

# Dell Latitude 7370

## Owner's Manual



# 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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# Working on your computer

## Safety instructions

Use the following safety guidelines to protect your computer from potential damage and to ensure your personal safety. Unless otherwise noted, each procedure included in this document assumes that the following conditions exist:

- You have read the safety information that shipped with your computer.
- A component can be replaced or, if purchased separately, installed by performing the removal procedure in reverse order.

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

 **WARNING:** Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance)

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

 **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface that is grounded to ground yourself before you touch the computer to perform any disassembly tasks.

 **CAUTION:** Handle components and cards with care. Do not touch the components or contacts on a card. Hold a card by its edges or by its metal mounting bracket. Hold a component such as a processor by its edges, not by its pins.

 **CAUTION:** When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. Some cables have connectors with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

 **NOTE:** The color of your computer and certain components may appear differently than shown in this document.

## Before working inside your computer

To avoid damaging your computer, perform the following steps before you begin working inside the computer.

1. Ensure that you follow the [Safety instructions](#).
2. Ensure that your work surface is flat and clean to prevent the computer cover from being scratched.
3. Turn off your computer, see [Turning off your computer](#).

 **CAUTION:** To disconnect a network cable, first unplug the cable from your computer and then unplug the cable from the network device.

4. Disconnect all the network cables from the computer.
5. Disconnect your computer and all attached devices from the electrical outlets.
6. Press and hold the power button while the computer is unplugged to ground the system board.
7. Remove the cover.

 **CAUTION:** Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate static electricity, which could harm internal components.

 **CAUTION:** Make sure that you place the cooler outlet side of your system at least 5 cm away from wall to prevent system overheat.

 **CAUTION:** Your system cannot be placed crosswise and make sure that there is no equipment on the side cover.

## Turning off your computer

## After working inside your computer

After you complete any replacement procedure, ensure you connect any external devices, cards, and cables before turning on your computer.

 **CAUTION:** To avoid damage to the computer, use only the battery designed for this particular Dell computer. Do not use batteries designed for other Dell computers.

1. Replace the battery.
2. Replace the base cover.
3. Connect any external devices, such as a port replicator or media base, and replace any cards, such as an ExpressCard.
4. Connect any telephone or network cables to your computer.

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

5. Connect your computer and all attached devices to their electrical outlets.
6. Turn on your computer.

# Removing and installing components

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

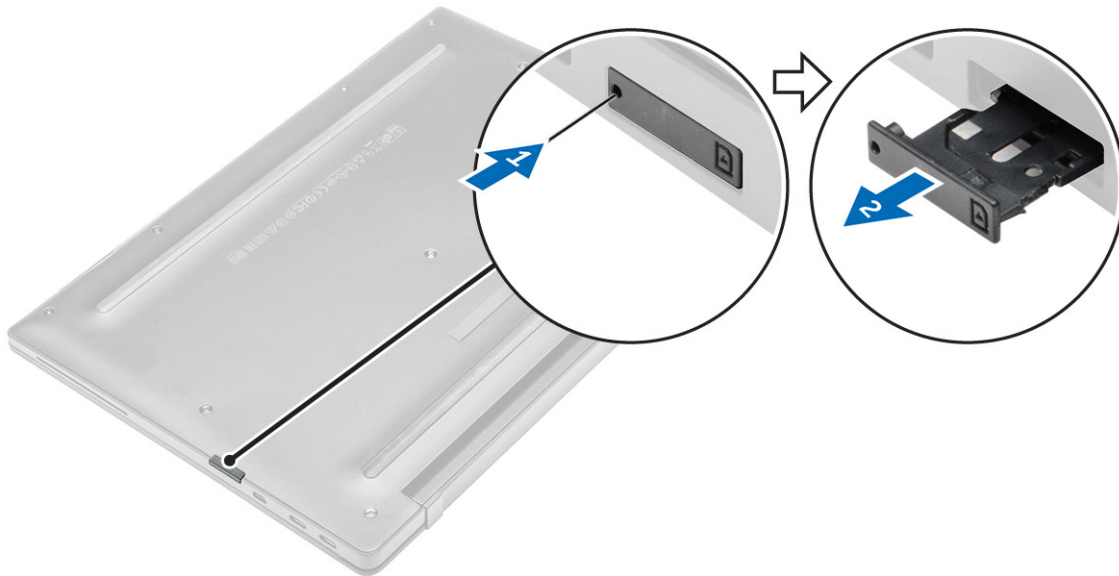
## Recommended tools

The procedures in this document require the following tools:

- Small flat blade screwdriver
- Phillips # 1 screwdriver
- Small plastic scribe

## Installing the micro Subscriber Identification Module (SIM) card

1. Follow the procedure in [Before working inside your computer.](#)
2. Insert a paperclip or a SIM card removal tool into the pinhole to remove the SIM card tray [1].
3. Place the micro SIM card on the SIM card tray [2].
4. Push the SIM card tray into the slot until it clicks into place.



## Removing the micro Subscriber Identification Module (SIM) card

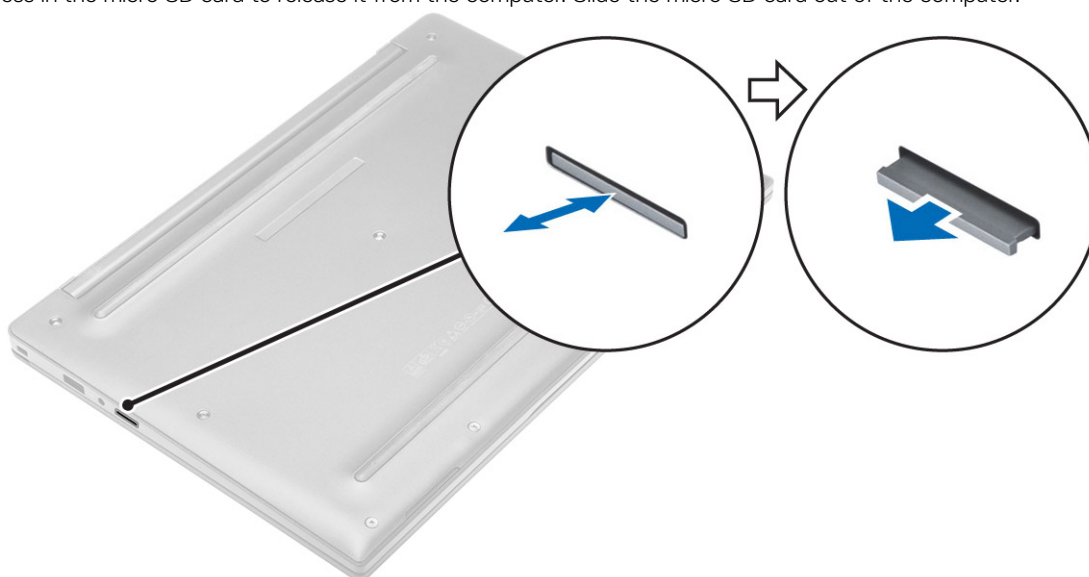
**CAUTION:** Removing the micro SIM card when the computer is on may cause data loss or damage the card. Ensure that your computer is turned off or the network connections are disabled.

1. Insert a paperclip or a SIM card removal tool into the pinhole on the SIM card tray.
2. Remove the micro SIM card from the SIM card tray.
3. Push the SIM card tray into the slot until it clicks into place.



## Removing the micro Secure Digital (SD) card

1. Follow the procedure in [Before working inside your computer.](#)
2. Press in the micro SD card to release it from the computer. Slide the micro SD card out of the computer.



## Installing the micro Secure Digital (SD) card

1. Push in the micro SD card into its slot until it clicks into place.
2. Follow the procedure in [After working inside your computer.](#)

## Removing the base cover

1. Follow the procedure in [Before working inside your computer.](#)
2. To remove the base cover:
  - a. Loosen the captive screws that secure the base cover to the computer [1].
  - b. Lift the base cover from the edge and remove it from the computer [2].



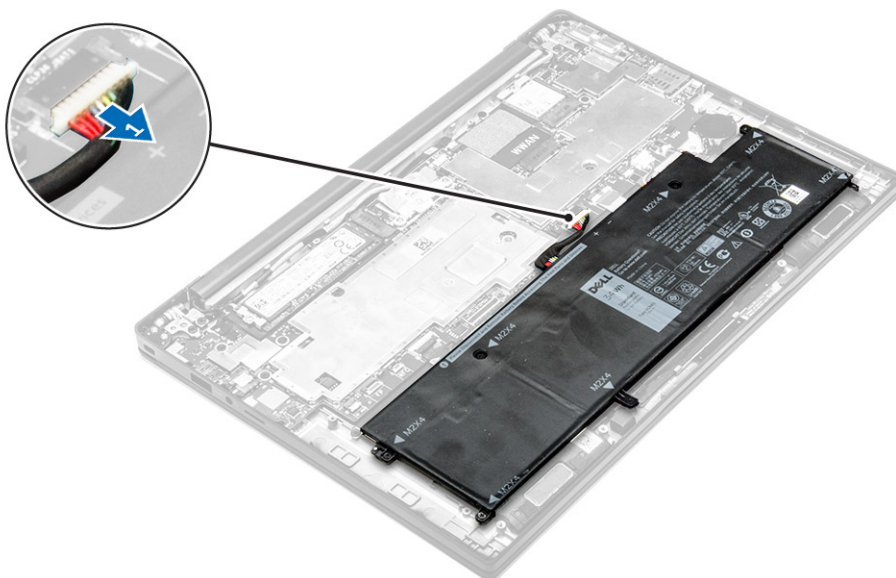
## Installing the base cover

1. Align the tabs on the base cover with the slots on the computer.
2. Tighten the screws to secure the base cover to the computer.
3. Press the edges of the cover until it clicks into place.
4. Follow the procedure in [After working inside your computer](#).

## Removing the battery

**NOTE:** Discharge the battery as much as possible before removing from the system. This can be done by disconnecting the A/C adapter from the system (while the system is turned on) to allow the system to drain the battery.

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Disconnect the battery cable from the connector on the system board [1].



4. To remove the battery:

- a. Remove the screws that secure the battery to the computer [1].
- b. Lift the battery away from the computer [2].
  - **Do not** apply pressure to the surface of the battery
  - **Do not** bend
  - **Do not** use tools of any kind to pry on or against the battery
  - If a battery cannot be removed within the constraints above, please contact Dell technical support

## Installing the battery

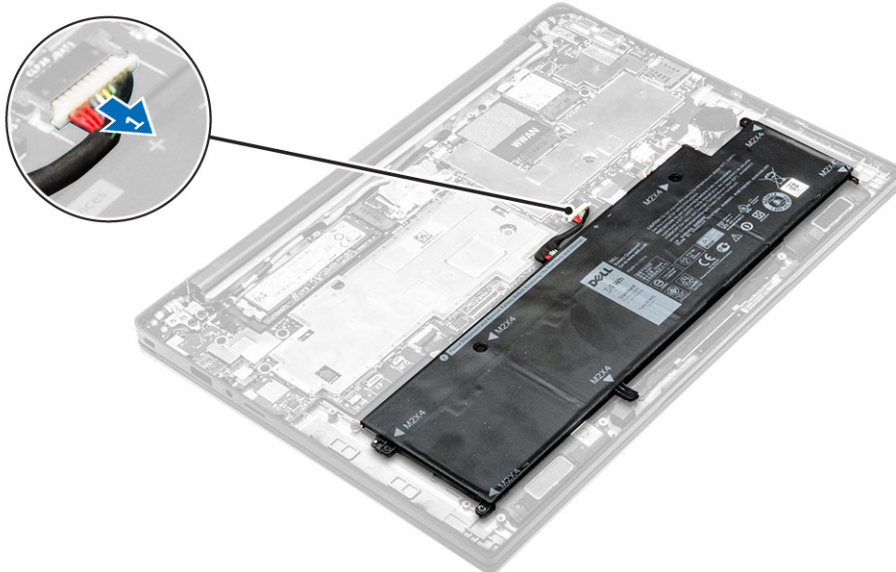
1. Align the tabs on the battery with the slots on the palmrest.
2. Tighten the screws to secure the battery to the computer.

 **NOTE:** The number of screws vary depending on the type of battery.

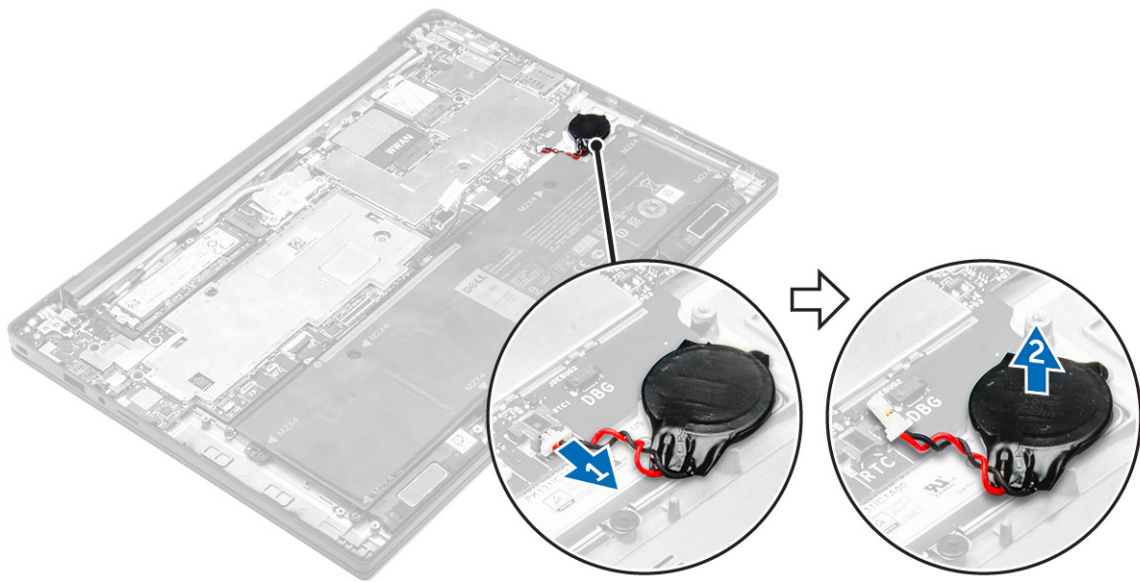
3. Connect the battery cable to the connector on the system board.
4. Install the [base cover](#).
5. Follow the procedure in [After working inside your computer](#).

## Removing the coin cell battery

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the:
  - a. [base cover](#)
3. Disconnect the battery cable from the connector on the system board [1].



4. To remove the coin cell battery:
  - a. Disconnect the coin cell battery cable from the connector on the system board [1].
  - b. Lift the coin cell battery to release it from the adhesive and remove it from the system board [2].

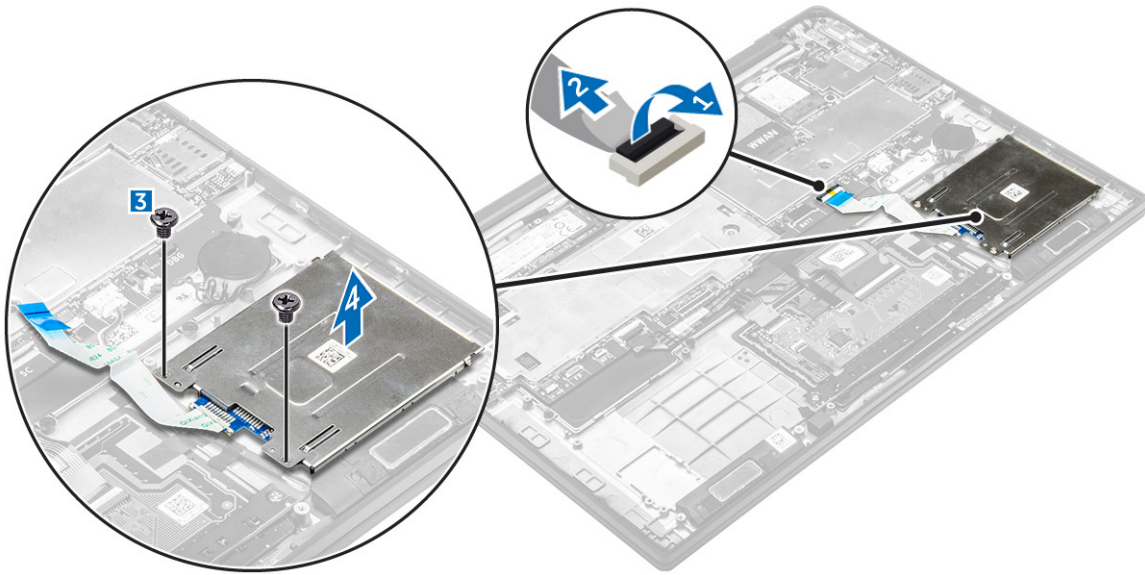


## Installing the coin cell battery

1. Place the coin cell battery into the slot on the system board.
2. Connect the coin cell battery cable to the connector on the system board.
3. Connect the battery cable to the connector on the system board.
4. Install the:
  - a. [base cover](#)
5. Follow the procedure in [After working inside your computer](#).

## Removing the smart card cage

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the:
  - a. [base cover](#)
  - b. [battery](#)
3. To remove the smart card cage:
  - a. Disconnect the smart card FFC cable [1,2].
  - b. Remove the screws that secure the smart card cage to the system board [3].
  - c. Lift the smart card cage from the system board [4].



## Installing the smart card cage

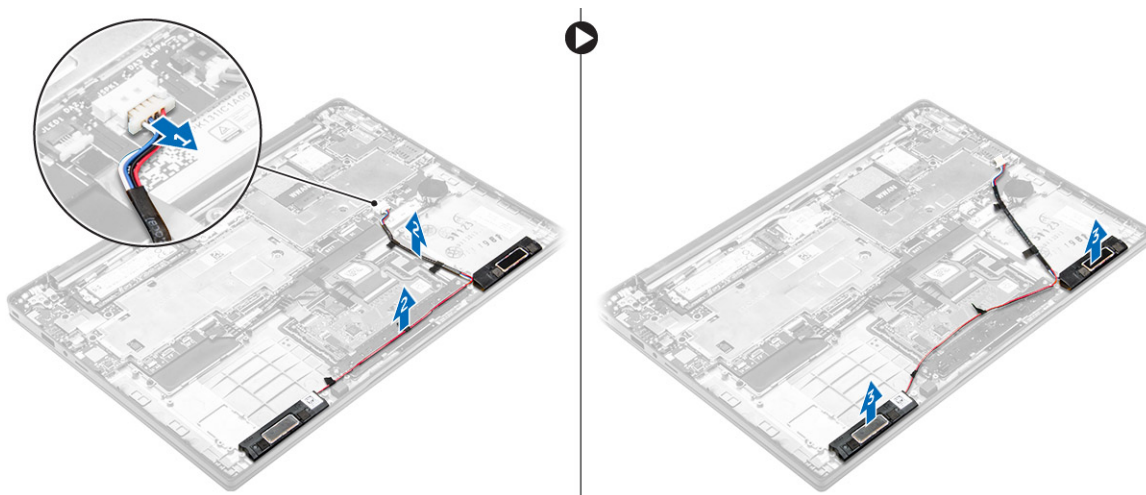
1. Place the smart card cage on the system board.
2. Tighten the screw to secure the smart card cage to the computer.
3. Connect the smart card FFC cable to the system board.
4. Install the:
  - a. [battery](#)
  - b. [base cover](#)
5. Follow the procedure in [After working inside your computer](#).

## Removing the speakers

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the:
  - a. [base cover](#)
  - b. [battery](#)
3. To remove the speakers:
  - a. Disconnect the speaker cable [1].
  - b. Unroute the speaker cable [2].
  - c. Remove the speakers from the computer [3].

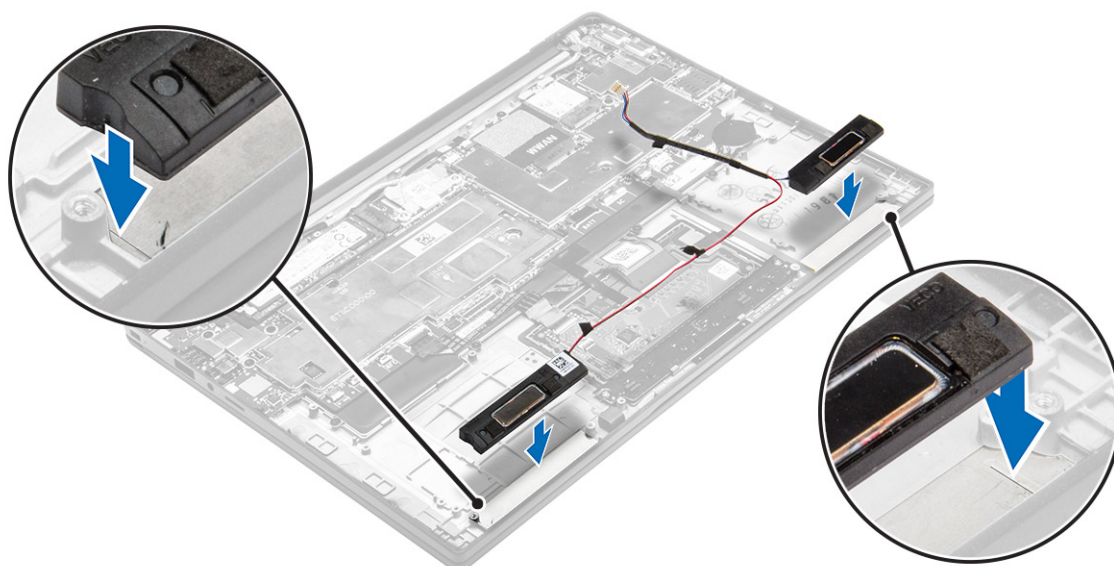
 **NOTE:** Use a plastic scribe to detach the speakers from the adhesive pads.





## Installing the speakers

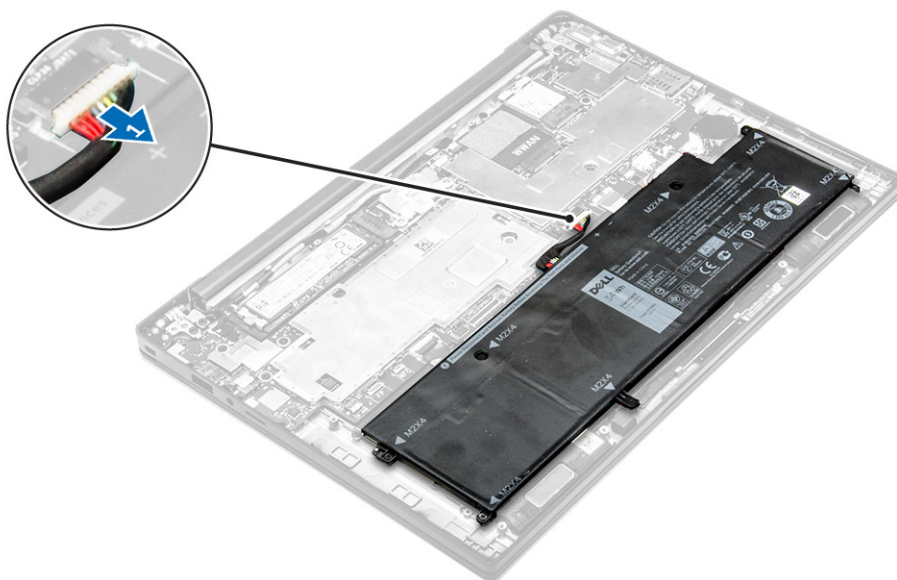
1. Place the speakers to align with the alignment lines on the computer.



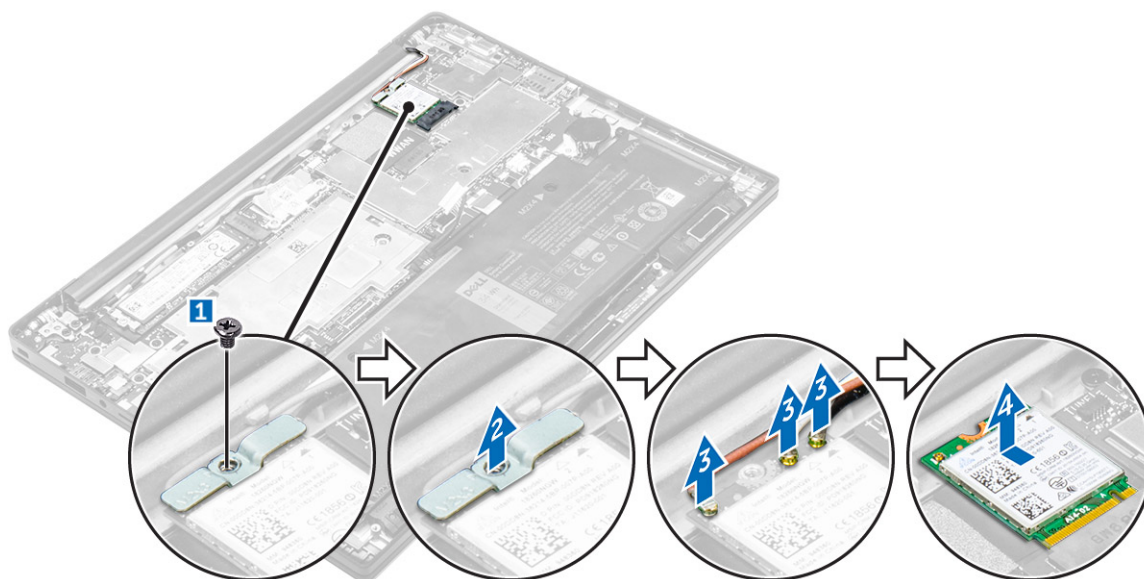
2. Route the speaker cable through the retention clips on the dock frame.
3. Connect the speaker cable to its connector on the system board.
4. Install the:
  - a. [battery](#)
  - b. [base cover](#)
5. Follow the procedure in [After working inside your computer](#).

## Removing the WLAN card

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the:
  - a. [base cover](#)
3. Disconnect the battery cable from the connector on the system board [1].



4. To remove the WLAN card:
  - a. Remove the screw that secures the metal bracket to the WLAN card [1].
  - b. Remove the metal bracket [2].
  - c. Disconnect the WLAN cables from the connectors on the WLAN card [3].
  - d. Remove the WLAN card from the computer [4].



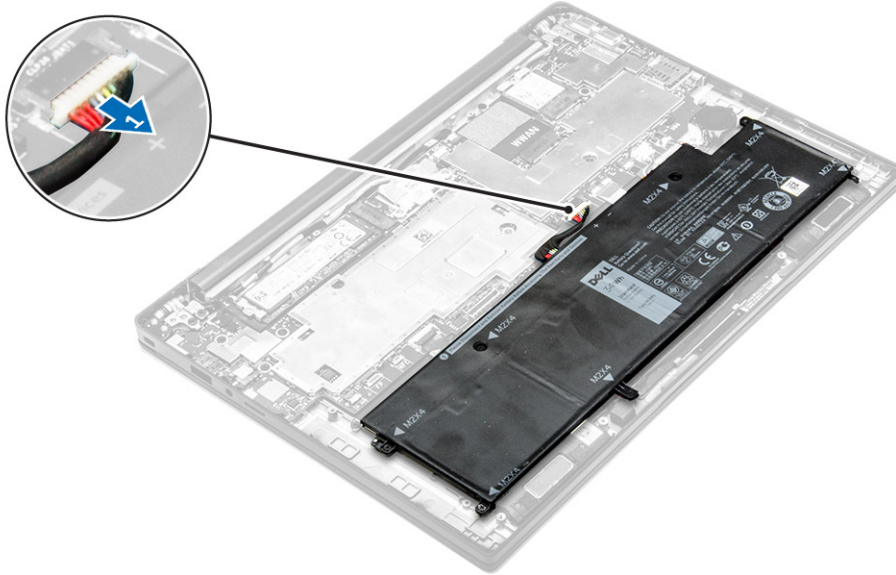
## Installing the WLAN card

1. Insert the WLAN card into the slot on the computer.
2. Route the WLAN cables through the routing channel.
3. Connect the WLAN cables to the connectors on the WLAN Card.
4. Place the metal bracket and tighten the screw to secure it to the computer.
5. Connect the battery cable to the connector on the system board.
6. Install the:
  - a. [base cover](#)
7. Follow the procedure in [After working inside your system](#).

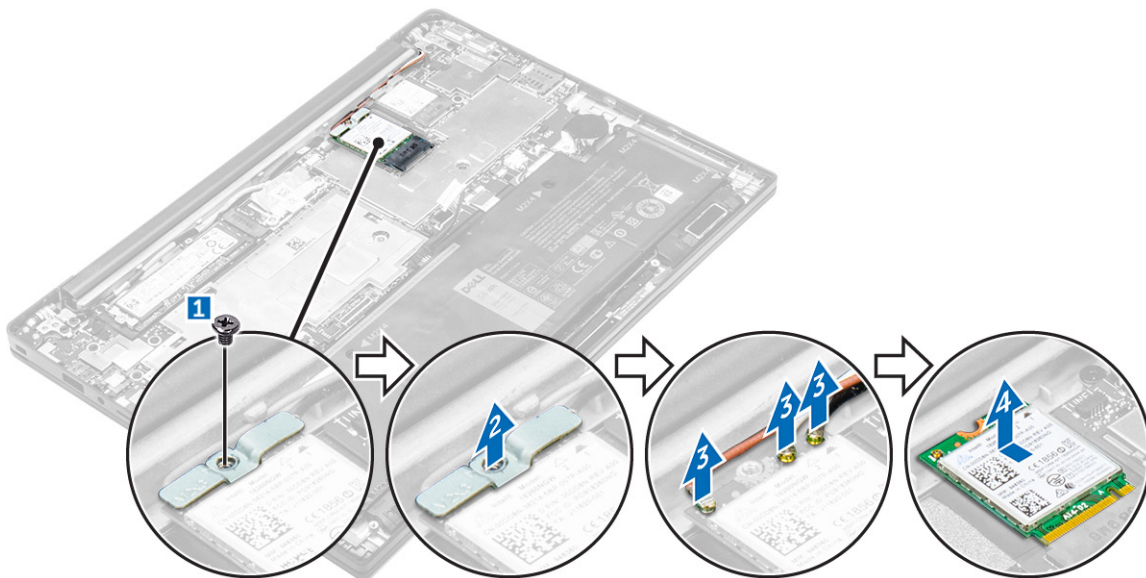


## Removing the WWAN card

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the:
  - a. [base cover](#)
3. Disconnect the battery cable from the connector on the system board [1].



4. To remove the WWAN card:
  - a. Peel the aluminum foil until the folding line.
  - b. Remove the screw that secures the metal bracket to the WWAN card [1].
  - c. Remove the metal bracket [2].
  - d. Disconnect the WWAN cables from the connectors on the WWAN card [3].
  - e. Remove the WWAN card from the computer [4].



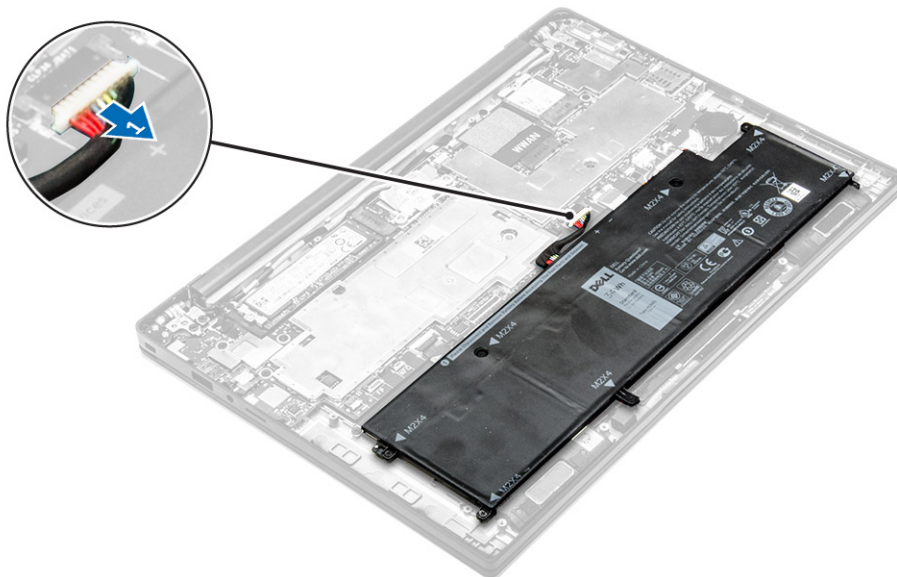


## Installing the WWAN card

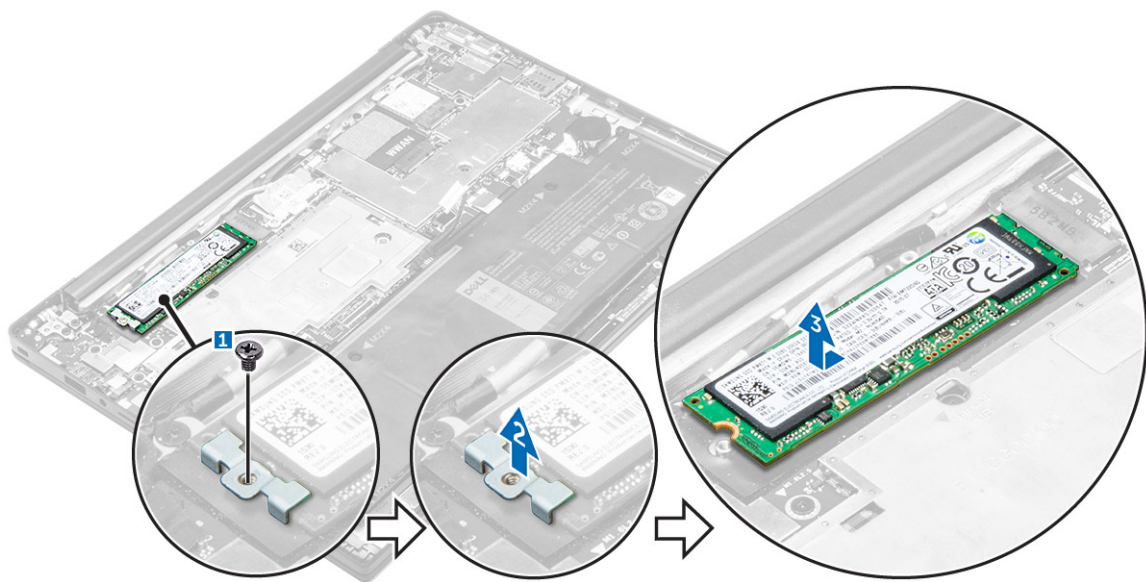
1. Peel the aluminum foil until the folding line.
2. Insert the WWAN card into the slot on the computer.
3. Route the WWAN cables through the routing channel.
4. Connect the WWAN cables to the connectors on the WWAN Card.
5. Place the metal bracket and tighten the screw to secure it to the computer.
6. Stick the aluminum foil on the bracket and WWAN card.
7. Connect the battery cable to the connector on the system board.
8. Install the:
  - a. [base cover](#)
9. Follow the procedure in [After working inside your system](#).

## Removing the Solid State Drive (SSD)

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the:
  - a. [base cover](#)
3. Disconnect the battery cable from the connector on the system board [1].



4. To remove the SSD:
  - a. Peel the aluminum foil until the folding line.
  - b. Remove the screw that secures the SSD to the computer [1].
  - c. Remove the SSD bracket [2].
  - d. Remove the copper thermal plate.
  - e. Remove the SSD from the computer [3].

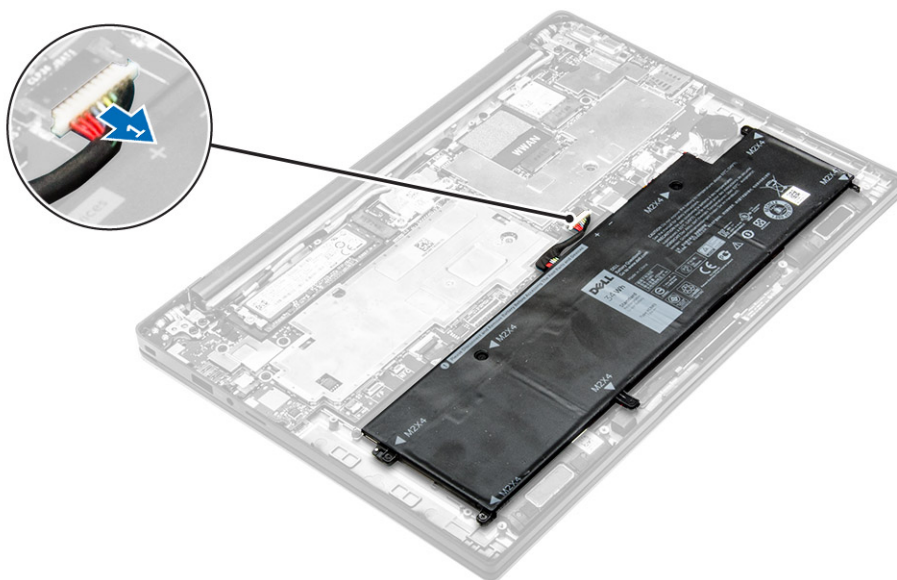


## Installing the Solid State Drive(SSD)

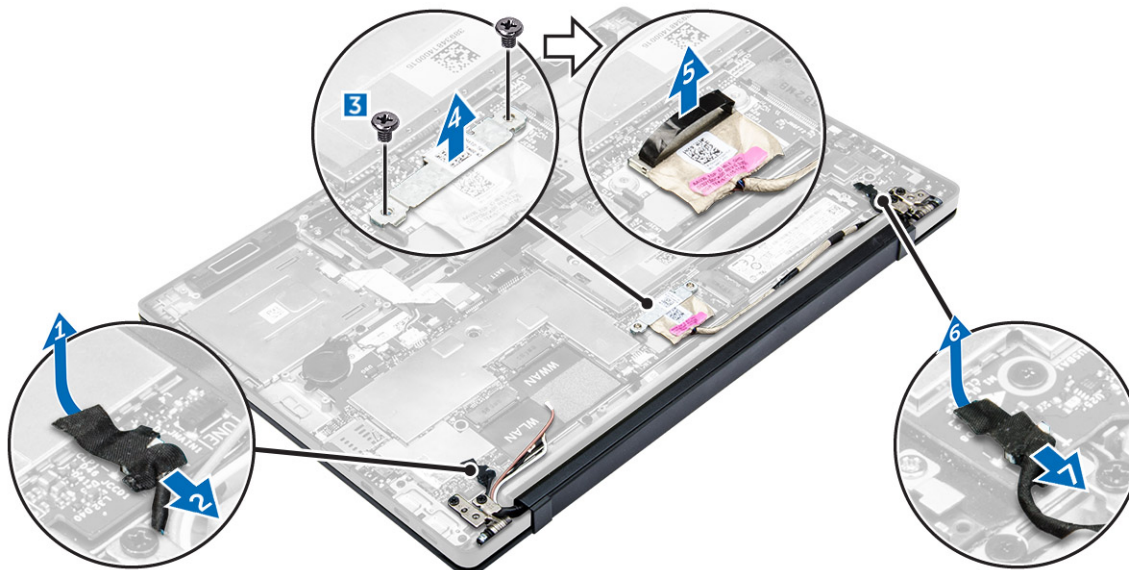
1. Insert the SSD into the connector on the computer.
2. Install the thermal plate.
3. Install the metal bracket.
4. Tighten the screw to secure the SSD to the computer.
5. Stick the aluminum foil on the thermal plate.
6. Connect the battery cable to the connector on the system board.
7. Install the:
  - a. [base cover](#)
8. Follow the procedure in [After working inside your computer](#).

## Removing the display assembly

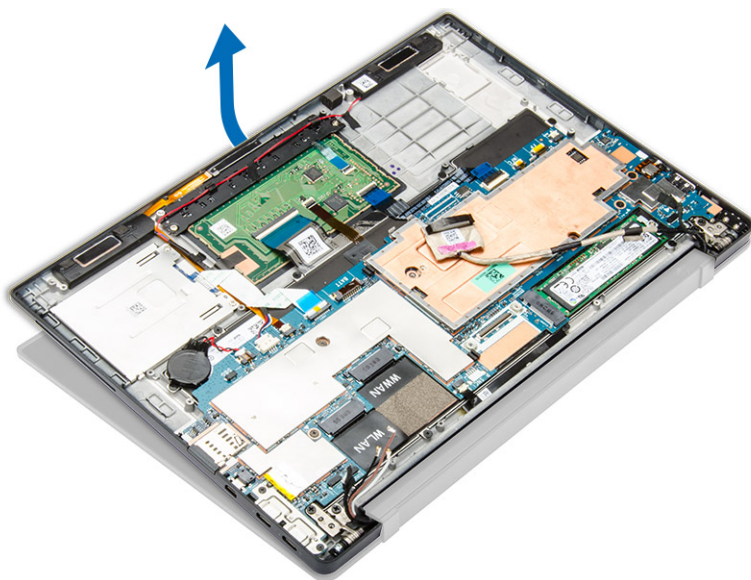
1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#)
3. Disconnect the battery cable from the connector on the system board [1].



4. Remove the:
  - a. [WLAN card](#)
  - b. [WWAN card](#)
5. To remove the cables:
  - a. Disconnect the camera and tune cable [1, 2].
  - b. Peel the aluminum foil until the folding line.
  - c. Remove the screws that secure the metal plate and lift it away from the computer [3, 4].
  - d. Peel the adhesive to access the display cable and disconnect it from the connector [5].
  - e. Disconnect the touch-panel cable from the computer [6].



6. Lift to separate the palmrest assembly from the display assembly.



7. To remove the display assembly:
  - a. Remove the screws that secure the display assembly to the computer [1].
  - b. Slide the display assembly to release it from the computer [2].



## Installing the display assembly

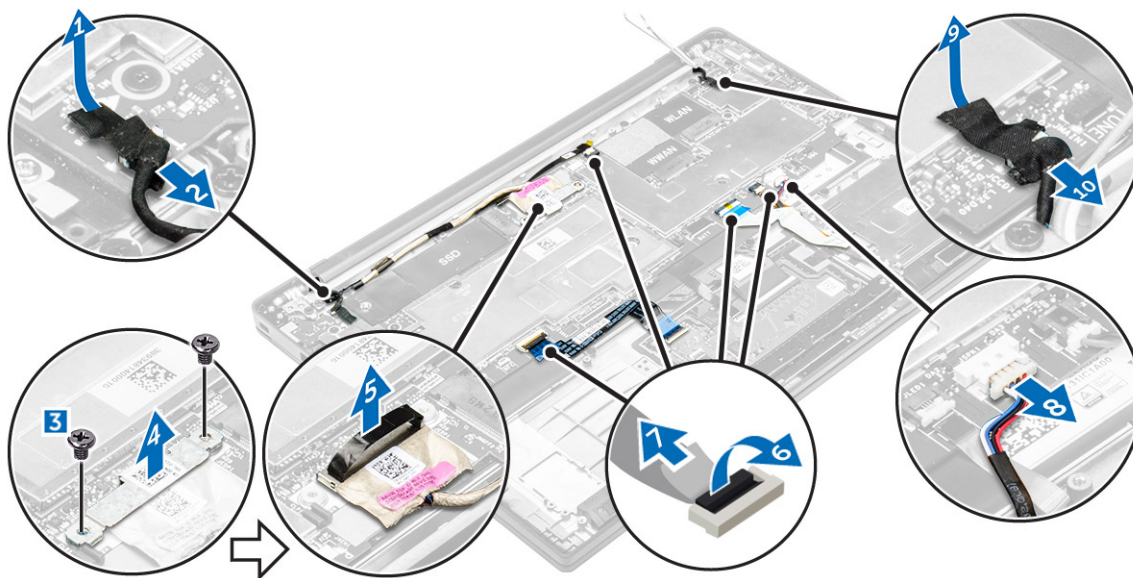
1. Connect the display cable to the connector and fix the adhesive tape.
2. Stick the aluminum foil on the thermal plate and display cable.
3. Connect the camera, touch-panel, and tune cable.
4. Align the display assembly with the screw holders on the computer.
5. Tighten the screws to secure the display assembly.



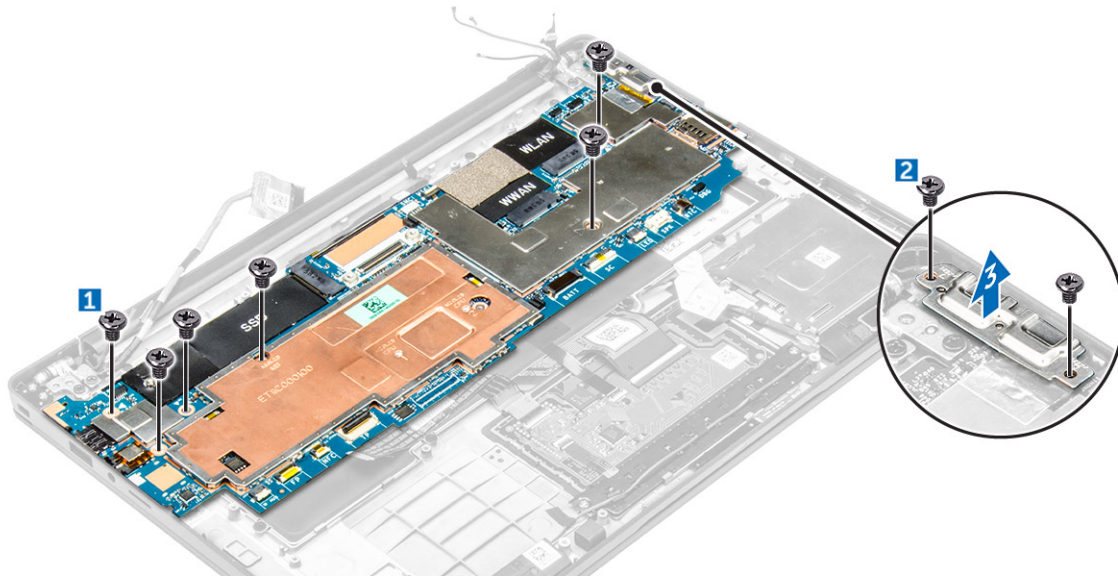
6. Install the:
  - a. [WWAN card](#)
  - b. [WLAN card](#)
7. Connect the battery cable to the connector on the system board.
8. Install the [base cover](#).
9. Follow the procedure in [After working inside your system](#).

## Removing the system board

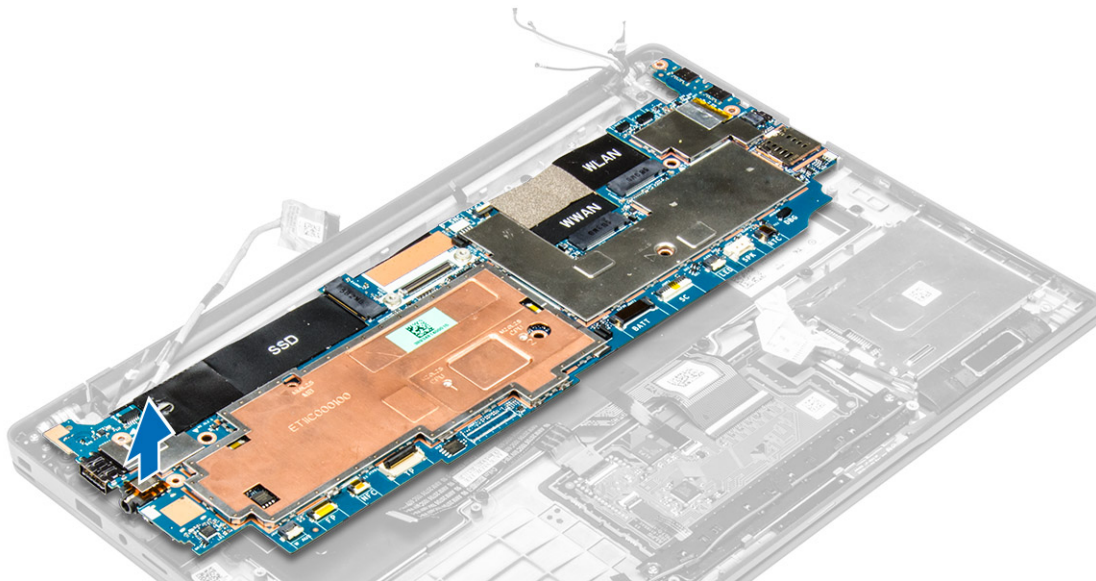
1. Follow the procedure in [Before working inside your computer](#).
2. Remove the:
  - a. [base cover](#)
  - b. [battery](#)
  - c. [SSD](#)
  - d. [WLAN card](#)
  - e. [WWAN card](#)
  - f. [coin cell](#)
3. Disconnect the following cables from the system board:
  - a. speaker cable
  - b. touch pad cable
  - c. smart card cable
  - d. display cable
  - e. LED cable
  - f. array mic cable
  - g. finger print cable
  - h. WWAN AUX antenna cable
  - i. NFC cable



4. To remove the system board:
  - a. Remove the screws that secure the system board to the computer [1].
  - b. Remove the screws that secure the metal tab and remove it from the computer [2, 3].



5. Lift the system board from the computer.



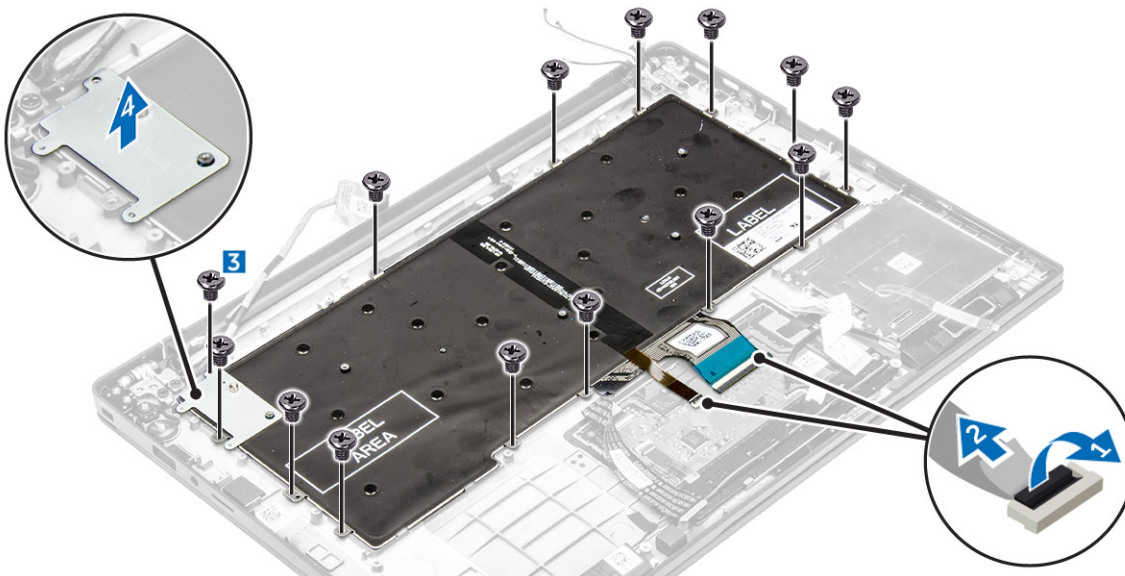
## Installing the system board

1. Align the system board with the screw holders on the computer.
2. Tighten the screws to secure the system board to the computer.
3. Tighten the screws to secure the metal tab over the USB type C port.
4. Connect the following cables to the connectors on the system board:
  - a. speaker cable
  - b. smart card cable
  - c. LED cable
  - d. array mic cable
  - e. touch pad cable
  - f. display cable
  - g. finger print cable
  - h. WWAN AUX antenna cable
  - i. NFC cable

5. Install the:
  - a. [coin cell](#)
  - b. [WWAN card](#)
  - c. [WLAN card](#)
  - d. [SSD](#)
  - e. [battery](#)
  - f. [base cover](#)
6. Follow the procedure in [After working inside your computer](#).

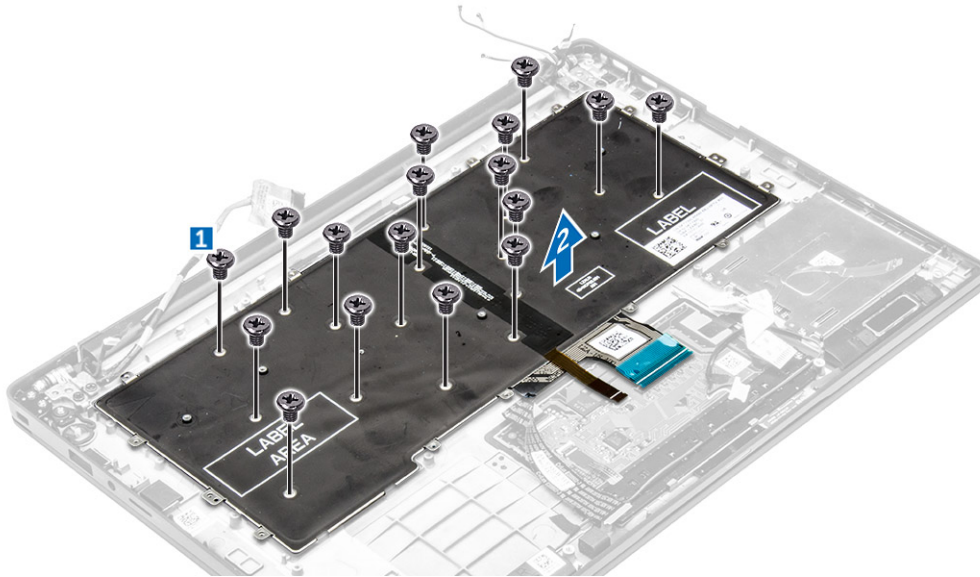
## Removing the keyboard

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the:
  - a. [base cover](#)
  - b. [battery](#)
  - c. [SSD](#)
  - d. [WLAN card](#)
  - e. [WWAN card](#)
  - f. [coin-cell](#)
  - g. [display](#)
  - h. [system board](#)
3. To remove the keyboard:
  - a. Disconnect the keyboard cables from the connectors on the system board [1, 2].
  - b. Remove the screws that secure the keyboard to the computer [3].
  - c. Lift the metal tab away from the computer [4].



4. To remove the keyboard:
  - a. Remove the screws that secure the keyboard to the computer [1].
  - b. Lift the keyboard from the computer [2].





## Installing the keyboard

1. Align the keyboard with the screw holders on the computer.
2. Tighten the screws to secure the keyboard to the computer.
3. Tighten the screw that secures the metal tab on the system board.
4. Connect the keyboard cables to the connectors on the system board.
5. Install the:
  - a. [system board](#)
  - b. [display](#)
  - c. [SSD](#)
  - d. [WWAN](#)
  - e. [WLAN](#)
  - f. [coin cell](#)
  - g. [battery](#)
  - h. [base cover](#)
6. Follow the procedure in [After working inside your system](#).

## Removing the palmrest

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the:
  - a. [base cover](#)
  - b. [battery](#)
  - c. [SSD](#)
  - d. [WWAN card](#)
  - e. [WLAN card](#)
  - f. [coin-cell](#)
  - g. [smart-card cage](#)
  - h. [speakers](#)
  - i. [display assembly](#)
  - j. [system board](#)
  - k. [keyboard](#)
3. Remove the palmrest assembly away from the computer.



## Installing the palmrest

1. Place the palmrest on the computer.
2. Install the:
  - a. [keyboard](#)
  - b. [system board](#)
  - c. [display assembly](#)
  - d. [speakers](#)
  - e. [smart-card cage](#)
  - f. [coin cell](#)
  - g. [WLAN card](#)
  - h. [WWAN card](#)
  - i. [SSD](#)
  - j. [battery](#)
  - k. [base cover](#)
3. Follow the procedure in [After working inside your system](#).

# Technology and components

## Power adapter

This laptop is offered with the 45 W power adapter. This adapter uses a USB C connector.

-  **WARNING:** When you disconnect the power adapter cable from the laptop, grasp the connector, not the cable itself, and then pull firmly but gently to avoid damaging the cable.
-  **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.

## Processors

This laptop is shipped with the following processors:

- Intel Core M3-6Y30
- Intel Core M5-6Y57
- Intel Core M7-6Y75

 **NOTE:** The clock speed and performance varies depending on the workload and other variables.

## Identifying processors in Windows 10

1. Tap **Search the Web and Windows**.
2. Type `Device Manager`.
3. Tap **Processor**.



The basic information of the processor is displayed.

## Identifying processors in Windows 8

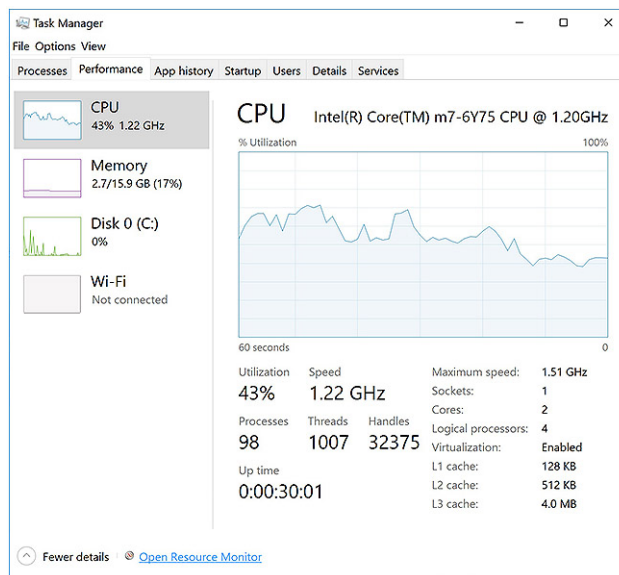
1. Tap **Search the Web and Windows**.
2. Type `Device Manager`.
3. Tap **Processor**.



The basic information of the processor is displayed.

## Verifying the processor usage in Task Manager

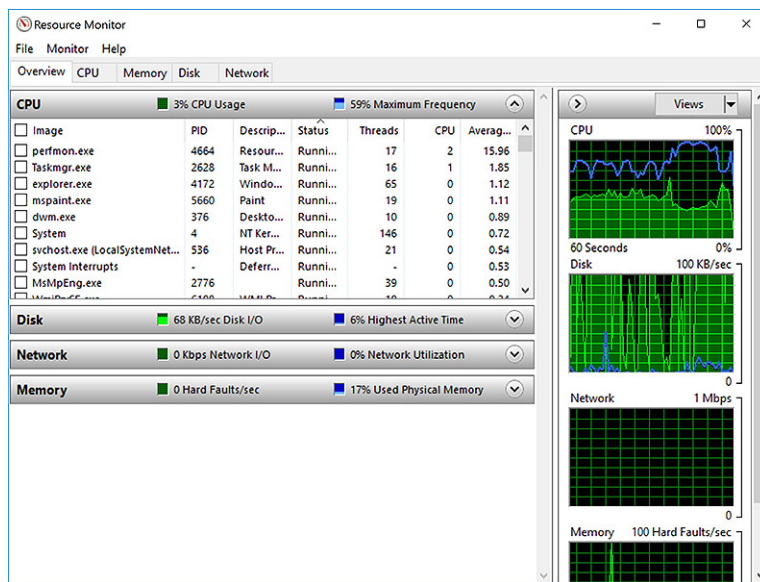
1. Press and hold the taskbar.
2. Select **Start Task Manager**.  
The **Windows Task Manager** window is displayed.
3. Click the **Performance** tab in the **Windows Task Manager** window.



The processor performance details are displayed.

## Verifying the processor usage in Resource Monitor

1. Right Click on the Taskbar.
2. Select **Start Task Manager**.  
The **Windows Task Manager** window is displayed.
3. Click the **Performance** tab in the **Windows Task Manager** window.  
The processor performance details are displayed.
4. Click **Open Resource Monitor**.



## Chipsets

All laptops or notebook communicate with the CPU through the chipset. This laptop is shipped with the Intel Mobile CM238 1-chip platform that includes the 7th generation Intel PCH.

## Downloading the chipset driver

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

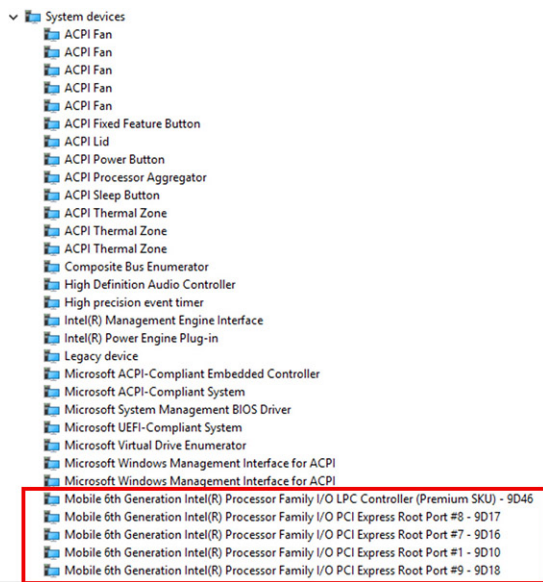


**NOTE:** If you do not have the Service Tag, use the autodetect feature or manually browse for your laptop model.

4. Click **Drivers and Downloads**.
5. Select the operating system installed on your laptop.
6. Scroll down the page, expand **Chipset**, and select your chipset driver.
7. Click **Download File** to download the latest version of the chipset driver for your laptop.
8. After the download is complete, navigate to the folder where you saved the driver file.
9. Double-click the chipset driver file icon and follow the instructions on the screen.

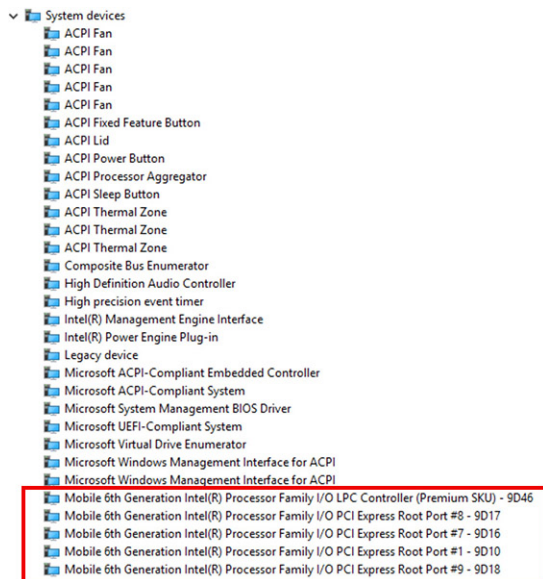
## Identifying the chipset in Device Manager on Windows 10

1. Click **All Settings**  on the Windows 10 Charms Bar.
2. From the **Control Panel**, select **Device Manager**.
3. Expand **System Devices** and search for the chipset.



## Identifying chipset in Device Manager on Windows 8

1. Click **Settings**  on the Windows 8.1 Charms Bar.
2. From the **Control Panel**, select **Device Manager**.
3. Expand **System Devices** and search for the chipset.



## Graphic options

This laptop is shipped with the Intel HD Graphics 515 graphics chipset.

## Downloading drivers

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



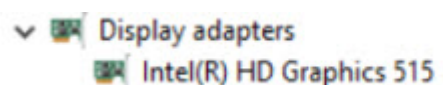


 **NOTE:** If you do not have the Service Tag, use the auto detect feature or manually browse for your laptop model.

4. Click **Drivers and Downloads**.
5. Select the operating system installed on your laptop.
6. Scroll down the page and select the graphic driver to install.
7. Click **Download File** to download the graphic driver for your laptop.
8. After the download is complete, navigate to the folder where you saved the graphic driver file.
9. Double-click the graphic driver file icon and follow the instructions on the screen.

## Identifying the display adapter

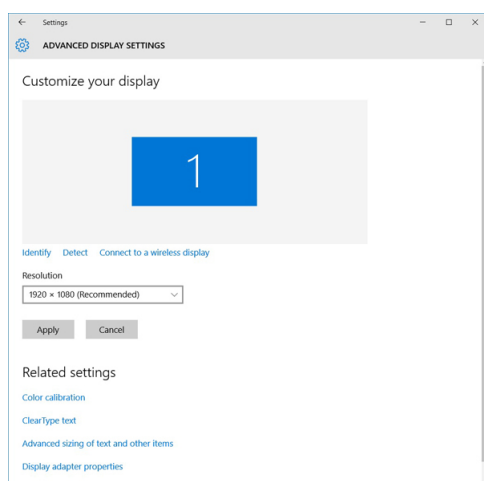
1. Start the **Search Charm** and select **Settings**.
2. Type **Device Manager** in the search box and tap **Device Manager** from the left pane.
3. Expand **Display adapters**.



The display adapters are displayed.

## Changing the screen resolution

1. Press and hold the desktop screen and select **Display Settings**.
2. Tap or click **Advanced display settings**.
3. Select the required resolution from the drop-down list and tap **Apply**.



## Rotating the display

1. Right click on the desktop.  
A sub menu is displayed.
2. Select **Graphic Options** → **Rotation** and choose one of the following:
  - Rotate to Normal
  - Rotate to 90 Degrees
  - Rotate to 180 Degrees
  - Rotate to 270 Degrees

 **NOTE: The Display can also be rotated using the following key combinations:**

- Ctrl + Alt + Up arrow key (Rotate to normal)
- Right arrow key (Rotate 90 degrees)
- Down arrow key (Rotate 180 degrees)
- Left arrow key (Rotate 270 degrees)

## Display options

This laptop has 14– inch HD with 1366 x 768 pixels resolution (maximum).

This laptop has 14– inch HD with 1366 x 768 pixels resolution (maximum) and FHD with 1920 x 1080 resolution (maximum).

## Adjusting brightness in Windows 10

To enable or disable automatic screen brightness adjustment:

1. Swipe-in from the right edge of the display to access the Action Center.
2. Tap or click **All Settings**  → **System** → **Display**.
3. Use the **Adjust my screen brightness automatically** slider to enable or disable automatic-brightness adjustment.

 **NOTE: You can also use the Brightness level slider to adjust the brightness manually.**

## Adjusting brightness in Windows 8

To enable or disable automatic screen brightness adjustment:

1. Swipe-in from the right edge of the display to access the Charms menu.
2. Tap or click **Settings**  → **Change PC Settings** → **PC and devices** → **Power and sleep**.
3. Use the **Adjust my screen brightness automatically** slider to enable or disable automatic-brightness adjustment.

## Cleaning the display

1. Check for any smudges or areas that has to be cleaned.
2. Use a microfiber cloth to remove any obvious dust and gently brush off any dirt particles.
3. Proper cleaning kits should be used to clean and keep your display in a crisp clear pristine condition.

 **NOTE: Never spray any cleaning solutions directly on the screen; spray it to the cleaning cloth.**

4. Gently wipe the screen in a circular motion. Do not press hard on the cloth.

 **NOTE: Do not press hard or touch the screen with your fingers or you may leave oily prints and smears.**

 **NOTE: Do not leave any liquid on the screen.**

5. Remove all excess moisture as it may damage your screen.
6. Let the display dry thoroughly before you turn it on.
7. For stains that are hard to remove, repeat this procedure till the display is clean.

## Using touch screen in Windows 10

Follow these steps to enable or disable the touch screen:

1. Right click on the Start menu.
2. Select **Control Panel**.
3. Tap **Pen and Input Devices** in the **Control Panel**.
4. Tap the **Touch** tab.
5. Select **Use your finger as an input device** to enable the touch screen. Clear the box to disable the touch screen.

## Using touch screen in Windows 8

Follow these steps to enable or disable the touch screen:

1. Go to the Charms Bar and tap **Settings** .
2. Tap **Control Panel**.
3. Tap **Pen and Input Devices** in the **Control Panel**.
4. Tap the **Touch** tab.
5. Select **Use your finger as an input device** to enable the touch screen. Clear the box to disable the touch screen.

## Connecting to external display devices

Follow these steps to connect your laptop to an external display device:

1. Ensure that the external display device is turned on and plug the external display device cable into a video port on your laptop.
2. Press the Windows logo+P key.
3. Select one of the following modes:
  - PC screen only
  - Duplicate
  - Extend
  - Second Screen only

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

## Audio controller

This laptop ships with integrated Realtek ALC3266–CG Waves MaxxAudio Pro controller. It is a High Definition audio codec designed for Windows desktop and laptops.

### Downloading the audio driver

1. Turn on the laptop.
2. Go to [www.Dell.com/support](http://www.Dell.com/support).
3. Click **Product Support**, enter the Service Tag of your laptop and click **Submit**.

 **NOTE:** If you do not have the Service Tag, use the autodetect feature or manually browse for your laptop model.

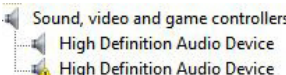
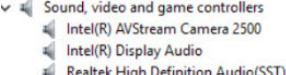
4. Click **Drivers and Downloads**.
5. Select the operating system installed on your laptop.
6. Scroll down the page and expand **Audio**.
7. Select the audio driver.

8. Click **Download File** to download the latest version of the audio driver for your laptop.
9. After the download is complete, navigate to the folder where you saved the audio driver file.
10. Double-click the audio driver file icon and follow the instructions on the screen.

## Identifying the audio controller in Windows 10

1. Start the **Search Charm** and select **All Settings** .
2. Type `Device Manager` in the search box and select **Device Manager** from the left pane.
3. Expand **Sound, video and game controllers**.  
The audio controller is displayed.

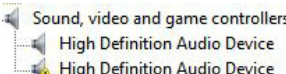
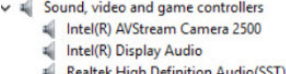
**Table 1. Identifying the audio controller in Windows 10**

| Before installation                                                               | After installation                                                                 |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

## Identifying the audio controller in Windows 8

1. Start the **Search Charm** and select **Settings** .
2. Type `Device Manager` in the search box and select **Device Manager** from the left pane.
3. Expand **Sound, video and game controllers**.  
The audio controller is displayed.

**Table 2. Identifying the audio controller in Windows 8**

| Before installation                                                                 | After installation                                                                   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |

## Changing the audio settings

1. Start the **Search Charm** and type `Dell Audio` in the search box.
2. Start the Dell Audio utility from the left pane.

## WLAN cards

This laptop supports the Intel Dual Band Wireless AC 8260 WLAN card.

## Secure Boot screen options

| Option                       | Description                                                                                                                                                                             |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Secure Boot Enable</b>    | <p>This option enables or disables the <b>Secure Boot</b> feature.</p> <ul style="list-style-type: none"> <li>• Disabled</li> <li>• Enabled</li> </ul> <p>Default setting: Enabled.</p> |
| <b>Expert Key Management</b> | <p>Allows you to manipulate the security key databases only if the system is in Custom Mode. The <b>Enable Custom Mode</b> option is disabled by default. The options are:</p>          |



| Option | Description |
|--------|-------------|
|--------|-------------|

- |  |                                                                                               |
|--|-----------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"><li>• PK</li><li>• KEK</li><li>• db</li><li>• dbx</li></ul> |
|--|-----------------------------------------------------------------------------------------------|

If you enable the **Custom Mode**, the relevant options for **PK, KEK, db, and dbx** appear. The options are:

- **Save to File**—Saves the key to a user-selected file
- **Replace from File**—Replaces the current key with a key from a user-selected file
- **Append from File**—Adds a key to the current database from a user-selected file
- **Delete**—Deletes the selected key
- **Reset All Keys**—Resets to default setting
- **Delete All Keys**—Deletes all the keys



**NOTE:** If you disable the **Custom Mode**, all the changes made will be erased and the keys will restore to default settings.

## Hard drive options

This laptop supports M.2 SATA drives.

### Identifying the hard drive in Windows 10

1. Right click on Start menu
2. Select **Device Manager**, and expand **Disk drives**.



The hard drive is listed under **Disk drives**.

### Identifying the hard drive in Windows 8

1. Tap or click **Settings**  on the Windows 8 Charms Bar.
2. Tap or click **Control Panel**, select **Device Manager**, and expand **Disk drives**.

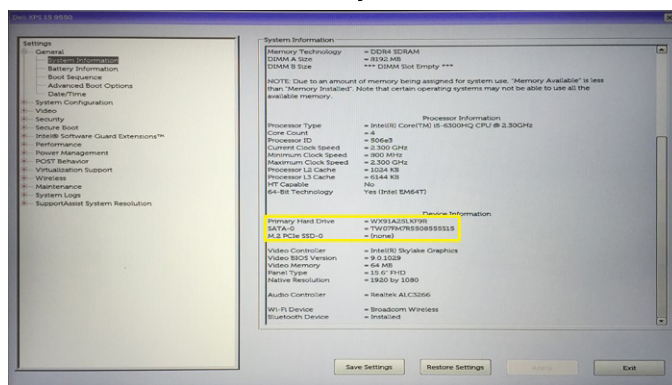


The hard drive is listed under Disk drives.

### Identifying the hard drive in the BIOS

1. Turn on or restart your system.
2. When the Dell logo appears, perform the following action to enter the BIOS setup program:
  - With keyboard — Tap F2 until the Entering BIOS setup message appears. To enter the Boot selection menu, tap F12.

The hard drive is listed under the **System Information** under the **General** group.



## Camera features

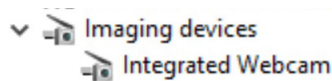
This laptop comes with front-facing camera with the image resolution of 1280 x 720 (maximum).

This laptop also has a back-facing camera.

 **NOTE: The camera is at the top center of the LCD.**

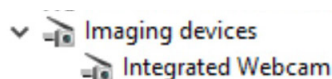
## Identifying the camera in Device Manager on Windows 10

1. In the **Search** box, type **device manager**, and tap to start it.
2. Under **Device Manager**, expand **Imaging devices**.



## Identifying the camera in Device Manager on Windows 8

1. Start the Charms Bar from the desktop interface.
2. Select **Control Panel**.
3. Select **Device Manager** and expand **Imaging devices**.



## Starting the camera (Windows 7, 8.1 and 10)

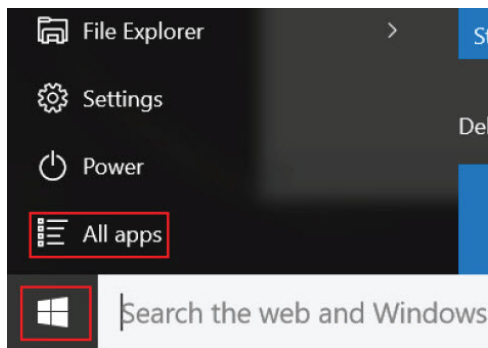
To start the camera, open an application that uses the camera. For instance, if you tap the Skype software that is shipped with the laptop, the camera turns on. Similarly, if you are chatting on the internet and the application requests to access the webcam, the webcam turns on.

## Starting the camera application

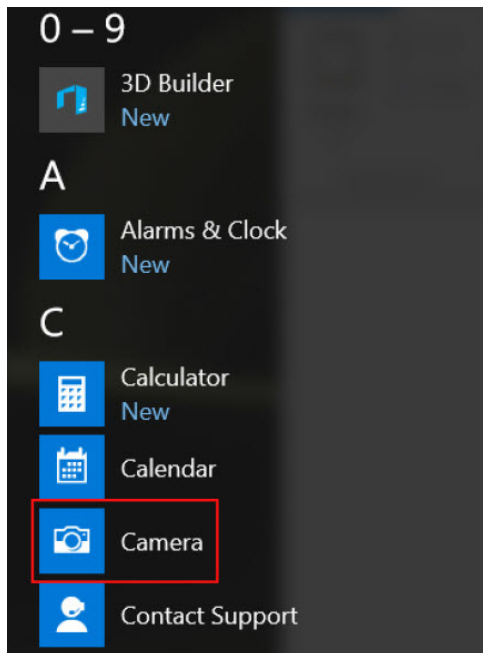
1. Tap or click the **Windows** button and select **All apps**.



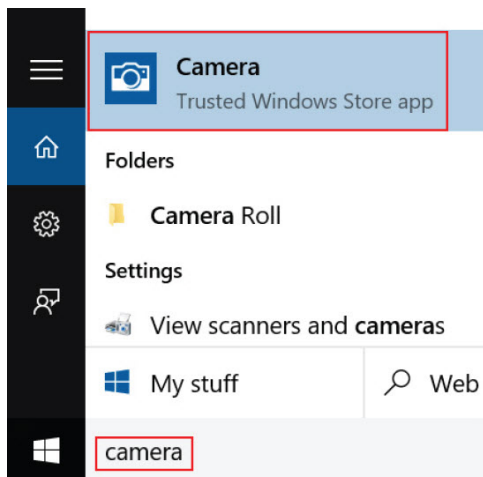




2. Select **Camera** from the apps list.



3. If the **Camera** App is not available in the apps list, search for it.



## Memory features

In this laptop, the memory (RAM) is a part of the system board. This laptop supports 4–16 GB LPDDR3 memory, up to 1600 MHz.

This laptop supports 4–32 GB DDR4 SDRAM memory, up to 2133 MHz.

 **NOTE:** Since memory is part of the system board, it cannot be upgraded as a separate module. If the technical support determines that the memory is the cause of an issue, replace the system board.

## Verifying system memory in Windows 10

1. Click on the start menu and select **Settings**  → **System**.
2. Under **System**, tap **About**.

## Verifying system memory in Windows 8

1. From your desktop, start the **Charms Bar**.
2. Select **Control Panel** and then select **System**.

## Verifying system memory in system setup (BIOS)

1. Turn on or restart your system.
2. Perform the following actions after the Dell logo is displayed
  - With keyboard — Tap F2 until the Entering BIOS setup message appears. To enter the Boot selection menu, tap F12.
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 system.
2. Perform one of the following actions after the Dell logo is displayed:
  - With keyboard — Press **F12**.

The PreBoot System Assessment (PSA) starts on your system.

 **NOTE:** If you wait too long and the operating system logo appears, continue to wait until you see the desktop. Turn off the laptop and try again.

## Intel chipset drivers

Verify if the Intel chipset drivers are already installed in the laptop.



**Table 3. Intel chipset drivers**

| Before installation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | After installation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Other devices <ul style="list-style-type: none"> <li>PCI Data Acquisition and Signal Processing Controller</li> <li>PCI Device</li> <li>PCI Memory Controller</li> <li>PCI Simple Communications Controller</li> <li>SM Bus Controller</li> <li>Unknown device</li> </ul> </li> <li>System devices <ul style="list-style-type: none"> <li>ACPI Fan</li> <li>ACPI Fan</li> <li>ACPI Fan</li> <li>ACPI Fan</li> <li>ACPI Fan</li> <li>ACPI Fixed Feature Button</li> <li>ACPI Power Button</li> <li>ACPI Processor Aggregator</li> <li>ACPI Thermal Zone</li> <li>ACPI Thermal Zone</li> <li>Composite Bus Enumerator</li> <li>High Definition Audio Controller</li> <li>High precision event timer</li> <li>Intel(R) Power Engine Plug-in</li> <li>Legacy device</li> <li>Microsoft ACPI-Compliant Embedded Controller</li> <li>Microsoft ACPI-Compliant System</li> <li>Microsoft System Management BIOS Driver</li> <li>Microsoft UEFI-Compliant System</li> <li>Microsoft Virtual Drive Enumerator</li> <li>Microsoft Windows Management Interface for ACPI</li> <li>Microsoft Windows Management Interface for ACPI</li> <li>NDIS Virtual Network Adapter Enumerator</li> <li>Numeric data processor</li> <li>PCI Express Root Complex</li> <li>PCI Express Root Port</li> <li>PCI Express Root Port</li> <li>PCI Express Root Port</li> <li>PCI standard host CPU bridge</li> <li>PCI standard ISA bridge</li> <li>Plug and Play Software Device Enumerator</li> <li>Programmable interrupt controller</li> <li>Remote Desktop Device Redirector Bus</li> <li>System CMOS/real time clock</li> <li>System timer</li> <li>UMBus Root Bus Enumerator</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>Other devices <ul style="list-style-type: none"> <li>PCI Device</li> <li>PCI Simple Communications Controller</li> <li>Unknown device</li> </ul> </li> <li>System devices <ul style="list-style-type: none"> <li>ACPI Fan</li> <li>ACPI Fan</li> <li>ACPI Fan</li> <li>ACPI Fan</li> <li>ACPI Fan</li> <li>ACPI Fixed Feature Button</li> <li>ACPI Lid</li> <li>ACPI Processor Aggregator</li> <li>ACPI Sleep Button</li> <li>ACPI Thermal Zone</li> <li>ACPI Thermal Zone</li> <li>ACPI Thermal Zone</li> <li>Camera Sensor OV5670</li> <li>Camera Sensor OV8858</li> <li>Composite Bus Enumerator</li> <li>High precision event timer</li> <li>Intel(R) 100 Series Chipset Family LPC Controller/gSPI Controller - 9D4B</li> <li>Intel(R) 100 Series Chipset Family PCI Express Root Port #10 - 9D19</li> <li>Intel(R) 100 Series Chipset Family PCI Express Root Port #9 - 9D18</li> <li>Intel(R) 100 Series Chipset Family PMIC - 9D21</li> <li>Intel(R) 100 Series Chipset Family SMBUS - 9D23</li> <li>Intel(R) 100 Series Chipset Family Thermal subsystem - 9D31</li> <li>Intel(R) C102 Host Controller</li> <li>Intel(R) Control Logic</li> <li>Intel(R) Imaging Signal Processor 2500</li> <li>Intel(R) Integrated Sensor Solution</li> <li>Intel(R) Management Engine Interface</li> <li>Intel(R) Power Engine Plug-in</li> <li>Intel(R) Serial IO GPIO Host Controller - INT3448</li> <li>Intel(R) Serial IO I2C Host Controller - 9D40</li> <li>Intel(R) Serial IO I2C Host Controller - 9D41</li> <li>Intel(R) Serial IO I2C Host Controller - 9D42</li> <li>Intel(R) Serial IO I2C Host Controller - 9D43</li> </ul> </li> </ul> |

## Intel HD Graphics drivers

Verify if the Intel HD Graphics drivers are already installed in the laptop.

**Table 4. Intel HD Graphics drivers**

| Before installation                                                                                                                                                                                                                                                                                                    | After installation                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Display adapters <ul style="list-style-type: none"> <li>Microsoft Basic Display Adapter</li> </ul> </li> <li>Sound, video and game controllers <ul style="list-style-type: none"> <li>High Definition Audio Device</li> <li>High Definition Audio Device</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>Display adapters <ul style="list-style-type: none"> <li>Intel(R) HD Graphics 630</li> </ul> </li> <li>Display adapters <ul style="list-style-type: none"> <li>Intel(R) HD Graphics 630</li> </ul> </li> <li>Display adapters <ul style="list-style-type: none"> <li>Intel(R) HD Graphics 620</li> </ul> </li> </ul> |

## Realtek HD audio drivers

Verify if the Realtek audio drivers are already installed in the laptop.

**Table 5. Realtek HD audio drivers**

| Before installation                                                                                                                                                                                                                                                                                                                                                                 | After installation                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Audio inputs and outputs <ul style="list-style-type: none"> <li>Microphone (High Definition Audio Device)</li> <li>Speakers (High Definition Audio Device)</li> </ul> </li> <li>Sound, video and game controllers <ul style="list-style-type: none"> <li>High Definition Audio Device</li> <li>Intel(R) Display Audio</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>Audio inputs and outputs <ul style="list-style-type: none"> <li>Microphone Array (Realtek High Definition Audio(SST))</li> <li>Speakers / Headphones (Realtek High Definition Audio(SST))</li> </ul> </li> <li>Sound, video and game controllers <ul style="list-style-type: none"> <li>Intel(R) AVStream Camera 2500</li> <li>Intel(R) Display Audio</li> <li>Realtek High Definition Audio(SST)</li> </ul> </li> </ul> |

# System Setup

## Boot Sequence

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

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

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

- Removable Drive (if available)
- STXXXX Drive

 **NOTE: XXX denotes the SATA drive number.**

- Optical Drive (if available)
- Diagnostics

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

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

## Navigation keys

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

| Keys       | Navigation                                                                                                                                                                          |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Up arrow   | Moves to the previous field.                                                                                                                                                        |
| Down arrow | Moves to the next field.                                                                                                                                                            |
| Enter      | Selects a value in the selected field (if applicable) or follow the link in the field.                                                                                              |
| Spacebar   | Expands or collapses a drop-down list, if applicable.                                                                                                                               |
| Tab        | Moves to the next focus area.                                                                                                                                                       |
|            |  <b>NOTE: For the standard graphics browser only.</b>                                            |
| Esc        | Moves to the previous page until you view the main screen. Pressing Esc in the main screen displays a message that prompts you to save any unsaved changes and restarts the system. |

## System setup options

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



## General screen options

This section lists the primary hardware features of your computer.

| Option                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>System Information</b>  | <p>This section lists the primary hardware features of your computer.</p> <ul style="list-style-type: none"><li>• System Information: Displays BIOS Version, Service Tag, Asset Tag, Ownership Tag, Ownership Date, Manufacture Date, and the Express Service Code.</li><li>• Memory Information: Displays Memory Installed, Memory Available, Memory Speed, Memory Channels Mode, Memory technology</li><li>• Processor Information: Displays Processor Type, Core Count, Processor ID, Current Clock Speed, Minimum Clock Speed, Maximum Clock Speed, Processor L2 Cache, Processor L3 Cache, HT Capable, and 64-bit technology.</li><li>• Device Information: SATA-0, M.2 PCIe SSD-0, Video Controller, Video BIOS Version, Video Memory, Panel Type, Native Resolution, Audio Controller, WiFi Device, WiGig Device, Cellular Device, Bluetooth Device.</li></ul> |
| <b>Battery Information</b> | Displays the battery status and the type of AC adapter connected to the computer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Boot Sequence</b>       | <p>Allows you to change the order in which the computer attempts to find an operating system.</p> <ul style="list-style-type: none"><li>• Windows Boot Manager or UEFI</li><li>• Legacy or UEFI</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Boot Options</b>        | This option allows you the legacy option ROMs to load. By default, the <b>Enable UEFI Network Stack</b> is disabled.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Date/Time</b>           | Allows you to change the date and time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## System Configuration screen options

| Option                | Description                                                                                                                                                                                                                                                                                                                  |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Integrated NIC</b> | <p>This option controls the on-board LAN controller.</p> <ul style="list-style-type: none"><li>• Disabled - The internal LAN is off and not visible to the operating system.</li><li>• Enabled - The internal LAN is enabled.</li><li>• <b>Enabled w/PXE</b> -The internal LAN is enabled with PXE boot (default).</li></ul> |
| <b>SATA Operation</b> | <p>Allows you to configure the internal SATA hard-drive controller. The options are:</p> <ul style="list-style-type: none"><li>• Disabled</li><li>• AHCI</li><li>• RAID On: This option is enabled by default.</li></ul>                                                                                                     |
| <b>Drives</b>         | <p>Allows you to configure the SATA drives on board. All drives are enabled by default. The options are:</p> <ul style="list-style-type: none"><li>• SATA- 1</li><li>• SATA- 2</li><li>• M.2 PCI-e SSD-0</li></ul>                                                                                                           |

| Option                                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SMART Reporting</b>                    | <p>This field controls whether hard drive errors for integrated drives are reported during system startup. This technology is part of the SMART (Self Monitoring Analysis and Reporting Technology) specification. This option is disabled by default.</p> <ul style="list-style-type: none"> <li>• Enable SMART Reporting</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>USB/Thunderbolt Configuration</b>      | <p>This is an optional feature.</p> <p>This field configures the integrated USB controller. If Boot Support is enabled, the system is allowed to boot any type of USB Mass Storage Devices (HDD, memory key, floppy).</p> <p>If USB port is enabled, device attached to this port is enabled and available for OS.</p> <p>If USB port is disabled, the OS cannot see any device attached to this port.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Enable USB Boot Support (by default enable)</li> <li>• Enable External USB Port (by default enable)</li> <li>• Enable Thunderbolt Port (by default enable).</li> <li>• Enable Thunderbolt Boot Support. This is an optional feature.</li> <li>• Always Allows Dell Docks. This is an optional feature.</li> <li>• Enables Thunderbolt (and PCIe behind TBT) Pre-boot</li> </ul> <p> <b>NOTE: USB keyboard and mouse always work in the BIOS setup irrespective of these settings.</b></p> |
| <b>Dell Type-C dock configuration</b>     | <p>Allows you to enable option- Always Allow Dell Docks.</p> <ul style="list-style-type: none"> <li>• When set to enabled, allows connection to the Dell WD and TB family of docks (Type-C docks) independent of USB and Thunderbolt Adapter configuration settings.</li> <li>• When set to disabled, the docks will be controlled via the USB and Thunderbolt Adapter configuration settings.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Thunderbolt Adapter configuration:</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>USB PowerShare</b>                     | <p>This field configures the USB PowerShare feature behavior. This option allows you to charge external devices using the stored system battery power through the USB PowerShare port. By default, the <b>Enable USB PowerShare</b> is disabled.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Audio</b>                              | <p>This field enables or disables the integrated audio controller. By default, the <b>Enable Audio</b> option is selected.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Enable Microphone (by default enabled)</li> <li>• Enable Internal Speaker (by default enabled)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Keyboard Illumination</b>              | <p>This field lets you choose the operating mode of the keyboard illumination feature. The keyboard brightness level can be set from 0% to 100%. The options are:</p> <ul style="list-style-type: none"> <li>• Disabled</li> <li>• Dim</li> <li>• Bright (enabled by default)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |



| Option                                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Keyboard Backlight Timeout on AC</b>       | <p>This feature defines the time-out value for the keyboard backlight when an AC adapter is plugged into the system. The main keyboard illumination feature is not affected. Keyboard Illumination will continue to support the various illumination levels. This field has an effect when the backlight is enabled. Options are:</p> <ul style="list-style-type: none"> <li>• 5 seconds</li> <li>• 10 seconds — this option is selected by default</li> <li>• 15 seconds</li> <li>• 30 seconds</li> <li>• 1 minute</li> <li>• 5 minute</li> <li>• 15 minute</li> <li>• never</li> </ul> |
| <b>Keyboard Backlight Time-out on Battery</b> | <p>The Keyboard Backlight Time-out dims out with Battery option. The main keyboard illumination feature is not affected. Keyboard Illumination will continue to support the various illumination levels. This field has an effect when the backlight is enabled. Options are:</p> <ul style="list-style-type: none"> <li>• 5 seconds</li> <li>• 10 seconds — this option is selected by default</li> <li>• 15 seconds</li> <li>• 30 seconds</li> <li>• 1 minute</li> <li>• 5 minute</li> <li>• 15 minute</li> <li>• never</li> </ul>                                                     |
| <b>Touchscreen</b>                            | <p>This field controls whether the touchscreen is enabled or disabled. By default, the option is enabled.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Unobtrusive Mode</b>                       | <p>This option, when enabled, pressing Fn+F7 turns off all light and sound emissions in the system. To resume normal operation, press Fn+F7 again. This option is disabled by default.</p>                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Miscellaneous Devices</b>                  | <p>Allows you to enable or disable various on board devices:</p> <ul style="list-style-type: none"> <li>• <b>Enable Camera</b> —enabled by default</li> <li>• <b>Enable Secure Digital(SD) Card</b> —enabled by default</li> <li>• Enable Secure Digital(SD) Card</li> <li>• Secure Digital(SD) Card read only mode</li> <li>• Secure Digital(SD) Card boot</li> </ul>                                                                                                                                                                                                                   |

## Video screen options

| Option                | Description                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------------------|
| <b>LCD Brightness</b> | Allows you to set the display brightness depending up on the power source (On Battery and On AC). |



**NOTE: The video setting will be visible only when a video card is installed into the system.**



## Security screen options

| Option                                                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Admin Password</b>                                              | <p>Allows you to set, change, or delete the administrator (admin) password.</p> <p> <b>NOTE: You must set the admin password before you set the system or hard drive password. Deleting the admin password automatically deletes the system password and the hard drive password.</b></p> <p> <b>NOTE: Successful password changes take effect immediately.</b></p> <p>Default setting: Not set</p> |
| <b>System Password</b>                                             | <p>Allows you to set, change, or delete the system password.</p> <p> <b>NOTE: Successful password changes take effect immediately.</b></p> <p>Default setting: Not set</p>                                                                                                                                                                                                                                                                                                           |
| <b>Mini Card SSD-0 Password</b><br><b>Mini SATA SSD-2 Password</b> | <p>Allows you to set, change or delete the password on the mini card Solid State Drive (SSD).</p> <p> <b>NOTE: Successful password changes take effect immediately.</b></p> <p>Default setting: Not set</p>                                                                                                                                                                                                                                                                          |
| <b>Strong Password</b>                                             | <p>Allows you to enforce the option to always set strong passwords.</p> <p>Default Setting: Enable Strong Password is not selected.</p> <p> <b>NOTE: If Strong Password is enabled, Admin and System passwords must contain at least one uppercase character, one lowercase character and be at least 8 characters long.</b></p>                                                                                                                                                   |
| <b>Password Configuration</b>                                      | <p>Allows you to determine the minimum and maximum length of Administrator and System passwords. Minimum is 4 characters and maximum is 32 characters.</p>                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Password Bypass</b>                                             | <p>Allows you to enable or disable the permission to bypass the System and the Internal HDD password, when they are set. The options are:</p> <ul style="list-style-type: none"><li>• Disabled</li><li>• Reboot bypass</li></ul> <p>Default setting: Disabled</p>                                                                                                                                                                                                                                                                                                     |
| <b>Password Change</b>                                             | <p>Allows you to enable the disable permission to the System and Hard Drive passwords when the admin password is set.</p> <p>Default setting: <b>Allow Non-Admin Password Changes</b> is selected.</p>                                                                                                                                                                                                                                                                                                                                                                |
| <b>Non-Admin Setup Changes</b>                                     | <p>Allows you to determine whether changes to the setup options are allowed when an Administrator Password is set. If disabled the setup options are locked by the admin password. The option Allow wireless switch changes is <b>disabled</b> by default.</p>                                                                                                                                                                                                                                                                                                        |
| <b>UEFI Capsule Firmware Updates</b>                               | <p>Allows to control whether this system allows BIOS updates via UEFI capsule update packages.</p> <p>Default setting: <b>Enable UEFI Capsule Firmware Updates</b> is selected.</p>                                                                                                                                                                                                                                                                                                                                                                                   |



| Option                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>TPM 1.2/2.0 Security</b> | <p>Allows you to enable the Trusted Platform Module (TPM) during POST. The options are:</p> <ul style="list-style-type: none"> <li>• <b>TPM On</b> (enabled by default)</li> <li>• Clear</li> <li>• PPI Bypass for Enabled Commands</li> <li>• PPI Bypass for Disabled Commands</li> <li>• Activate</li> <li>• Deactivate</li> <li>• Attestation Enable (selected)</li> <li>• Key Storage Enable (selected)</li> <li>• Disabled</li> <li>• <b>Enabled</b> (default)</li> </ul> <p> <b>NOTE: To upgrade or downgrade TPM1.2/2.0, download the TPM wrapper tool (software).</b></p> |
| <b>Computrace</b>           | <p>Allows you to activate or disable the optional Computrace software. The options are:</p> <ul style="list-style-type: none"> <li>• Deactivate</li> <li>• Disable</li> <li>• Activate</li> <li>• <b>Activate</b> (default)</li> </ul> <p> <b>NOTE: The Activate and Disable options will permanently activate or disable the feature and no further changes will be allowed</b></p> <p>Default setting: Deactivate</p>                                                                                                                                                           |
| <b>CPU XD Support</b>       | <p>Allows you to enable the Execute Disable mode of the processor.</p> <p>Enable CPU XD Support (default)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>OROM Keyboard Access</b> | <p>Allows you to set an option to enter the Option ROM Configuration screens using hotkeys during boot. The options are:</p> <ul style="list-style-type: none"> <li>• Enabled</li> <li>• One Time Enable</li> <li>• Disabled</li> </ul> <p>Default setting: Enabled</p>                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Admin Setup Lockout</b>  | <p>Allows you to prevent users from entering Setup when an Administrator password is set.</p> <p>Default Setting: <b>Disabled</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Secure Boot screen options

| Option                    | Description                                                                                                                                            |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Secure Boot Enable</b> | <p>This option enables or disables the <b>Secure Boot</b> feature.</p> <ul style="list-style-type: none"> <li>• Disabled</li> <li>• Enabled</li> </ul> |

| Option                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              | Default setting: Enabled.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Expert Key Management</b> | <p>Allows you to manipulate the security key databases only if the system is in Custom Mode. The <b>Enable Custom Mode</b> option is disabled by default. The options are:</p> <ul style="list-style-type: none"> <li>• PK</li> <li>• KEK</li> <li>• db</li> <li>• dbx</li> </ul> <p>If you enable the <b>Custom Mode</b>, the relevant options for <b>PK, KEK, db, and dbx</b> appear. The options are:</p> <ul style="list-style-type: none"> <li>• <b>Save to File</b>—Saves the key to a user-selected file</li> <li>• <b>Replace from File</b>—Replaces the current key with a key from a user-selected file</li> <li>• <b>Append from File</b>—Adds a key to the current database from a user-selected file</li> <li>• <b>Delete</b>—Deletes the selected key</li> <li>• <b>Reset All Keys</b>—Resets to default setting</li> <li>• <b>Delete All Keys</b>—Deletes all the keys</li> </ul> <p> <b>NOTE: If you disable the Custom Mode, all the changes made will be erased and the keys will restore to default settings.</b></p> |

## Intel Software Guard Extensions screen options

| Option                     | Description                                                                                                                                                                                                                                                                                     |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Intel SGX Enable</b>    | <p>This field specifies you to provide a secured environment for running code/storing sensitive information in the context of the main OS. The options are:</p> <ul style="list-style-type: none"> <li>• Disabled</li> <li>• Enabled</li> <li>• <b>Software Controlled</b> (default)</li> </ul> |
| <b>Enclave Memory Size</b> | <p>This option sets <b>SGX Enclave Reserve Memory Size</b>. The options are:</p> <ul style="list-style-type: none"> <li>• 32 MB</li> <li>• 64 MB</li> <li>• 128 MB</li> </ul>                                                                                                                   |

## Performance screen options

| Option                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Multi Core Support</b> | <p>This field specifies whether the process has one or all cores enabled. The performance of some applications improves with the additional cores. This option is enabled by default. Allows you to enable or disable multi-core support for the processor. The installed processor supports twoofour cores. If you enable Multi Core Support, twoofour cores are enabled. If you disable Multi Core Support, one core is enabled.</p> <ul style="list-style-type: none"> <li>• Enable Multi Core Support</li> </ul> |



| Option                      | Description                                                                                                                                                                                     |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | Default setting: The option is enabled.                                                                                                                                                         |
| <b>Intel SpeedStep</b>      | Allows you to enable or disable the Intel SpeedStep feature. <ul style="list-style-type: none"> <li>• Enable Intel SpeedStep</li> </ul> Default setting: The option is enabled.                 |
| <b>C-States Control</b>     | Allows you to enable or disable the additional processor sleep states. <ul style="list-style-type: none"> <li>• C states</li> </ul> Default setting: The option is enabled.                     |
| <b>Intel TurboBoost</b>     | Allows you to enable or disable the Intel TurboBoost mode of the processor. <ul style="list-style-type: none"> <li>• Enable Intel TurboBoost</li> </ul> Default setting: The option is enabled. |
| <b>Hyper-Thread Control</b> | Allows you to enable or disable the Hyper-Threading in the processor. <ul style="list-style-type: none"> <li>• Disabled</li> <li>• Enabled</li> </ul> Default setting: Enabled.                 |
| <b>DDR Frequency</b>        | This option changes DDR frequency to 1600 or 1866 MHz. By default, 1600 is selected.                                                                                                            |

## Power Management screen options

| Option                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AC Behavior</b>      | Allows you to enable or disable the computer from turning on automatically when an AC adapter is connected.<br>Default setting: Wake on AC is not selected.                                                                                                                                                                                                                                                                                                                    |
| <b>Auto On Time</b>     | Allows you to set the time at which the computer must turn on automatically. The options are: <ul style="list-style-type: none"> <li>• Disabled</li> <li>• Every Day</li> <li>• Weekdays</li> <li>• Select Days</li> </ul> Default setting: Disabled                                                                                                                                                                                                                           |
| <b>USB Wake Support</b> | Allows you to enable USB devices to wake the system from Standby. <div>  <p><b>NOTE: This feature is only functional when the AC power adapter is connected. If the AC power adapter is removed during Standby, the system setup removes power from all the USB ports to conserve battery power.</b></p> </div> <ul style="list-style-type: none"> <li>• Enable USB Wake Support</li> </ul> |

| Option                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                              | <ul style="list-style-type: none"> <li>Wake on Trinity Dock - The option is selected by default.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Wake on LAN/WLAN</b>                      | <p>Allows you to enable or disable the feature that powers on the computer from the Off state when triggered by a LAN signal.</p> <ul style="list-style-type: none"> <li>Disabled</li> <li>WLAN Only</li> </ul> <p>Default setting: Disabled</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Peak Shift</b>                            | <p>This option enables you to minimize the AC power consumption during the peak power times of day. After you enable this option, your system runs only in battery even if the AC is attached.</p> <ul style="list-style-type: none"> <li>Enable Peak Shift</li> </ul> <p>Default setting: Disabled</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Advanced Battery Charge Configuration</b> | <p>This option enables you to maximize the battery health. By enabling this option, your system uses the standard charging algorithm and other techniques, during the non-work hours to improve the battery health.</p> <ul style="list-style-type: none"> <li>Enabled Advanced Battery Charge Mode</li> </ul> <p>Default setting: Disabled</p>                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Primary Battery Charge Configuration</b>  | <p>Allows you to select the charging mode for the battery. The options are:</p> <ul style="list-style-type: none"> <li>Adaptive</li> <li>Standard — Fully charges your battery at a standard rate.</li> <li>ExpressCharge — The battery charges over a shorter period of time using Dell's fast charging technology. This option is enabled by default.</li> <li>Primarily AC use</li> <li>Custom</li> </ul> <p>If Custom Charge is selected, you can also configure Custom Charge Start and Custom Charge Stop.</p> <p> <b>NOTE: All charging mode may not be available for all the batteries. To enable this option, disable the Advanced Battery Charge Configuration option.</b></p> |

## POST Behavior screen options

| Option                   | Description                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Adapter Warnings</b>  | <p>Allows you to enable or disable the system setup (BIOS) warning messages when you use certain power adapters.</p> <p>Default setting: Enable Adapter Warnings</p>                                                                                                                                                                                                                                                            |
| <b>Keypad (Embedded)</b> | <p>Allows you to choose one of two methods to enable the keypad that is embedded in the internal keyboard.</p> <ul style="list-style-type: none"> <li>Fn Key Only: This option is enabled by default.</li> <li>By Numlock</li> </ul> <p> <b>NOTE: When setup is running, this option has no effect. Setup works in Fn Key Only mode.</b></p> |



| Option                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Numlock Enable</b>          | Allows you to enable the Numlock option when the computer boots.<br>Enable Network. This option is enabled by default.                                                                                                                                                                                                                                                                                                                       |
| <b>Fn Key Emulation</b>        | Allows you to set the option where the Scroll Lock key is used to simulate the Fn key feature.<br>Enable Fn Key Emulation (default)                                                                                                                                                                                                                                                                                                          |
| <b>Fn Lock Options</b>         | Allows you to let hot key combinations Fn + Esc toggle the primary behavior of F1–F12, between their standard and secondary functions. If you disable this option, you cannot toggle dynamically the primary behavior of these keys. The available options are: <ul style="list-style-type: none"> <li>• Fn Lock. This option is selected by default.</li> <li>• Lock Mode Disable/Standard</li> <li>• Lock Mode Enable/Secondary</li> </ul> |
| <b>MEBx Hotkey</b>             | Allows you to specify whether the MEBx Hotkey function should enable, during the system boot.<br>Default Setting: Enable MEBx Hotkey                                                                                                                                                                                                                                                                                                         |
| <b>Fastboot</b>                | Allows you to speed up the boot process by bypassing some of the compatibility steps. The options are: <ul style="list-style-type: none"> <li>• Minimal</li> <li>• Thorough (default)</li> <li>• Auto</li> </ul>                                                                                                                                                                                                                             |
| <b>Extended BIOS POST Time</b> | Allows you to create an additional preboot delay. The options are: <ul style="list-style-type: none"> <li>• 0 seconds. This option is enabled by default.</li> <li>• 5 seconds</li> <li>• 10 seconds</li> </ul>                                                                                                                                                                                                                              |

## Virtualization support screen options

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

## Wireless screen options

| Option                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Wireless Switch</b>        | <p>Allows to set the wireless devices that can be controlled by the wireless switch. The options are:</p> <ul style="list-style-type: none"><li>• WWAN</li><li>• GPS (on WWAN Module)</li><li>• WLAN/WiGig</li><li>• Bluetooth</li></ul> <p>All the options are enabled by default.</p> <p> <b>NOTE: For WLAN and WiGig enable or disable controls are tied together and they cannot be enabled or disabled independently.</b></p> |
| <b>Wireless Device Enable</b> | <p>Allows you to enable or disable the internal wireless devices.</p> <ul style="list-style-type: none"><li>• WWAN/GPS</li><li>• WLAN/WiGig</li><li>• Bluetooth</li></ul> <p>All the options are enabled by default.</p>                                                                                                                                                                                                                                                                                            |

## Maintenance screen options

| Option                | Description                                                                                                                                                                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Service Tag</b>    | Displays the Service Tag of your computer.                                                                                                                                                                                                                     |
| <b>Asset Tag</b>      | Allows you to create a system asset tag if an asset tag is not already set. This option is not set by default.                                                                                                                                                 |
| <b>BIOS Downgrade</b> | This controls flashing of the system firmware to previous revisions.                                                                                                                                                                                           |
| <b>Data Wipe</b>      | <p>This field allows users to erase the data securely from all internal storage devices. The following is the device affected:</p> <ul style="list-style-type: none"><li>• Internal M.2 SSD</li></ul>                                                          |
| <b>BIOS Recovery</b>  | <p>This field allows you to recover from certain corrupted BIOS conditions from a recover file on the user primary hard drive or an external USB key.</p> <ul style="list-style-type: none"><li>• BIOS Recovery from Hard Drive (enabled by default)</li></ul> |

## System Log screen options

| Option                | Description                                                       |
|-----------------------|-------------------------------------------------------------------|
| <b>BIOS Events</b>    | Allows you to view and clear the System Setup (BIOS) POST events. |
| <b>Thermal Events</b> | Allows you to view and clear the System Setup (Thermal) events.   |
| <b>Power Events</b>   | Allows you to view and clear the System Setup (Power) events.     |





# Updating the BIOS in Windows

It is recommended to update your BIOS (System Setup), on replacing the system board or if an update is available. For laptops, ensure that your computer battery is fully charged and connected to a power outlet

 **NOTE: If BitLocker is enabled, it must be suspended prior to updating the system BIOS, and then re-enabled after the BIOS update is completed.**

1. Restart the computer.
2. Go to **Dell.com/support**.
  - Enter the **Service Tag** or **Express Service Code** and click **Submit**.
  - Click **Detect Product** and follow the instructions on screen,
3. If you are unable to detect or find the Service Tag, click the **Choose from all products**.
4. Choose the **Products** category from the list.

 **NOTE: Choose the appropriate category to reach the product page**

5. Select your computer model and the **Product Support** page of your computer appears.
6. Click **Get drivers** and click **Drivers and Downloads**.  
The Drivers and Downloads section opens.
7. Click **Find it myself**.
8. Click **BIOS** to view the BIOS versions.
9. Identify the latest BIOS file and click **Download**.
10. Select your preferred download method in the **Please select your download method below** window, click **Download File**.  
The **File Download** window appears.
11. Click **Save** to save the file on your computer.
12. Click **Run** to install the updated BIOS settings on your computer.  
Follow the instructions on the screen.

 **NOTE: It is recommended not to update the BIOS version for more than 3 revisions. For example: If you want to update the BIOS from 1.0 to 7.0, then install version 4.0 first and then install version 7.0.**

## System and setup password

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

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

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

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

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

## Assigning a system password and setup password

You can assign a new **System Password** only when the status is in **Not Set**.

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

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

The **Security** screen is displayed.

2. Select **System Password** and create a password in the **Enter the new password** field.

Use the following guidelines to assign the system password:

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

3. Type the system password that you entered earlier in the **Confirm new password** field and click **OK**.
4. Press Esc and a message prompts you to save the changes.
5. Press Y to save the changes.

The computer reboots.

## Deleting or changing an existing system and/or setup password

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

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



**NOTE: If you change the System and/or Setup password, re-enter the new password when prompted. If you delete the System and/or Setup password, confirm the deletion when prompted.**

5. Press Esc and a message prompts you to save the changes.
6. Press Y to save the changes and exit from System Setup.

The computer reboots.

# Diagnostics

If you experience a problem with your computer, run the ePSA diagnostics before contacting Dell for technical assistance. The purpose of running diagnostics is to test your computer's hardware without requiring additional equipment or risking data loss. If you are unable to fix the problem yourself, service and support personnel can use the diagnostics results to help you solve the problem.

## Enhanced Pre-Boot System Assessment (ePSA) diagnostics

The ePSA diagnostics (also known as system diagnostics) performs a complete check of your hardware. The ePSA is embedded with the BIOS and is launched by the BIOS internally. The embedded system diagnostics provides a set of options for particular devices or device groups allowing you to:

- Run tests automatically or in an interactive mode
- Repeat tests
- Display or save test results
- Run thorough tests to introduce additional test options to provide extra information about the failed device(s)
- View status messages that inform you if tests are completed successfully
- View error messages that inform you of problems encountered during testing

 **CAUTION: Use the system diagnostics to test only your computer. Using this program with other computers may cause invalid results or error messages.**

 **NOTE: Some tests for specific devices require user interaction. Always ensure that you are present at the computer terminal when the diagnostic tests are performed.**

## Device status lights

**Table 6. Device status lights**

| Icon                                                                                | Name               | Description                                                                                        |
|-------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------|
|  | Power status light | Turns on when you turn on the computer and blinks when the computer is in a power management mode. |

This can be useful as a diagnostic tool when there's a possible failure to the system.

 **NOTE: The position of the power status light may vary depending on the system.**

# Technical specifications



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

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

## System specifications

| Feature                | Specification   |
|------------------------|-----------------|
| Chipset                | Skylake         |
| DRAM bus width         | 64-bit          |
| Flash EPROM            | SPI 128 Mbits   |
| PCIe bus               | 100 MHz         |
| External Bus Frequency | DMI 3.0 (8GT/s) |

## Processor specifications

| Feature           | Specification           |
|-------------------|-------------------------|
| Types             | Intel Core m3 / m5 / m7 |
| Intel Smart Cache | 3 MB and 4 MB           |

## Memory specifications

| Feature        | Specification |
|----------------|---------------|
| Memory type    | LPDDR3        |
| Minimum memory | 4 GB          |
| Maximum memory | 16 GB         |

## Audio specifications

| Feature | Specification                      |
|---------|------------------------------------|
| Types   | Four-channel high-definition audio |



| Feature                    | Specification                                                 |
|----------------------------|---------------------------------------------------------------|
| Controller                 | Realtek ALC3246                                               |
| Stereo conversion          | 24-bit (analog-to-digital and digital-to-analog)              |
| Internal interface         | High-definition audio                                         |
| External interface         | Microphone-in, stereo headphones, and headset combo connector |
| Speakers                   | Two                                                           |
| Internal speaker amplifier | 2 W (RMS) per channel                                         |
| Volume controls            | Hot keys                                                      |

## Video specifications

| Feature                  | Specification              |
|--------------------------|----------------------------|
| Type                     | Integrated on system board |
| UMA controller           | Intel HD Graphics 515      |
| External display support | One micro-HDMI             |

## Camera specifications

| Feature                    | Specification                 |
|----------------------------|-------------------------------|
| HD Panel Resolution        | 1280 x 720 pixels (Non Touch) |
| Video Resolution (maximum) | 1280 x 720 pixels             |
| Diagonal viewing angle     | 74°                           |

## Communication specifications

| Features | Specification                                                                                                                                        |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wireless | Internal wireless local area network (WLAN) and wireless wide area network (WWAN) <ul style="list-style-type: none"> <li>Bluetooth 4.1 LE</li> </ul> |

## Port and connector specifications

| Feature | Specification                                                                                                                        |
|---------|--------------------------------------------------------------------------------------------------------------------------------------|
| Audio   | One microphone/stereo headphone/speakers connector                                                                                   |
| Video   | Micro HDMI                                                                                                                           |
| USB     | <ul style="list-style-type: none"> <li>one USB3.0 with PowerShare</li> <li>one USB Type C port with thunderbolt 3 support</li> </ul> |

| Feature                                      | Specification                                                                                        |
|----------------------------------------------|------------------------------------------------------------------------------------------------------|
|                                              | <ul style="list-style-type: none"> <li>one USB Type C (DC-IN) port (for charging purpose)</li> </ul> |
| Memory card reader (Micro SD)                | One                                                                                                  |
| Micro Subscriber Identity Module (uSIM) card | One                                                                                                  |
| Smart Card                                   | Optional                                                                                             |
| RFID                                         | Optional                                                                                             |
| Finger print reader                          | Optional                                                                                             |

## Display specifications

| Feature                             | Specification            |
|-------------------------------------|--------------------------|
| <b>FHD anti-glare:</b>              |                          |
| Height                              | 293.76 mm (11.57 inches) |
| Width                               | 165.24 mm (6.51 inches)  |
| Diagonal                            | 337.82 (13.3 inches)     |
| Maximum resolution                  | 1920 x 1080              |
| Refresh rate                        | 60 Hz                    |
| Maximum viewing angles (horizontal) | +/-80°                   |
| Maximum viewing angles (vertical)   | +/-80°                   |
| Pixel pitch                         | 0.153 mm                 |
| <b>QHD anti-glare:</b>              |                          |
| Height                              | 293.76 mm (11.57 inches) |
| Width                               | 165.24 mm (6.51 inches)  |
| Diagonal                            | 337.82 (13.3 inches)     |
| Maximum resolution                  | 3200 x 1800              |
| Refresh rate                        | 60 Hz                    |
| Maximum viewing angles (horizontal) | +/-80°                   |
| Maximum viewing angles (vertical)   | +/-80°                   |
| Pixel pitch                         | 0.092 mm                 |



## Keyboard specifications

| Feature        | Specification                                                                                                                                                 |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of keys | <ul style="list-style-type: none"><li>• United States: 82 keys</li><li>• United Kingdom: 83 keys</li><li>• Brazil: 84 keys</li><li>• Japan: 86 keys</li></ul> |

## Touchpad specifications

| Feature      | Specification    |
|--------------|------------------|
| Active Area: |                  |
| X-axis       | 99.50 mm         |
| Y-axis       | 51.00 mm53.00 mm |

## Battery specifications

| Feature | Specification                                                                                            |
|---------|----------------------------------------------------------------------------------------------------------|
| Type    | <ul style="list-style-type: none"><li>• 34 WHr (4 cell) Entry</li><li>• 43 WHr (4 cell) Upsell</li></ul> |

### 34 WHr (4 cell)

#### Entry:

|         |                      |
|---------|----------------------|
| Length  | 267 mm (10.5 inches) |
| Height  | 4.35 mm (0.17 inch)  |
| Width   | 58.5 mm (2.3 inches) |
| Weight  | 165.0 g (0.43 lb)    |
| Voltage | 7.6 VDC              |

### 43 WHr (4 cell)

#### Upsell:

|         |                      |
|---------|----------------------|
| Length  | 267 mm (10.5 inches) |
| Height  | 6.25 mm (0.24 inch)  |
| Width   | 58.5 mm (2.3 inches) |
| Weight  | 200 g (0.66 lb)      |
| Voltage | 7.6 VDC              |

#### Temperature range:

|           |                                                                                                                                        |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------|
| Operating | <ul style="list-style-type: none"><li>• Charge: 0°C to 50°C (32°F to 122°F)</li><li>• Discharge: 0°C to 70°C (32°F to 158°F)</li></ul> |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------|

| Feature           | Specification                   |
|-------------------|---------------------------------|
| Non-operating     | - 20°C to 65°C (- 4°F to 149°F) |
| Coin cell battery | 3 V CR2032 lithium coin cell    |

## AC Adapter specifications

| Feature                           | Specification                  |
|-----------------------------------|--------------------------------|
| Type                              | 45 W (Type C)                  |
| Input voltage                     | 100 VAC to 240 VAC             |
| Input current (maximum)           | 1.3A                           |
| Input frequency                   | 50 Hz to 60 Hz                 |
| Output power                      | 45 W                           |
| Output current                    | 2.25 A                         |
| Rated output voltage              | 20 VDC                         |
| Weight                            | 0.17 kg (.37 lb)               |
| Dimensions                        | 0.87 x 2.17 x 3.42             |
| Temperature range (Operating)     | 0°C to 40°C (32°F to 104°F)    |
| Temperature range (Non-Operating) | -40°C to 70°C (-40°F to 158°F) |

## Physical specifications

| Feature                                       | Specification          |
|-----------------------------------------------|------------------------|
| Front height                                  | 9.86 mm (0.39 inches)  |
| Back height                                   | 14.32 mm (0.56 inches) |
| Width                                         | 304.8 mm (12 inches)   |
| Depth                                         | 210.5 mm (8.29 inches) |
| Minimum Weight (Non-touch with 34Whr battery) | 1.12 kg (2.48 lb)      |

## Environmental specifications

| Temperature | Specifications                 |
|-------------|--------------------------------|
| Operating   | 0°C to 60°C (32°F to 140°F)    |
| Storage     | -51°C to 71°C (-59°F to 159°F) |





**Relative humidity Specifications  
(maximum)**

**Operating** 10 % to 90 % (non condensing)

**Storage** 5 % to 95 % (non condensing)

**Altitude Specifications  
(maximum)**

**Operating** -15.2 m to 3048 m (-50 to 10,000 ft)

0°C to 35°C

**Non-operating** -15.24 m to 10,668 m (-50 ft to 35,000 ft)

**Airborne  
contaminant level** G2 or lower as defined by ISA S71.04-1985

# Contacting Dell



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

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

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

