Inspiron 22 3263

Service Manual

Regulatory Model: W17B
Regulatory Type: W17B002

Notes, cautions, and warnings

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

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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1

Before working inside your computer

NOTE: The images in this document may differ from your computer depending on the configuration you ordered.

Topics:

- Before you begin
- Safety instructions
- Recommended tools
- Screw list

Before you begin

1. Save and close all open files and exit all open applications.
2. Shut down your computer.

   The shut-down instruction varies depending on the operating system installed on your computer.

   - Windows 10: Click **Start** > **Power** > **Shut down**.
   - Windows 8.1: On the **Start** screen, click the power icon > **Shut down**.
   - Windows 7: Click **Start** > **Shut down**.

   NOTE: If you are using a different operating system, see the documentation of your operating system for shut-down instructions.
3. Disconnect your computer and all attached devices from their electrical outlets.
4. Disconnect all attached network devices and peripherals, such as keyboard, mouse, and monitor from your computer.
5. Remove any media card and optical disc from your computer, if applicable.
6. After the computer is unplugged, press and hold the power button for 5 seconds to ground the system board.

   CAUTION: Place the computer on a flat, soft, and clean surface to avoid scratches on the display.
7. Place the computer face down.

Safety instructions

Use the following safety guidelines to protect your computer from potential damage and ensure your personal safety.

NOTE: Before working inside your computer, read the safety information that shipped with your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

NOTE: 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 electrical outlet.

CAUTION: To avoid damaging the computer, ensure that the work surface is flat and clean.

CAUTION: To avoid damaging the components and cards, handle them by their edges, and avoid touching pins and contacts.

CAUTION: You should only perform troubleshooting and repairs as authorized or directed by the Dell technical assistance team. Damage due to servicing that is not authorized by Dell is not covered by your warranty. See the safety instructions that shipped with the product or at www.dell.com/regulatory_compliance.

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.

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 or thumb-screws that you must disengage before disconnecting the cable. When disconnecting cables, keep them evenly aligned to avoid bending any connector pins. When connecting cables, ensure that the ports and connectors are correctly oriented and aligned.

CAUTION: Press and eject any installed card from the media-card reader.

Recommended tools

The procedures in this document may require the following tools:

- Phillips screwdriver
- Plastic scribe

Screw list

Component	Secured to	Screw type	Quantity
MB Bracket	Main Bracket	M3X5	4
Main Board	Main Bracket	M3X5	4
Fan	Main Bracket	M3X5	2
Stand Plate	Main Bracket	M3X5	4
HDD Bracket	Main Bracket	M3X5	1
ODD Bracket	Main Bracket	M3X5	1
HDD	HDD Bracket	M3X5	3
Main Bracket	Middle Frame	M3X5	15
Main Bracket	Panel Bracket	M3X5	4
Thermal Module	Main Bracket	M3X5	1
Foot Bracket	Middle Frame	M3X5	4
Easel Stand	Stand Plate	M4X8	2
Pedestal Stand	Stand Plate	M4X8	4
Panel Bracket	Panel	M3X3	4
ODD Bracket	ODD	M2X2.5	2
NGFF	Main Board	M2X2.5	1
DUMMY ODD	BACL COVER	M3X6(TAPPING SCREW)	2

2

After working inside your computer

CAUTION: Leaving stray or loose screws inside your computer may severely damage your computer.

1. Replace all screws and ensure that no stray screws remain inside your computer.
2. Connect any external devices, peripherals, or cables you removed before working on your computer.
3. Replace any media cards, discs, or any other parts that you removed before working on your computer.
4. Connect your computer and all attached devices to their electrical outlets.
5. Turn on your computer.

3

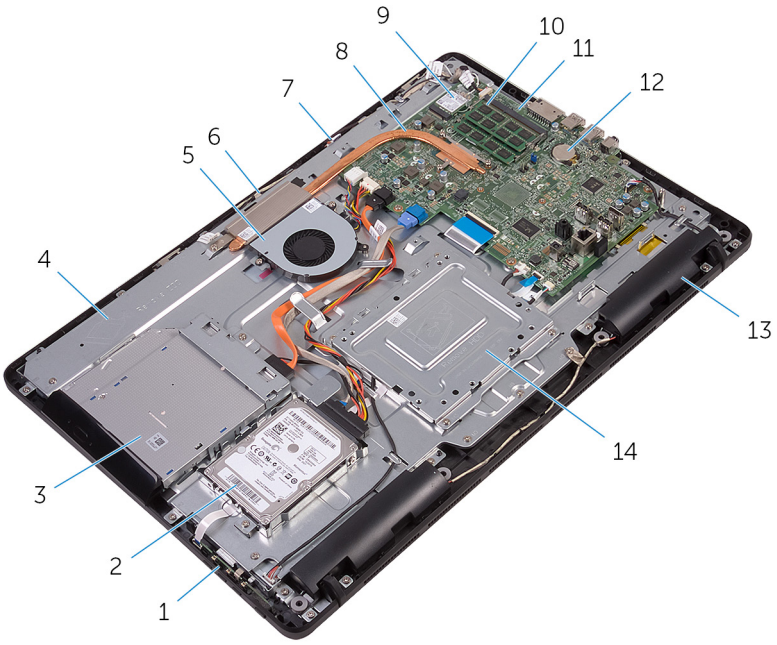
Technical overview

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

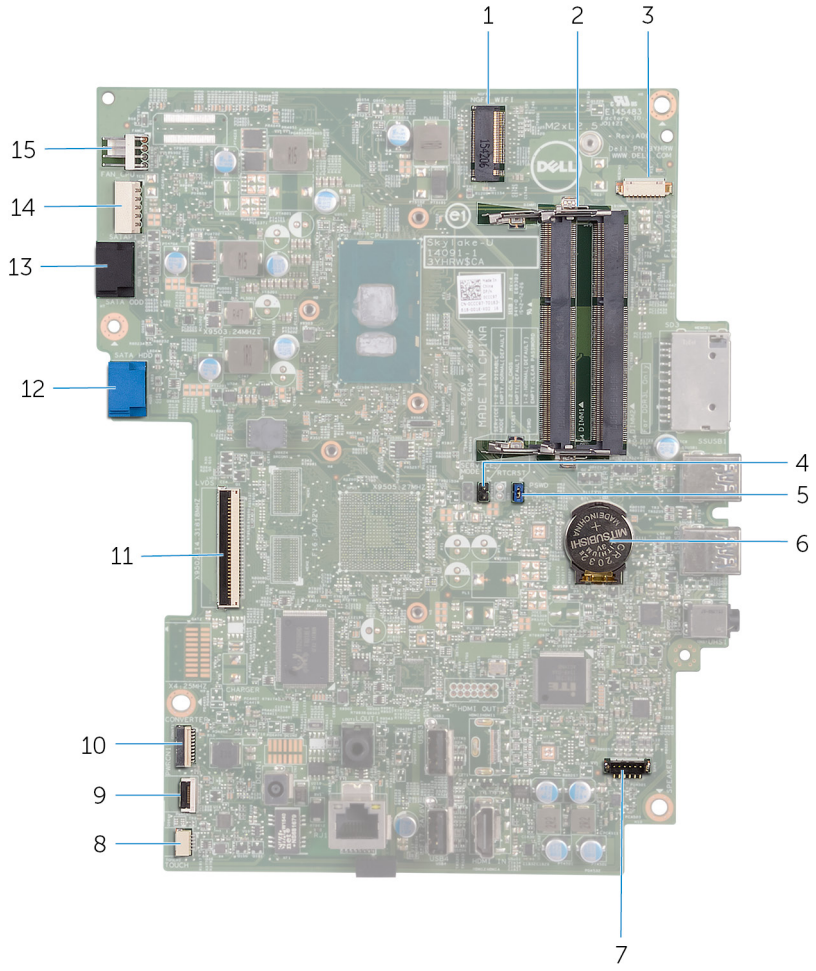
- Inside view of your computer
- System-board components

Inside view of your computer



1. control-buttons board
2. hard-drive assembly
3. optical-drive assembly
4. display-assembly base
5. fan
6. camera module
7. microphone board
8. heat sink
9. wireless card
10. memory module
11. system board
12. coin-cell battery
13. speakers (2)
14. VESA-mount bracket

System-board components



1. wireless-card slot (NGFF_WI-FI)
2. memory-module slots (2)
3. camera-cable connector (WEBCAM)
4. CMOS clear jumper (RTCRST)
5. Password clear jumper (PSWD)
6. coin-cell battery
7. speaker-cable connector (SPEAKER)
8. touch-screen board cable connector (TOUCH)
9. control-buttons board cable connector
10. display-panel power cable connector (PWRCN1)
11. display-cable connector
12. hard-drive data cable connector (SATA HDD)
13. optical-drive cable connector (SATA ODD)
14. hard-drive and optical-drive power cable connector (SATAP1)
15. fan-cable connector (FAN_CPU)

4

Removing the stand

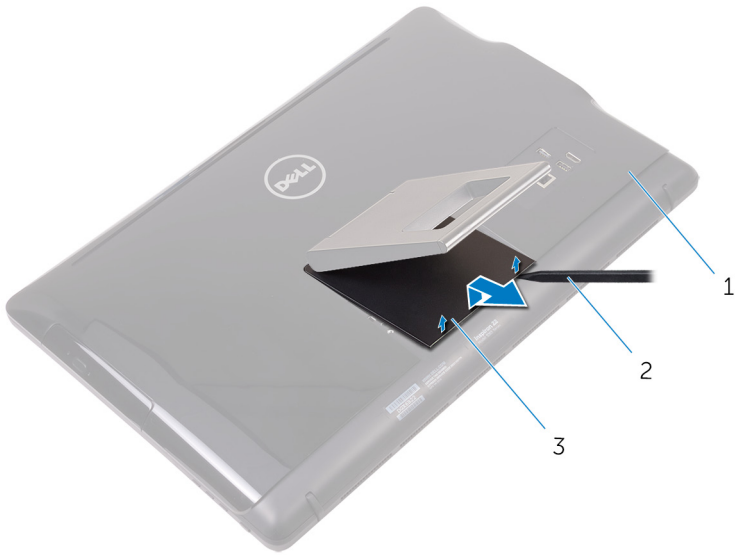
NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Easel stand
- Pedestal stand

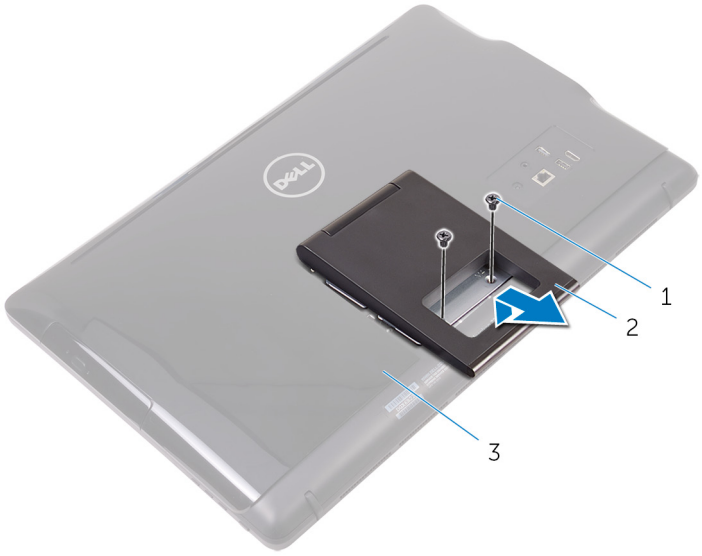
Easel stand

1. Using a plastic scribe, pry the stand cover off the back cover.
2. Slide and remove the stand cover from the back cover.



a. back cover
b. plastic scribe
c. stand cover

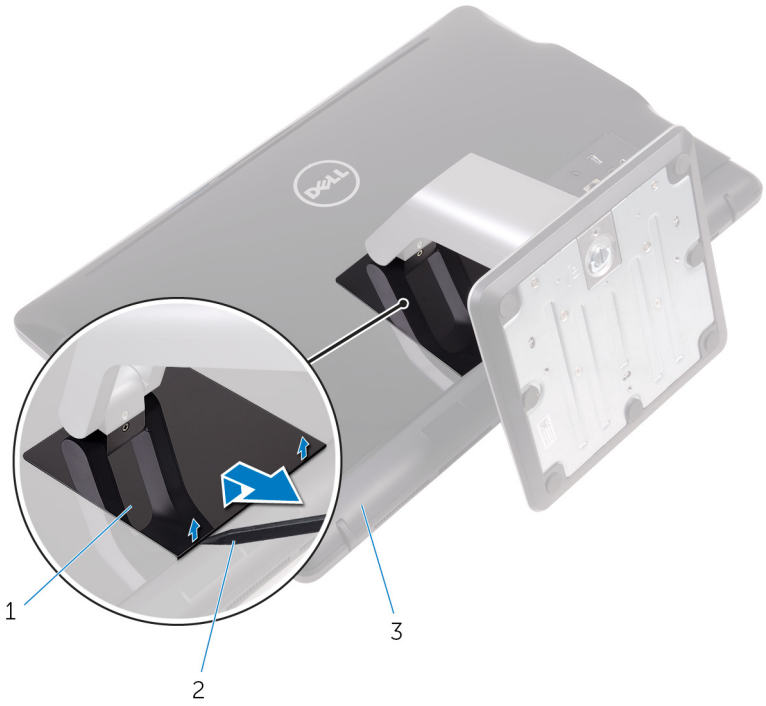
3. Close the stand and remove the screws that secure the stand to the back cover.
4. Slide and remove the stand from the back cover.



a. screws (2)
b. easel stand
c. back cover

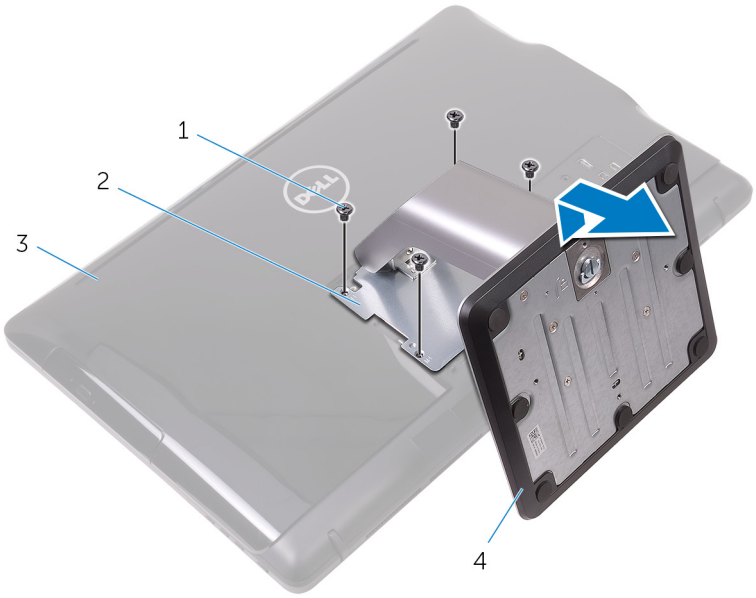
Pedestal stand

1. Using a plastic scribe, pry the stand cover off the back cover.



a. stand cover
b. plastic scribe
c. back cover

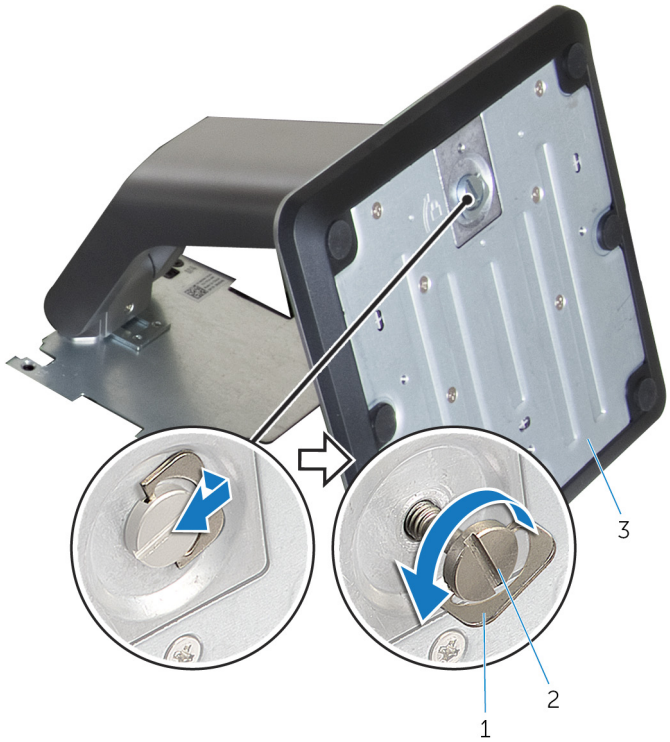
2. Remove the screws that secure the stand bracket to the back cover.
3. Lift the handle and slide it out from the back cover.



1. screws (4)
2. stand bracket
3. back cover
4. pedestal stand

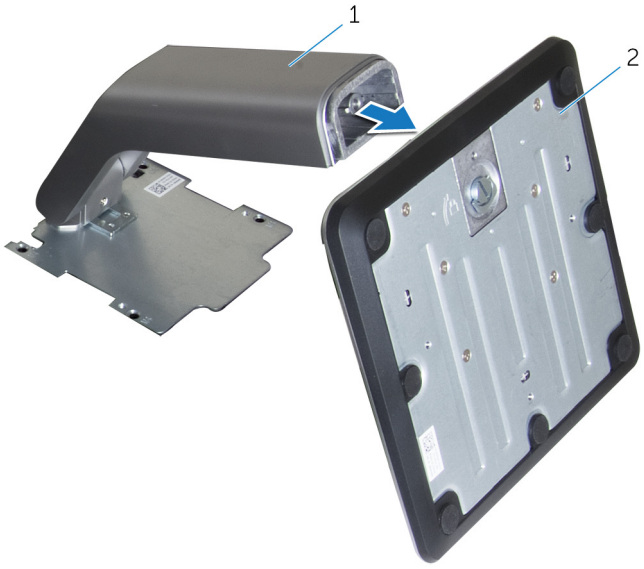
Procedure to remove stand riser from stand base

1. Lift the screw handle on the stand base.
2. Using the screw handle, loosen the captive thumbscrew that secures the stand base to the stand riser.



a. screw handle
b. captive thumbscrew
c. stand base

3. Slide the stand base off the stand riser.



a. stand riser
b. stand base

5

Replacing the stand

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Easel stand
- Pedestal stand

Easel stand

1. Insert the tabs on the stand bracket into the slots on the back cover.
2. Align the screw holes on the stand with the screw holes on the back cover.
3. Replace the screws that secure the stand to the back cover.
4. Replace the stand cover.

Pedestal stand

1. Insert the tabs on the stand bracket into the slots on the back cover.
2. Align the screw holes on the stand with the screw holes on the back cover.
3. Replace the screws that secure the stand bracket to the back cover.
4. Replace the stand cover.

Procedure to replace stand riser to stand base

1. Slide the stand base into the slot on the stand riser.
2. Tighten the captive thumbscrew and fold the screw handle on the stand base.

6

Removing the back cover

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Prerequisites
- Procedure

Prerequisites

Remove the stand.

Procedure

CAUTION: Do not remove the computer cover unless you need to install or replace internal components on your computer.

1. Using your thumb, press the slot on the back cover.
2. Using your fingertips, pry and release the tabs from the back cover.
3. Lift the back cover off the display-assembly base.

a. back cover

7

Replacing the back cover

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Procedure
- Post-requisites

Procedure

Align the tabs on the back cover with the slots on the display-assembly base and snap the back cover into place.

NOTE: Make sure that no cables are caught between the back cover and the display-assembly base.

Post-requisites

Replace the stand.

8

Replacing the optical drive

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

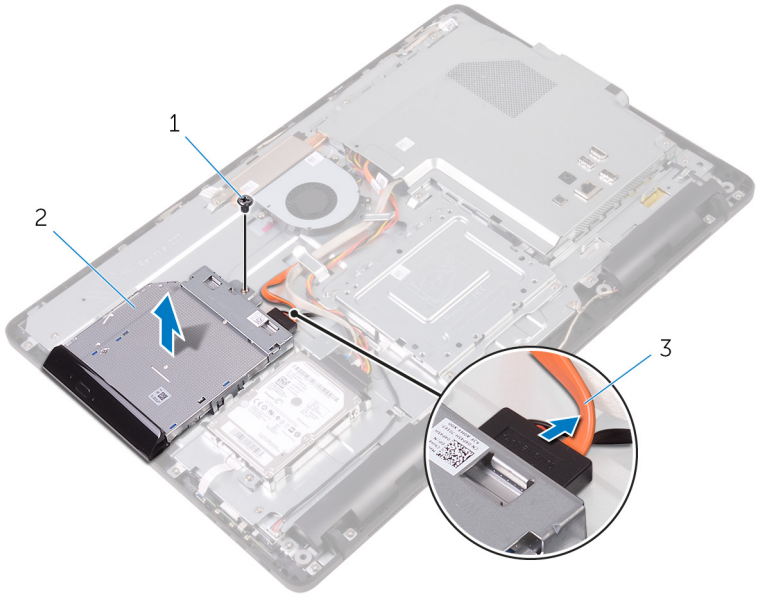
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.

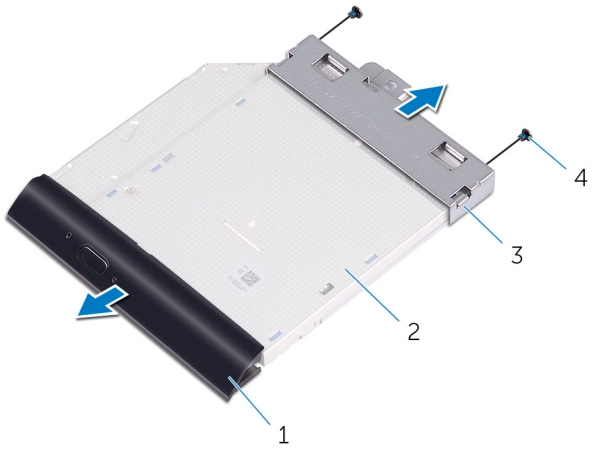
Procedure

1. Disconnect the optical-drive cable from the optical drive.
2. Remove the screw that secures the optical-drive bracket to the display-assembly base.
3. Lift the optical-drive bracket from the display-assembly base.



   a. screw
   b. optical drive
   c. optical-drive cable
4. Carefully pull the optical-drive bezel and remove it from the optical drive.
5. Remove the screws that secure the optical-drive bracket to the optical drive.
6. Remove the optical-drive bracket from the optical drive.

NOTE: Note the orientation of the optical-drive bracket so that you can replace it correctly.



1. optical-drive bezel
2. optical drive
3. optical-drive bracket
4. screws (2)

9

Removing the optical drive

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Procedure
- Post-requisites

Procedure

1. Align the screw holes on the optical-drive bracket with the screw holes on the optical drive.

   NOTE: You must correctly align the optical-drive bracket to ensure that the optical drive can be properly secured to the computer. For correct orientation, see step 6 in "Removing the optical drive".
2. Replace the screws that secure the optical-drive bracket to the optical drive.
3. Carefully push the optical-drive bezel into the optical drive.
4. Place the optical-drive bracket on the display-assembly base.
5. Replace the screw that secures the optical-drive bracket to the display-assembly base.
6. Connect the optical-drive cable to the optical drive.

Post-requisites

1. Replace the back cover.
2. Replace the stand.

10

Removing the hard drive

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

CAUTION: Hard drives are fragile. Exercise care when handling the hard drive.

CAUTION: To avoid data loss, do not remove the hard drive while the computer is in sleep or on state.

Topics:

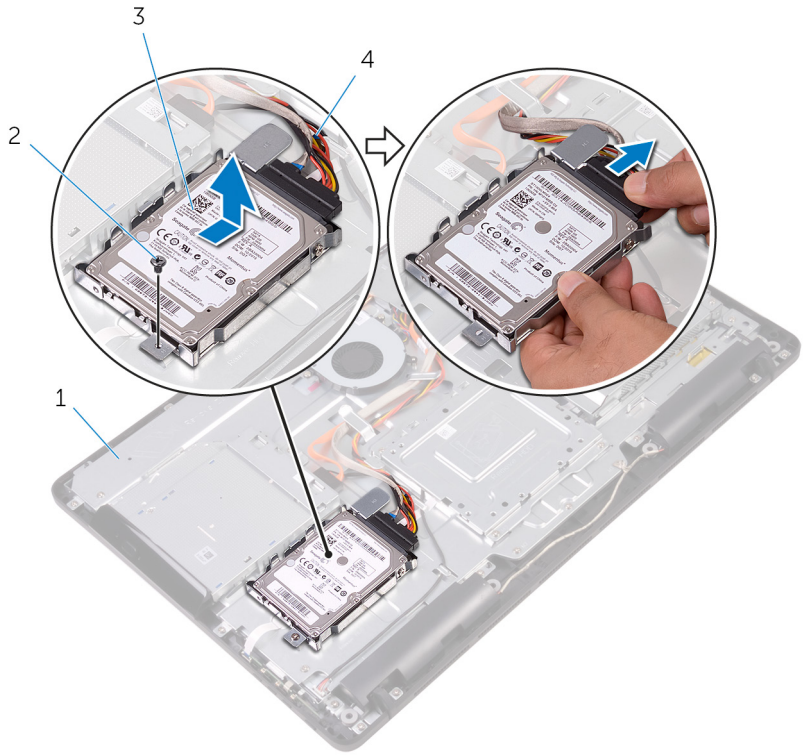
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.

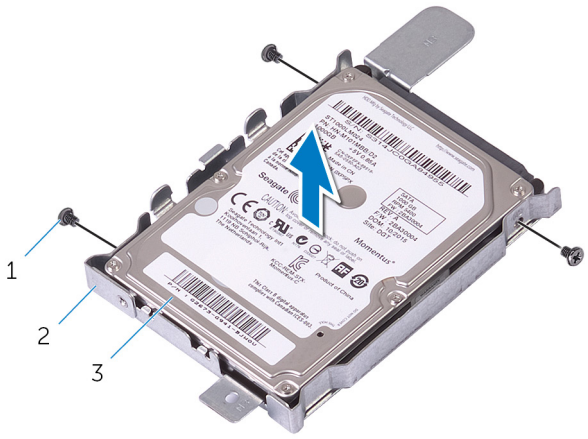
Procedure

1. Disconnect the hard-drive cable from the hard drive.
2. Remove the screw that secures the hard-drive assembly to the display-assembly base.
3. Slide the hard-drive assembly until the securing tabs are released from the slots on the display-assembly base.
4. Lift the hard-drive assembly off the display-assembly base.



1. display-assembly base
2. screw
3. hard-drive assembly
4. hard-drive cable

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



a. screws (3)
b. hard-drive bracket
c. hard drive

11

Replacing the hard drive

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

CAUTION: Hard drives are fragile. Exercise care when handling the hard drive.

Topics:

- Procedure
- Post-requisites

Procedure

1. Align the screw holes on the hard drive with the screw holes on the hard-drive bracket.
2. Replace the screws that secure the hard-drive bracket to the hard drive.
3. Align the tabs on the hard-drive assembly with the slots on the display-assembly base.
4. Slide the securing tabs on the hard-drive assembly into the slots on the display-assembly base.
5. Replace the screw that secures the hard-drive assembly to the display-assembly base.
6. Connect the hard-drive cable to the hard drive.

Post-requisites

1. Replace the back cover.
2. Replace the stand.

12

Removing the system-board shield

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

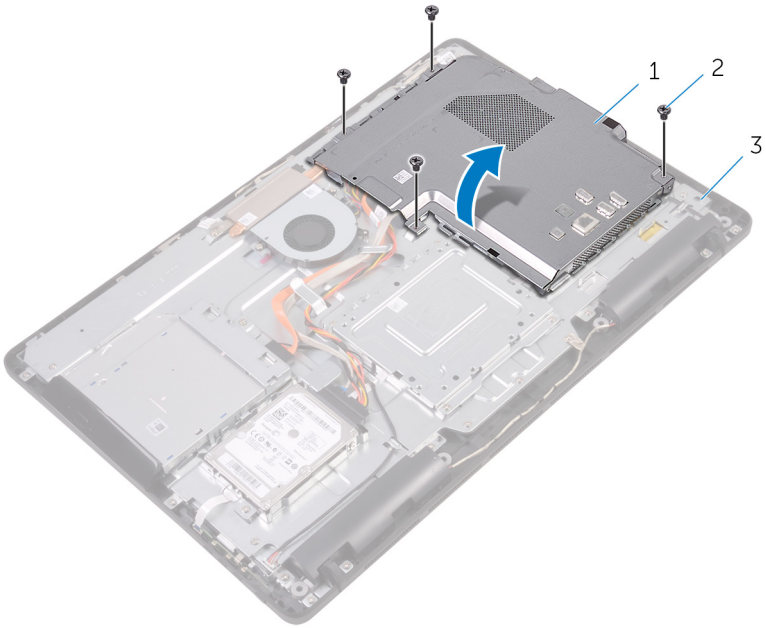
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.

Procedure

1. Remove the screws that secure the system-board shield to the display-assembly base.
2. Lift the system-board shield off the display-assembly base.



a. system-board shield
b. screws (4)
c. display-assembly base

13

Replacing the system-board shield

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Procedure
- Post-requisites

Procedure

1. Align the slots on the system-board shield with the ports on the system board and place the system-board shield on the display-assembly base.
2. Align the screw holes on the system-board shield with the screw holes on the display-assembly base.
3. Replace the screws that secure the system-board shield to the display-assembly base.

Post-requisites

1. Replace the back cover.
2. Replace the stand.

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Removing the memory module

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

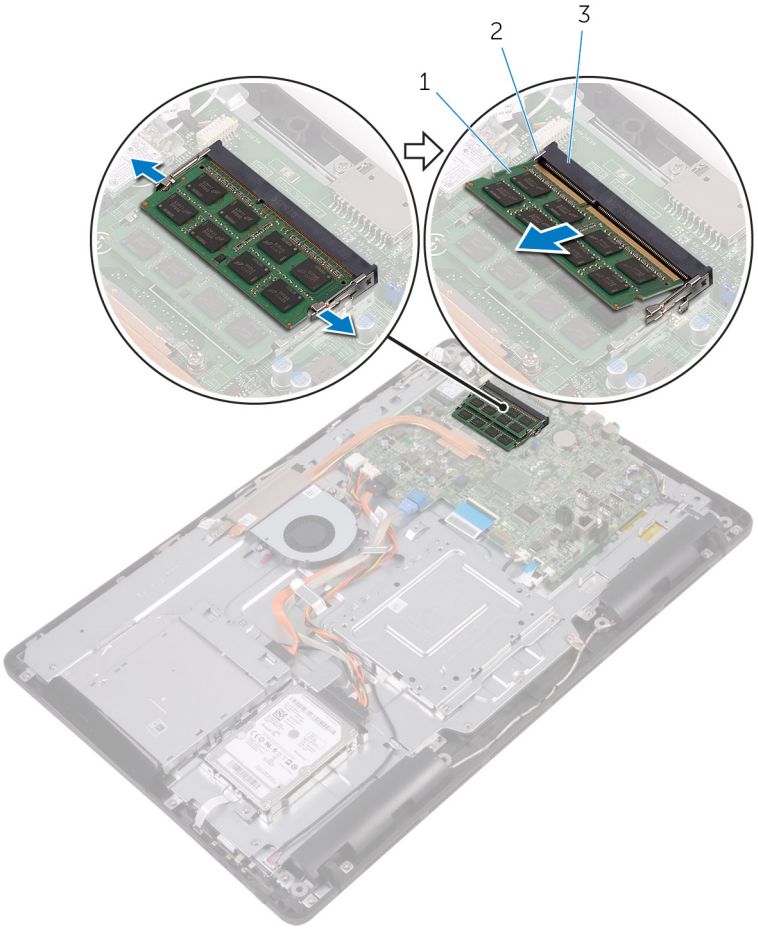
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.
3. Remove the system-board shield.

Procedure

1. Using your fingertips, spread apart the securing clips at each end of the memory-module slot until the memory module pops up.
2. Slide and remove the memory module from the memory-module slot.



a. memory module
b. securing clips (2)
c. memory-module slot

15

Replacing the memory module

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

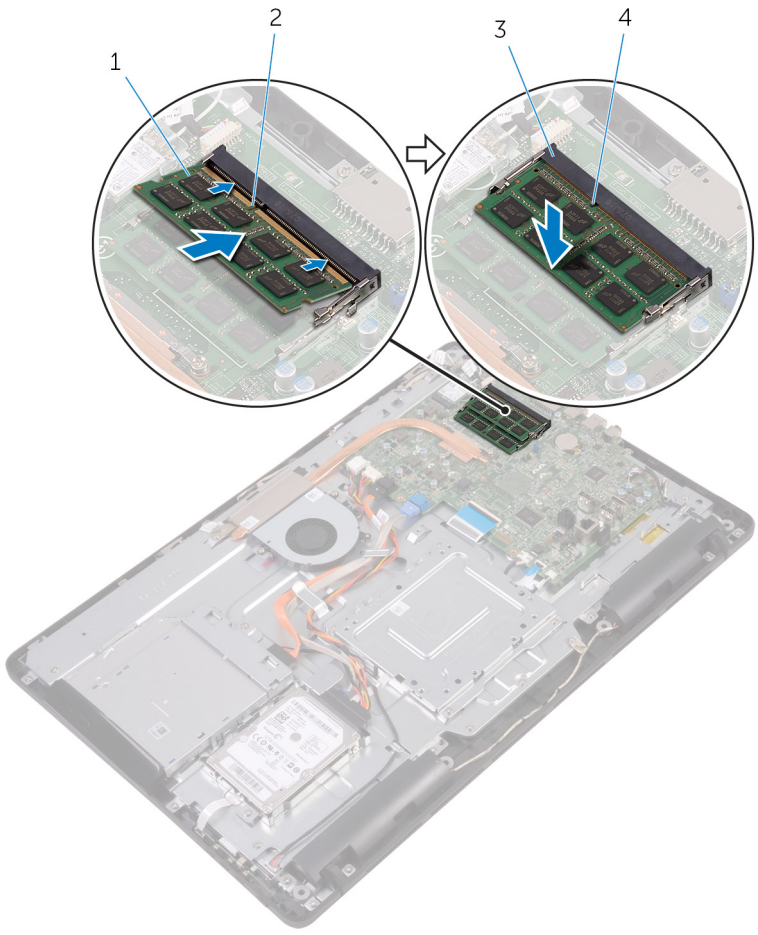
Topics:

- Procedure
- Post-requisites

Procedure

1. Align the notch on the memory module with the tab on the memory-module slot.
2. Slide the memory module firmly into the slot at an angle and press the memory module down until it clicks into place.

NOTE: If you do not hear the click, remove the memory module and reinstall it.



1. memory module
2. notch
3. memory-module slot
4. tab

Post-requisites

1. Replace the system-board shield.
2. Replace the back cover.
3. Replace the stand.

16

Removing the wireless card

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

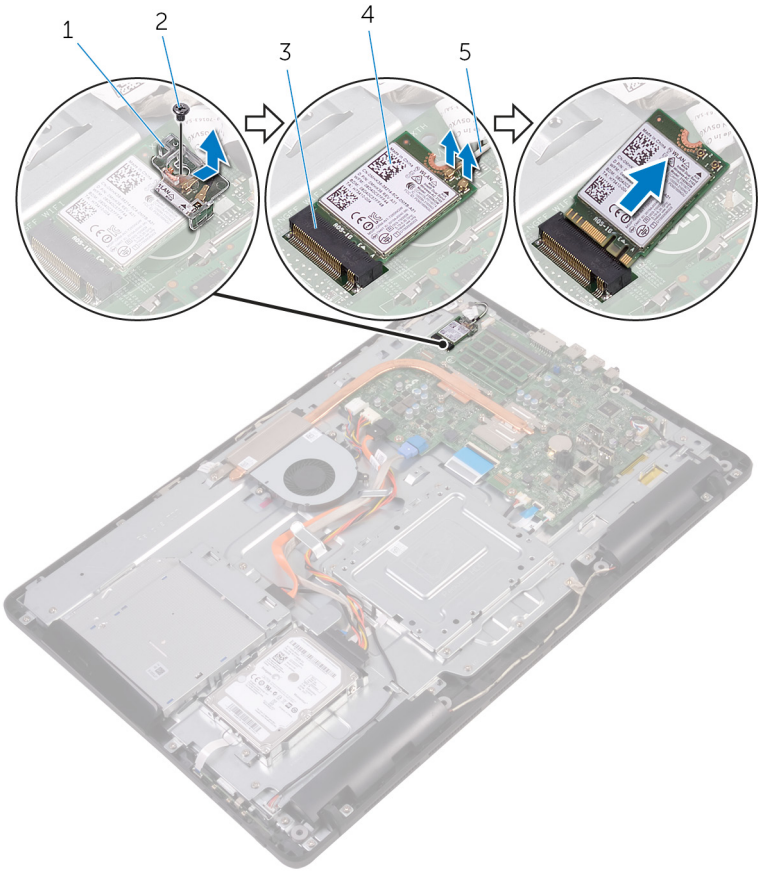
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.
3. Remove the system-board shield.

Procedure

1. Remove the screw that secures the wireless-card bracket and the wireless card to the system board.
2. Slide the wireless-card bracket off the wireless card.
3. Disconnect the antenna cables from the wireless card.
4. Slide the wireless card out of the wireless-card slot.



1. wireless-card bracket
2. screw
3. wireless-card slot
4. wireless card
5. antenna cables

17

Replacing the wireless card

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Procedure
- Post-requisites

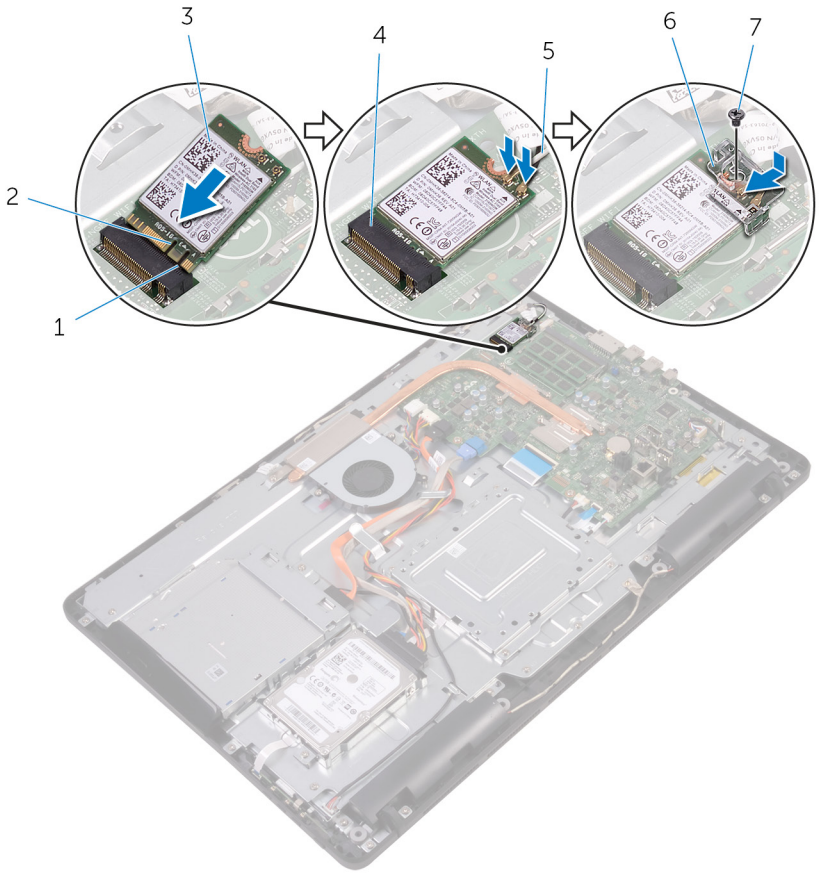
Procedure

1. Align the notch on the wireless card with the tab on the wireless-card slot.
2. Insert the wireless card into the wireless-card slot.
3. Connect the antenna cables to the wireless card.

   The following table provides the antenna-cable color scheme for the wireless card supported by your computer:

Connectors on the wireless card	Antenna-cable color
Main (white triangle)	White
Auxiliary (black triangle)	Black

4. Press down the other end of the wireless card and align the screw hole on the wireless-card bracket and wireless card with the screw hole on the system board.
5. Replace the screw that secures the wireless-card bracket and the wireless card to the system board.



1. tab
2. notch
3. wireless card
4. wireless-card slot
5. antenna cables
6. wireless-card bracket
7. screw

Post-requisites

1. Replace the system-board shield.
2. Replace the back cover.
3. Replace the stand.

18

Removing the control-buttons board

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Prerequisites
- Procedure

Prerequisites

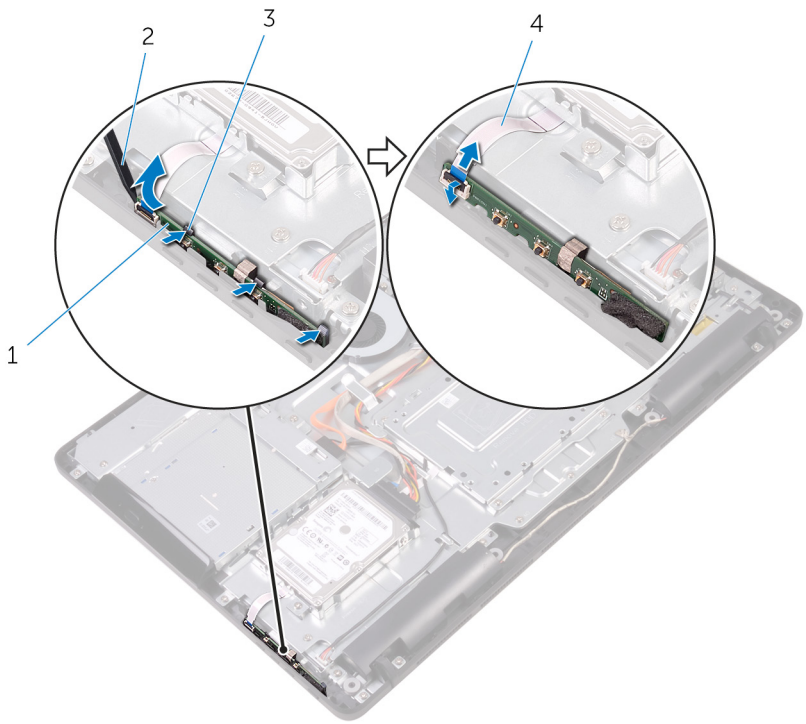
1. Remove the stand.
2. Remove the back cover.

Procedure

1. Using a plastic scribe, push the securing clips on the control-buttons board slot.

   NOTE: Note the orientation of the control-buttons board so that you can replace it correctly.

2. Press the securing clips and lift the control-buttons board off the display-assembly base.
3. Open the latch and disconnect the control-buttons board cable from the control-buttons board.



1. control-buttons board
2. plastic scribe
3. securing clips (3)
4. control-buttons board cable

19

Replacing the control-buttons board

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Procedure
- Post-requisites

Procedure

1. Slide the control-buttons board cable into the connector on the control-buttons board and close the latch to secure the cable.

   NOTE: You must correctly align the control-buttons board to ensure that it is properly secured to the display-assembly base. For correct orientation, see step 1 in "Removing the control-buttons board".

2. Slide the control-buttons board into the slot on the display-assembly base until the securing clips lock in place.

Post-requisites

1. Replace the back cover.
2. Replace the stand.

20

Removing the microphone

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

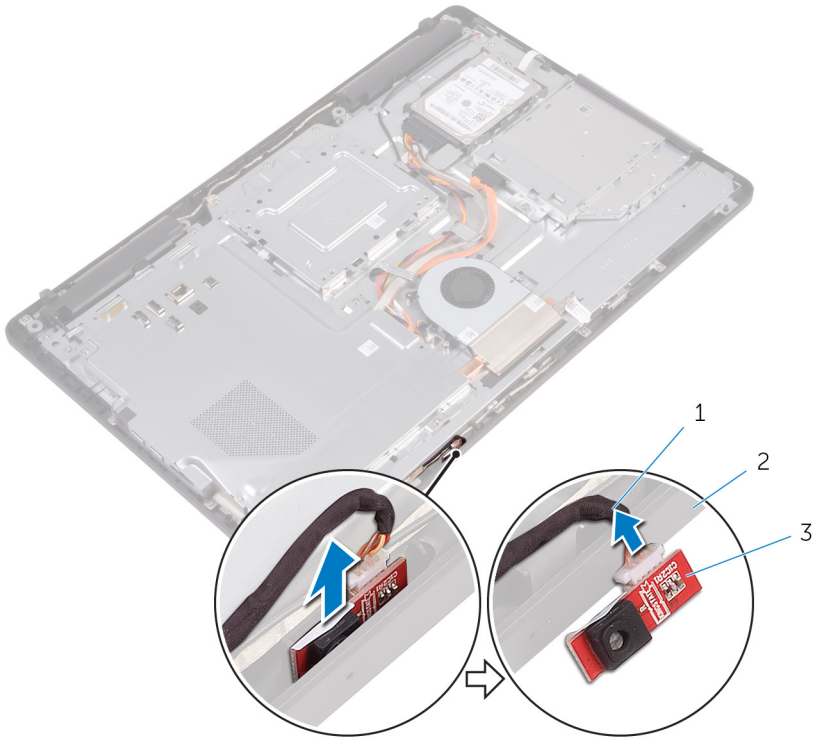
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.

Procedure

1. Lift the microphone module off the display-assembly base.
2. Disconnect the microphone cable from the microphone module.



a. microphone cable
b. display-assembly base
c. microphone module

21

Replacing the microphone

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Procedure
- Post-requisites

Procedure

1. Connect the microphone cable to the microphone module.
2. Slide the microphone module into the slot on the display-assembly base.

Post-requisites

1. Replace the back cover.
2. Replace the stand.

22

Removing the camera

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Prerequisites
- Procedure

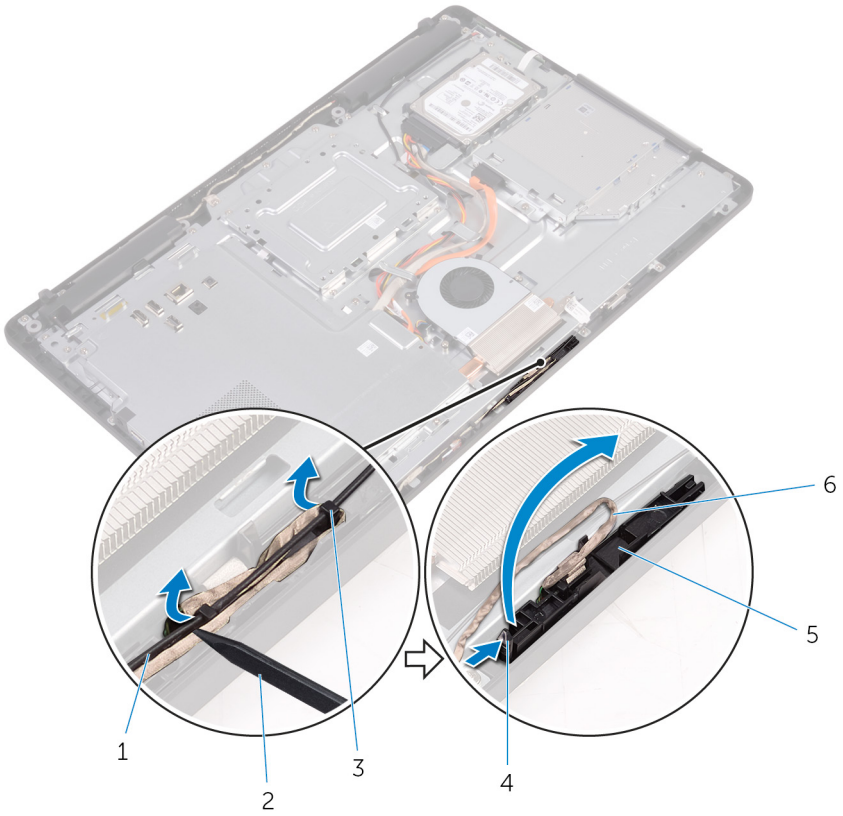
Prerequisites

NOTE: This chapter is applicable only for systems with a touch screen display. For systems with a non-touch screen display, the microphones will be integrated on the camera assembly.

1. Remove the stand.
2. Remove the back cover.

Procedure

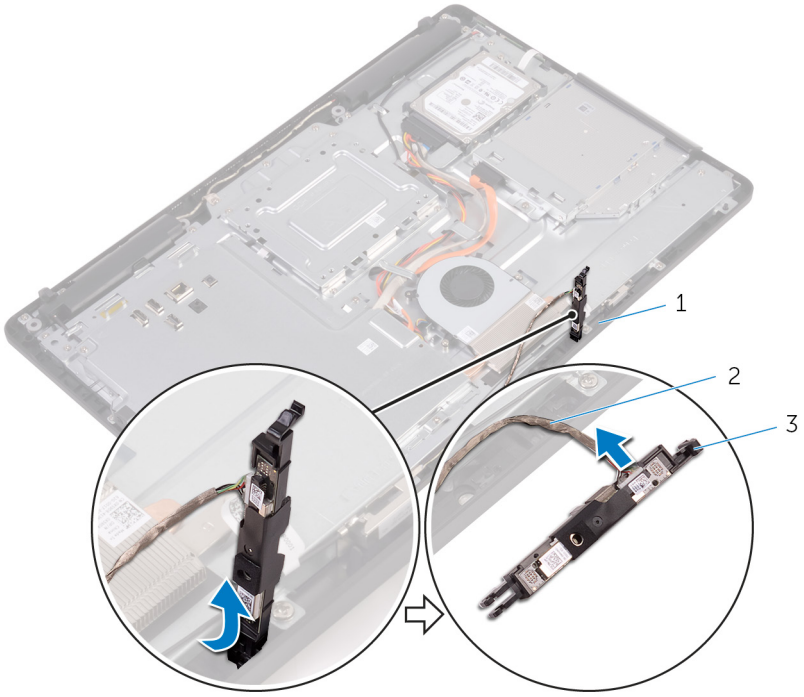
1. Note the routing of the camera cable and antenna cable and remove it from the routing guides using a plastic scribe.
2. Press the securing clip to release the camera frame from the tab on the display-assembly base and lift it off.



1. antenna cable
2. plastic scribe

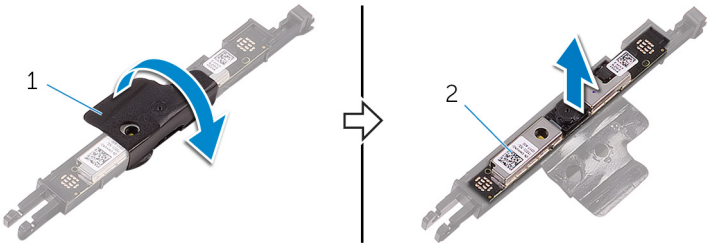
3. routing guides
4. securing clip
5. camera frame
6. camera cable

3. Turn the camera over and remove the camera cable from the tab on the back of the camera frame.



a. tab
b. camera cable
c. camera frame

4. Peel off the camera from the camera frame and lift up the camera from the frame.



a. camera frame
b. camera

23

Replacing the camera

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Procedure
- Post-requisites

Procedure

1. Place the camera on the camera frame and secure the camera.
2. Connect the camera cable to the camera module.
3. Press the camera frame down into the slot on the display-assembly base until it snaps into place.
4. Route the camera cable and antenna cable through the routing guides on the display-assembly base.

Post-requisites

1. Replace the back cover.
2. Replace the stand.

24

Removing the coin-cell battery

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

CAUTION: Removing the coin-cell battery resets the BIOS setup program's settings to default. It is recommended that you note the BIOS setup program's settings before removing the coin-cell battery.

Topics:

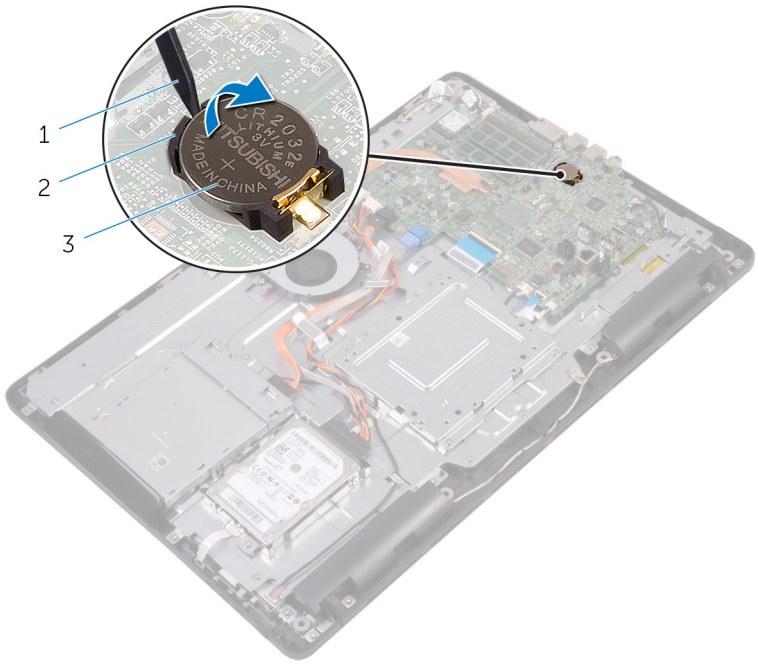
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.
3. Remove the system-board shield.

Procedure

Using a plastic scribe, gently pry the coin-cell battery out of the battery socket on the system board.



1. plastic scribe
2. coin-cell battery
3. battery socket

25

Replacing the coin-cell battery

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Procedure
- Post-requisites

Procedure

With the positive-side facing up, insert the coin-cell battery into the battery socket and press down the battery into place.

Post-requisites

1. Replace the system-board shield.
2. Replace the back cover.
3. Replace the stand.

26

Removing the fan

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

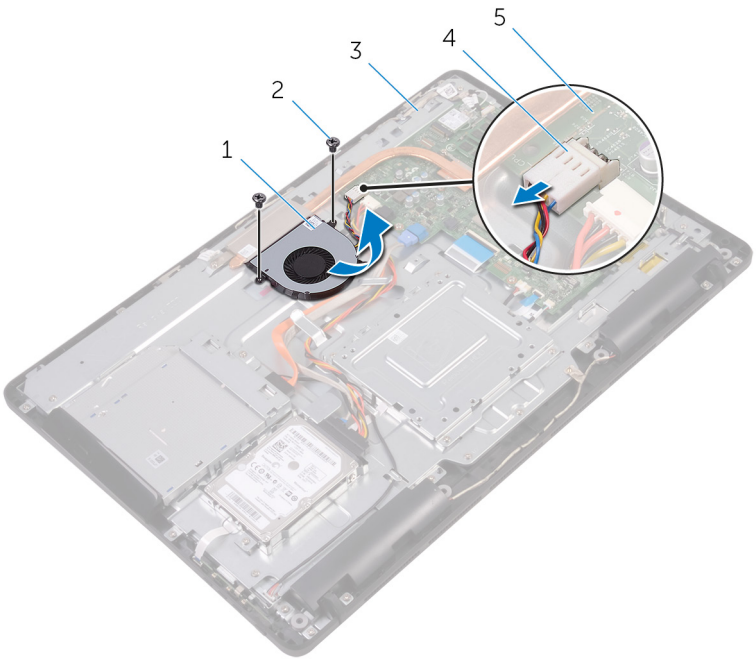
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.
3. Remove the system-board shield.

Procedure

1. Disconnect the fan cable from the system board.
2. Remove the screws that secure the fan to the display-assembly base.
3. Lift and slide the fan from under the heat sink.



1. fan
2. screws (2)
3. display-assembly base
4. fan cable
5. system board

27

Replacing the fan

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Procedure
- Post-requisites

Procedure

1. Slide the fan under the heat sink and place it on the display-assembly base.
2. Align the screw holes on the fan with the screw holes on the display-assembly base.
3. Replace the screws that secure the fan to the display-assembly base.
4. Connect the fan cable to the system board.

Post-requisites

1. Replace the system-board shield.
2. Replace the back cover.
3. Replace the stand.

28

Removing the heat sink

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

NOTE: The heat sink may become hot during normal operation. Allow sufficient time for the heat sink to cool before you touch it.

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

Topics:

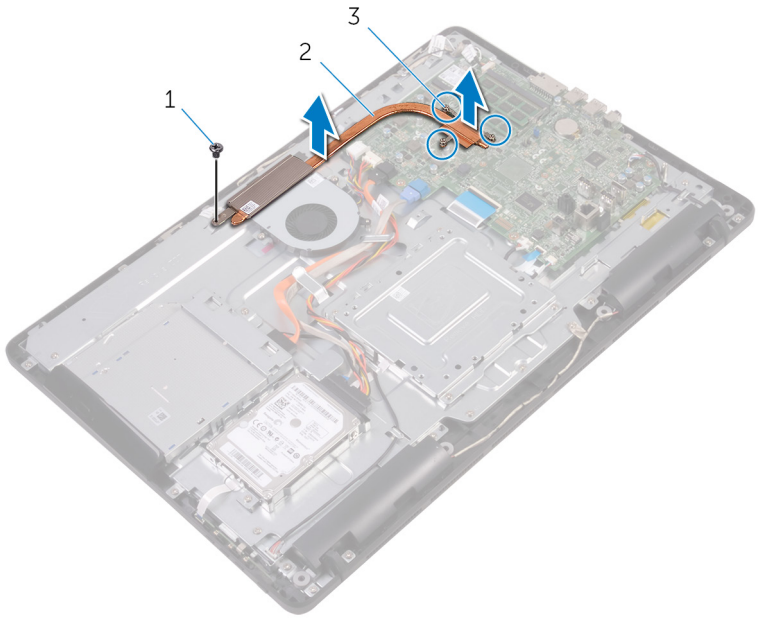
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.
3. Remove the system-board shield.

Procedure

1. Remove the screw that secures the heat sink to the display-assembly base.
2. In sequential order (as indicated on the heat sink), loosen the captive screws that secure the heat sink to the system board.
3. Lift the heat sink off the system board.



a. screw
b. heat sink

c. captive screws (3)

29

Replacing the heat sink

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

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

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

Topics:

- Procedure
- Post-requisites

Procedure

1. Align the captive screws on the heat sink with the screw holes on the system board.
2. In sequential order (as indicated on the heat sink), tighten the captive screws that secure the heat sink to the system board.
3. Replace the screw that secures the heat sink to the display-assembly base.

Post-requisites

1. Replace the system-board shield.
2. Replace the back cover.
3. Replace the stand.

30

Removing the speakers

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

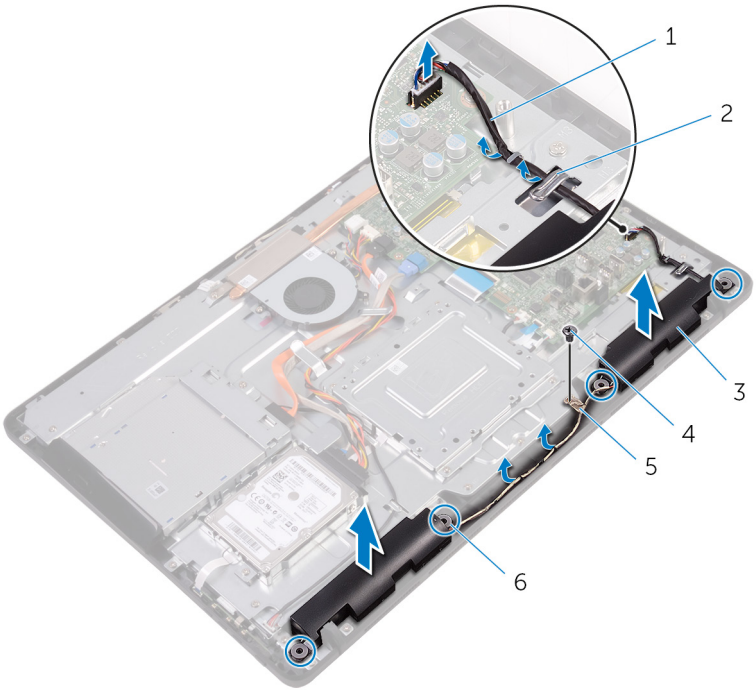
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.
3. Remove the system-board shield.

Procedure

1. Disconnect the speaker cable from the system board.
2. Note the routing of the speaker cable and the position of the rubber grommets on the computer bezel.
3. Remove the speaker cable from the routing guides.
4. Remove the screw that secures the tape to the display-assembly base.
5. Peel off the tape that secures the speaker cable to the display-assembly base.
6. Lift the speakers, along with the speaker cable, off the display assembly.



1. speaker cable
2. routing guides
3. speakers (2)
4. screw

5. tape
6. rubber grommets (4)

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Replacing the speakers

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Procedure
- Post-requisites

Procedure

1. Using the alignment posts and rubber grommets on the display-assembly base, place the speakers on the display-assembly base.
2. Route the speaker cable through the routing guides on the display-assembly base.
3. Adhere the tape that secures the speaker cable to the display-assembly base.
4. Replace the screw that secures the tape to the display-assembly base.
5. Connect the speaker cable to the system board.

Post-requisites

1. Replace the system-board shield.
2. Replace the back cover.
3. Replace the stand.

32

Removing the system board

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

NOTE: Your computer's Service Tag is stored in the system board. You must enter the Service Tag in the BIOS setup program after you replace the system board.

NOTE: Replacing the system board removes any changes you have made to the BIOS using the BIOS setup program. You must make the appropriate changes again after you replace the system board.

NOTE: Before disconnecting the cables from the system board, note the location of the connectors so that you can reconnect the cables correctly after you replace the system board.

Topics:

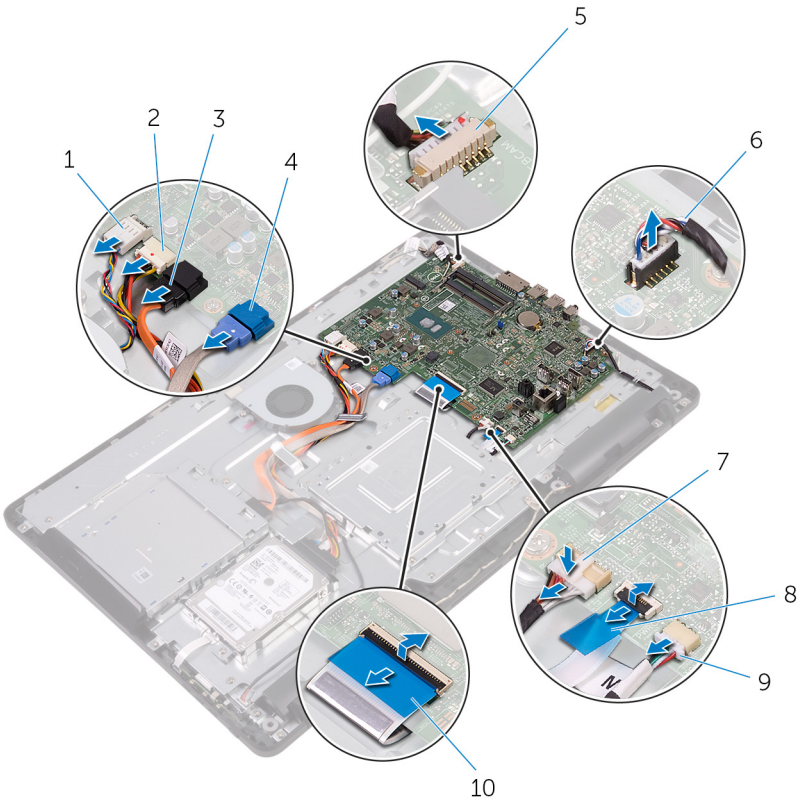
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.
3. Remove the system-board shield.
4. Remove the heat sink.
5. Remove the memory module.
6. Remove the wireless card.

Procedure

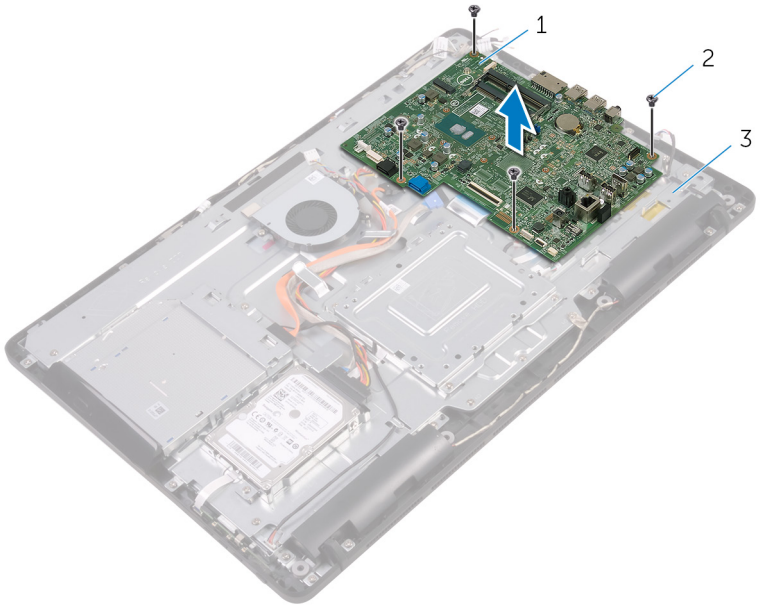
1. Disconnect the fan cable, hard-drive and optical-drive power cable, optical-drive data cable, hard-drive data cable, microphone and camera cable, speaker cable, display-panel power cable, and touch-board cable from the system board.
2. Open the latches and disconnect the control-buttons board cable and display cable from the system board.



1. fan cable
2. hard-drive and optical-drive power cable
3. optical-drive data cable
4. hard-drive data cable
5. microphone and camera cable
6. speaker cable
7. display-panel power cable
8. control-buttons board cable
9. touch-board cable
10. display cable

NOTE: The touch-board cable is not available on the non-touch systems.

3. Remove the screws that secure the system board to the display-assembly base.
4. Lift the system board off the display-assembly base.



a. system board
b. screws (4)

c. display-assembly base

33

Replacing the system board

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

NOTE: Your computer's Service Tag is stored in the system board. You must enter the Service Tag in the BIOS setup program after you replace the system board.

NOTE: Replacing the system board removes any changes you have made to the BIOS using the BIOS setup program. You must make the appropriate changes again after you replace the system board.

Topics:

- Procedure
- Post-requisites

Procedure

1. Align the screw holes on the system board with the screw holes on the display-assembly base.
2. Replace the screws that secure the system board to the display-assembly base.
3. Slide the control-buttons board cable and the display cable into their respective connectors on the system board and close the latches to secure the cables.
4. Connect the touch-board cable, display-panel power cable, speaker cable, microphone and camera cable, hard-drive data cable, optical-drive data cable, hard-drive and optical-drive power cable, and fan cable to the system board.

Post-requisites

1. Replace the wireless card.
2. Replace the memory module.
3. Replace the heat sink.
4. Replace the system-board shield.
5. Replace the back cover.
6. Replace the stand.

34

Removing the display assembly

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

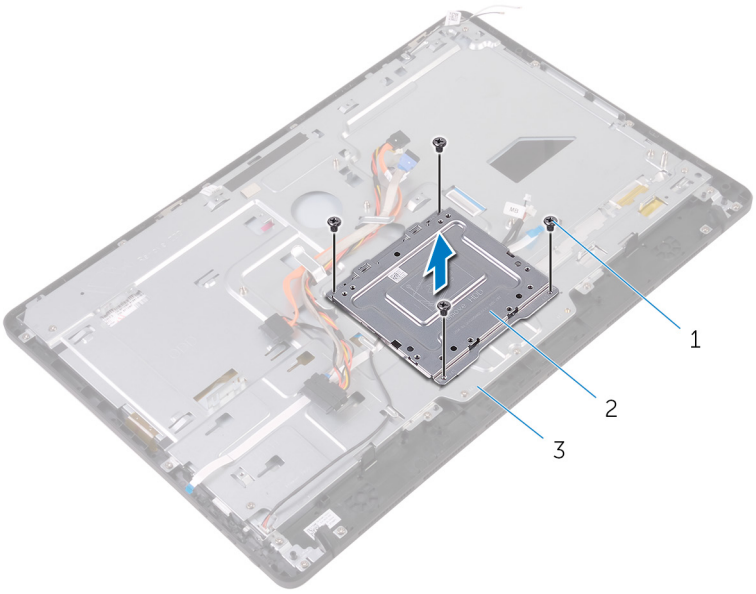
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.
3. Remove the optical drive.
4. Follow the procedure from step 1 to step 4 in "Removing the hard drive".
5. Remove the system-board shield.
6. Remove the memory module.
7. Remove the wireless card.
8. Remove the control-buttons board.
9. Remove the microphone.
10. Remove the camera.
11. Remove the fan.
12. Remove the heat sink.
13. Remove the speakers.
14. Remove the system board.

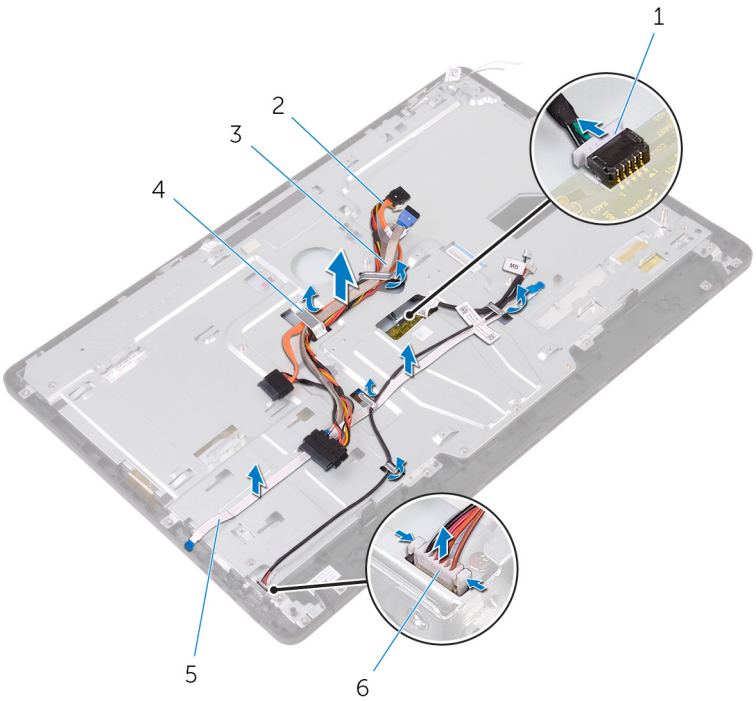
Procedure

1. Remove the screws that secure the VESA-mount bracket to the display-assembly base.
2. Lift the VESA-mount bracket off the display-assembly base.



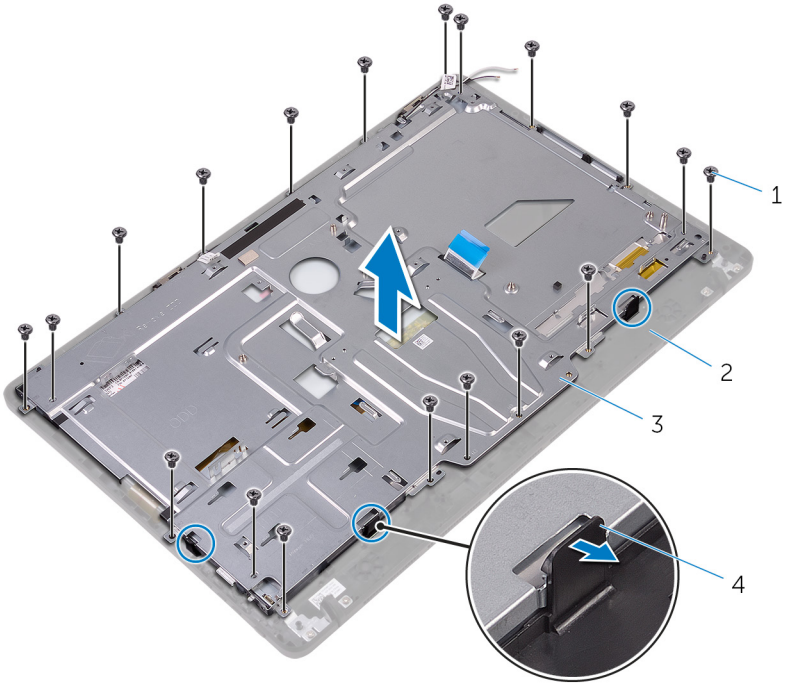
a. screws (4)
b. VESA-mount bracket
c. display-assembly base

3. Disconnect the touch-screen board cable and display-panel power cable from their connectors on the display-assembly base.
4. Note the routing of the optical-drive data, touch-board, display backlight, hard drive, and control-buttons board cables and remove the cables from the routing guides on the display-assembly base.



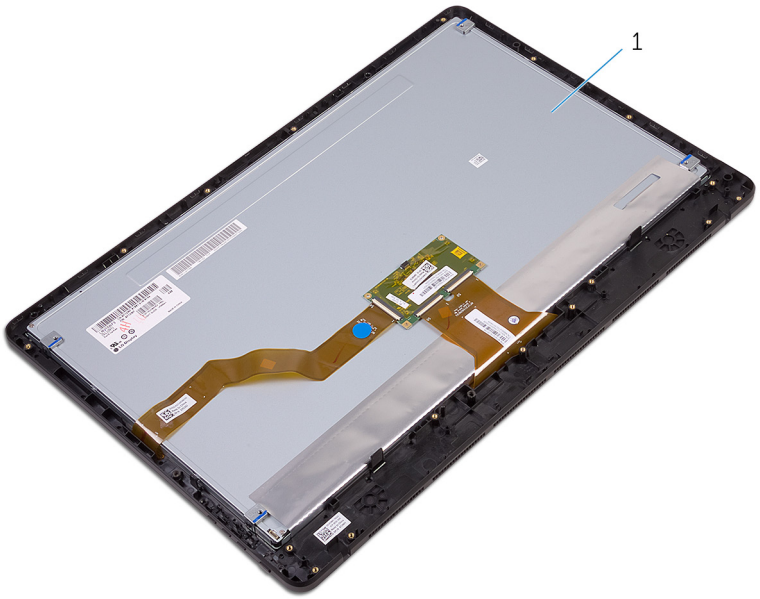
1. touch-screen board cable
2. optical-drive data cable
3. hard-drive cable
4. routing guide
5. control-buttons board cable
6. display-panel power cable

5. Remove the screws that secure the display-assembly base to the display assembly.
6. Release the display-assembly base from the tabs on the display assembly.



1. screws (19)
2. display assembly
3. display-assembly base
4. tabs (3)

7. Lift the display-assembly base off the display assembly.
8. Remove the rubber feet.



1. display assembly

35

Replacing the display assembly

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Procedure
- Post-requisites

Procedure

1. Replace the rubber feet.
2. Slide the tabs on the display assembly into the slots on the display-assembly base.
3. Replace the display-assembly base on the display assembly.
4. Replace the screws that secure the display-assembly base to the display assembly.
5. Route the optical-drive data cable, touch-board cable, display-backlight cable, hard-drive cables and control-buttons board cable through the routing guides on the display-assembly base.
6. Connect the touch-screen board cable and display-panel power cable to their connectors on the display-assembly base.
7. Align the screw holes on the VESA-mount bracket with the screw holes on the display-assembly base.
8. Replace the screws that secure the VESA-mount bracket to the display-assembly base.

Post-requisites

1. Replace the system board.
2. Replace the speakers.
3. Replace the heat sink.
4. Replace the fan.
5. Replace the camera.
6. Replace the microphone.
7. Replace the control-buttons board.
8. Replace the wireless card.
9. Replace the memory module.
10. Replace the system-board shield.
11. Follow the procedure in step 3 to step 6 in “Replacing the hard drive”.
12. Replace the optical drive.
13. Replace the back cover.
14. Replace the stand.

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Removing the display cable

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

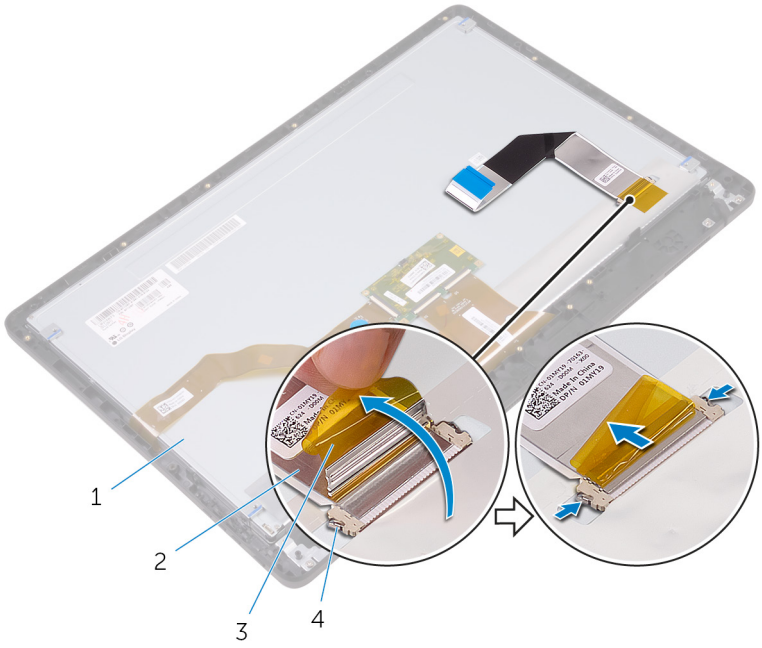
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.
3. Remove the optical drive.
4. Follow the procedure from step 1 to step 4 in "Removing the hard drive".
5. Remove the system-board shield.
6. Remove the memory module.
7. Remove the wireless card.
8. Remove the control-buttons board.
9. Remove the microphone.
10. Remove the fan.
11. Remove the heat sink.
12. Remove the speakers.
13. Remove the system board.
14. Remove the display assembly.

Procedure

1. Peel off the tape that secures the display cable to the display assembly.
2. Press the clips and disconnect the display cable from the display assembly.
3. Lift the display cable off the display assembly.



1. display assembly
2. display cable
3. tape
4. clips (2)

37

Replacing the display cable

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Procedure
- Post-requisites

Procedure

1. Connect the display cable to the display assembly and close the latch to secure the cable.
2. Adhere the tape that secures the display cable to the display assembly.

Post-requisites

1. Replace the display assembly.
2. Replace the system board.
3. Replace the speakers.
4. Replace the heat sink.
5. Replace the fan.
6. Replace the microphone.
7. Replace the control-buttons board.
8. Replace the wireless card.
9. Replace the memory module.
10. Replace the system-board shield.
11. Follow the procedure in step 3 to step 6 in "Replacing the hard drive".
12. Replace the optical drive.
13. Replace the back cover.
14. Replace the stand.

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Removing the rubber feet

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

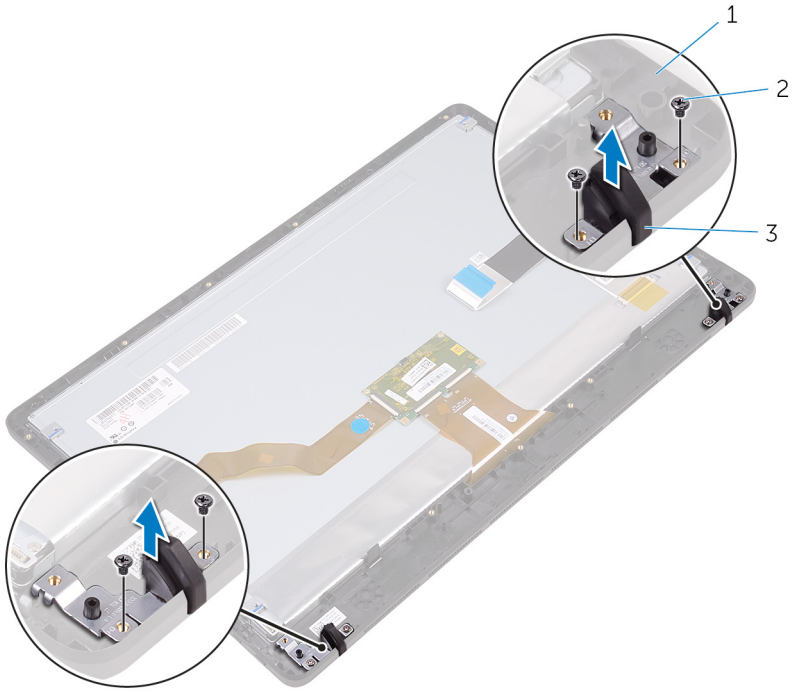
- Prerequisites
- Procedure

Prerequisites

1. Remove the stand.
2. Remove the back cover.
3. Remove the optical drive.
4. Follow the procedure from step 1 to step 4 in "Removing the hard drive".
5. Remove the system-board shield.
6. Remove the memory module.
7. Remove the wireless card.
8. Remove the control-buttons board.
9. Remove the fan.
10. Remove the heat sink.
11. Remove the speakers.
12. Remove the system board.
13. Follow the procedure from step 1 to step 7 in Removing the display assembly.

Procedure

1. Remove the screws that secure the rubber feet to the display bezel.
2. Lift the rubber feet off the display bezel.



a. display bezel
b. screws (4)
c. rubber feet (2)

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Replacing the rubber feet

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Topics:

- Procedure
- Post-requisites

Procedure

1. Align the screw holes on the rubber feet with the screw holes on the display bezel.
2. Replace the screws that secure the rubber feet to the display bezel.

Post-requisites

1. Follow the procedure in step 2 to step 8 in "Replacing the display assembly".
2. Replace the system board.
3. Replace the speakers.
4. Replace the heat sink.
5. Replace the fan.
6. Replace the control-buttons board.
7. Replace the wireless card.
8. Replace the memory module.
9. Replace the system-board shield.
10. Follow the procedure in step 3 to step 6 in "Replacing the hard drive".
11. Replace the optical drive.
12. Replace the back cover.
13. Replace the stand.

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BIOS setup program

BIOS overview

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

NOTE: Before you change BIOS Setup program, it is recommended that you write down the BIOS Setup program screen information for future reference.

Use the BIOS Setup program for the following purposes:

- Get information about the hardware installed in your computer, such as the amount of RAM and the size of the hard drive.
- Change the system configuration information.
- Set or change a user-selectable option, such as the user password, type of hard drive installed, and enabling or disabling base devices.

Entering BIOS setup program

1. Turn on (or restart) your computer.
2. During POST, when the DELL logo is displayed, watch for the F2 prompt to appear, and then press F2 immediately.

   NOTE: The F2 prompt indicates that the keyboard is initialized. This prompt can appear very quickly, so you must watch for it, and then press F2. If you press F2 before the F2 prompt, this keystroke is lost. If you wait too long and the operating system logo appears, continue to wait until you see the desktop. Then, turn off your computer and try again.

Clearing forgotten passwords

NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

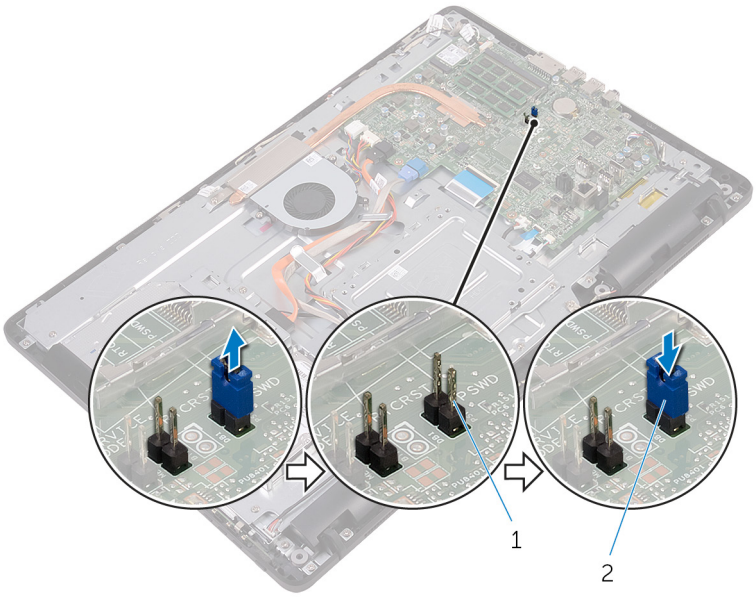
Prerequisites

1. Remove the stand.
2. Remove the back cover.
3. Remove the system-board shield.

Procedure

1. Locate the password reset jumper (PSWD) on the system board.

   NOTE: For more information on the location of the jumper, see "System-board components".
2. Remove the jumper plug from the password jumper-pins.
3. Wait for 5 seconds and then replace the jumper plug in its original location.



a. password jumper-pins
b. jumper plug

Post-requisites

1. Replace the system-board shield.
2. Replace the back cover.
3. Replace the stand.

Clearing CMOS settings

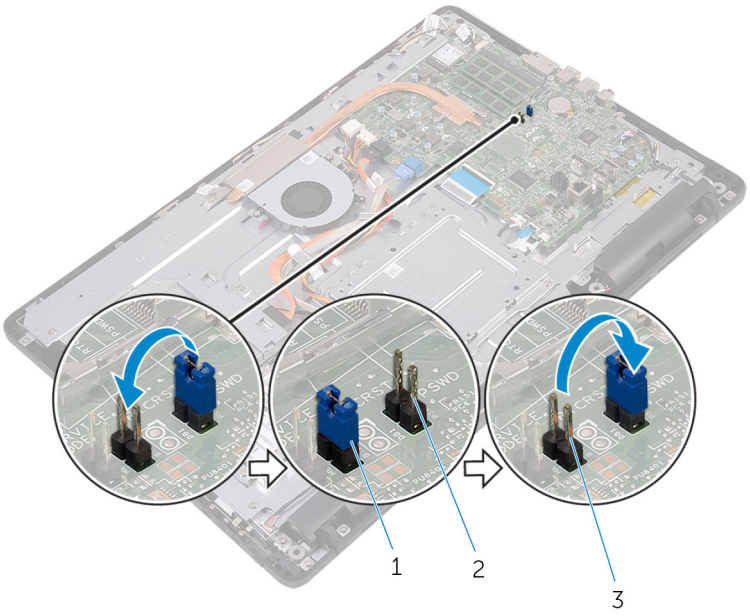
NOTE: Before working inside your computer, read the safety information that shipped with your computer and follow the steps in Before working inside your computer. After working inside your computer, follow the instructions in After working inside your computer. For more safety best practices, see the Regulatory Compliance home page at www.dell.com/regulatory_compliance.

Prerequisites

1. Remove the stand.
2. Remove the back cover.
3. Remove the system-board shield.

Procedure

1. Locate the CMOS reset jumper (RTCRST) on the system board.
2. Remove the jumper plug from the password jumper-pins and connect it to the CMOS jumper-pins.
3. Wait for 5 seconds and then replace the jumper plug to its original location.



a. jumper plug
b. password jumper pins
c. CMOS jumper-pins

Post-requisites

1. Replace the system-board shield.
2. Replace the back cover.
3. Replace the stand.

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Flashing the BIOS

You may need to flash (update) the BIOS when an update is available or when you replace the system board. To flash the BIOS:

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads** > **Find it myself**.
5. Select the operating system installed on your computer.
6. Scroll down the page and expand **BIOS**.
7. Click **Download** to download the latest version of the BIOS for your computer.
8. After the download is complete, navigate to the folder where you saved the BIOS update file.
9. Double-click the BIOS update file icon and follow the instructions on the screen.

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Technology and components

NOTE: The screen shots of the device manager in your computer may vary depending on the configuration ordered.

Topics:

- Audio
- Camera
- Display
- HDMI
- Graphics
- Intel WiDi
- USB
- Wi-Fi
- Bluetooth
- Hard Drive
- Media-card reader
- Power adapter
- Chipsets
- Memory
- Processors
- Operating system
- Service Tag location
- Device drivers
- BIOS overview

Audio

This computer is shipped with Realtek ALC3661 with Waves MaxxAudio Pro, which is the utility to adjust various audio settings.

NOTE: The audio drivers are already installed when you receive your computer.

Downloading the audio driver

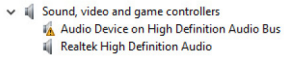
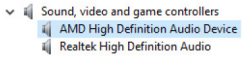
1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads** > **Find it myself**.
5. Scroll down the page and expand **Audio**.
6. Click **Download** to download the audio driver.
7. Save the file, and after the download is complete, navigate to the folder where you saved the audio driver file.
8. Double-click the audio driver file icon and follow the instructions on the screen to install the driver.

Identifying the audio controller

1. On the taskbar, click the search box, and then type `Device Manager`.
2. Click **Device Manager**.
   The **Device Manager** window is displayed.

3. Expand **Sound, video and game controllers** to view the audio controller.

Before installation	After installation
	

Changing the audio settings

1. On the taskbar, click the search box, and then type `Dell Audio`.
2. Click **Dell Audio** and change the audio settings as required.

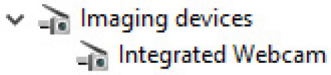
Camera

This computer is shipped with an integrated 0.92 megapixel high-speed camera with a maximum of 1280 X 720 HD resolution at 30 FPS.

NOTE: You must replace the camera module if you encounter any issues with the built-in microphones.

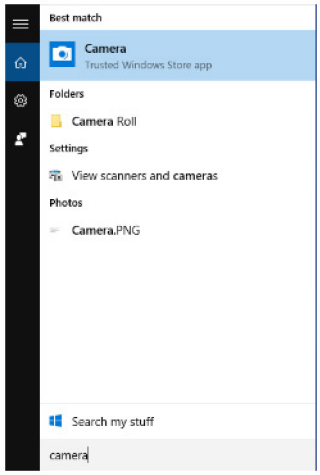
Identifying the webcam in device manager

1. On the taskbar, click the search box, and then type `Device Manager`.
2. Click **Device Manager**.
   The **Device Manager** window is displayed.
3. Expand **Imaging devices**.



Starting the camera application

1. On the taskbar, click the search box, and then type `Camera`.
2. Click **Camera**.



Getting the Dell Webcam Central

A CD is shipped along with your computer which contains the Dell Webcam Central software. If you do not have the software, you can download it by registering through My Account on the Dell website.

NOTE: The Dell Webcam Central is not available for download from the support site or the resource CD.

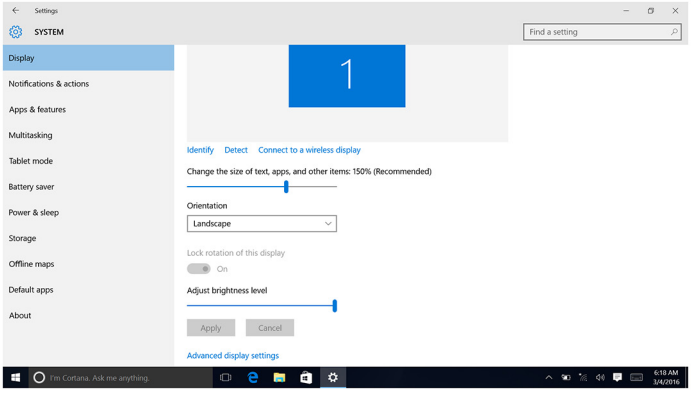
Display

This computer is shipped with the following display options:

- 21.5-in FHD + touch screen with 1920 x 1080 resolution
- 21.5-in FHD + non-touch screen with 1920 x 1080 resolution

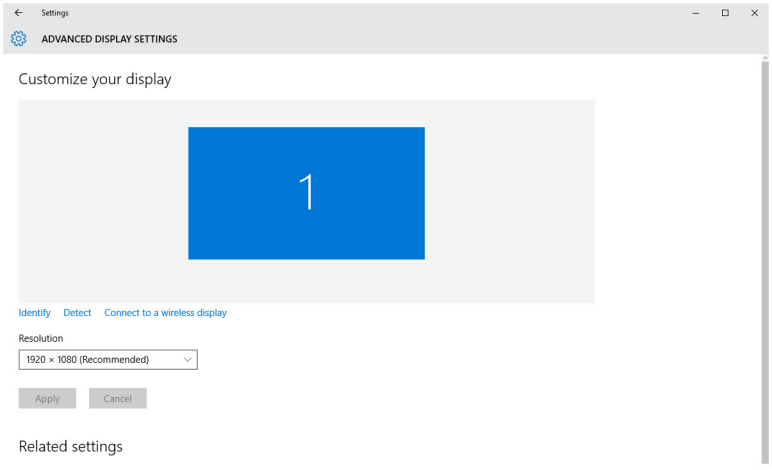
Adjusting the brightness

1. Right-click on your desktop and select **Display settings**.
2. Drag the **Adjust brightness level** slider to adjust the brightness.



Changing the screen resolution

1. Right-click and hold on your desktop and select **Display settings**.
2. Click **Advanced display settings**.
3. Select the desired resolution from the drop-down list.
4. Click **Apply**.



Cleaning the display

CAUTION: Do not use substances such as alcohol, chemicals, or household cleaners for cleaning the display.

CAUTION: To avoid damaging the display, do not apply force when cleaning and wipe off any remaining liquid after cleaning.

NOTE: A commercial display cleaning kit should be used for cleaning. If unavailable, use a soft, damp microfiber cloth lightly sprayed with distilled water.

1. Turn off your computer and display before cleaning.
2. Gently wipe the display in circular motion to remove any dust or dirt particles.
3. Let the display dry thoroughly before turning it on.

HDMI

This computer has an HDMI-in port located on the back side of your computer. The HDMI-in port allows you to connect a gaming console, Blu-ray player, or other HDMI-out enabled devices.

Graphics

This computer is shipped with AMD Radeon R5 A335 video controller.

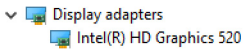
Downloading the graphics driver

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer and click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads** > **Find it myself**.
5. Scroll down the page and expand **Video**.
6. Click **Download** to download the graphics driver for your computer.
7. Save the file, and after the download is complete, navigate to the folder where you saved the graphics driver file.
8. Double-click the graphics driver file icon and follow the instructions on the screen to install the driver.

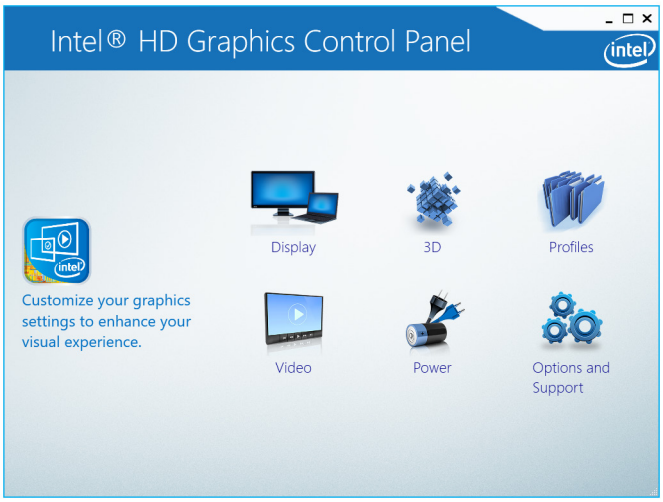
Identifying the display adapter

1. On the taskbar, click the search box, and then type `Device Manager`.
2. Click **Device Manager**.
   The **Device Manager** window is displayed.
3. Expand **Display adapters**.

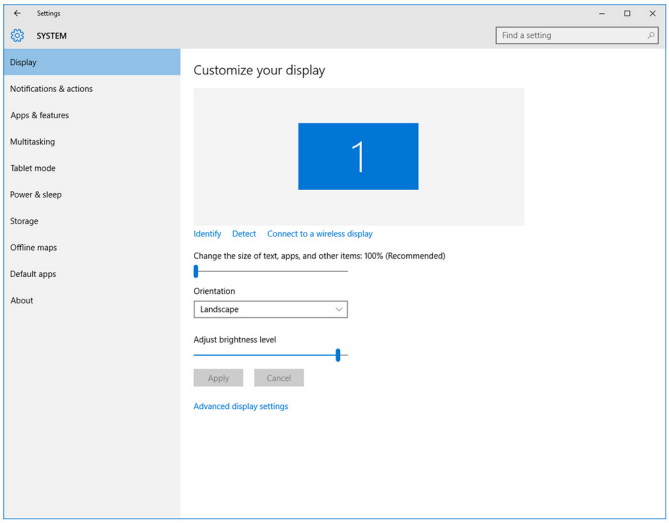


Changing the display and Graphics Control Panel

1. Right-click on the desktop and select **Graphics Properties** to launch the **Intel HD Graphics Control Panel**.



2. Click **Display**.
3. Change the display settings as required.



Intel WiDi

The wireless display feature allows you to share your computer display with a compatible TV without using cables. You must connect a wireless display adapter to your TV before setting up the wireless display. To check if your TV supports this feature, see the documentation that is shipped with the TV.

The following table provides the basic system requirements for a wireless display.

Processor	2nd generation Intel Core i3/i5/i7
Video Controller	Intel HD Graphics
WLAN card	Intel 2230 or Intel 6150
Operating System	Windows 7 or later
Driver	Download and install the latest driver for “Intel Wireless Display Connection Manager” available at www.dell.com/support

Downloading the WiDi application

1. Turn on your computer.

2. Go to www.dell.com/support.
3. Click **Product Support**, enter the Service Tag of your computer and click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads** > **Find it myself**.
5. Scroll down the page and expand **Video**.
6. Click **Download** to download the Intel WiDi application for your computer.
7. After the download is complete, navigate to the folder where you saved the application.
8. Double-click the application file icon and follow the instructions on the screen to install the application.

Setting up the wireless display

1. Turn on your computer.

   NOTE: Ensure that Wi-Fi is enabled.
2. Connect the wireless display adapter to the TV.
3. Turn on the TV and the wireless display adapter.
4. Select the appropriate video source for your TV, such as HDMI1, HDMI2, or S-Video.
5. Double-click or double-tap the Intel Wireless Display icon on the desktop.
   The **Intel Wireless Display** window is displayed.
6. Click or tap **Scan for available displays**.
7. Select your wireless display adapter from the **Detected Wireless Displays** list.
8. Enter the security code that is displayed on your TV.

USB

This computer is shipped with the following USB ports:

Ports	Location
USB 2.0 ports (2)	Back side
USB 3.0 ports (2)	Left side

NOTE: USB 3.0 needs the driver to be installed before it can detect any USB devices.

Downloading the USB 3.0 driver

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product Support**, enter the Service Tag of your computer and click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads** > **Find it myself**.
5. Scroll down the page and expand **Chipset**.
6. Click **Download** to download the USB 3.0 driver.
7. After the download is complete, navigate to the folder where you saved the USB 3.0 driver file.
8. Double-click the USB 3.0 driver file icon and follow the instructions on the screen.

Enabling or disabling the USB in BIOS setup program

1. Turn on or restart your computer.
2. Press F2 when the Dell logo is displayed on the screen to enter the BIOS setup program.
   The BIOS setup program is displayed.

3. On the left pane, select **Settings** > **System Configuration** > **USB Configuration**.
   The USB configuration is displayed on the right pane.
4. Check the **Enable External USB Port** check box to either enable or disable it.
5. Save the BIOS setup program settings and exit.

Fixing a no-boot issue caused by USB emulation

Sometimes the computer does not boot to the operating system when USB devices are connected to the computer during startup. This behavior occurs because the computer is looking for bootable files in the USB devices. Follow these steps to fix the no-boot issue:

1. Turn on or restart your computer.
2. Press F2 when the Dell logo is displayed on the screen to enter the BIOS setup program.
3. On the left pane, select **Settings** > **System Configuration** > **USB Configuration**.
   The USB configuration is displayed on the right pane.
4. Clear the **Enable Boot Support**check box to either enable or disable it.
5. Save the settings and exit.

Wi-Fi

This computer is shipped with the following:

- Wi-Fi 802.11 ac
- Wi-Fi 802.11b/g/n

Turning Wi-Fi on or off

NOTE: There is no physical switch to enable or disable Wi-Fi. It has to be done through computer settings.

1. Swipe-in from the right edge of the display, or click the **Action Center** icon on the taskbar to access the Action Center.
2. Click **Wi-Fi** to turn Wi-Fi on or off.

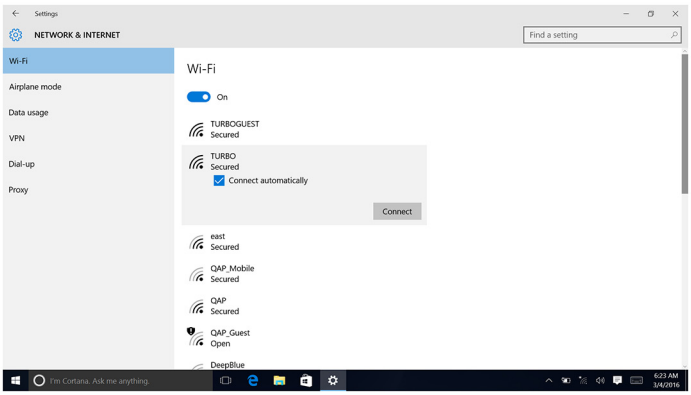
Downloading the Wi-Fi driver

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product Support**, enter the Service Tag of your computer and click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads** > **Find it myself**.
5. Scroll down the page and expand **Network**.
6. Click **Download** to download the Wi-Fi driver for your computer.
7. After the download is complete, navigate to the folder where you saved the Wi-Fi driver file.
8. Double-click the driver file icon and follow the instructions on the screen.

Configuring Wi-Fi

1. Turn on Wi-Fi. For more information, see Turning Wi-Fi on or off.
2. Swipe-in from the right edge of the display or click the **Action Center** icon on the taskbar to access the Action Center.
3. Click **Wi-Fi** and then click **Go to settings**. A list of available networks is displayed.
4. Select your network and click **Connect**.



NOTE: Type the network security key, if prompted.

Bluetooth

This computer is shipped with Bluetooth 4.0.

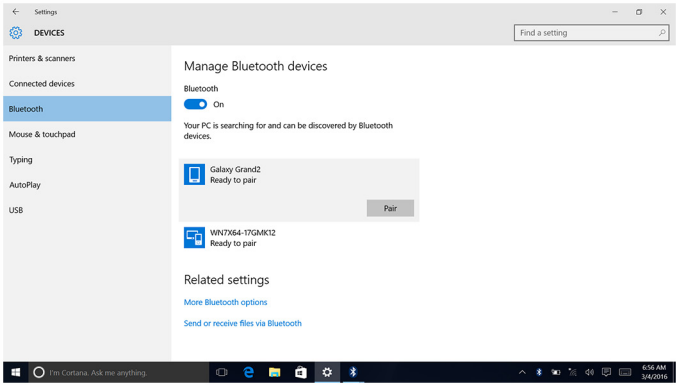
Turning Bluetooth on or off

NOTE: There is no physical switch to enable or disable Bluetooth. It has to be done through the computer settings.

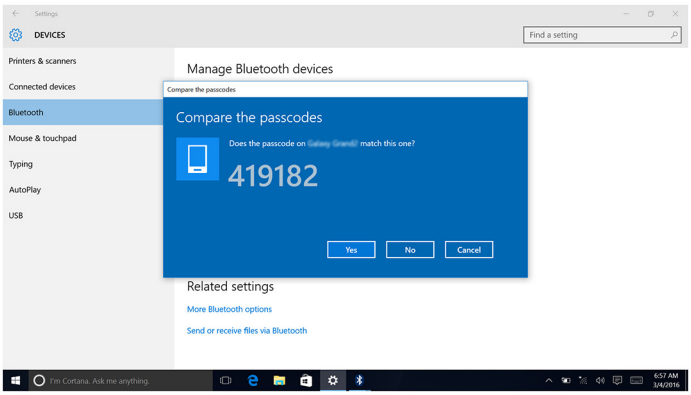
1. Swipe-in from the right edge of the display, or click the **Action Center** icon on the taskbar to access the Action Center.
2. Click **Bluetooth** to turn Bluetooth on or off.

Pairing the Bluetooth-enabled devices

1. Turn on Bluetooth.
   For more information, see Turning Bluetooth on or off.
2. Swipe-in from the right edge of the display, or click the **Action Center** icon on the taskbar to access the Action Center.
3. Click **Bluetooth** , and then click **Go to settings**.
4. Select the desired Bluetooth device.
5. Click **Pair** to pair the bluetooth devices.

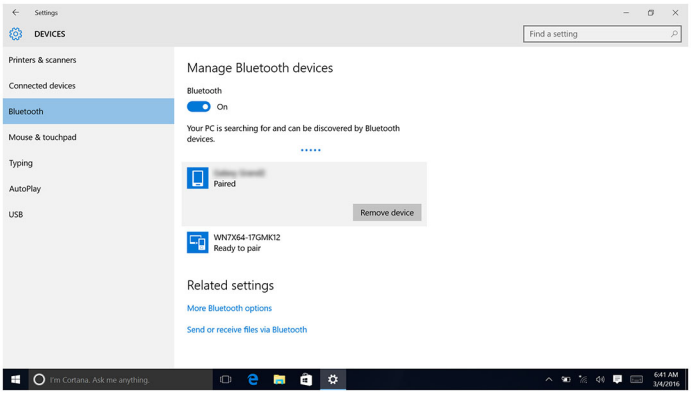


6. Click **Yes** to confirm the passcodes on both the devices.



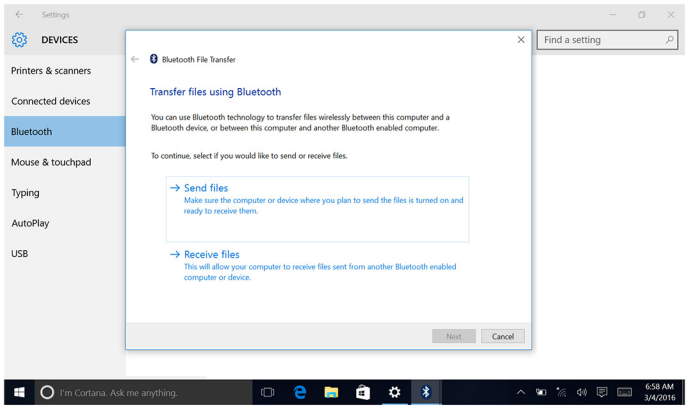
Removing the Bluetooth device

1. Swipe-in from the right edge of the display, or click the **Action Center** icon on the taskbar to access the Action Center.
2. Click **Bluetooth**, and then click **Go to settings**.
3. Click the device you want to remove, and then click **Remove device**.



Transferring files between devices using Bluetooth

1. Swipe-in from the right edge of the display, or click the **Action Center** icon on the taskbar to access the Action Center.
2. Click on **Bluetooth** and then click **Go to settings**.
3. Select your Bluetooth device.
4. Click **Send or receive files via Bluetooth**.
5. In the **Bluetooth file transfer** window, click **Send files** and select the desired file.



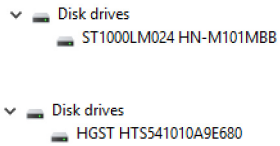
Hard Drive

The following table shows the hard drive options available in this computer:

Options	Dimensions
HDD	2.5 inch drive

Identifying the hard drive

1. On the taskbar, click the search box, and then type `Device Manager`.
2. Click **Device Manager**.
   The **Device Manager** window is displayed.
3. Expand **Disk drives**.



Identifying the hard drive in BIOS setup program

1. Turn on or restart the computer.
2. Press F2 when the Dell logo is displayed on the screen to enter the BIOS setup program.
   A list of hard drives is displayed under the **System Information** in the **General** group.

Media-card reader

This computer has one SD card slot located on the left side of your computer.

Downloading the media-card reader driver

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product Support**, enter the Service Tag of your computer and click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads** > **Find it myself**.
5. Scroll down the page and expand **Chipset**.
6. Click **Download** to download the media-card reader driver for your computer.
7. After the download is complete, navigate to the folder where you saved the media-card reader driver file.
8. Double-click the card-reader driver file icon and follow the instructions on the screen.

Browsing a media card

1. Insert the media card with the metal contacts facing down.
   The card will auto-play and a notification appears on the screen.
2. Follow the instructions on the screen.

Power adapter

This computer is shipped with a 65 W or 90 W power adapter.

WARNING: When you disconnect the power adapter cable from the computer, pull on its connector, not the cable itself. When disconnecting cable, keep it evenly aligned to avoid bending any connector pins. When connecting the cable, ensure that the port and the connector are correctly oriented and aligned.

WARNING: The power adapter works with electrical outlets worldwide. However, power connectors and power strips vary among countries. Using an incompatible cable or improperly connecting the cable to the power strip or electrical outlet may cause fire or equipment damage.

Chipsets

The chipset is virtually divided into two sections — Northbridge and Southbridge. All computer components communicate with the CPU through the chipset.

This computer is shipped with the chipset integrated in the processor.

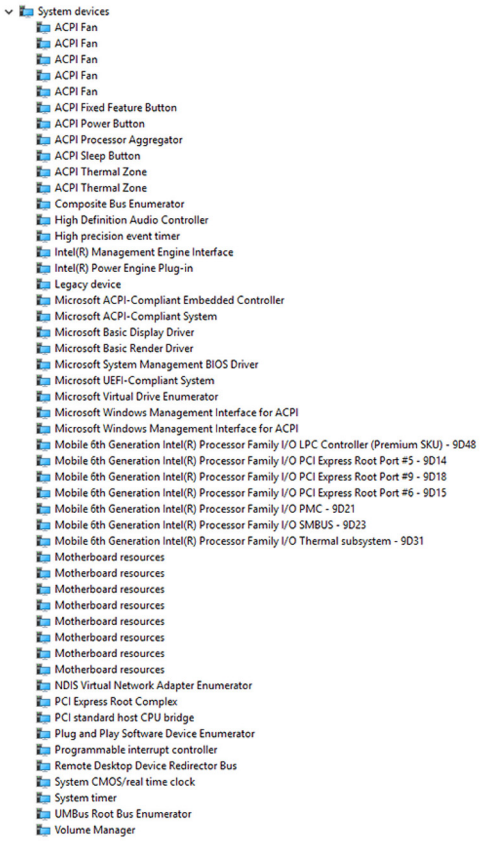
Downloading the chipset driver

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product Support**, enter the Service Tag of your computer and click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads** > **Find it myself**.
5. Scroll down the page and expand **Chipset**.
6. Click **Download** to download the chipset driver for your computer.
7. After the download is complete, navigate to the folder where you saved the chipset driver file.
8. Double-click the chipset driver file icon and follow the instructions on the screen.

Identifying the chipset

1. On the taskbar, click the search box, and then type `Device Manager`.
2. Click **Device Manager**.
   The **Device Manager** window is displayed.
3. Expand **System devices**.



Memory

This computer has two SODIMM (RAM) slots, which are accessible by removing the back cover. Memory configurations supported are 2GB, 4GB, 6GB, 8GB, 10GB, 12GB, and 16GB.

Checking the system memory in Windows

1. Click **Start**.
2. Select **Settings**.
3. Click **System** > **About**.

Verifying the system memory in BIOS setup program

1. Turn on or restart your computer.
2. Press F2 when the Dell logo is displayed on the screen to enter the BIOS setup program.
3. On the left pane, select **Settings** > **General** > **System Information**.
   The memory information is displayed on the right pane.

Testing memory using ePSA

1. Turn on or restart your computer.
2. Press F12 after the Dell logo is displayed on the screen to access the boot menu.
3. Use the arrow keys to highlight the **Diagnostics** menu option and press **Enter**.
4. Follow the instructions on the screen to complete the ePSA Pre-boot System Assessment (PSA).

NOTE: If the operating system logo appears, wait until you see the desktop. Turn off your computer and try again.

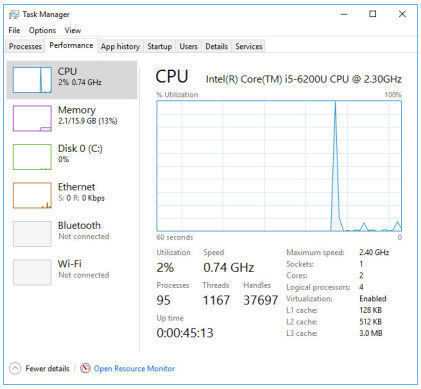
Processors

This computer is shipped with the following processors:

- 6th Generation Intel Core i3/i5

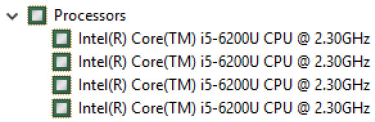
Checking the processor usage in the task manager

1. Right-click on the taskbar.
2. Click **Task Manager**.
   The **Task Manager** window is displayed.
3. Click the **Performance** tab to display the processor performance details.



Identifying the processors in Windows

1. On the taskbar, click the search box, and then type `Device Manager`.
2. Click **Device Manager**.
   The **Device Manager** window is displayed.
3. Expand **Processors**.



Operating system

This computer is shipped with the Windows 10 factory installation.

Service Tag location

The service tag is a unique alphanumeric identifier that allows Dell service technicians to identify the hardware components in your computer and access warranty information.

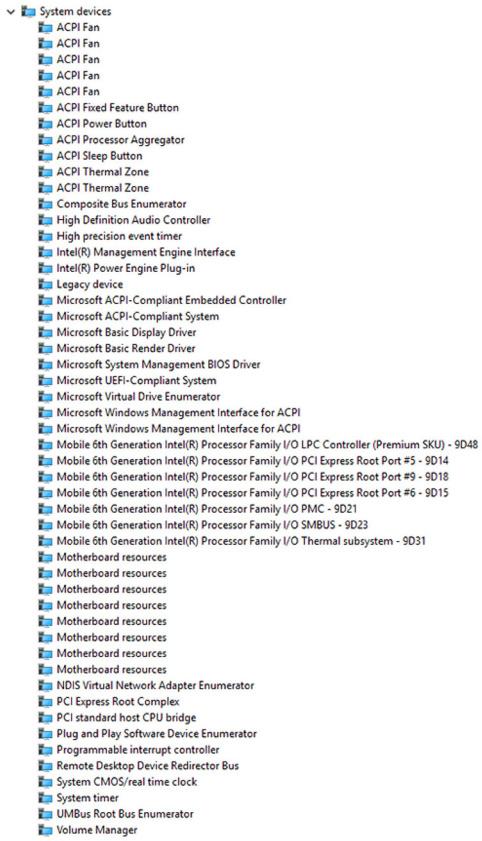
Device drivers

Intel Dynamic Platform and Thermal Framework

In the Device Manager, check if the Intel Dynamic Platform and Thermal Framework is installed. Install the driver updates from www.dell.com/support.

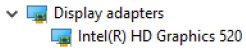
Intel Chipset Software Installation Utility

In the Device Manager, check if the chipset driver is installed. Install the driver updates from www.dell.com/support.



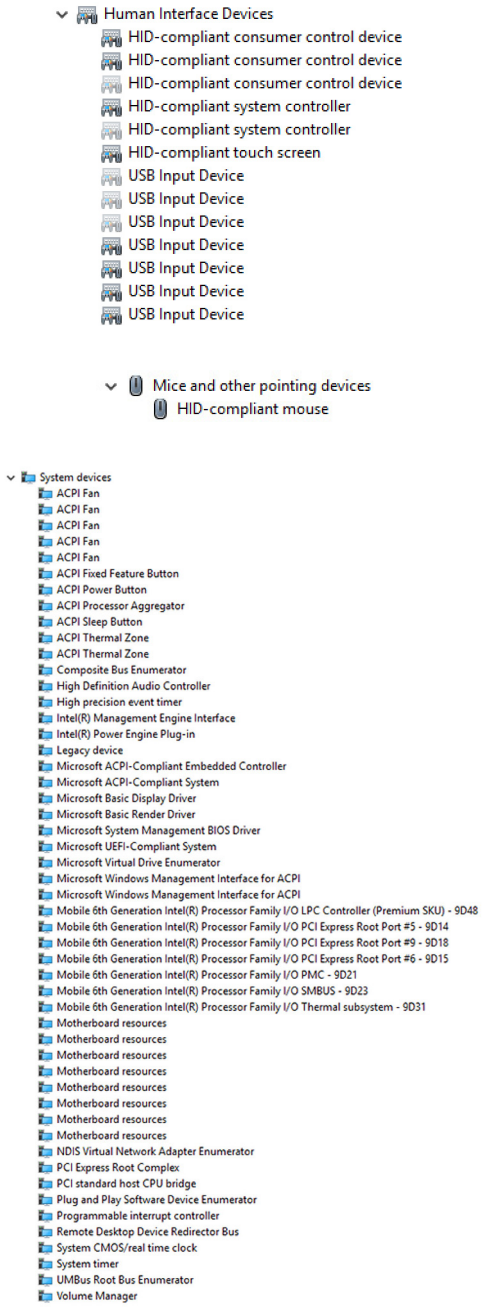
Graphics

In the Device Manager, check if the video driver is installed. Install the video driver updates from www.dell.com/support.



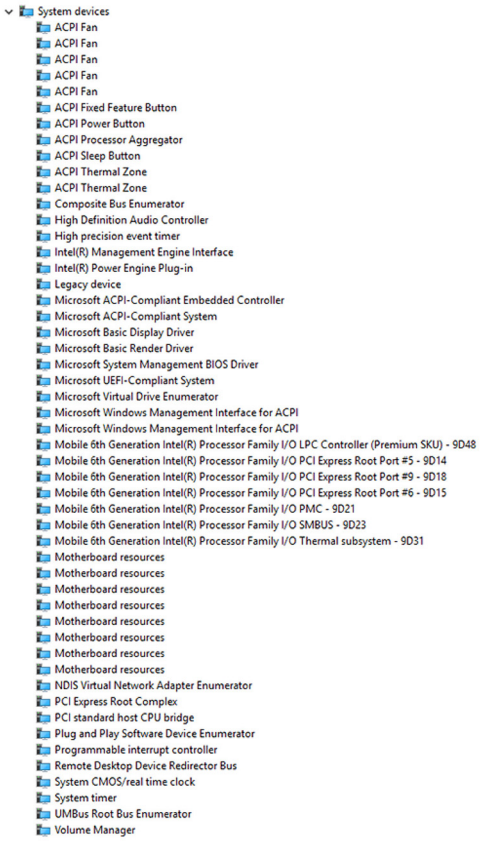
Intel Serial IO Driver

In the Device Manager, check if the Intel Serial IO Driver is installed. Install the driver updates from www.dell.com/support.



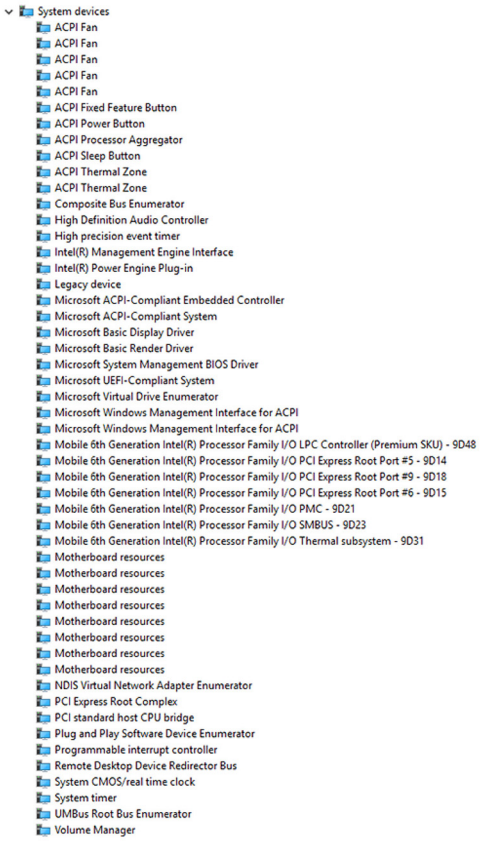
Intel Trusted Execution Engine Interface

In the Device Manager, check if the Intel Trusted Execution Engine Interface driver is installed. Install the driver updates from www.dell.com/support.



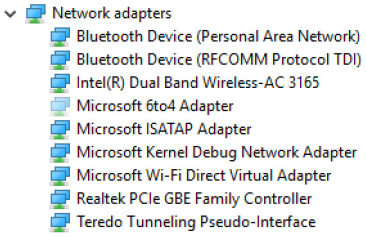
Intel Virtual Button driver

In the Device Manager, check if the Intel Virtual Button driver is installed. Install the driver updates from www.dell.com/support.



Intel Wireless 3165 Wi-Fi and Bluetooth drivers

In the Device Manager, check if the network card driver is installed. Install the driver updates from www.dell.com/support.



In the Device Manager, check if the Bluetooth driver is installed. Install the driver updates from www.dell.com/support.

BIOS overview

The **BIOS** manages data flow between the computer's operating system and attached devices such as hard disk, video adapter, keyboard, mouse, and printer.

Entering the BIOS setup program

1. Turn on or restart your computer.
2. Press F2 when the Dell logo is displayed on the screen to enter the BIOS setup program.
   You can change the user-defined settings in BIOS setup program.

Boot menu

This computer includes a one-time boot menu. This feature allows you to change the sequence of devices that your computer attempts to boot from, for example, floppy, CD-ROM, or hard drive.

Boot menu enhancements

The boot menu enhancements are as follows:

- **Easier Access** – Press F12 to access the boot selection menu.
- **User Prompting** – The user is prompted to use the keystroke on the BIOS screen.
- **Diagnostics Options** – The boot menu includes the ePSA diagnostic options.

Timing key sequences

The keyboard is not the first device initialized by Setup. As a result, if you press a keystroke too early, the keyboard is locked out. In such case, a keyboard error message is displayed on the screen, and you cannot restart your computer with the Ctrl+Alt+Del key combination.

To prevent the keyboard from locking, wait until the keyboard is initialized completely. The keyboard is initialized if one of the following occurs:

- The keyboard lights flash.
- The F2=Setup prompt appears at the top-right corner of the screen during boot.

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System diagnostic lights

Power status light: Indicates the power status.

Solid Amber – The computer is unable to boot to the operating system. This indicates that the power supply or another device in the computer is failing.

Blinking Amber – The computer is unable to boot to the operating system. This indicates that the power supply is normal but another device in the computer is failing or not installed properly.

NOTE: See the light patterns to determine the device that is failing.

Off – Computer is in hibernation or turned off.

The power status light blinks amber along with beep codes indicating failures.

For example, the power status light blinks amber two times followed by a pause, and then blinks white three times followed by a pause. This 3,3 pattern continues until the computer is turned off indicating the Recovery image is not found.

The following table shows different light patterns what they indicate, and the suggested solutions:

Light pattern	Problem description	Suggested solution
1	System board: BIOS and ROM failure	Flash latest BIOS version. If problem persists, replace the system board.
2	No memory or RAM detected	Confirm that the memory module is installed properly. If problem persists, replace the memory module.
3	System board or chipset error	Replace the system board.
3,3	Recovery image not found	Reimage the system.
3,4	Recovery image found but invalid	Reimage the system.
4	Memory or RAM failure	Replace the memory module.
5	CMOS battery failure	Replace the CMOS battery.
6	Video card or chip failure	Replace the system board.
7	CPU failure	Replace the system board.
8	LCD failure	Replace the LCD.

The computer may emit a series of beeps during start-up if the errors or problems cannot be displayed. The repetitive beep codes help the user troubleshoot problems with the computer.

Camera status light: Indicates whether the camera is in use.

- Solid white – Camera is in use.
- Off – Camera is not in use.

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Getting help and contacting Dell

Self-help resources

You can get information and help on Dell products and services using these self-help resources:

Table 1. Self-help resources.

Information about Dell products and services	www.dell.com
Windows 8.1 and Windows 10	Dell Help & Support app
Windows 10	Get started app
Windows 8.1	Help + Tips app
Accessing help in Windows 8, Windows 8.1, and Windows 10	In Windows search, type `Help and Support`, and press Enter.
Accessing help in Windows 7	Click **Start** > **Help and Support**.
Online help for operating system	www.dell.com/support/windows www.dell.com/support/linux
Troubleshooting information, user manuals, setup instructions, product specifications, technical help blogs, drivers, software updates, and so on.	www.dell.com/support
Learn about your operating system, setting up and using your computer, data backup, diagnostics, and so on.	See *Me and My Dell* at www.dell.com/support/manuals.

Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see www.dell.com/contactdell.

NOTE: Availability varies by country and product, and some services may not be available in your country.

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.