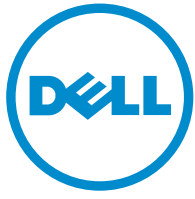
Inspiron 15 5000
2-in-1
Service Manual

Computer Model: Inspiron 15-5578
Regulatory Model: P58F
Regulatory Type: P58F001



Notes, cautions, and warnings

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

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

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

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Contents

Before working inside your computer....12
Before you begin....12
Safety instructions....12
Recommended tools....13
Screw list....14

After working inside your computer....15

Removing the base cover....16
Procedure....16

Replacing the base cover....18
Procedure....18

Removing the battery....19
Prerequisites....19
Procedure....19

Replacing the battery....21
Procedure....21
Post-requisites....21

Removing the memory module....22
Prerequisites....22
Procedure....23

Replacing the memory module....25
Procedure....25
Post-requisites....26

Removing the hard drive....27
Prerequisites....27
Procedure....27

Replacing the hard drive....32
Procedure....32
Post-requisites....32

Removing the coin-cell battery....33
Prerequisites....33
Procedure....33

Replacing the coin-cell battery....35
Procedure....35
Post-requisites....35

Removing the wireless card....36
Prerequisites....36
Procedure....36

Replacing the wireless card....38
Procedure....38
Post-requisites....39

Removing the keyboard daughter-board....40
Prerequisites....40
Procedure....40

Replacing the keyboard daughter-board....42
Procedure....42
Post-requisites....42

Removing the status-light board..... 43
Prerequisites.....43
Procedure..... 43

Replacing the status-light board..... 46
Procedure..... 46
Post-requisites.....46

Removing the touch pad.....47
Prerequisites.....47
Procedure..... 48

Replacing the touch pad.....52
Procedure.....52
Post-requisites..... 52

Removing the speakers..... 53
Prerequisites.....53
Procedure.....53

Replacing the speakers..... 56
Procedure..... 56
Post-requisites..... 56

Removing the fan..... 57
Prerequisites.....57
Procedure.....57

Replacing the fan.....59
Procedure..... 59
Post-requisites..... 59

Removing the heat sink..... 60
Prerequisites..... 60
Procedure..... 60

Replacing the heat sink..... 62
Procedure..... 62
Post-requisites..... 62

Removing the power-adapter port..... 63
Prerequisites..... 63
Procedure..... 63

Replacing the power-adapter port..... 65
Procedure..... 65
Post-requisites..... 65

Removing the power and volume-buttons board..... 66
Prerequisites..... 66
Procedure..... 66

Replacing the power and volume-buttons board..... 68
Procedure..... 68
Post-requisites..... 68

Removing the I/O board..... 69
Prerequisites..... 69
Procedure..... 69

Replacing the I/O board..... 72
Procedure..... 72
Post-requisites..... 72

Removing the system board.....73
Prerequisites.....73
Procedure.....73

Replacing the system board.....77
Procedure.....77
Post-requisites.....77
Entering the Service Tag in the BIOS setup program.....78

Removing the display assembly.....79
Prerequisites.....79
Procedure.....80

Replacing the display assembly.....82
Procedure.....82
Post-requisites.....82

Removing the palm rest and keyboard assembly.....83
Prerequisites.....83
Procedure.....83

Replacing the palm rest and keyboard assembly.....85
Procedure.....85
Post-requisites.....85

Removing the display panel.....86
Prerequisites.....86
Procedure.....86

Replacing the display panel.....89
Procedure.....89
Post-requisites.....89

Removing the display cable..... 90
Prerequisites..... 90
Procedure..... 90

Replacing the display cable.....93
Procedure..... 93
Post-requisites..... 93

Removing the display back-cover and antenna assembly..... 94
Prerequisites..... 94
Procedure..... 94

Replacing the display back-cover and antenna assembly.....96
Procedure..... 96
Post-requisites..... 96

Removing the camera.....97
Prerequisites..... 97
Procedure..... 97

Replacing the camera.....99
Procedure..... 99
Post-requisites..... 99

Removing the sensor board.....100
Prerequisites..... 100
Procedure..... 100

Replacing the sensor board..... 102
Procedure..... 102
Post-requisites..... 102

Flashing the BIOS..... 103

Technology and components.....104

Audio.....104
Downloading the audio driver..... 104
Identifying the audio controller..... 104
Changing the audio settings..... 105
Camera.....105
Identifying the webcam in device manager..... 105
Starting the camera application..... 105
Getting the Dell Webcam Central.....106
Display.....107
Adjusting the brightness..... 107
Changing the screen resolution.....107
Rotating the display.....108
Cleaning the display..... 108
HDMI.....109
Connecting to external display devices.....109
Graphics.....111
Downloading the graphics driver.....111
Identifying the display adapter..... 111
Changing the display settings in Intel HD Graphics Control Panel.....112
Intel WiDi..... 112
Downloading the Intel WiDi application.....113
Setting up the wireless display.....113
USB..... 114
Downloading the USB 3.0 driver..... 114
Enabling or disabling the USB in BIOS setup program.....114
Fixing a no-boot issue caused by USB emulation..... 115
WiFi..... 115
Turning on or off Wi-Fi..... 115
Downloading the Wi-Fi driver.....115

Configuring the Wi-Fi....116
Bluetooth....116
Turning on or off Bluetooth....117
Pairing the Bluetooth-enabled devices....117
Removing the Bluetooth device....118
Transferring files between devices using Bluetooth....118
Hard Drive....119
Identifying the hard drive....119
Identifying the hard drive in BIOS setup program....120
Media-card reader....120
Downloading the media-card reader driver....120
Browsing a media card....120
Keyboard....121
Changing the keyboard language....121
Keyboard shortcuts....121
Touch pad....122
Identifying the touch pad....123
Touch pad gestures....123
Power adapter....123
Battery....124
Chipset....124
Downloading the chipset driver....124
Identifying the chipset....125
Memory....126
Checking the system memory in Windows....126
Checking the system memory in BIOS setup program....126
Testing memory using ePSA....126
Processors....126
Identifying the processors in Windows....127
Checking the processor usage in the task manager....127
Operating System....128
Service Tag location....128
Device drivers....128
Intel Dynamic Platform and Thermal Framework....128

Intel Chipset Software Installation Utility....129
Intel Kabylake HD Graphics....129
Intel Serial IO driver....130
Intel Trusted Execution Engine Interface....131
Intel Virtual Button driver....132
Intel Wireless 3165 Wi-Fi and Bluetooth drivers....133
BIOS overview....134
Entering the BIOS setup program....134
Boot menu....134
Boot menu enhancements....134
Timing key sequences....134

System diagnostic lights....136

Getting help and contacting Dell....138
Self-help resources....138
Contacting Dell....139

Before working inside your computer

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

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 or tap **Start** → **Power** → **Shut down**.
- Windows 8.1: On the **Start** screen, click or tap the power icon → **Shut down**.
- Windows 7: Click or tap **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 cables such as telephone cables and network cables, from your computer.

5 Disconnect all attached devices and peripherals, such as keyboard, mouse, and monitor, from your computer.

6 Remove any media card and optical disc from your computer, if applicable.

Safety instructions

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

WARNING: 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.

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 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
Power-adapter port	Palm rest and keyboard assembly	M2x3	1
Wireless card	Palm rest and keyboard assembly	M2x3	1
Power and volume-buttons board	Palm rest and keyboard assembly	M2x3	1
Battery	Palm rest and keyboard assembly	M2x3	2
Hard-drive bracket	Palm rest and keyboard assembly	M2x3	3
Fan	Palm rest and keyboard assembly	M2x3	2
I/O board	Palm rest and keyboard assembly	M2x3	2
Display hinge	Display back-cover and antenna assembly	M2x3	2
Touch pad	Palm rest and keyboard assembly	M2x2	4
Touch-pad bracket	Palm rest and keyboard assembly	M2x2.5	3
System board	Palm rest and keyboard assembly	M2x2 Big Head	5
Hard drive	Hard-drive bracket	M3x3	4
Display hinge	Palm rest and keyboard assembly	M2.5x7	2
Base cover	Palm rest and keyboard assembly	M2.5x7	10
Display hinge	Display back-cover and antenna assembly	M2.5x2.5 Big Head	6
Sensor board	Display panel	M2.5x2.5 Big Head	1

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.

Removing the base cover

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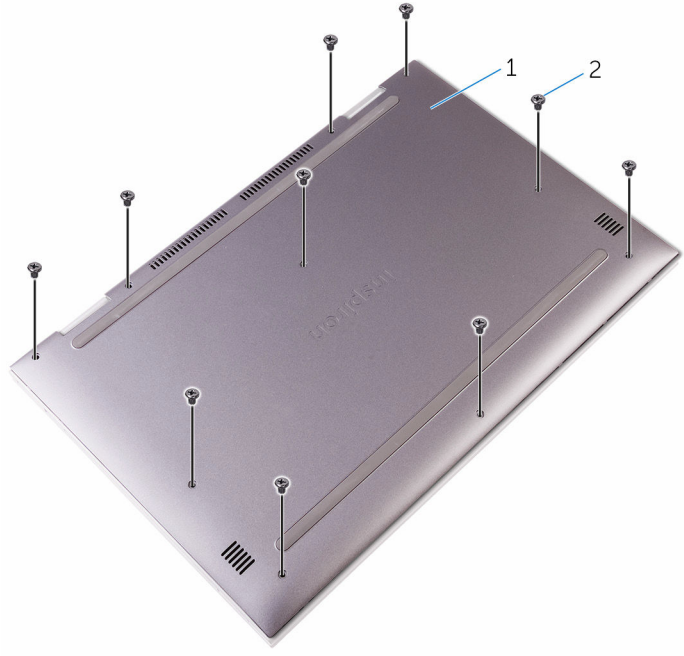
Procedure

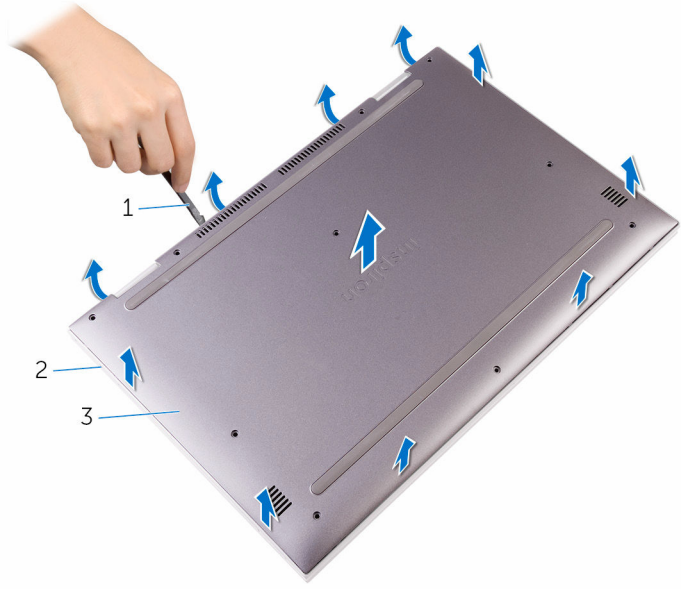
1. Close the display and turn the computer over.
2. Remove the screws that secure the base cover to the palm rest and keyboard assembly.



1 base cover

2 screws (10)

3 Using a plastic scribe, pry the base cover off the palm rest and keyboard assembly.



1	plastic scribe	2	palm rest and keyboard assembly
3	base cover		

Replacing the base cover

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Procedure

1. Slide the tabs on the base cover into the slots on the palm rest and keyboard assembly and snap the base cover into place.
2. Replace the screws that secure the base cover to the palm rest and keyboard assembly.

Removing the battery

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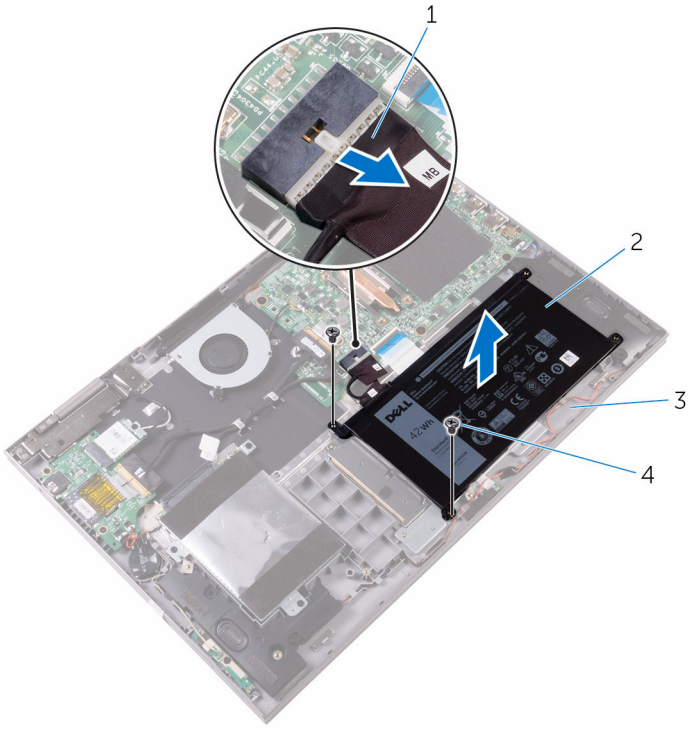
Prerequisites

Remove the base cover.

Procedure

1. Disconnect the battery cable from the system board.
2. Remove the screws that secure the battery to the palm rest and keyboard assembly.

3 Lift the battery along with its cable off the palm rest and keyboard assembly.



1	battery cable	2	battery
3	palm rest and keyboard assembly	4	screws (2)

4 Press and hold the power button for 5 seconds to ground the system board.

Replacing the battery

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Procedure

1. Align the screw holes on the battery with the screw holes on the palm rest and keyboard assembly.
2. Replace the screws that secure the battery to the palm rest and keyboard assembly.
3. Connect the battery cable to the system board.

Post-requisites

Replace the base cover.

Removing the memory module

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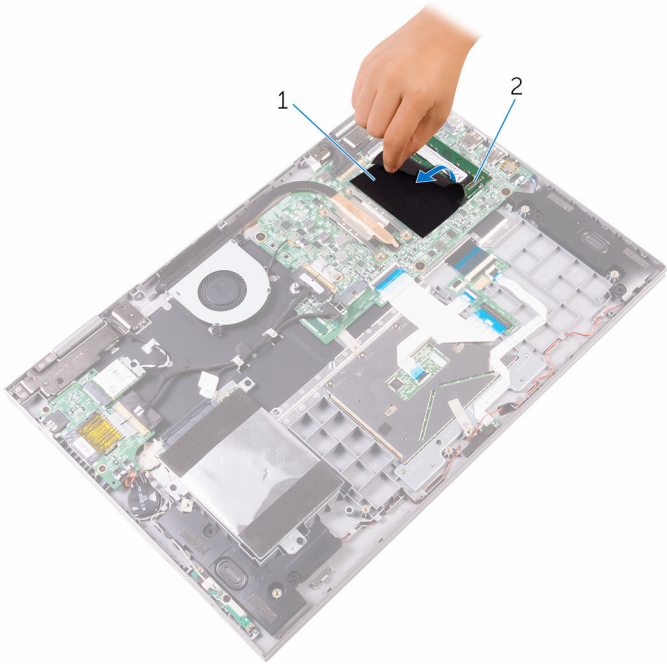
Prerequisites

1. Remove the base cover.
2. Remove the battery.

Procedure

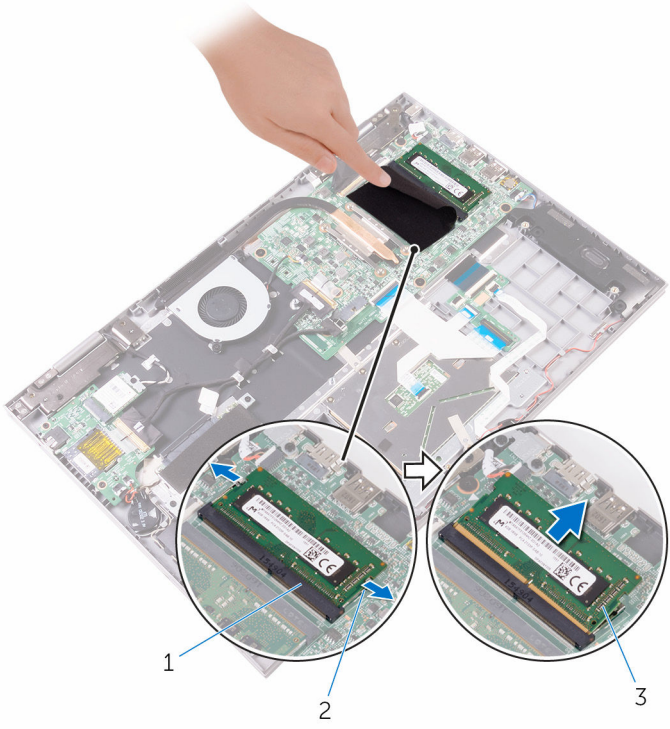
1 Lift the Mylar from to access the memory module.



1 Mylar 2 memory module

2 Use your fingertips to carefully spread apart the securing-clips on each end of the memory-module slot until the memory module pops up.

3 Remove the memory module from the memory-module slot.



1	memory-module slot	2	securing clips (2)
3	memory-module		

Replacing the memory module

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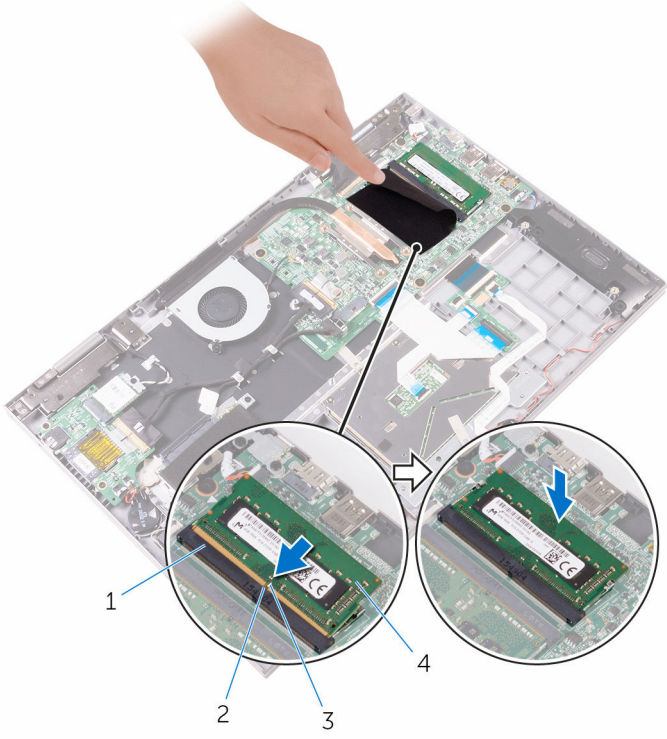
Procedure

1. Lift the Mylar to access the memory-module slot.
2. Align the notch on the memory module with the tab on the memory-module slot.

3 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 slot	2	tab
3	notch	4	memory module

Post-requisites

1 Replace the battery.
2 Replace the base cover.

Removing the hard drive

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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.

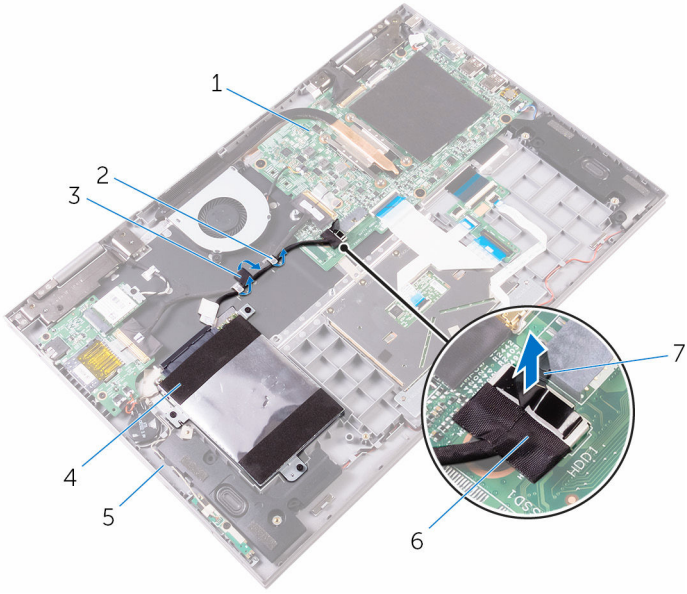
Prerequisites

1. Remove the base cover.
2. Remove the battery.

Procedure

1. Using the pull tab, disconnect the hard-drive cable from the system board.
2. Peel off the tape that secures the hard-drive cable to the palm rest and keyboard assembly.

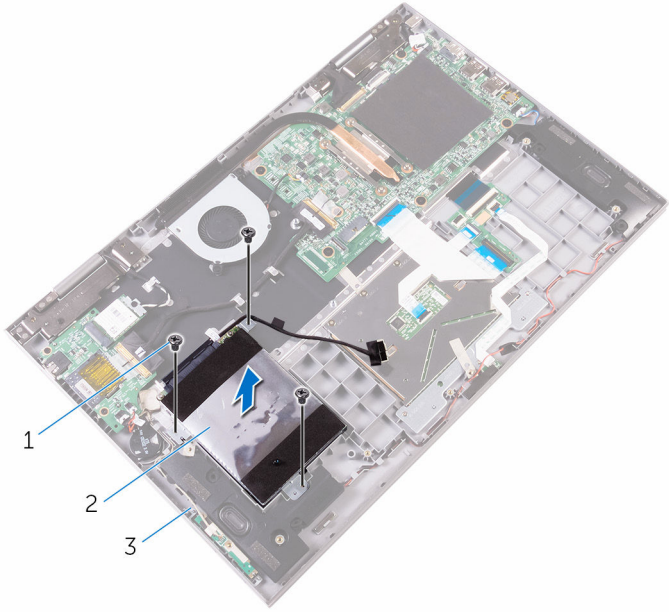
3 Note the hard-drive cable routing and remove the cable from the routing guides.



1	system board	2	routing guides
3	tape	4	hard-drive assembly
5	palm rest and keyboard assembly	6	hard-drive cable
7	pull tab		

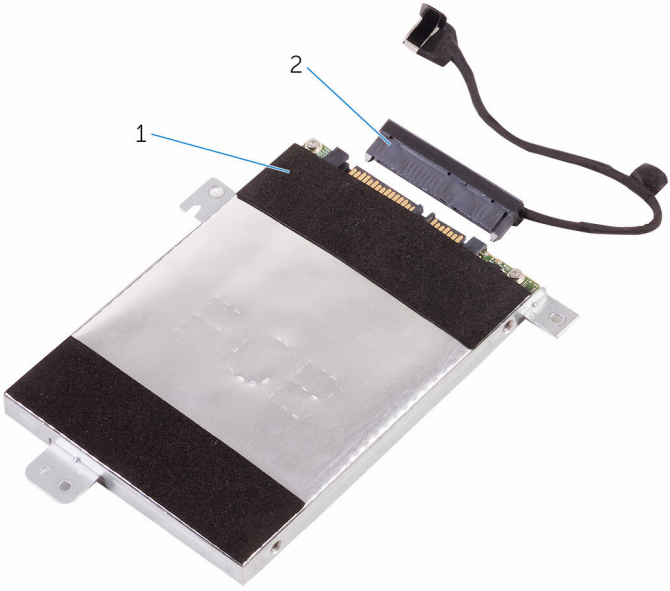
4 Remove the screws that secure the hard-drive assembly to the palm rest and keyboard assembly.

5 Lift the hard-drive assembly along with its cable off the palm rest and keyboard assembly.



1	screws (3)	2	hard-drive assembly
3	palm rest and keyboard assembly		

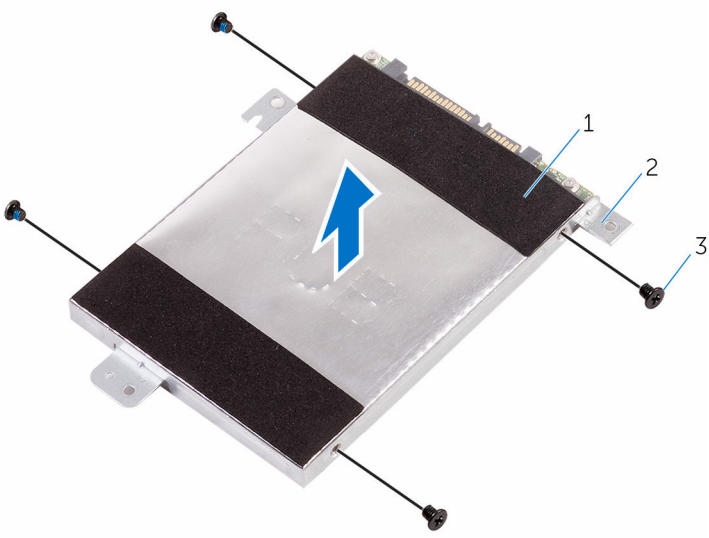
6 Disconnect the interposer from the hard-drive assembly.



1 hard-drive assembly 2 interposer

7 Remove the screws that secure the hard-drive bracket to the hard drive.

8 Lift the hard drive off the hard-drive bracket.



1 hard drive
2 hard-drive bracket
3 screws (4)

Replacing the hard drive

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

Procedure

1. Align the screw holes on the hard-drive bracket with the screw holes on the hard drive.
2. Replace the screws that secure the hard-drive bracket to the hard drive.
3. Connect the interposer to the hard-drive assembly.
4. Align the screw holes on the hard-drive assembly with the screw holes on the palm rest and keyboard assembly.
5. Replace the screws that secure the hard-drive assembly to the palm rest and keyboard assembly.
6. Route the hard-drive cable through the routing guides on the palm rest and keyboard assembly.
7. Connect the hard-drive cable to the system board.
8. Adhere the tape that secures the hard-drive cable to the palm rest and keyboard assembly.

Post-requisites

1. Replace the battery.
2. Replace the base cover.

Removing the coin-cell battery

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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.

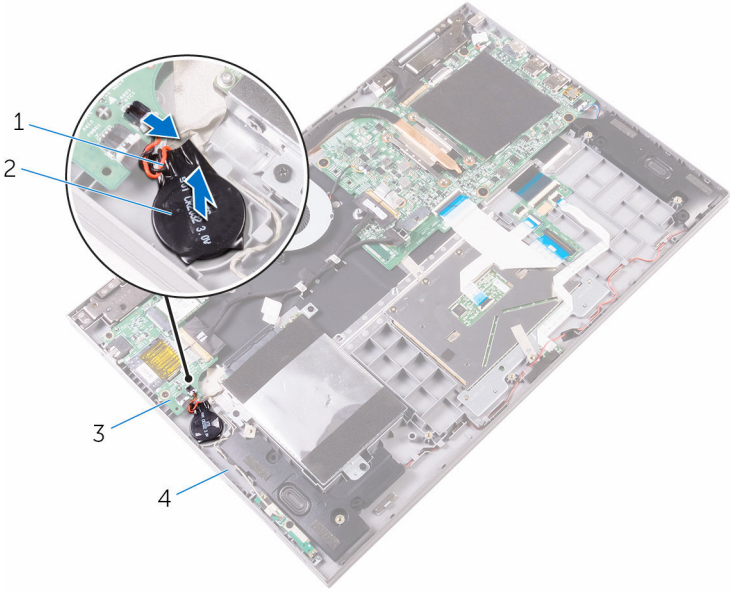
Prerequisites

1. Remove the base cover.
2. Remove the battery.

Procedure

1. Disconnect the coin-cell battery cable from the I/O board.

2 Peel the coin-cell battery off the palm rest and keyboard assembly.



1	coin-cell battery cable	2	coin-cell battery
3	I/O board	4	palm rest and keyboard assembly

Replacing the coin-cell battery

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Procedure

1. Connect the coin-cell battery cable to the I/O board.
2. Adhere the coin-cell battery to the palm rest and keyboard assembly.

Post-requisites

1. Replace the battery.
2. Replace the base cover.

Removing the wireless card

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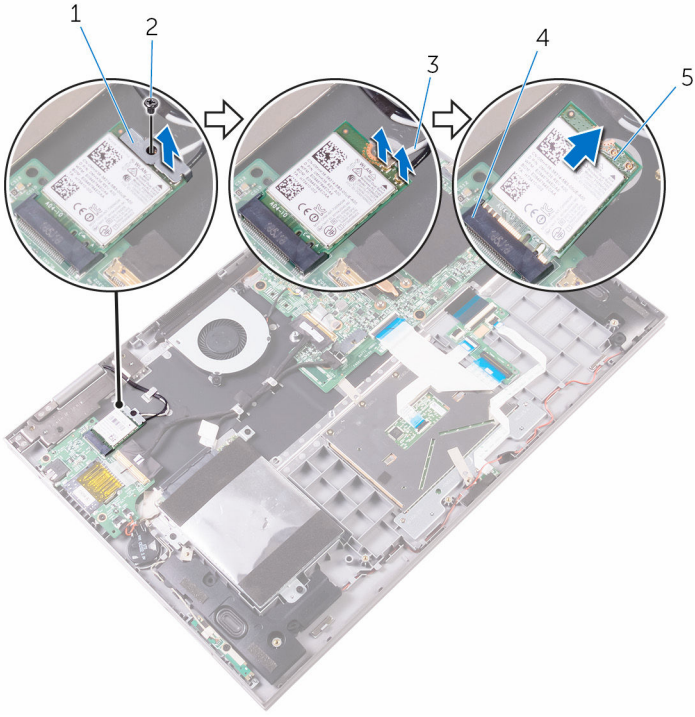
Prerequisites

1. Remove the base cover.
2. Remove the battery.

Procedure

1. Remove the screw that secures the wireless-card bracket to the wireless card and the palm rest and keyboard assembly.
2. Remove the wireless-card bracket and disconnect the antenna cables from the wireless card.

3 Slide and remove the wireless card from the wireless-card slot.



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

Replacing the wireless card

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Procedure

CAUTION: To avoid damage to the wireless card, do not place any cables under it.

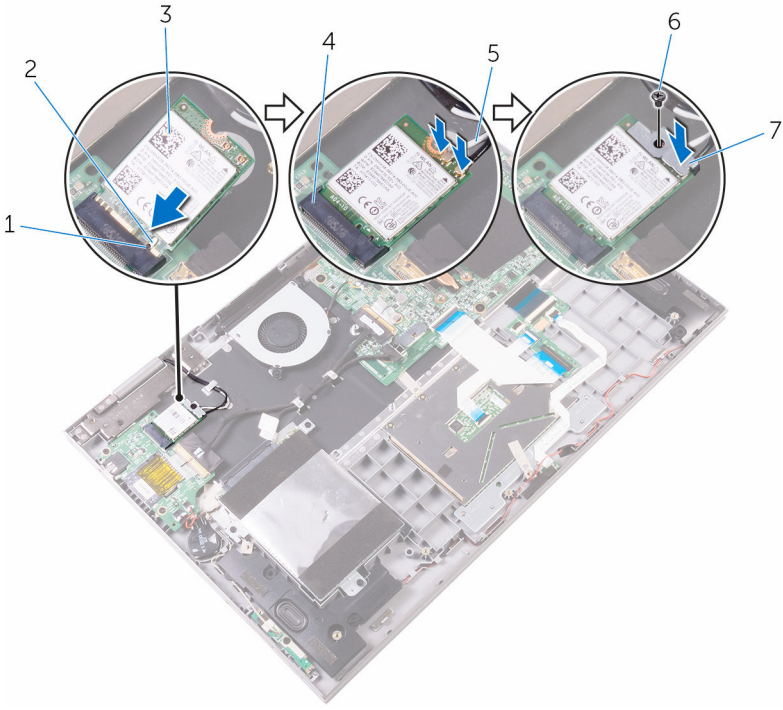
1. Align the notch on the wireless card with the tab on the wireless-card slot.
2. Insert the wireless card at an angle into the wireless-card slot.
3. Connect the antenna cables to the wireless card.

   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. Align the screw hole on the wireless-card bracket with the screw hole on the wireless card and the palm rest and keyboard assembly.

5 Replace the screw that secures the wireless-card bracket to the wireless card and the palm rest and keyboard assembly.



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

Post-requisites

1 Replace the battery.
2 Replace the base cover.

Removing the keyboard daughter-board

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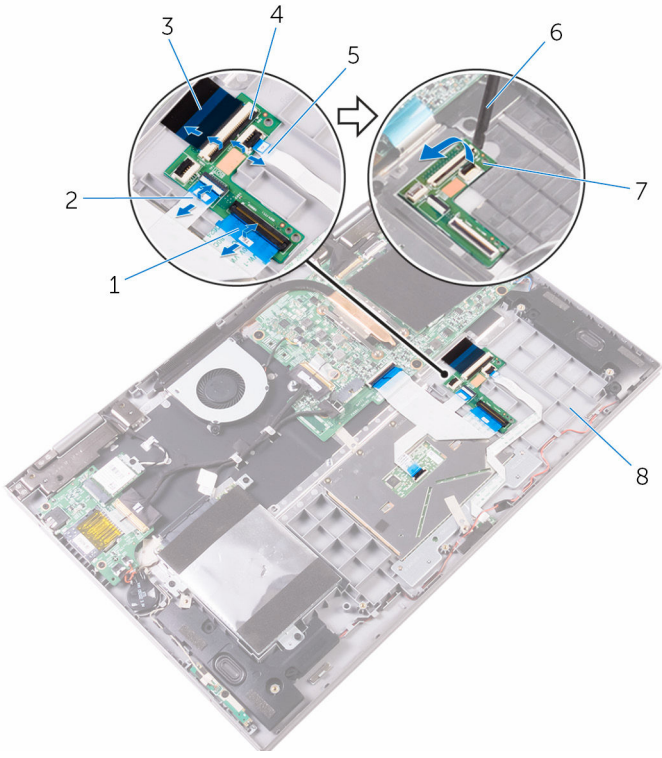
Prerequisites

1. Remove the base cover.
2. Remove the battery.

Procedure

1. Open the latches and disconnect the keyboard cables, keyboard-backlight cable (optional), status-light board cable, and the touch-pad cable from the keyboard daughter-board.

2 Using a plastic scribe, gently pry out the keyboard daughter-board from the palm rest and keyboard assembly.



1	keyboard cable	2	touch-pad cable
3	keyboard cable	4	latches (4)
5	status-light board cable	6	plastic scribe
7	keyboard daughter-board	8	palm rest and keyboard assembly

Replacing the keyboard daughter-board

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Procedure

1. Adhere the keyboard daughter-board to the palm rest and keyboard assembly.
2. Slide the keyboard cables, keyboard-backlight cable (optional), status-light board cable, and the touch-pad cable into their respective connectors on the keyboard daughter-board, and then close the latches to secure the cables.

Post-requisites

1. Replace the battery.
2. Replace the base cover.

Removing the status-light board

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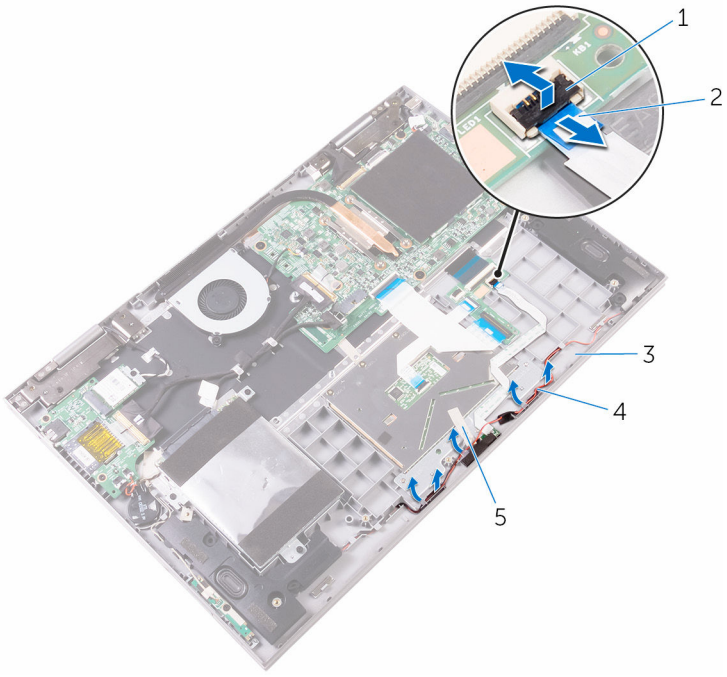
Prerequisites

1. Remove the base cover.
2. Remove the battery.

Procedure

1. Open the latch and disconnect the status-light board cable from the keyboard daughter-board.
2. Peel off the tape that secures the speaker cable to the palm rest and keyboard assembly.

3 Note the speaker-cable routing and remove the speaker cable from the routing guides on the palm rest and keyboard assembly.

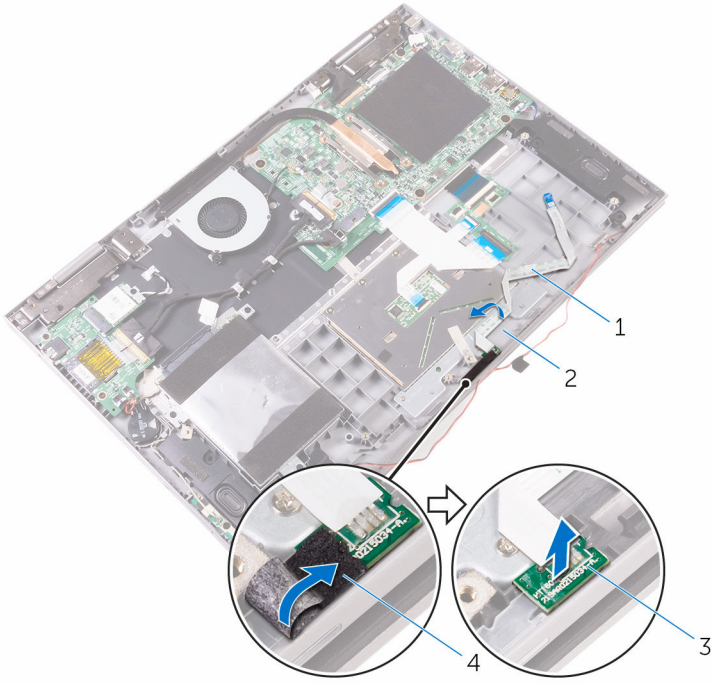


1	latch	2	status-light board cable
3	palm rest and keyboard assembly	4	speaker cable
5	tape		

4 Peel off the foam that secures the status-light board to the palm rest and keyboard assembly.

5 Peel off the status-light board cable from the palm rest and keyboard assembly.

6 Lift the status-light board along with its cable off the palm rest and keyboard assembly.



1	status-light board cable	2	palm rest and keyboard assembly
3	status-light board	4	foam

Replacing the status-light board

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Procedure

1. Place the status-light board into the slot on the palm rest and keyboard assembly.
2. Slide the status-light board cable into the connector on the keyboard daughter-board and close the latch to secure the cable.
3. Adhere the foam that secures the status-light board to the palm rest and keyboard assembly.
4. Adhere the status-light board cable to the palm rest and keyboard assembly.
5. Route the speaker cable through the routing guides on the palm rest and keyboard assembly and adhere the tape that secures the speaker cable to the palm rest and keyboard assembly.

Post-requisites

1. Replace the battery.
2. Replace the base cover.

Removing the touch pad

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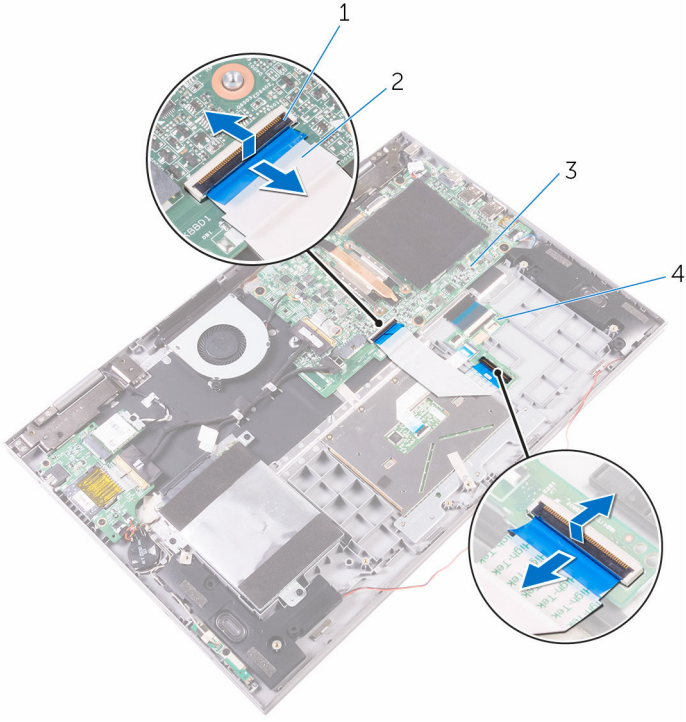
Prerequisites

1. Remove the base cover.
2. Remove the battery.
3. Remove the status-light board.

Procedure

1 Open the latches, and then disconnect the keyboard cable from the system board and the keyboard daughter-board.

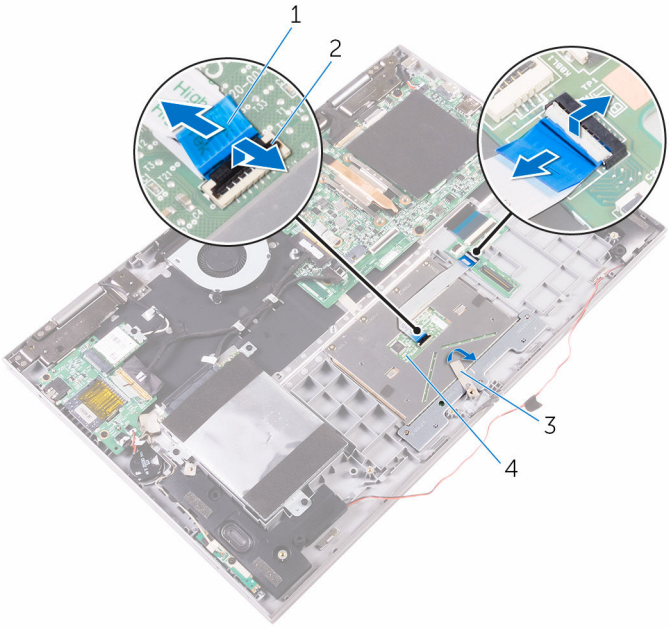


1	latches (2)	2	keyboard cable
3	system board	4	keyboard daughter-board

2 Open the latches, and then disconnect the touch-pad cable from the touch pad and the keyboard daughter-board.

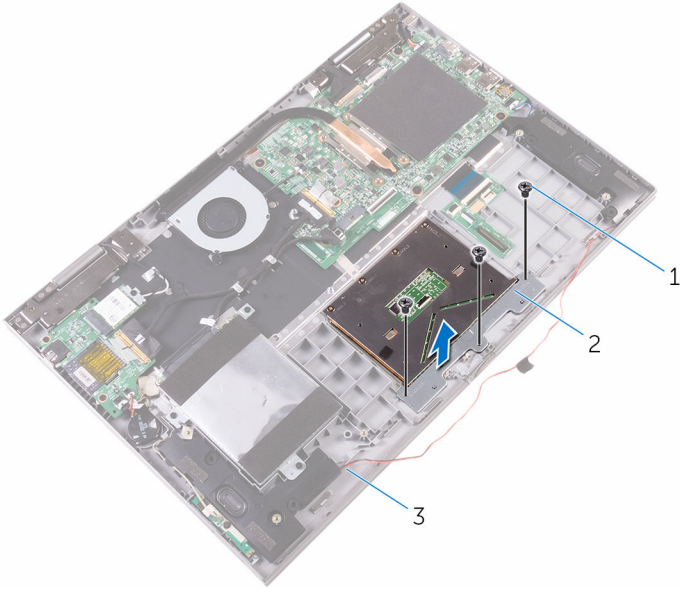
3 Peel off the touch-pad cable from the touch pad.

4 Peel off the tape that secures the touch-pad assembly to the palm rest and keyboard assembly.



1	touch-pad cable	2	latches (2)
3	tape	4	touch pad

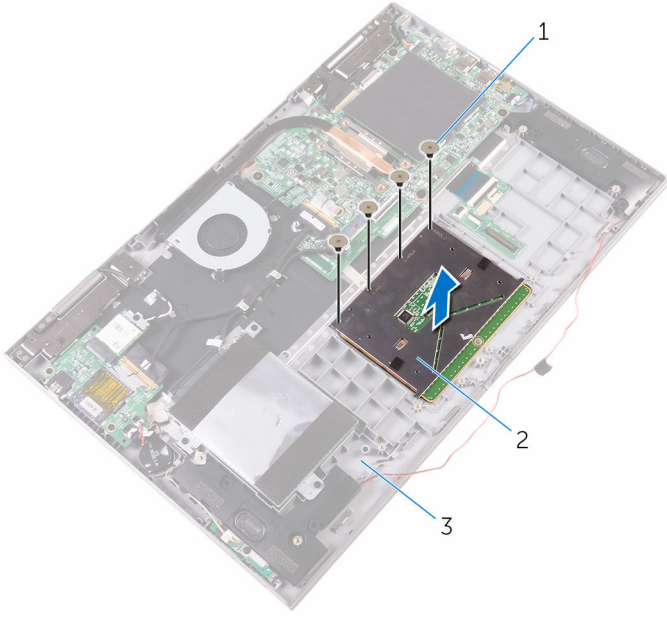
5 Remove the screws that secure the touch-pad bracket to the palm rest and keyboard assembly.



1	screws (3)	2	touch-pad bracket
3	palm rest and keyboard assembly		

6 Remove the screws that secure the touch pad to the palm rest and keyboard assembly.

7 Lift the touch pad off the palm rest and keyboard assembly.



1	screws (4)	2	touch pad
3	palm rest and keyboard assembly		

Replacing the touch pad

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Procedure

1. Align the screw holes on the touch pad with the screw holes on the palm rest and keyboard assembly.
2. Replace the screws that secure the touch pad to the palm rest and keyboard assembly.
3. Align the screw holes on the touch-pad bracket with the screw holes on the palm rest and keyboard assembly.
4. Replace the screws that secure the touch-pad bracket to the palm rest and keyboard assembly.
5. Adhere the tape that secures the touch-pad bracket to the palm rest and keyboard assembly.
6. Adhere the touch-pad cable to the touch pad.
7. Slide both ends of the touch-pad cable into their respective connectors and close the latches to secure the cable.
8. Slide both ends of the keyboard cable into their respective connectors and close the latches to secure the cable.

Post-requisites

1. Replace the status-light board.
2. Replace the battery.
3. Replace the base cover.

Removing the speakers

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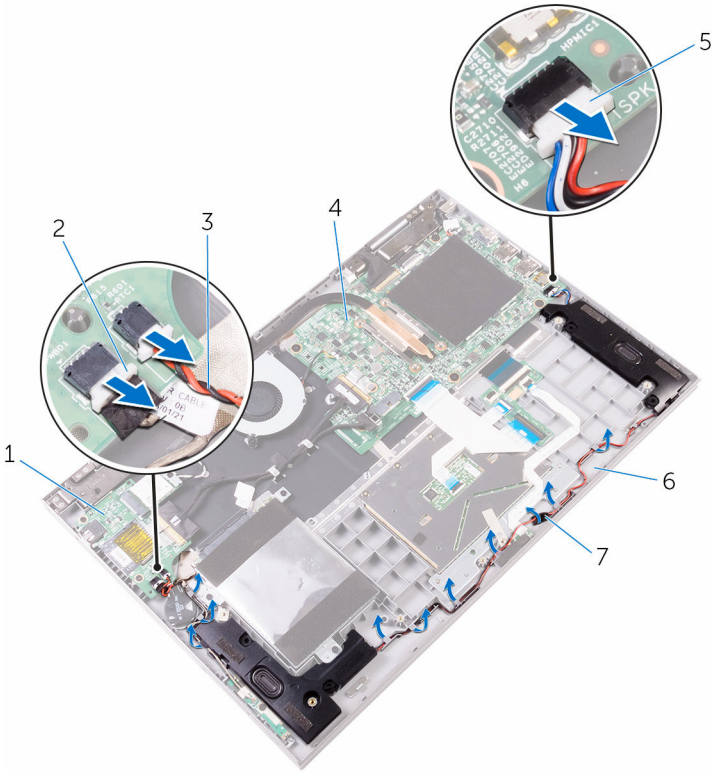
Prerequisites

1. Remove the base cover.
2. Remove the battery.

Procedure

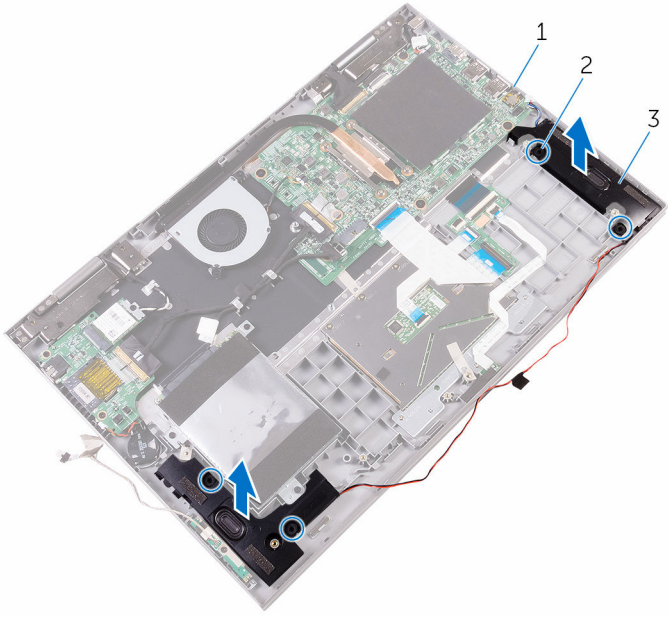
1. Disconnect the speaker cable from the system board.
2. Disconnect the power and volume-buttons board cable and the coin-cell battery cable from the I/O board.
3. Note the cable routing and remove the power and volume-buttons board cable from the routing guides on the palm rest and keyboard assembly and the speaker.
4. Note the cable routing and remove the speaker cable from the routing guides on the palm rest and keyboard assembly.

5 Peel off the tape that secures the speaker cable to the palm rest and keyboard assembly.



1	I/O board	2	power and volume-buttons board cable
3	coin-cell battery cable	4	system board
5	speaker cable	6	palm rest and keyboard assembly
7	tape		

6 Release the tabs on the speakers from the slots on the palm rest and keyboard assembly and lift the speakers along with the cable off the palm rest and keyboard assembly.



1 system board
2 tabs (4)
3 speakers (2)

Replacing the speakers

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Procedure

1. Using the tabs on the speakers, place the speakers in the slots on the palm rest and keyboard assembly and snap the speakers into place.
2. Route the speaker cable through the routing guides on the palm rest and keyboard assembly.
3. Adhere the tape that secures the speaker cable to the palm rest and keyboard assembly.
4. Connect the speaker cable to the system board.
5. Route the power and volume-buttons board cable through the routing guides on the speaker and the palm rest and keyboard assembly.
6. Connect the power and volume-buttons board cable and the coin-cell battery cable to the I/O board.

Post-requisites

1. Replace the battery.
2. Replace the base cover.

Removing the fan

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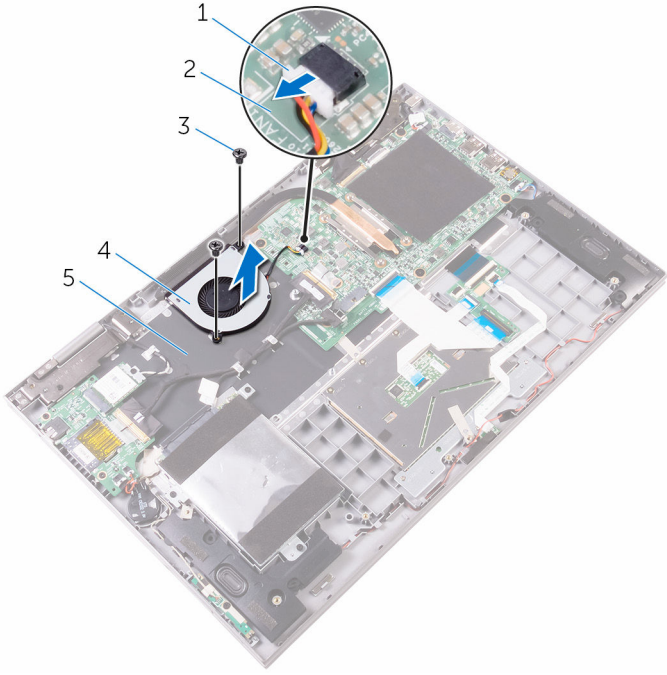
Prerequisites

1. Remove the base cover.
2. Remove the battery.

Procedure

1. Disconnect the fan cable from the system board.
2. Remove the screws that secure the fan to the palm rest and keyboard assembly.

3 Lift the fan along with its cable off the palm rest and keyboard assembly.



1	fan cable	2	system board
3	screws (2)	4	fan
5	palm rest and keyboard assembly		

Replacing the fan

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Procedure

1. Align the screw holes on the fan with the screw holes on the palm rest and keyboard assembly.
2. Replace the screws that secure the fan to the palm rest and keyboard assembly.
3. Connect the fan cable to the system board.

Post-requisites

1. Replace the battery.
2. Replace the base cover.

Removing the heat sink

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WARNING: 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.

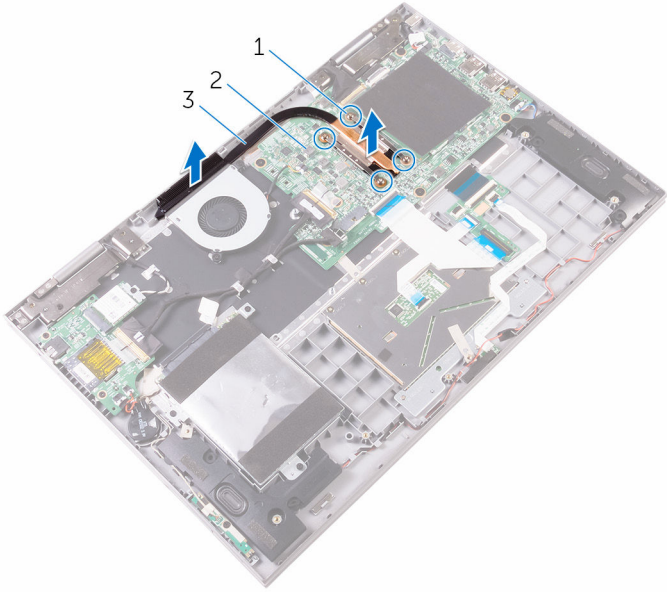
Prerequisites

1 Remove the base cover.
2 Remove the battery.

Procedure

1 In sequential order (as indicated on the heat sink), loosen the captive screws that secure the heat sink to the system board.

2 Lift the heat sink off the system board.



1 captive screws (4)
2 system board
3 heat sink

Replacing the heat sink

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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.

Procedure

1. Align the screw holes on the heat sink with the screw holes on the system board.
2. In sequential order (indicated on the heat sink), tighten the captive screws that secure the heat sink to the system board.

Post-requisites

1. Replace the battery.
2. Replace the base cover.

Removing the power-adapter port

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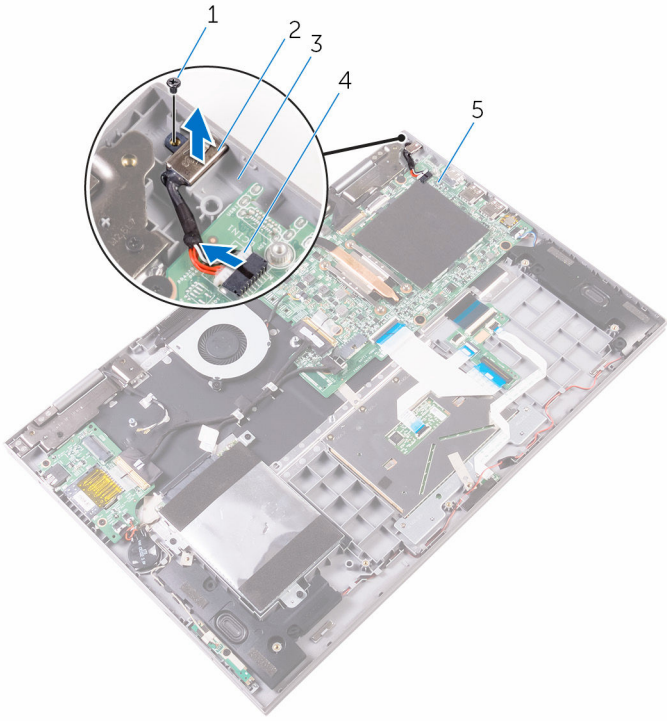
Prerequisites

1. Remove the base cover.
2. Remove the battery.

Procedure

1. Disconnect the power-adapter port cable from the system board.
2. Remove the screw that secures the power-adapter port to the palm rest and keyboard assembly.

3 Lift the power-adapter port along with its cable off the palm rest and keyboard assembly.



1	screw	2	power-adapter port
3	palm rest and keyboard assembly	4	power-adapter port cable
5	system board		

Replacing the power-adapter port

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Procedure

1. Place the power-adapter port into the slot on the palm rest and keyboard assembly.
2. Align the screw hole on the power-adapter port with the screw hole on the palm rest and keyboard assembly.
3. Replace the screw that secures the power-adapter port to the palm rest and keyboard assembly.
4. Connect the power-adapter port cable to the system board.

Post-requisites

1. Replace the battery.
2. Replace the base cover.

Removing the power and volume-buttons board

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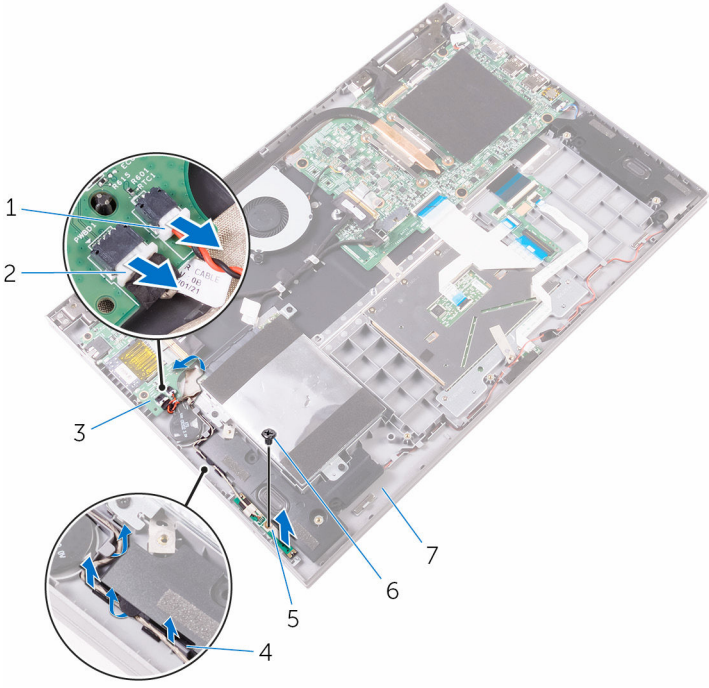
Prerequisites

1. Remove the base cover.
2. Remove the battery.

Procedure

1. Disconnect the coin-cell battery cable from the I/O board.
2. Disconnect the power and volume-buttons board cable from the I/O board.
3. Remove the power and volume-buttons board cable from the routing guides on the palm rest and keyboard assembly and the speaker.
4. Remove the screw that secures the power and volume-buttons board to the palm rest and keyboard assembly.

5 Lift the power and volume-buttons board along with its cable off the palm rest and keyboard assembly.



1	coin-cell battery cable	2	power and volume-buttons board cable
3	I/O board	4	routing guides
5	power and volume-buttons board	6	screw
7	palm rest and keyboard assembly		

Replacing the power and volume-buttons board

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Procedure

1. Align the screw hole on the power and volume-buttons board with the screw hole on the palm rest and keyboard assembly.
2. Replace the screw that secures the power and volume-buttons board to the palm rest and keyboard assembly.
3. Route the power and volume-buttons board cable through the routing guides on the palm rest and keyboard assembly and the speaker.
4. Connect the power and volume-buttons board cable to the I/O board.
5. Connect the coin-cell battery cable to the I/O board.

Post-requisites

1. Replace the battery.
2. Replace the base cover.

Removing the I/O board

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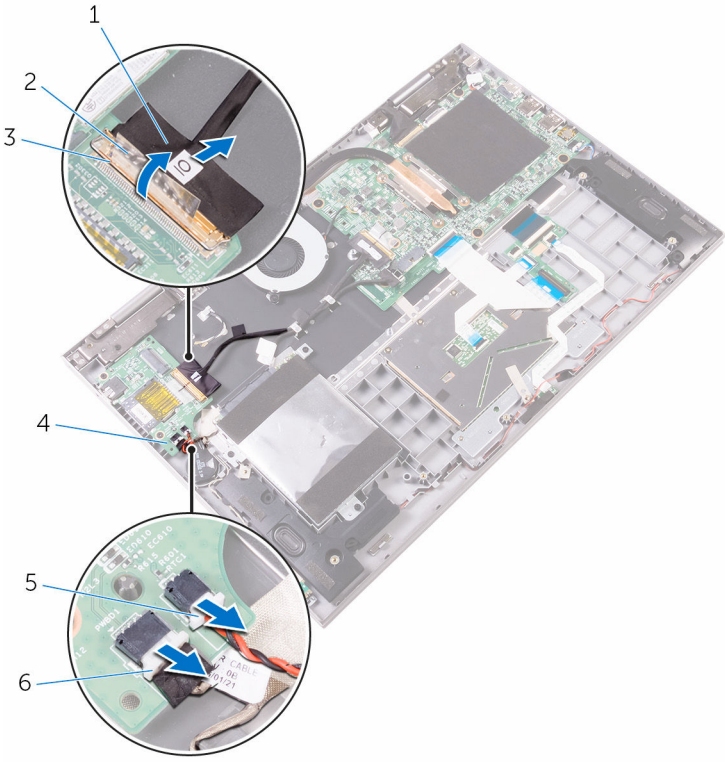
Prerequisites

1. Remove the base cover.
2. Remove the battery.
3. Remove the wireless card.

Procedure

1. Peel off the tape that secures the I/O-board cable to the I/O board.
2. Open the latch and disconnect the I/O-board cable from the I/O board.

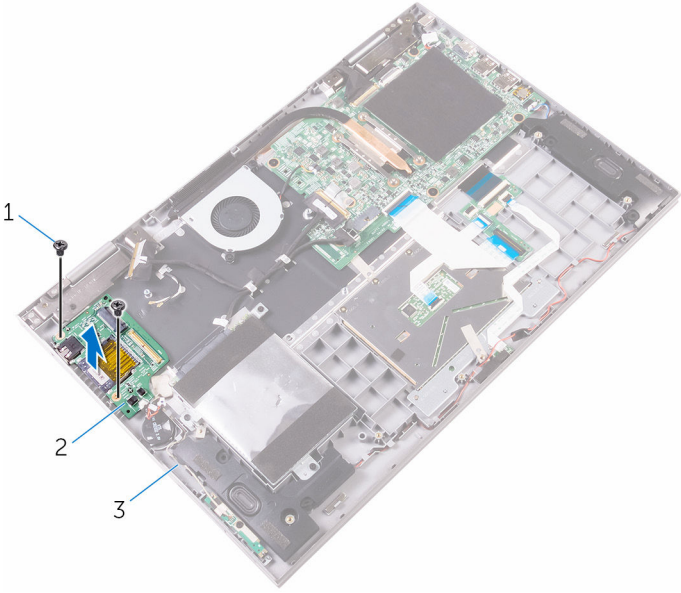
3 Disconnect the coin-cell battery cable and the power and volume-buttons board cable from the I/O board.



1	I/O-board cable	2	tape
3	latch	4	I/O board
5	coin-cell battery cable	6	power and volume-buttons board cable

4 Remove the screws that secure the I/O board to the palm rest and keyboard assembly.

5 Lift the I/O board off the palm rest and keyboard assembly.



1	screws (2)	2	I/O board
3	palm rest and keyboard assembly		

Replacing the I/O board

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Procedure

1. Using the alignment posts, place the I/O board on the palm rest and keyboard assembly.
2. Align the screw holes on the I/O board with the screw holes on the palm rest and keyboard assembly.
3. Replace the screws that secure the I/O board to the palm rest and keyboard assembly.
4. Connect the power and volume-buttons board cable and the coin-cell battery cable to the I/O board.
5. Slide the I/O-board cable into the connector on the I/O board and close the latch to secure the cable.
6. Adhere the tape that secures the I/O-board cable to the I/O board.

Post-requisites

1. Replace the wireless card.
2. Replace the battery.
3. Replace the base cover.

Removing the system board

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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.

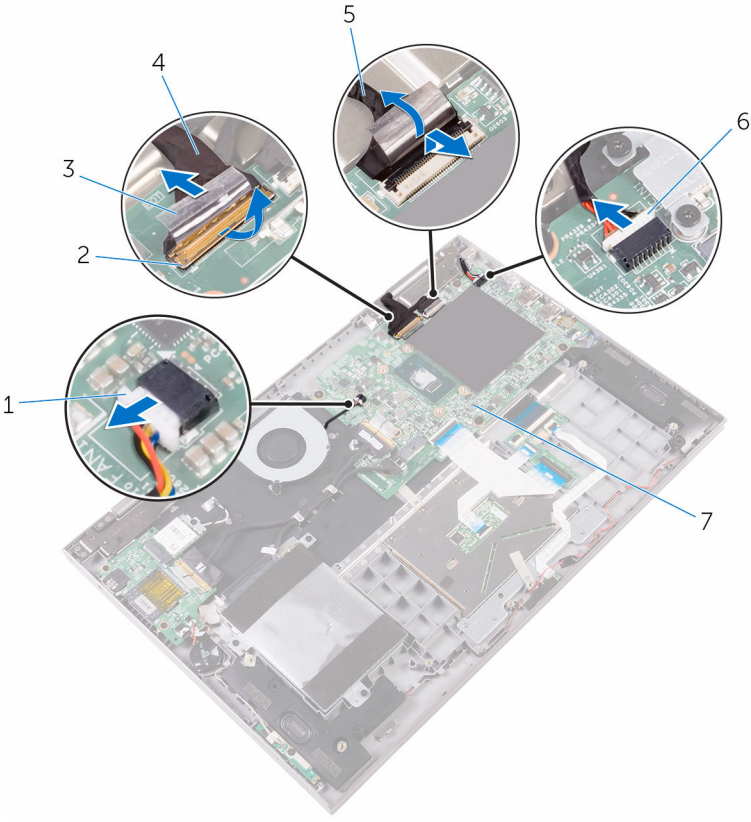
Prerequisites

1. Remove the base cover.
2. Remove the battery.
3. Remove the memory module.
4. Remove the heat sink.

Procedure

1. Disconnect the fan cable and the power-adapter port cable from the system board.
2. Peel off the pieces of tape that secure the display cable and touch-screen board cable from their respective connectors.

3 Open the latches and disconnect the display cable and the touch-screen board cable from the system board.

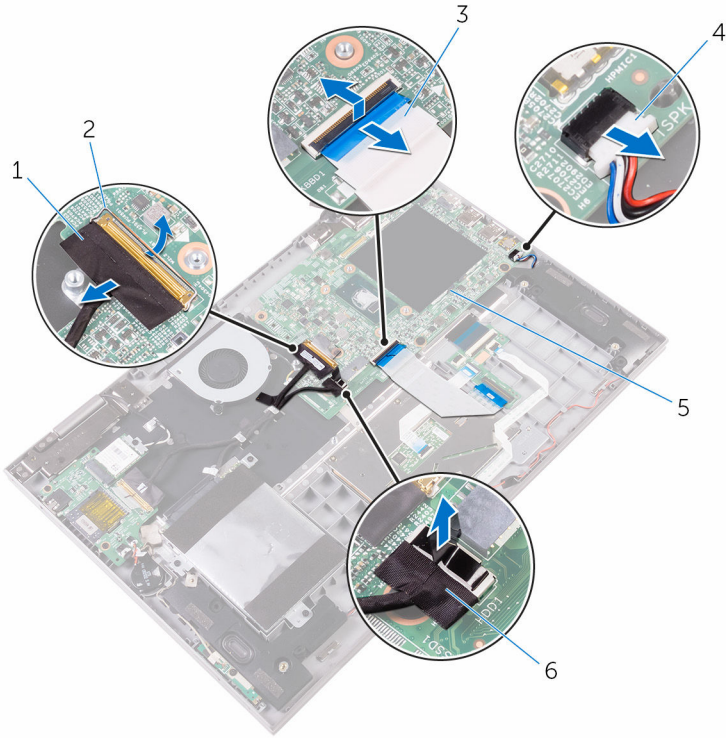


1	fan cable	2	latches (2)
3	tape (2)	4	display cable
5	touch-screen board cable	6	power-adapter port cable
7	system board		

4 Disconnect the speaker cable from the system board.

5 Using the pull tab, disconnect the hard-drive cable from the system board.

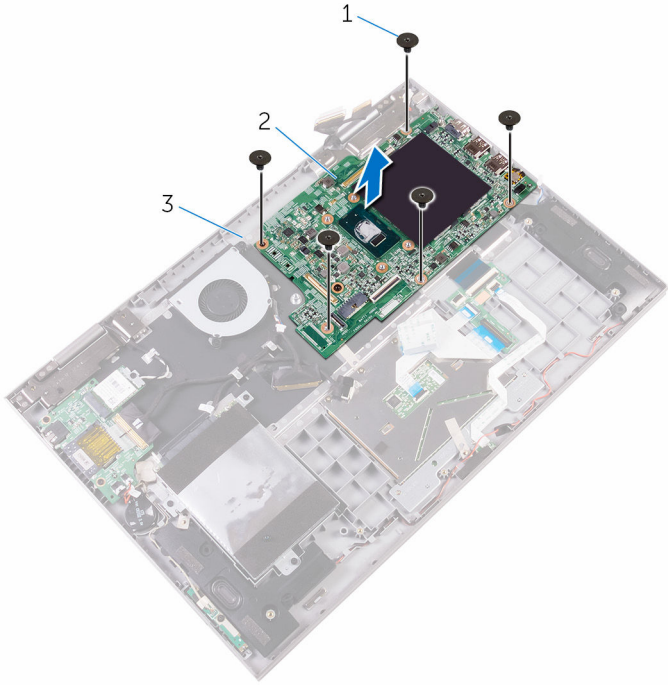
6 Open the latches and disconnect the keyboard cable and the I/O-board cable from the system board.



1	I/O-board cable	2	latches (2)
3	keyboard cable	4	speaker cable
5	system board	6	hard-drive cable

7 Remove the screws that secure the system board to the palm rest and keyboard assembly.

8 Lift the system board off the palm rest and keyboard assembly.



1	screws (5)	2	system board
3	palm rest and keyboard assembly		

Replacing the system board

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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.

Procedure

1. Align the screw holes on the system board with the screw holes on the palm rest and keyboard assembly.
2. Replace the screws that secure the system board to the palm rest and keyboard assembly.
3. Connect the fan cable, hard-drive cable, power-adapter port cable, and the speaker cable to the system board.
4. Slide the keyboard cable and the I/O-board cable into their respective connectors on the system board and close the latches to secure the cables.
5. Slide the display cable and the touch-screen board cable into their respective connectors on the system board and close the latches to secure the cables.
6. Adhere the pieces of tape that secure the display cable and the touch-screen board cable to their respective connectors on the system board.

Post-requisites

1. Replace the heat sink.
2. Replace the memory module.
3. Replace the battery.

4 Replace the base cover.

Entering the Service Tag in the BIOS setup program

1 Turn on or restart your computer.
2 Press F2 when the Dell logo is displayed to enter the BIOS setup program.
3 Navigate to the **Main** tab and enter the Service Tag in the **Service Tag Input** field.

Removing the display assembly

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Prerequisites

1. Remove the base cover.
2. Remove the battery.
3. Remove the wireless card.
4. Remove the memory module.
5. Remove the heat sink.
6. Remove the system board.

Procedure

1 Turn the computer over and open the display to 180-degree angle.

CAUTION: Place the computer on a soft and clean surface to avoid scratching the display.

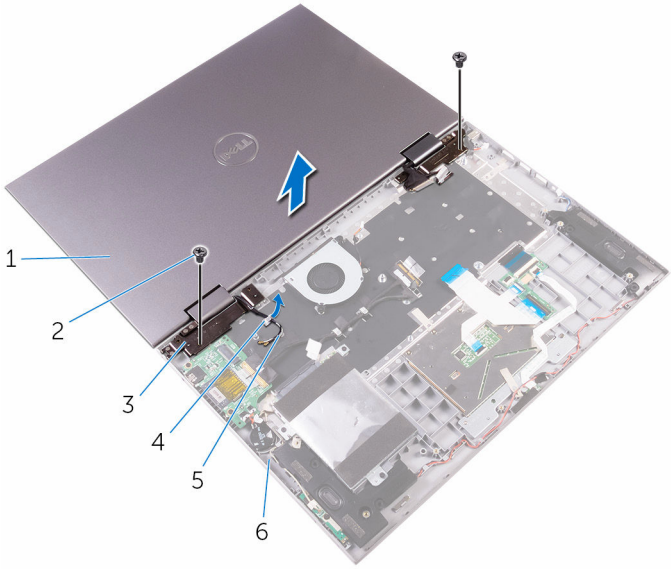
1	palm rest and keyboard assembly	2	display assembly

2 Place the computer on a flat surface with the display facing down.

3 Remove the screws that secure the display assembly to the palm rest and keyboard assembly.

4 Remove the antenna cables from the routing guide on the palm rest and keyboard assembly.

5 Lift the display assembly off the palm rest and keyboard assembly.



1	display assembly	2	screws (2)
3	display hinges (2)	4	routing guide
5	antenna cables (2)	6	palm rest and keyboard assembly

Replacing the display assembly

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Procedure

CAUTION: Place the computer on a soft and clean surface to avoid scratching the display.

1. With the display facing down, align the screw holes on the display hinges with the screw holes on the palm rest and keyboard assembly.
2. Replace the screws that secure the display assembly to the palm rest and keyboard assembly.
3. Turn the computer over and close the display.

Post-requisites

1. Replace the system board.
2. Replace the heat sink.
3. Replace the memory module.
4. Replace the wireless card.
5. Replace the battery.
6. Replace the base cover.

Removing the palm rest and keyboard assembly

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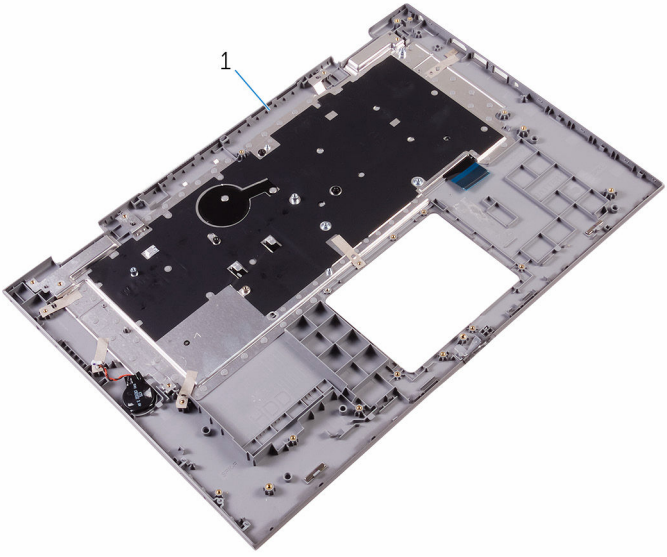
Prerequisites

1. Remove the base cover.
2. Remove the battery.
3. Remove the memory module.
4. Remove the wireless card.
5. Remove the coin-cell battery.
6. Follow the procedure from step 1 to step 5 in "Removing the hard drive".
7. Remove the keyboard daughter-board.
8. Remove the fan.
9. Remove the heat sink.
10. Remove the I/O board.
11. Remove the power and volume-buttons board.
12. Remove the power-adapter port.
13. Remove the status-light board.
14. Remove the speakers.
15. Remove the touch pad.
16. Remove the system board.
17. Remove the display assembly.

Procedure

After performing the steps in prerequisites, we are left with the palm rest and keyboard assembly.



1 palm rest and keyboard assembly

Replacing the palm rest and keyboard assembly

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Procedure

Place the palm rest and keyboard assembly on a clean and flat surface.

Post-requisites

1. Replace the display assembly.
2. Replace the system board.
3. Replace the touch pad.
4. Replace the status-light board.
5. Replace the speakers.
6. Replace the power-adapter port.
7. Replace the power and volume-buttons board.
8. Replace the I/O board.
9. Replace the heat sink.
10. Replace the fan.
11. Replace the keyboard daughter-board.
12. Follow the procedure from step 4 to step 8 in "Replacing the hard drive".
13. Replace the coin-cell battery.
14. Replace the wireless card.
15. Replace the memory module.
16. Replace the battery.
17. Replace the base cover.

Removing the display panel

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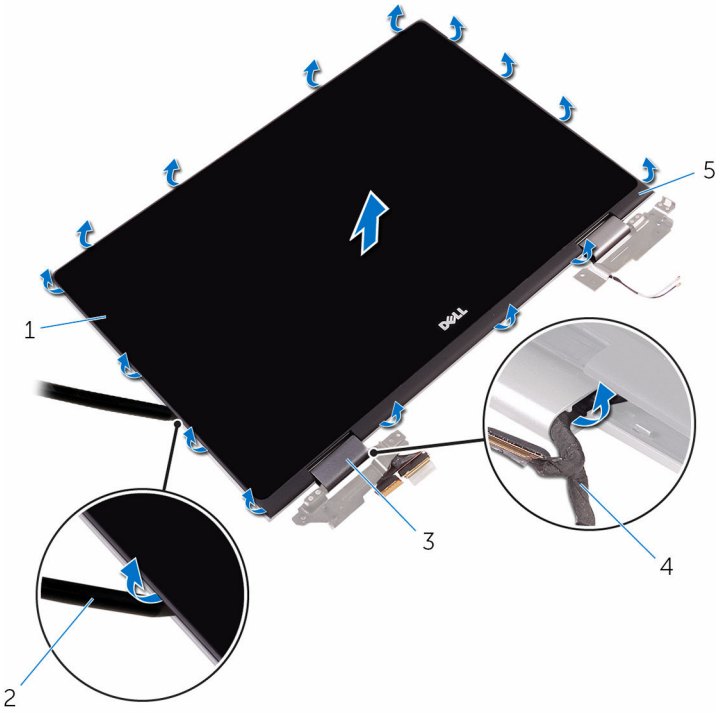
Prerequisites

1. Remove the base cover.
2. Remove the battery.
3. Remove the display assembly.

Procedure

1. Remove the display cable from inside the hinge covers.

2 Using a plastic scribe, pry up the display-panel assembly to release the tabs that secure display-panel assembly to the display back-cover and antenna assembly.



1	display-panel assembly	2	plastic scribe
3	hinge covers (2)	4	display cable
5	display back-cover and antenna assembly		

3 Remove the camera.

4 Remove the sensor board.

5 Remove the display cable.

After performing the preceding steps, we are left with the display panel.

1 display panel

Replacing the display panel

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Procedure

CAUTION: Place the display panel on a soft and clean surface to avoid scratching the display.

1. Place the display panel on a flat surface with the display facing down.
2. Replace the display cable.
3. Replace the sensor board.
4. Replace the camera.
5. Turn over the display-panel assembly.
6. Align the display-panel assembly with the display back-cover and antenna assembly and gently snap the display-panel assembly into place.

Post-requisites

1. Replace the display assembly.
2. Replace the battery.
3. Replace the base cover.

Removing the display cable

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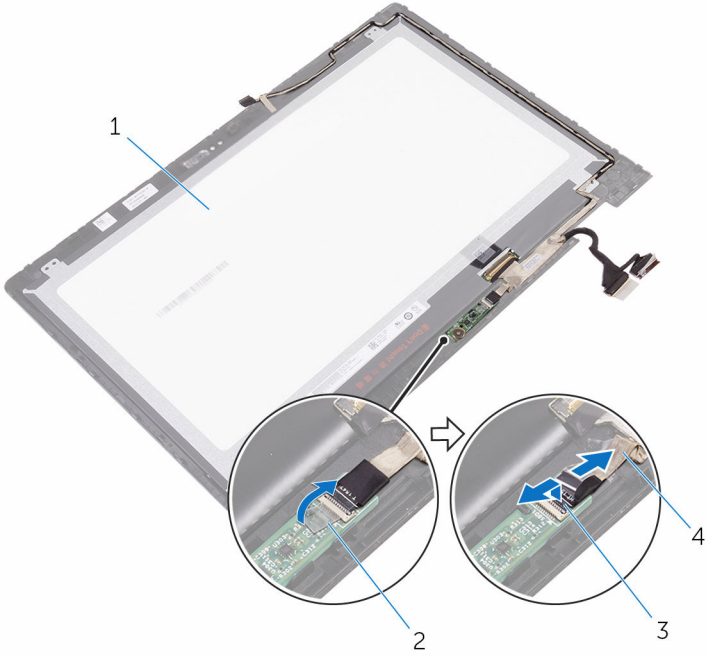
Prerequisites

1. Remove the base cover.
2. Remove the battery.
3. Remove the display assembly.
4. Follow the procedure from step 1 to step 2 in "Removing the display panel".
5. Remove the camera.

Procedure

1. Peel off the tape on the sensor-board connector.

2 Open the latch and disconnect the sensor-board cable from the sensor board.



1	display panel	2	tape
3	latch	4	sensor-board cable

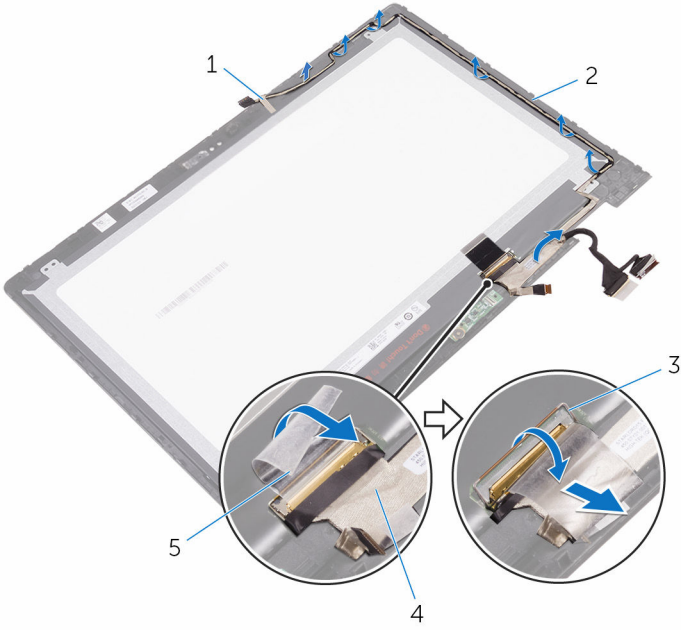
3 Peel off the tape on the display-cable connector.

4 Open the latch and disconnect the display cable from the display panel.

5 Note the display cable routing and remove the display cable from the routing guides on the display-panel assembly.

6 Peel off the tape that secures the display cable from the display-panel assembly.

7 Lift the display cable off the display-panel assembly.



1	tape	2	display-panel assembly
3	latch	4	display cable
5	tape		

Replacing the display cable

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Procedure

1. Adhere the tape that secures the display cable to the display-panel assembly.
2. Route the display cable through the routing guides on the display-panel assembly.
3. Slide the display cable into the connector on the display panel and close the latch to secure the cable.
4. Adhere the tape on the display-cable connector.
5. Slide the sensor-board cable into the connector on the sensor board and close the latch to secure the cable.
6. Adhere the tape on the sensor-board connector.

Post-requisites

1. Replace the camera.
2. Follow the procedure from step 5 to step 6 in "Replacing the display panel".
3. Replace the display assembly.
4. Replace the battery.
5. Replace the base cover.

Removing the display back-cover and antenna assembly

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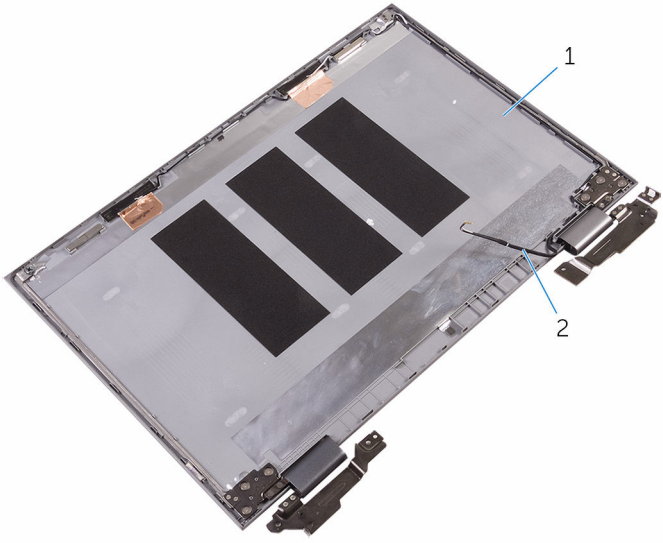
Prerequisites

1. Remove the base cover.
2. Remove the battery.
3. Remove the display assembly.
4. Follow the procedure from step 1 to step 2 in "Removing the display panel".

Procedure

After performing the steps in prerequisites, we are left with the display back-cover and antenna assembly.



1	display back-cover and antenna assembly	2	antenna cables

Replacing the display back-cover and antenna assembly

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Procedure

Place the display back-cover and antenna assembly on a flat surface.

Post-requisites

1. Follow the procedure from step 5 to step 6 in "Replacing the display panel".
2. Replace the display assembly.
3. Replace the battery.
4. Replace the base cover.

Removing the camera

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Prerequisites

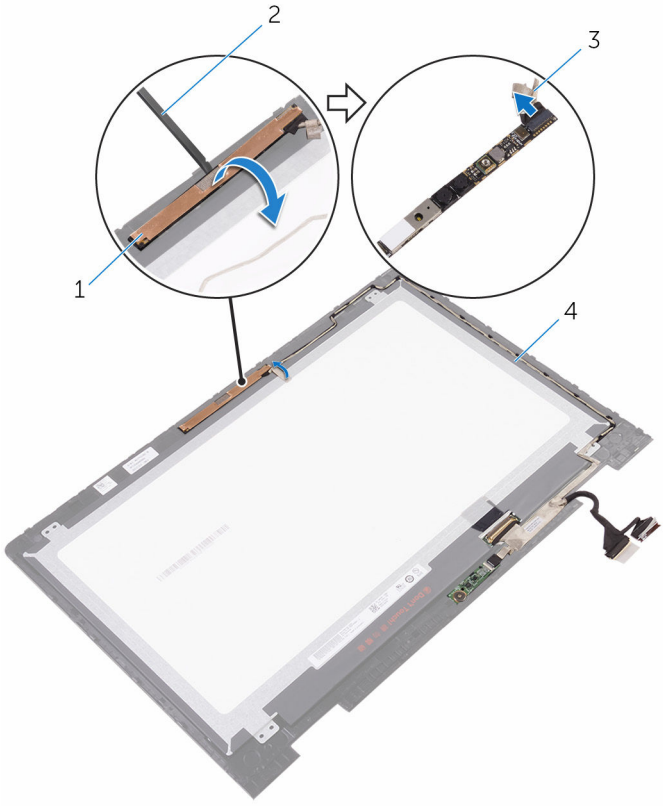
1. Remove the base cover.
2. Remove the battery.
3. Remove the display assembly.
4. Follow the procedure from step 1 to step 2 in "Removing the display panel".

Procedure

CAUTION: Place the display-panel assembly on a soft and clean surface to avoid scratching the display.

1. Place the display-panel assembly face down on a flat surface.
2. Using a plastic scribe, pry the camera module off the display-panel assembly.

3 Turn the camera over and disconnect the display cable from the camera module.



1	camera module	2	plastic scribe
3	display cable	4	display-panel assembly

Replacing the camera

WARNING: 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.

Procedure

1. Connect the display cable to the camera module.
2. Using the alignment post place the camera module on the display panel and snap it into place.

Post-requisites

1. Follow the procedure from step 5 to step 6 in "Replacing the display panel".
2. Replace the display assembly.
3. Replace the battery.
4. Replace the base cover.

Removing the sensor board

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Prerequisites

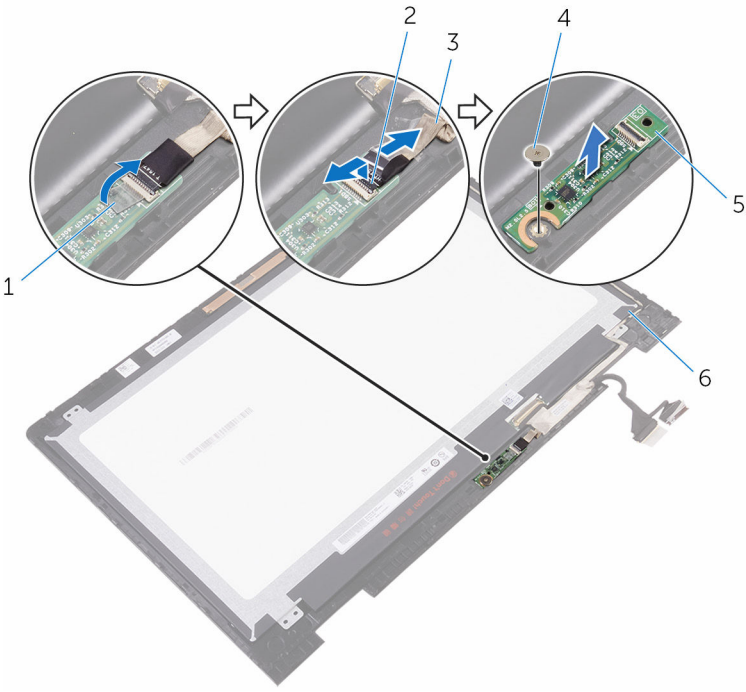
1. Remove the base cover.
2. Remove the battery.
3. Remove the display assembly.
4. Follow the procedure from step 1 to step 2 in "Removing the display panel".

Procedure

CAUTION: Place the display-panel assembly on a soft and clean surface to avoid scratching the display.

1. Place the display-panel assembly face down on a flat surface.
2. Remove the screw that secures the sensor board to the display panel.
3. Peel off the tape that secures the sensor-board cable to the sensor board.
4. Open the latch to disconnect the sensor-board cable from the sensor board.

5 Lift the sensor board off the display-panel assembly.



1	tape	2	latch
3	sensor-board cable	4	screw
5	sensor board	6	display-panel assembly

Replacing the sensor board

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Procedure

1. Align the screw hole on the sensor board with the screw hole on the display-panel assembly and snap the sensor board in place.
2. Slide the sensor-board cable into the connector on the sensor board and close the latch to secure the cable.
3. Adhere the tape on the sensor-board connector to secure the cable.
4. Replace the screw that secures the sensor board to the display-panel assembly.

Post-requisites

1. Follow the procedure from step 5 to step 6 in "Replacing the display panel".
2. Replace the display assembly.
3. Replace the battery.
4. Replace the base cover.

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 or tap **Product support**, enter the Service Tag of your computer, and then click or tap **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click or tap **Drivers & downloads** → **Find it myself**.
5. Select the operating system installed on your computer.
6. Scroll down the page and expand **BIOS**.
7. Click or tap **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 or double-tap the BIOS update file icon and follow the instructions on the screen.

Technology and components

Audio

The Inspiron 15-5578 is shipped with Realtek ALC3253 with Waves MaxxAudio Pro, which is the utility used to adjust various audio settings.

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

Downloading the audio driver

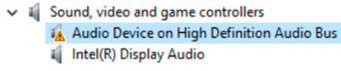
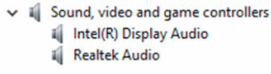
1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click or tap **Product support**, enter the Service Tag of your computer, and then click or tap **Submit**.

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

Identifying the audio controller

1. On the taskbar, click or tap the search box, and then type `Device Manager`.
2. Click or tap **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 or tap the search box, and then type `Dell Audio`.

2 Click or tap **Dell Audio** and change the audio settings as required.

Camera

The Inspiron 15-5578 is shipped with an integrated 0.92 megapixel high-speed camera with a maximum of 1280 x 720 HD resolution at 30 FPS. The camera has built-in digital-array microphones.

If you have purchased the optional infrared camera, the camera is equipped with depth-sensing feature which enhances security when paired with Windows Hello.

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

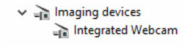
Identifying the webcam in device manager

1 On the taskbar, click or tap the search box, and then type `Device Manager`.

2 Click or tap **Device Manager**.

The **Device Manager** window is displayed.

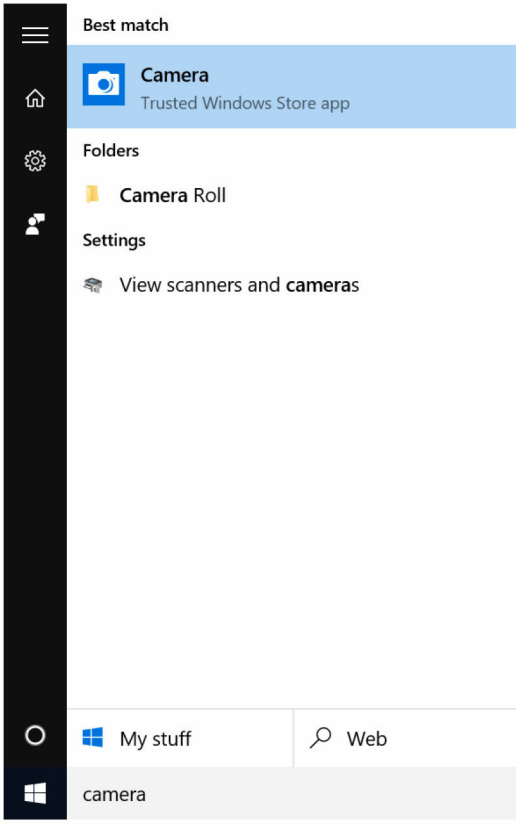
3 Expand **Imaging devices**.



Starting the camera application

1 On the taskbar, click or tap the search box, and then type `Camera`.

2 Click or tap **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.

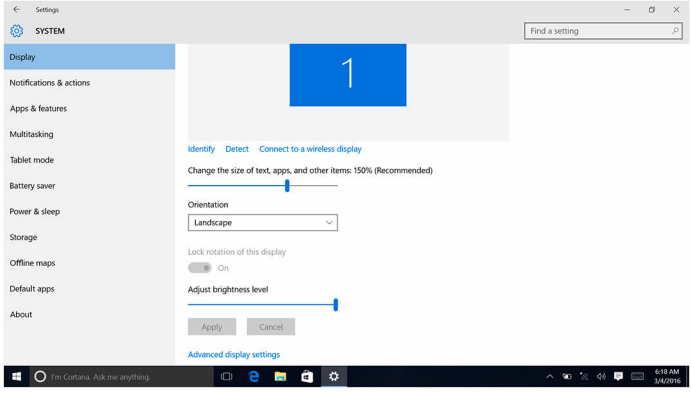
NOTE: The Dell Webcam Central is not available for download from the support site or the resource CD.

Display

The Inspiron 15-5578 is shipped with a 15.6-inch Full HD touch screen that supports a resolution of 1920 x 1080.

Adjusting the brightness

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

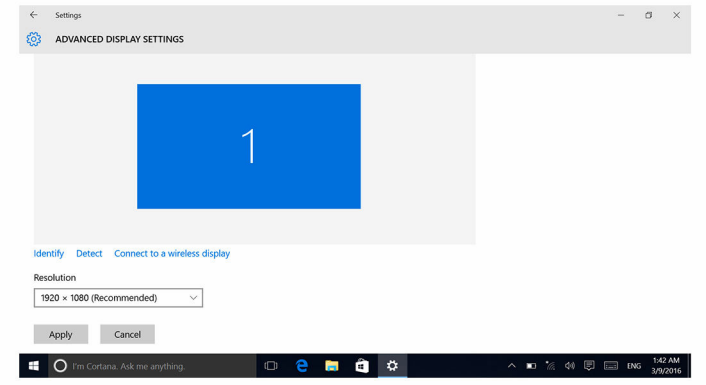


Alternatively, press F11 to decrease brightness and F12 to increase brightness.

Changing the screen resolution

1. Right-click or touch and hold on your desktop and select **Display settings**.
2. Click or tap **Advanced display settings**.
3. Select the appropriate resolution from the drop-down list.

4 Click or tap **Apply**.



Rotating the display

1 Right-click or touch and hold on your desktop.

2 Select **Display Settings**.

The **Settings** window is displayed.

3 From the **Orientation** drop-down list, select one of the following options:

- Landscape
- Portrait
- Landscape (flipped)
- Portrait (flipped)

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 motions to remove any dust or dirt particles.

3 Let the display dry thoroughly before turning it on.

HDMI

The Inspiron 15-5578 supports HDMI used to connect a TV or another HDMI-in enabled device. It provides video and audio output. The HDMI port is located on the left side of your computer.

NOTE: Appropriate converters (sold separately) are required to connect standard DVI and DisplayPort devices.

Connecting to external display devices

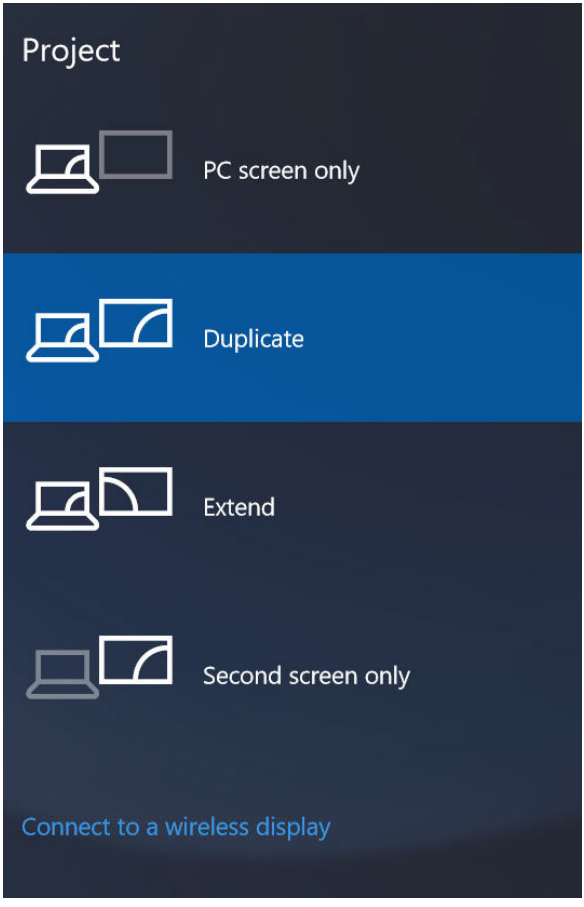
1 Connect the HDMI cable to your computer and the external display device.

2 Press F8 to display different display modes.

3 Select one of the following display modes:

- PC screen only
- Duplicate
- Extend
- Second screen only

NOTE: For more information, see the document that shipped with your display device.



Graphics

The Inspiron 15-5578 is shipped with the following video controllers:

- Intel HD Graphics 610 - Intel Celeron and Pentium
- Intel HD Graphics 620 - Intel Core i3/i5/i7
- Intel Iris Graphics 640 - Intel Core i7

Downloading the graphics driver

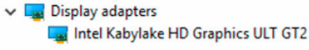
1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click or tap **Product support**, enter the Service Tag of your computer, and then click or tap **Submit**.

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

Identifying the display adapter

1. On the taskbar, click or tap the search box, and then type `Device Manger`.
2. Click or tap **Device Manager**.

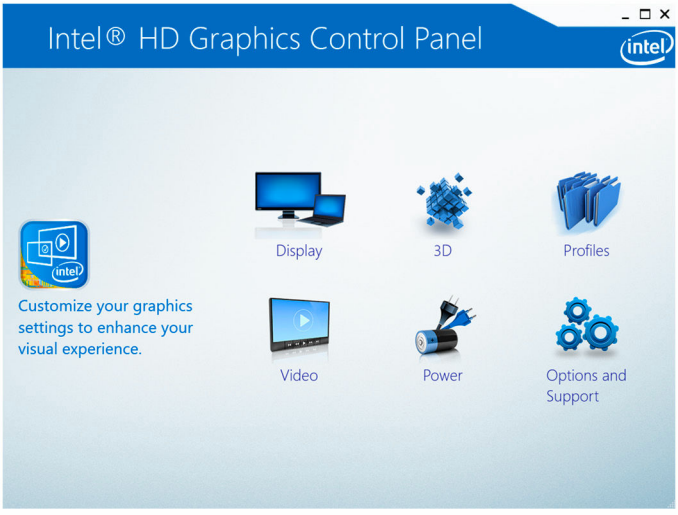
   The **Device Manager** window is displayed.
3. Expand **Display adapters**.



Changing the display settings in Intel HD Graphics Control Panel

1 Right-click or touch and hold on your desktop and select **Intel(R) Graphics Settings** to open the Intel HD Graphics Control Panel.

2 Click or tap **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 Intel WiDi application

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

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

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

The following table shows the USB ports available in Inspiron 15-5578.

Ports	Location
USB 3.0 port with PowerShare	Left side
USB 3.0 port	Left side
USB 2.0 port	Right 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 or tap **Product support**, enter the Service Tag of your computer, and then click or tap **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click or tap **Drivers & downloads** → **Find it myself**.
5. Scroll down the page and expand **Chipset**.
6. Click or tap **Download** to download the USB 3.0 driver for your computer.
7. After the download is complete, navigate to the folder where you saved the driver file.
8. Double-click or double-tap the 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 Select or clear the **Enable External USB Port** check box to enable or disable it, respectively.

5 Save the 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.

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 Clear the **Enable Boot Support** check box to disable it.

5 Save the settings and exit.

WiFi

The Inspiron 15-5578 is shipped with Wi-Fi 802.11 ac.

Turning on or off Wi-Fi

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 or tap the **Action Center** icon on the taskbar to access the Action Center.

2 Click or tap **Wi-Fi** to turn Wi-Fi on or off.

Downloading the Wi-Fi driver

1 Turn on the computer.

2 Go to www.dell.com/support.

3 Click or tap **Product support**, enter the Service Tag of your computer, and then click or tap **Submit**.

NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.

4 Click or tap **Drivers & downloads** → **Find it myself**.

5 Scroll down the page and expand **Network**.

6 Click or tap **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 or double-tap the driver file icon and follow the instructions on the screen.

Configuring the Wi-Fi

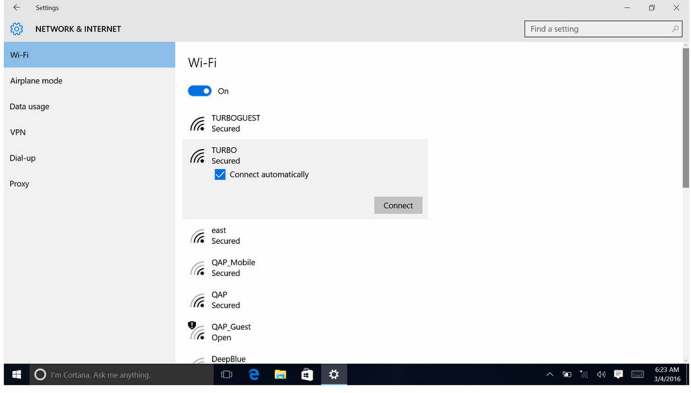
1 Turn on Wi-Fi. For more information, see Turning on or off Wi-Fi.

2 Swipe-in from the right edge of the display, or click or tap the **Action Center** icon on the taskbar to access the Action Center.

3 Right-click or touch and hold **Wi-Fi**, and then click or tap **Go to settings**.

A list of available networks is displayed.

4 Select your network and click or tap **Connect**.



NOTE: Type the network security key if prompted.

Bluetooth

The Inspiron 15-5578 is shipped with Bluetooth 4.0.

Turning on or off Bluetooth

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 or tap the **Action Center** icon on the taskbar to access the Action Center.

2 Click or tap **Bluetooth** to turn Bluetooth on or off.

Pairing the Bluetooth-enabled devices

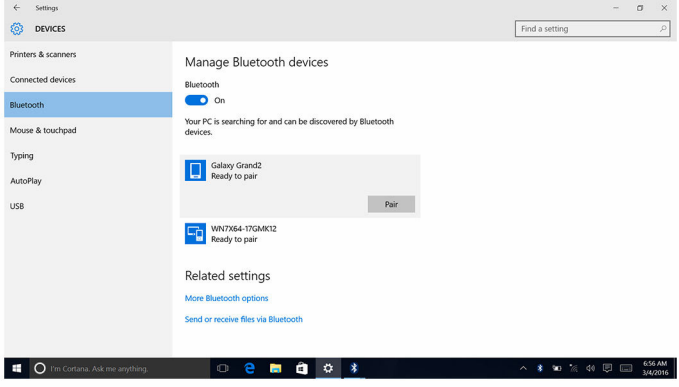
1 Turn on Bluetooth. For more information, see Turning on or off Bluetooth.

2 Swipe-in from the right edge of the display, or click or tap the **Action Center** icon on the taskbar to access the Action Center.

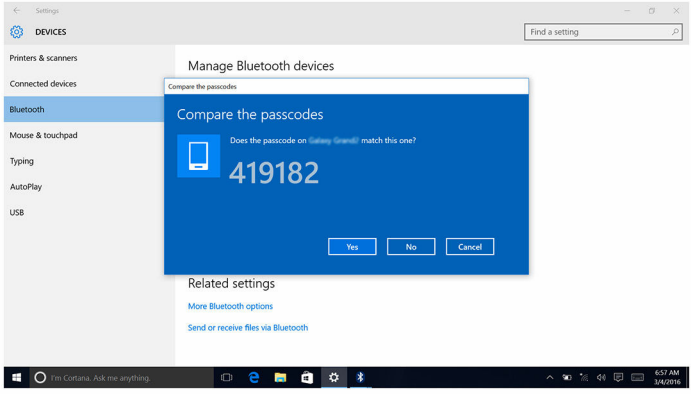
3 Right-click or touch and hold **Bluetooth**, and then click or tap **Go to settings**.

4 Select the required Bluetooth device for pairing.

5 Click or tap **Pair** to pair the Bluetooth devices.



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

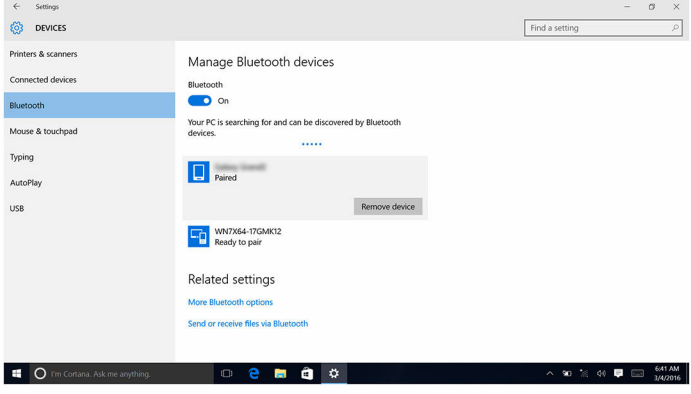


Removing the Bluetooth device

1 Swipe-in from the right edge of the display, or click or tap the **Action Center** icon on the taskbar to access the Action Center.

2 Right-click or touch and hold **Bluetooth**, and then click or tap **Go to settings**.

3 Click or tap the device you want to remove, and then click or tap **Remove device**.



Transferring files between devices using Bluetooth

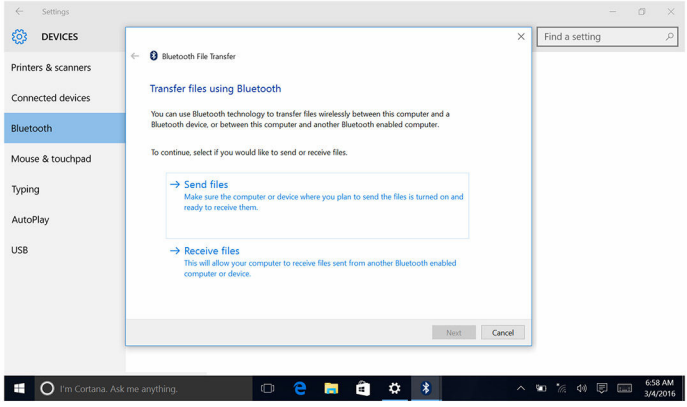
1 Swipe-in from the right edge of the display, or click or tap the **Action Center** icon on the taskbar to access the Action Center.

2 Right-click or touch and hold **Bluetooth**, and then click or tap **Go to settings**.

3 Select your Bluetooth device.

4 Click or tap **Send or receive files via Bluetooth**.

5 In the **Bluetooth File Transfer** window, click or tap **Send files**, and then select the file you want to transfer.



Hard Drive

The following table shows the hard-drive options available in Inspiron 15-5578.

Options	Dimensions
HDD	2.5-inch drive
SSD	2.5-inch drive

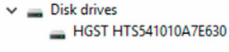
Identifying the hard drive

1 On the taskbar, click or tap the search box, and then type `Device Manager`.

2 Click or tap **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 your computer.

2 Press F2 when the Dell logo is displayed on the screen to enter the BIOS setup program.

A list of hard drives are displayed under the **System Information** in the **General** group.

Media-card reader

Inspiron 15-5578 has one SD-card slot located on the right side of your computer.

Downloading the media-card reader driver

1 Turn on your computer.

2 Go to www.dell.com/support.

3 Click or tap **Product support**, enter the Service Tag of your computer, and then click or tap **Submit**.

NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.

4 Click or tap **Drivers & downloads** → **Find it myself**.

5 Scroll down the page and expand **Chipset**.

6 Click or tap **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 card reader driver file.

8 Double-click or double-tap 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 is displayed on the screen.

2 Follow the instructions on the screen.

Keyboard

Inspiron 15-5578 is shipped with a backlit keyboard or a standard keyboard.

Changing the keyboard language

1. Click or tap **Start**.
2. Click or tap **Settings**.
3. Click or tap **Time & language** → **Region & language**.
4. Click or tap **Add a language**.
5. Choose the language you want to add and select a country for the language.
6. Under **Languages**, click or tap the language that you want to set as the default language.
7. Click or tap **Set as default**.

Keyboard shortcuts

Keys	Description
	Mute audio
	Decrease volume
	Increase volume
	Play previous track/chapter
	Play/Pause
	Play next track/chapter
	Switch to external display
	Search
	Toggle keyboard backlight

Keys	Description
F11	Decrease brightness
F12	Increase brightness
Fn + PrtScr	Turn off/on wireless
Fn + B	Pause/Break
Fn + Insert	Sleep
Fn + S	Toggle scroll lock
Fn + H	Toggle between power and battery-status light/hard-drive activity light
Fn + R	System request
Fn + Ctrl	Open application menu
Fn + Esc	Toggle Fn-key lock
Fn + End	End
Fn + Home	Home
Fn + PgDn	Page down
Fn + PgUp	Page up

Touch pad

The Inspiron 15-5578 is shipped with a Precision touch pad.

A precision touch pad is a new class of input device that provides high precision pointer input and gesture functionality. Precision touch pads interact with the operating system directly without a driver.

The operating system handles the overall functionality of the touch pad and there are no separate drivers available for download.

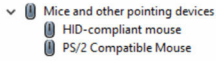
Identifying the touch pad

1 On the taskbar, click or tap the search box, and then type `Device Manager`.

2 Click or tap **Device Manager**.

The **Device Manager** window is displayed.

3 Expand **Mice and other pointing devices**.



Touch pad gestures

Gesture	Procedure	Result
Tap to click	Tap on the touch pad.	Selects an item.
Tap, tap-slide to highlight or drag	Tap, tap-slide on the touch pad.	Highlights text, and drags and drops an item.
Slide to scroll	Place two fingers on the touch pad, and then slide.	Scrolls the page. Pages can scroll left and right, up and down, or both.
Pinch or stretch to zoom	Place two fingers on the touch pad and move them toward each other or away from each other.	Zooms out or zooms in on the touch pad.
Swipe for Action Center	Swipe in from the right edge.	Opens the Action Center. Swipe again to hide the Action Center.
Swipe for adding new desktop	Swipe in from the left edge.	Click or tap **New desktop** to add a new desktop.

Power adapter

The Inspiron 15-5578 is shipped with a 45 W/65 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.

NOTE: Depending on the region, two or three pin adapters are available. Please verify part numbers from SPMD before replacing the power adapter.

Battery

The Inspiron 15-5578 is shipped with a 3-cell 42 WHr smart lithium ion battery.

NOTE: Batteries are covered for a period of one year from the invoice date unless stated otherwise in the invoice.

Chipset

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

The Inspiron 15-5578 is shipped with the chipset that is integrated in the processor.

Downloading the chipset driver

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

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click or tap **Drivers & downloads** → **Find it myself**.
5. Scroll down the page and expand **Chipset**.

6 Click or tap **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 or double-tap the chipset driver file icon and follow the instructions on the screen.

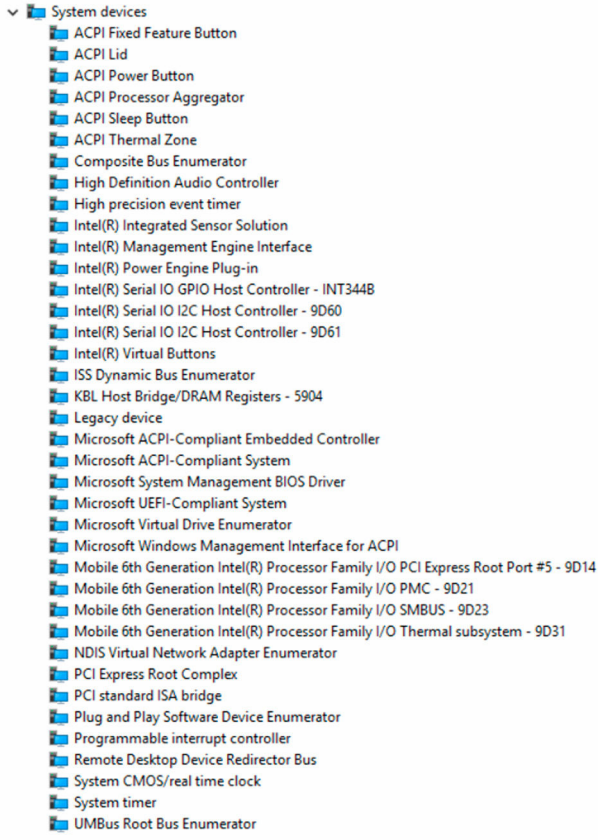
Identifying the chipset

1 On the taskbar, click or tap the search box, and then type `Device Manager`.

2 Click or tap **Device Manager**.

The **Device Manager** window is displayed.

3 Expand **System devices**.



Memory

The Inspiron 15-5578 has two SODIMM (RAM) slots, which are accessible by removing the base cover. Your computer supports 4 GB, 8 GB, 12 GB, and 16 GB dual-channel DDR4 memory of up to 2133 MHz.

Checking the system memory in Windows

1. Click or tap **Start**.
2. Select **Settings**.
3. Click or tap **System** → **About**.

Checking the system memory in BIOS setup program

1. Turn on or restart your computer.
2. Press F2 when the Dell logo is displayed 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

The Inspiron 15-5578 is shipped with the following processor options:

- 7th generation Intel Core i3/i5/i7
- Intel Celeron Dual Core
- Intel Pentium Dual Core

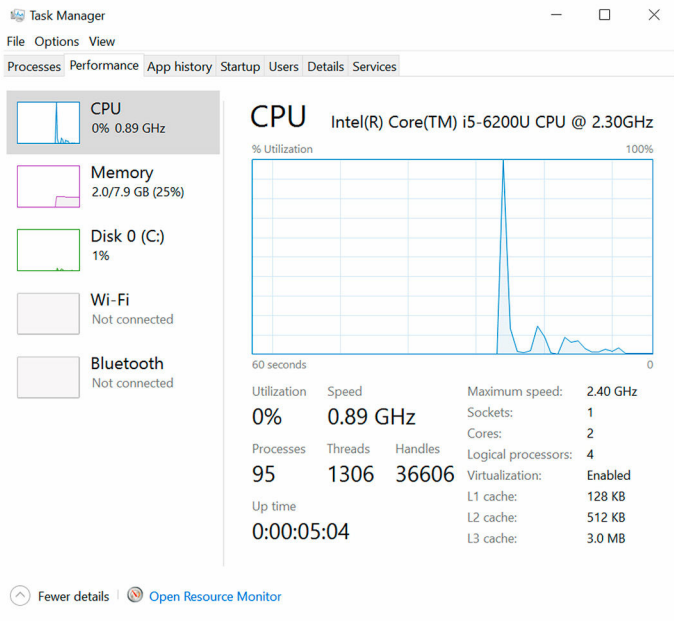
Identifying the processors in Windows

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

Checking the processor usage in the task manager

1. Right-click or touch and hold on the taskbar.
2. Click or tap **Task Manager**.
   The **Task Manager** window is displayed.
3. Click or tap **More details**.

4 Click or tap the **Performance** tab to display the processor usage details.



Operating System

The Inspiron 15-5578 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.

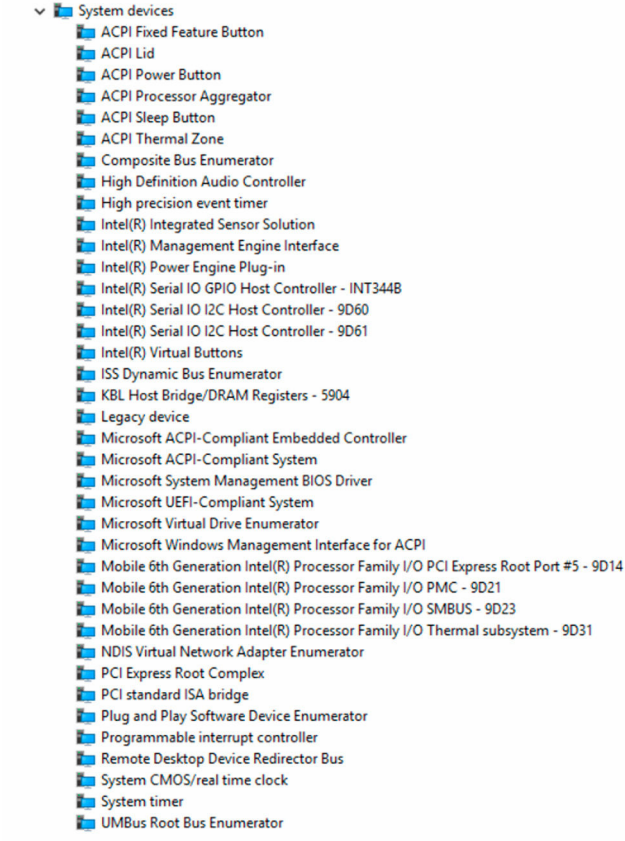
Device drivers

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.

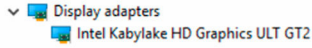
Intel Chipset Software Installation Utility

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



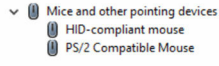
Intel Kabylake HD Graphics

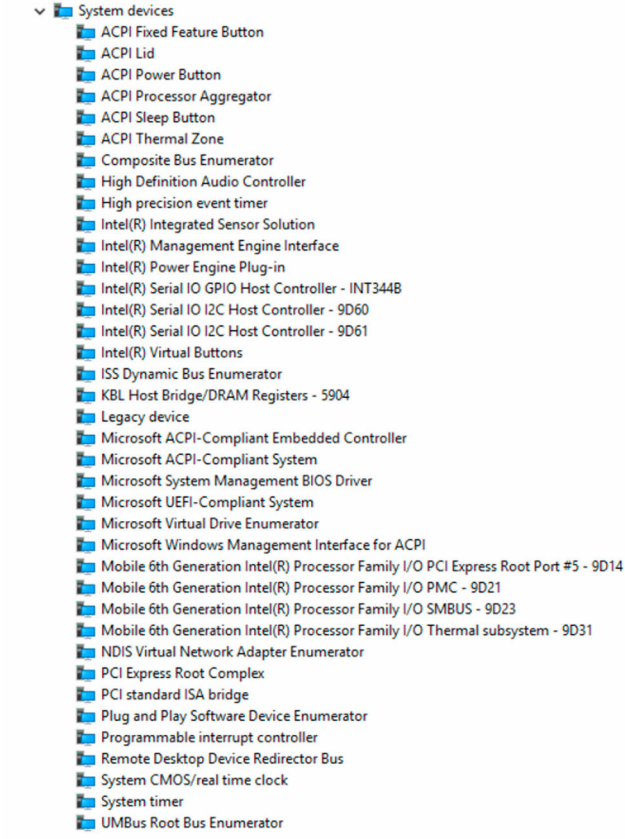
In the Device Manager, check if the video driver is installed. Install the video driver update from www.dell.com/support.



Intel Serial IO driver

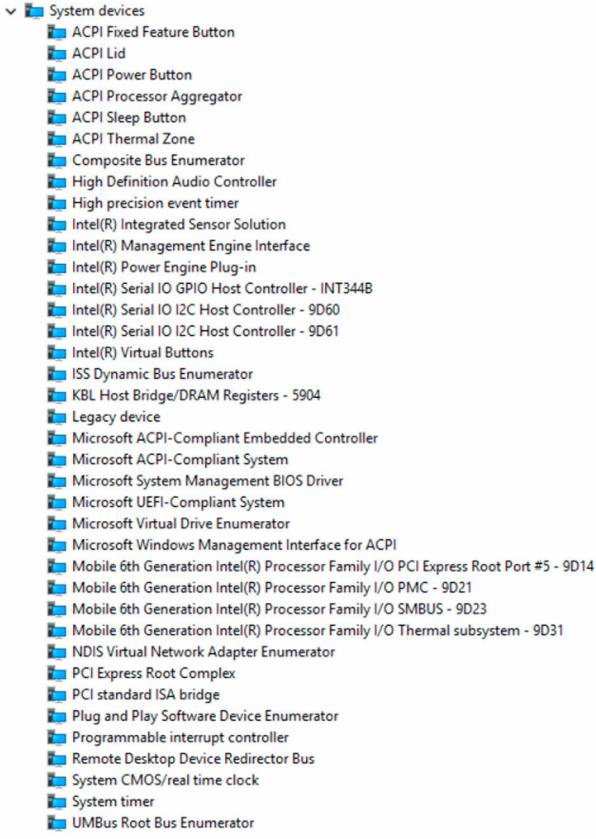
In the Device Manager, check if the Intel Serial IO driver is installed. Install the driver updates from www.dell.com/support.





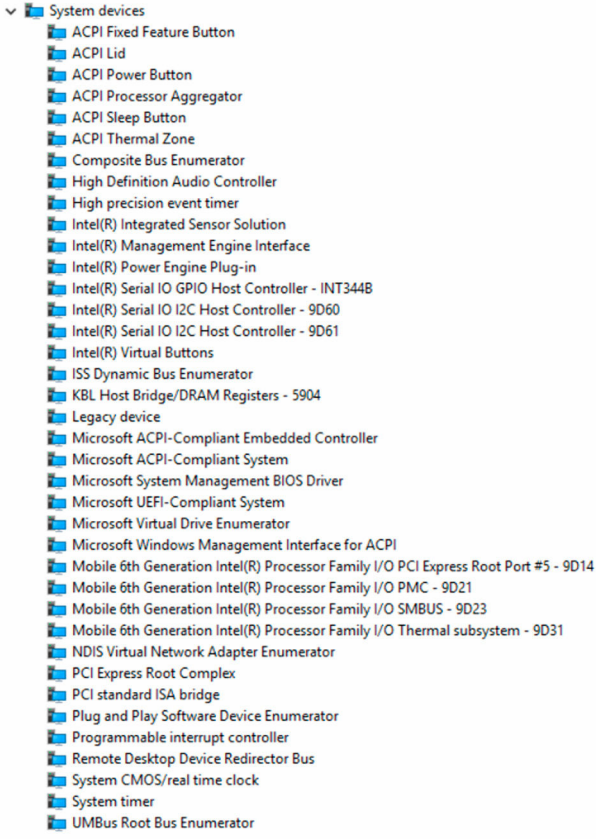
Intel Trusted Execution Engine Interface

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



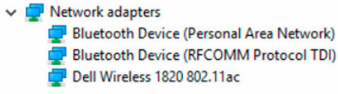
Intel Virtual Button driver

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 the 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-definable settings in BIOS setup program.

Boot menu

The Inspiron 15-5578 includes a one-time boot menu. By using this feature, you can 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.

System diagnostic lights

Power and battery-status light/hard-drive activity light

Indicates the battery-charge status or the hard-drive activity.

NOTE: Press Fn+H to toggle this light between power and battery-status light and hard-drive activity light.

Hard-drive activity light

Turns on when the computer reads from or writes to the hard drive.

Power and battery-status light

Indicates the power and battery-charge status.

Solid white — Power adapter is connected and the battery has more than 5 percent charge.

Amber — Computer is running on battery and the battery has less than 5 percent charge.

Off

- Power adapter is connected and the battery is fully charged.
- Computer is running on battery and the battery has more than 5 percent charge.
- Computer is in sleep state, hibernation, or turned off.

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

For example, the power and battery-status light blinks amber two times followed by a pause, and then blinks white three times followed by a pause. This 2,3 pattern continues until the computer is turned off indicating no memory or RAM is detected.

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

Light pattern	Problem description	Suggested solution
2,1	CPU failure	Replace the system board.
2,2	System board: BIOS and ROM failure	Flash latest BIOS version. If problem persists, replace the system board.
2,3	No memory or RAM detected	Confirm that the memory module is installed properly. If

Light pattern	Problem description	Suggested solution
		problem persists, replace the memory module.
2,4	Memory or RAM failure	Replace the memory module.
2,5	Invalid memory installed	Replace the memory module.
2,6	System board or chipset error	Replace the system board.
2,7	LCD failure	Replace the LCD.
3,1	CMOS battery failure	Replace the CMOS battery.
3,2	PCI or video card or chip failure	Replace the CMOS battery.
3,3	Recovery image not found	Reimage the system.
3,4	Recovery image found but invalid	Reimage the system.

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

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

Caps Lock status light: Indicates whether Caps Lock is enabled or disabled.

- Solid white — Caps Lock enabled.
- Off — Caps Lock disabled.

Getting help and contacting Dell

Self-help resources

You can get information and help on Dell products and services using these 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.