed of the system fan. This option is disabled by default. NOTE: When enabled, the fan runs at full speed.
USB Wake Support	Allows you to enable USB devices to wake the system from Standby.

Option	Description
	NOTE: This feature is only functional when the AC power adapter is connected. If the AC power adapter is removed during Standby, the system setup removes power from all the USB ports to conserve battery power. • Enable USB Wake Support Default setting: The option is disabled.
Wake on LAN/ WLAN	Allows you to enable or disable the feature that powers on the computer from the Off state when triggered by a LAN signal. • Disabled • LAN Only • WLAN Only • LAN or WLAN Default setting: Disabled
Block Sleep	This option lets you block entering to sleep (S3 state) in operating system environment. Block Sleep (S3 state) Default setting: This option is disabled
Intel Ready Mode	This option enables the capability of Intel Ready Mode technology.

POST behavior screen options

Option	Description
Numlock LED	Specifies if the NumLock function can be enabled when the system boots. This option is enabled by default.
Keyboard Errors	Specifies whether keyboard related errors are reported when it boots. This option is enabled by default.
MEBx Hotkey	Allows you to specify whether the MEBx Hotkey function should enable, during the system boot. Default Setting: Enable MEBx Hotkey
Fastboot	Allows you to speed up the boot process by bypassing some of the compatibility steps. The options are: • Minimal • Through (default) • Auto

Virtualization support screen options

Option	Description
Virtualization	Allows you to enable or disable the Intel Virtualization Technology. Enable Intel Virtualization Technology (default).
VT for Direct I/O	Enables or disables the Virtual Machine Monitor (VMM) from utilizing the additional hardware capabilities provided by Intel® Virtualization technology for direct I/O. Enable VT for Direct I/O - enabled by default.
Trusted Execution	This option specifies whether a Measured Virtual Machine Monitor (MVMM) can utilize the additional hardware capabilities provided by Intel Trusted Execution Technology. The TPM Virtualization Technology, and Virtualization technology for direct I/O must be enabled to use this feature. Trusted Execution - disabled by default.

Wireless screen options

Option	Description
Wireless Device Enable	Allows you to enable or disable the internal wireless devices. • WLAN/WiGig • Bluetooth All the options are enabled by default.

Maintenance screen options

Option	Description
Service Tag	Displays the Service Tag of your computer.
Asset Tag	Allows you to create a system asset tag if an asset tag is not already set. This option is not set by default.
SERR Messages	Controls the SERR message mechanism. This option is enabled by default. Some graphics cards require that the SERR message mechanism be disabled.
BIOS Downgrade	This controls flashing of the system firmware to previous revisions. • Data Wipe • Wipe on Next boot • BIOS recovery • BIOS recovery from the hard drive

Option	Description
	Follow the procedure to recover BIOS from hard drive. 1. Power on the system. 2. While the blue Dell logo is visible, press the **F2** key to enter the System Setup. 3. Press the **Num Lock** key, and verify that the Num Lock light is on. 4. Press the **Caps Lock** key, and verify that the Caps Lock light is on. 5. Press the **Scroll Lock** key, and verify that the Scroll Lock light is on. 6. Press the **Alt** + **F** keys at the same time. The system will beep as the setup defaults are restored. 7. Press the **Alt** + **F** keys at the same time to restart the system. The changes are automatically saved.

Cloud desktop screen options

Option	Description
Server Lookup Method	This option specifies how the Cloud Desktop software will lookup the server address. The options are: • Static IP - Uses the static IP address • DNS - Obtains several IP addresses using the Domain Name System (DNS) protocol. This option is selected by default NOTE: This option is relevant only when the Integrated NIC control in the System Configuration group is set to Enable with Cloud Desktop.
Server Name	This option specifies the server name of the server. NOTE: This option is relevant only when the Integrated NIC control in the System Configuration group is set to Enable with Cloud Desktop, and when the server look up method is set to DNS.
Server IP Address	This option specifies the primary static IP address of the Cloud Desktop Server with which the client software communicates. The default Server IP Address is **255.255.255.255** NOTE: This option is relevant only when the Integrated NIC control in the System Configuration group is set to Enable with Cloud Desktop.
Server Port	This option specifies the primary IP port of the Cloud Desktop with which the client software communicates. The default Server Port value is 06910. NOTE: This option is relevant only when the Integrated NIC control in the System Configuration group is set to Enable with Cloud Desktop.
Client Address Method	This option specifies how the client obtains its IP address. The options are: • Static IP - Uses the static IP address

Option	Description
	• DHCP - Obtains IP address using Dynamic Host Configuration Protocol(DHCP). This option is selected by default. NOTE: This option is relevant only when the Integrated NIC control in the System Configuration group is set to Enable with Cloud Desktop.
Client IP Address	This option specifies the static IP address of the client. The default IP Address is **255.255.255.255** NOTE: This option is relevant only when the Integrated NIC control in the System Configuration group is set to Enable with Cloud Desktop.
Client Subnet Mask	This option specifies the subnet mask IP address of the client. The default IP Address is **255.255.255.255** NOTE: This option is relevant only when the Integrated NIC control in the System Configuration group is set to Enable with Cloud Desktop.
Client Gateway	This option specifies the gateway IP address of the client. The default IP Address is **255.255.255.255** NOTE: This option is relevant only when the Integrated NIC control in the System Configuration group is set to Enable with Cloud Desktop.
DNS IP address	This option specifies the DNS IP address of the client. The default IP Address is **255.255.255.255** NOTE: This option is relevant only when the Integrated NIC control in the System Configuration group is set to Enable with Cloud Desktop.
Domain Name	This option specifies the domain name of the client. NOTE: This option is relevant only when the Integrated NIC control in the System Configuration group is set to Enable with Cloud Desktop, and when the client address method is set to static IP.
Advanced	This option turns on the Verbose Mode for advanced debugging. By default, this option is disabled. NOTE: This option is relevant only when the Integrated NIC control in the System Configuration group is set to Enable with Cloud Desktop.

Updating the BIOS

It is recommended to update your BIOS (system setup), on replacing the system board or if an update is available.

1. Re-start the computer.
2. Go to **dell.com/support**.
3. Enter the **Service Tag** or **Express Service Code** and click **Submit**.

NOTE: To locate the Service Tag, click **Where is my Service Tag?**

NOTE: If you cannot find your Service Tag, click **Detect My Product**. Proceed with the instructions on screen.

4. If you are unable to locate or find the Service Tag, click the Product Category of your computer.
5. Choose the **Product Type** from the list.
6. Select your computer model and the **Product Support** page of your computer appears.
7. Click **Get drivers** and click **View All Drivers**.
   The Drivers and Downloads page opens.
8. On the Drivers and Downloads screen, under the **Operating System** drop-down list, select **BIOS**.
9. Identify the latest BIOS file and click **Download File**.
   You can also analyze which drivers need an update. To do this for your product, click **Analyze System for Updates** and follow the instructions on the screen.
10. Select your preferred download method in the **Please select your download method below window**; click **Download File**.
    The **File Download** window appears.
11. Click **Save** to save the file on your computer.
12. Click **Run** to install the updated BIOS settings on your computer.
    Follow the instructions on the screen.

System and setup password

You can create a system password and a setup password to secure your computer.

Password Type	Description
System password	Password that you must enter to log on to your system.
Setup password	Password that you must enter to access and make changes to the BIOS settings of your computer.

CAUTION: The password features provide a basic level of security for the data on your computer.

CAUTION: Anyone can access the data stored on your computer if it is not locked and left unattended.

NOTE: Your computer is shipped with the system and setup password feature disabled.

Assigning a system password and setup password

You can assign a new **System Password** and/or **Setup Password** or change an existing **System Password** and/or **Setup Password** only when **Password Status** is **Unlocked**. If the Password Status is **Locked**, you cannot change the System Password.

NOTE: If the password jumper is disabled, the existing System Password and Setup Password are deleted and you need not provide the system password to log on to the computer.

To enter a system setup, press <F2> immediately after a power-on or re-boot.

1. In the **System BIOS** or **System Setup** screen, select **System Security** and press Enter.

The **System Security** screen appears.

2. In the **System Security** screen, verify that **Password Status** is **Unlocked**.
3. Select **System Password** , enter your system password, and press Enter or Tab.

   Use the following guidelines to assign the system password:

   - A password can have up to 32 characters.
   - The password can contain the numbers 0 through 9.
   - Only lower case letters are valid, upper case letters are not allowed.
   - Only the following special characters are allowed: space, ("), (+), (,), (-), (.), (/), (;), ([), (\), (]), (`).

   Re-enter the system password when prompted.
4. Type the system password that you entered earlier and click **OK**.
5. Select **Setup Password**, type your system password and press Enter or Tab.

   A message prompts you to re-type the setup password.
6. Type the setup password that you entered earlier and click **OK**.
7. Press Esc and a message prompts you to save the changes.
8. Press Y to save the changes.

   The computer reboots.

Deleting or changing an existing system and/or setup password

Ensure that the **Password Status** is Unlocked (in the System Setup) before attempting to delete or change the existing System and/or Setup password. You cannot delete or change an existing System or Setup password, if the **Password Status** is Locked.
To enter the System Setup, press F2 immediately after a power-on or reboot.

1. In the **System BIOS** or **System Setup** screen, select **System Security** and press Enter.

   The **System Security** screen is displayed.
2. In the **System Security** screen, verify that **Password Status** is **Unlocked**.
3. Select **System Password**, alter or delete the existing system password and press Enter or Tab.
4. Select **Setup Password**, alter or delete the existing setup password and press Enter or Tab.

   NOTE: If you change the System and/or Setup password, re-enter the new password when promoted. If you delete the System and/or Setup password, confirm the deletion when promoted.
5. Press Esc and a message prompts you to save the changes.
6. Press Y to save the changes and exit from System Setup.

   The computer reboots.

4

Technical specifications

NOTE: Offerings may vary by region. For more information regarding the configuration of your computer in:

- Windows 10, click or tap **Start** → **Settings** → **System** → **About**.
- Windows 8.1 and Windows 8, click or tap **Start** → **PC Settings** → **PC and devices** → **PC Info**.
- Windows 7, click **Start**, right-click **My Computer**, and then select **Properties**.

System specifications

Feature	Specification
Processor cache	Intel Core i3/ i5 / i7 series
Total cache	Up to 8 MB cache depending on processor type
Chipset	Intel Q170 chipset

Memory specifications

Feature	Specification
Memory type	up to 1600 MHz, unbuffered non-ECC, dual-channel DDR4 2133 configuration
Memory capacity	4 GB and 8 GB
Memory connectors	two internally-accessible DDR4 SODIMM sockets
Minimum memory	4 GB
Maximum memory	16 GB

Video specifications

Feature	Specification
Video Controller (Integrated)	Integrated Intel HD Graphics (Gen 9 iGfx), 2GB GDDR5 for dGPU
Video Memory	shared memory
External display support	Display port, HDMI in and HDMI out

Audio specifications

Feature	Specification
Controller	Intel High Definition Audio with Waves MaxxVoice Pro
Speaker	single 4-ohms speakers in both the left and right speaker assembly (4 W average per channel)
Internal speaker amplifier	up to 7.6 W at 4-ohm per channel
Internal microphone support	dual digital microphone
Volume controls	Volume up/down buttons, program menus, and keyboard media-control keys

WARNING: Excessive sound pressure from earphones or headphones can cause hearing damage or loss. Adjustment of the volume control as well as the equalizer to settings other than the center position may increase the earphones or headphones output voltage, and therefore the sound pressure level. The use of factors influencing the earphones or headphones output other than those specified by the manufacturer(e.g. operating system, equalizer software, firmware, driver, etc.) may increase the earphones or headphones output voltage and therefore the sound pressure level. The use of earphones or headphones other than those specified by the manufacturer may lead to heightened sound pressure level.

Communication specifications

Features	Specification
Network adapter	Intel 10/100/1000 Mbps RJ-45 Ethernet
Wireless	• M.2 2230 card • combo M.2 card (Intel Wireless 8260 M.2 PCIe WLAN card (802.11n/ac) with Bluetooth)

Cards specifications

Feature	Specification
M.2 slots	• One 2230 D3 Key-A M.2 Socket 1 • One 2280 D3 Key-M M.2 Socket 3

Display specifications

Feature	Specification
Type	23.8 inch, FHD and UHD (4K)
Maximum resolution	3840 x 2160
Refresh rate	60 Hz
Brightness	Brightness up/down buttons
Operating angle	178 horizontal/ 178 vertical
Pixel pitch	0.2475 mm
Controls	on-screen controls

Drives specifications

Feature	Specification
Hard drive	one 2.5-inch SATA drive with an adapter bracket and one 2.5-inch SATA drive (optional)
Optical drive (optional)	one DVD-ROM SATA drive or DVD+/- RW SATA drive

Port and connector specifications

Feature	Specification
Audio	• one line-out connector at rear • one global headset port at side
Network adapter	One RJ-45 connector
USB 2.0 (Front/ Rear)	0(side)/2

Feature	Specification
USB 3.0 (Front/ Rear)	2(side)/4
USB port with PowerShare support	1(side) USB 3.0
Video	one display port
HDMI	• one 19–pin output port • one 19–pin input port
Media card reader	one 4-in-1 slot

Power specifications

Feature	Specification
155 Watt PSU for UMA	
200 Watt dGPU and UHD(4K)	
Frequency	47 Hz — 63 Hz
Voltage	90 VAC — 264 VAC
Input current	• Maximum 2.6 A (Low AC range) • Maximum 1.3 A (High AC range)

Camera (optional) specifications

Feature	Specification
Image resolution	2.0 megapixel
Video resolution	FHD (1080p)
Diagonal viewing angle	74 degrees

Stand specifications

Feature	Specification
Tilt	–5 degrees to 30 degrees

Physical specifications

Feature	Specification
Width	575.24 mm (22.65 inches)
Height	392.90 mm (15.47 inches)
Depth:	
Non-touch	62.79 mm (2.47 inches)
Touch	62.79 mm (2.47 inches)
Weight:	
Non-touch	9.76 kg with stand (21.52 lb)
Touch	11.00 kg with stand (24.25 lb)

NOTE: The weight of your computer may vary depending on the configuration ordered and the manufacturing variability.

Environmental specifications

Temperature	Specifications
Operating	0°C to 35°C (50°F to 95°F)
Storage	–40°C to 65°C (–40°F to 149°F)
Relative humidity (maximum)	**Specifications**
Operating	20 % to 80 % (non condensing)
Storage	20 % to 80 % (non condensing)
Maximum vibration	**Specifications**
Operating	0.26 GRMS at 5 to 350 Hz
Storage	2.2 GRMS at 5 to 500 Hz
Maximum shock	**Specifications**
Operating	40 G
Storage	45 G
Altitude (maximum)	**Specifications**
Operating	0 m to 5000 m (0 ft to 16,404 ft)

Altitude (maximum)	Specifications
Non-operating	0 m to 5000 m (0 ft to 16,404 ft)
Airborne contaminant level	G2 or lower as defined by ANSI/ISA-S71.04-1985

5

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.