

# Inspiron 16 5635

## 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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# Views of Inspiron 16 5635

## Right



### 1. SD-card slot

- Secure Digital (SD)
- Secure Digital High Capacity (SDHC)
- Secure Digital Extended Capacity (SDXC)

### 2. USB 3.2 Gen 1 port

Connect devices such as external storage devices and printers. Provides data transfer speeds up to 5 Gbps.

### 3. Universal audio jack

Connect headphones or a headset (headphone and microphone combo).

## Left



### 1. Power-adapter port

Connect a power adapter to provide power to your computer and charge the battery.

### 2. HDMI 1.4 port

Connect to a TV, external display or another HDMI-in enabled device. Provides video and audio output.

### 3. USB 3.2 Gen 1 port

Connect devices such as external storage devices and printers. Provides data transfer speeds up to 5 Gbps.

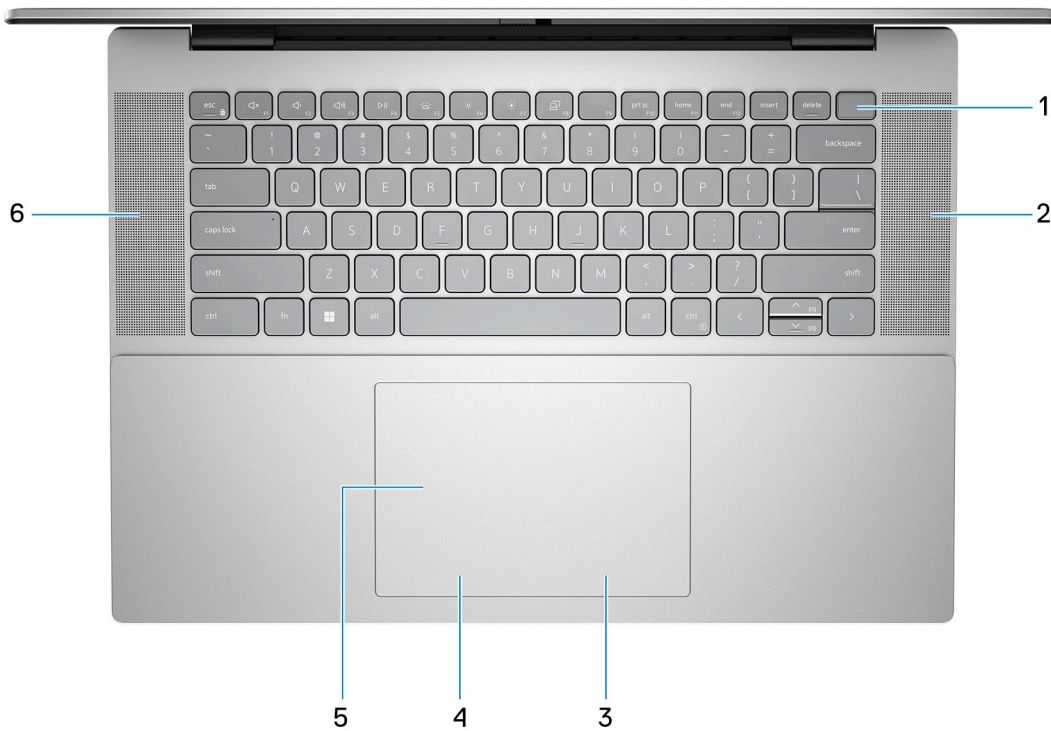
### 4. USB 3.2 Gen 2 Type-C port with DisplayPort 1.4 and Power Delivery

Connect devices such as external storage devices, printers, and external displays.

Supports Power Delivery that enables two-way power supply between devices. Provides up to 15 W power output that enables faster charging.

**NOTE:** A USB Type-C to DisplayPort adapter (sold separately) is required to connect a DisplayPort device.

# Top

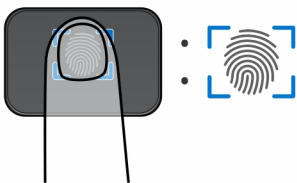


## 1. Power button with optional fingerprint reader

Press to turn on the computer if it is turned off, in sleep state, or in hibernate state.

When the computer is turned on, press the power button to put the computer into sleep state; press and hold the power button for 10 seconds to force shut-down the computer.

If the power button has a fingerprint reader, place your finger on the power button to log in.



**i NOTE:** The highlighted area indicates the actual active fingerprint reader area and the image is for illustration purposes only.

**i NOTE:** The power-status light on the power button is available only on computers without the fingerprint reader. Computers that are shipped with the fingerprint reader that is integrated on the power button will not have the power-status light on the power button.

**i NOTE:** To reset the battery, press and hold the power button for 25 seconds.

## 2. Right speaker

Provides audio output.

## 3. Right-click area

Press to right-click.

**i NOTE:** The right-click area is enabled when you touch the touchpad.

## 4. Left-click area

Press to left-click.

**NOTE:** The left-click area is enabled when you touch the touchpad.

#### 5. **Precision touchpad**

Move your finger on the touchpad to move the mouse pointer. Tap to left-click and two fingers tap to right-click.

#### 6. **Left speaker**

Provides audio output.

## Front



#### 1. **Left microphone**

Provides digital sound input for audio recording and voice calls.

#### 2. **Privacy shutter**

Slide the privacy shutter to cover the camera lens and protect your privacy when the camera is not in use.

#### 3. **Camera**

Enables you to video chat, capture photos, and record videos.

#### 4. **Camera-status light**

Turns on when the camera is in use.

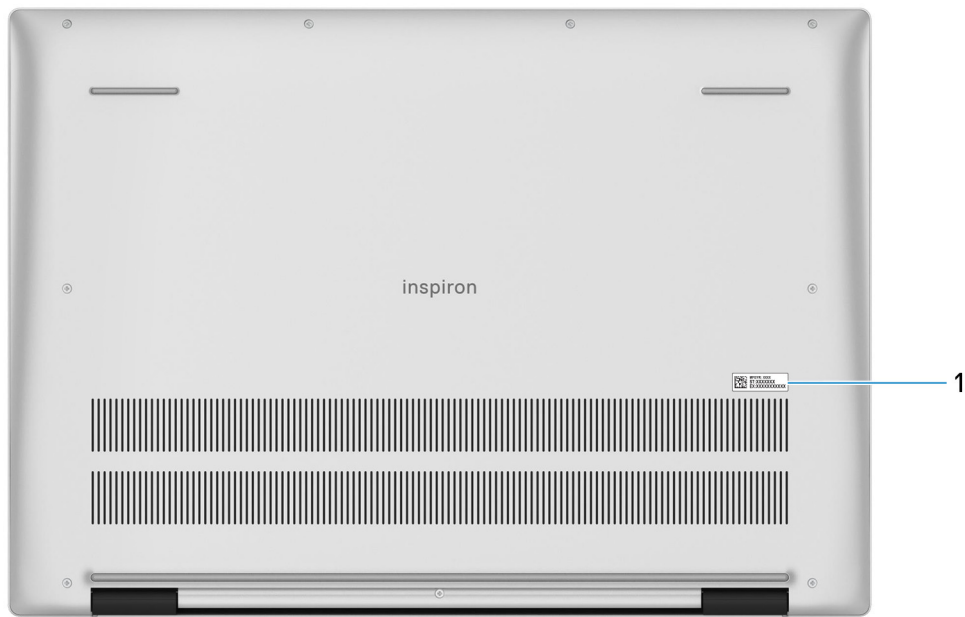
#### 5. **Right microphone**

Provides digital sound input for audio recording and voice calls.

#### 6. **LCD panel**

Provides visual output to the user.

## Bottom



### 1. Service Tag

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

# Set up your Inspiron 16 5635

## About this task

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

## Steps

1. Connect the power adapter and press the power button.



**NOTE:** The battery may go into power-saving mode during shipment to conserve charge on the battery. Ensure that the power adapter is connected to your computer when it is turned on for the first time.


2. Finish Windows setup.

Follow the on-screen instructions to complete the setup. When setting up, Dell recommends that you:

- Connect to a network for Windows updates.
  - NOTE:** If connecting to a secured wireless network, enter the password for the wireless network access when prompted.
- If connected to the Internet, sign in with or create a Microsoft account. If not connected to the Internet, create an offline account.
- On the **Support and Protection** screen, enter your contact details.




3. Locate and use Dell apps from the Windows Start menu—Recommended.

**Table 1. Locate Dell apps**

Resources	Description
	<b>My Dell</b>



**Table 1. Locate Dell apps (continued)**


Resources	Description
	<p>Centralized location for key Dell applications, help articles, and other important information about your computer. It also notifies you about the warranty status, recommended accessories, and software updates if available.</p>
	<p><b>SupportAssist</b></p> <p>SupportAssist proactively and predictively identifies hardware and software issues on your computer and automates the engagement process with Dell Technical support. It addresses performance and stabilization issues, prevents security threats, monitors, and detects hardware failures. For more information, see <i>SupportAssist for Home PCs User's Guide</i> at <a href="http://www.dell.com/serviceabilitytools">www.dell.com/serviceabilitytools</a>. Click <b>SupportAssist</b> and then, click <b>SupportAssist for Home PCs</b>.</p> <p><b>NOTE:</b> In SupportAssist, click the warranty expiry date to renew or upgrade your warranty.</p>
	<p><b>Dell Update</b></p> <p>Updates your computer with critical fixes and latest device drivers as they become available. For more information on using Dell Update, search in the Knowledge Base Resource at <a href="http://www.dell.com/support">www.dell.com/support</a>.</p>
	<p><b>Dell Digital Delivery</b></p> <p>Download software applications, which are purchased but not preinstalled on your computer. For more information on using Dell Digital Delivery, search in the Knowledge Base Resource at <a href="http://www.dell.com/support">www.dell.com/support</a>.</p>

# Specifications of Inspiron 16 5635

## Dimensions and weight

The following table lists the height, width, depth, and weight of your Inspiron 16 5635.

**Table 2. Dimensions and weight**

Description	Values
Height:	
Front height	17.95 mm (0.71 in.)
Rear height	18.20 mm (0.72 in.)
Width	356.78 mm (14.05 in.)
Depth	251.90 mm (9.92 in.)
Weight (maximum)	1.90 kg (4.19 lb), maximum  <b>NOTE:</b> The weight of your computer depends on the configuration ordered and manufacturing variability.

## Processor

The following table lists the details of the processors supported by your Inspiron 16 5635.

**Table 3. Processor**

Description	Option one	Option two
Processor type	AMD Ryzen 5 7530U	AMD Ryzen 7 7730U
Processor wattage	25 W	25 W
Processor core count	6	8
Processor thread count	12	16
Processor speed	Up to 4.50 GHz	Up to 4.50 GHz
Processor cache	19 MB	20 MB
Integrated graphics	AMD Radeon graphics	AMD Radeon graphics

# Chipset

The following table lists the details of the chipset supported by your Inspiron 16 5635.

**Table 4. Chipset**

Description	Values
Chipset	Integrated in processor
Processor	AMD Ryzen 5/7
DRAM bus width	128-bit
Flash EPROM	16 MB
PCIe bus	Up to Gen 3

# Operating system

Your Inspiron 16 5635 supports the following operating systems:

- Windows 11 Pro, 64-bit
- Windows 11 Pro National Education, 64-bit
- Windows 11 Home, 64-bit
- Windows 11 Home in S mode, 64-bit

# Memory

The following table lists the memory specifications of your Inspiron 16 5635.

**Table 5. Memory specifications**

Description	Values
Memory slots	Two memory modules integrated with the system board
Memory type	Dual-channel LPDDR4x
Memory speed	4266 MHz
Maximum memory configuration	16 GB
Minimum memory configuration	8 GB
Memory configurations supported	<ul style="list-style-type: none"><li>• 8 GB, 2 x 4 GB, LPDDR4x, 4266 MHz, dual-channel</li><li>• 16 GB, 2 x 8 GB, LPDDR4x, 4266 MHz, dual-channel</li></ul>

# External ports

The following table lists the external ports of your Inspiron 16 5635.

**Table 6. External ports**

Description	Values
Network port	N/A


**Table 6. External ports (continued)**

Description	Values
USB ports	<ul style="list-style-type: none"> <li>One USB 3.2 Gen 2 port with DisplayPort™ and Power Delivery</li> <li>Two USB 3.2 Gen 1 ports</li> </ul>
Audio port	One Universal headset jack
Video port	One HDMI 1.4 port
Media-card reader	One SD-card slot
Power-adaptor port	<ul style="list-style-type: none"> <li>One 4.50 mm x 2.90 mm DC-in</li> </ul>
Security-cable slot	N/A

## Internal slots

The following table lists the internal slots of your Inspiron 16 5635.



**Table 7. Internal slots**

Description	Values
M.2	One M.2 2230/2280 slot for solid-state drive.  <b>NOTE:</b> To learn more about the features of different types of M.2 cards, search in the Knowledge Base Resource at <a href="http://www.dell.com/support">www.dell.com/support</a> .


## Wireless module

The following table lists the Wireless Local Area Network (WLAN) modules that are supported on your Inspiron 16 5635.

**Table 8. Wireless module specifications**

Description	Option one	Option two
Model number	MediaTek MT7921	MediaTek MT7922
Transfer rate	Up to 2400 Mbps	Up to 2400 Mbps
Frequency bands supported	2.4 GHz/5 GHz	2.4 GHz/5 GHz/6 GHz
Wireless standards	<ul style="list-style-type: none"> <li>WiFi 802.11a/b/g</li> <li>Wi-Fi 4 (WiFi 802.11n)</li> <li>Wi-Fi 5 (WiFi 802.11ac)</li> <li>Wi-Fi 6 (802.11ax)</li> </ul>	<ul style="list-style-type: none"> <li>WiFi 802.11a/b/g</li> <li>Wi-Fi 4 (WiFi 802.11n)</li> <li>Wi-Fi 5 (WiFi 802.11ac)</li> <li>Wi-Fi 6E (802.11ax)</li> </ul>
Encryption	<ul style="list-style-type: none"> <li>64-bit/128-bit WEP</li> <li>AES-CCMP</li> <li>TKIP</li> </ul>	<ul style="list-style-type: none"> <li>64-bit/128-bit WEP</li> <li>AES-CCMP</li> <li>TKIP</li> </ul>
Bluetooth wireless card	Bluetooth 5.3  <b>NOTE:</b> Particular versions of Microsoft Windows may not support the full Bluetooth 5.3 functionality	Bluetooth 5.3  <b>NOTE:</b> Particular versions of Microsoft Windows may not support the full Bluetooth 5.3 functionality

**Table 8. Wireless module specifications (continued)**

Description	Option one	Option two
	 <b>NOTE:</b> The version of the Bluetooth wireless card may vary depending on the operating system that is installed on your computer.	

## Audio

The following table lists the audio specifications of your Inspiron 16 5635.

**Table 9. Audio specifications**

Description	Values
Audio controller	Realtek ALC3254
Stereo conversion	Supported
Internal audio interface	High definition audio interface
External audio interface	Universal Audio Jack
Number of speakers	2
Internal-speaker amplifier	Supported
External volume controls	Keyboard shortcut controls
Speaker output:	
Average speaker output	2 W x 2 = 4 W
Peak speaker output	2.5 W x 2 = 5 W
Subwoofer output	Supported
Microphone	Digital-array microphones

## Storage

This section lists the storage options on your Inspiron 16 5635.

Your Inspiron 16 5635 supports one of the following storage configurations:

- One M.2 2230 solid-state drive
- One M.2 2280 solid-state drive

The primary drive of your Inspiron16 5635 is the M.2 drive where your operating system is installed.

**Table 10. Storage specifications**

Storage type	Interface type	Capacity
M.2 2230 solid-state drive	PCIe Gen3.0x4 NVMe, up to 32 Gbps	Up to 1 TB
M.2 2230 solid-state drive	PCIe Gen4.0x4 NVMe, up to 64 Gbps	Up to 1 TB
M.2 2280 solid-state drive	PCIe Gen4.0x4 NVMe, up to 64 Gbps	Up to 2 TB
M.2 2280 solid-state drive	PCIe Gen3.0x4 NVMe QLC, up to 32 Gbps	Up to 1 TB


**Table 10. Storage specifications (continued)**

Storage type	Interface type	Capacity
M.2 2280 solid-state drive	PCIe Gen4.0x4 NVMe, up to 64 Gbps	Up to 2 TB
M.2 2280 solid-state drive	PCIe Gen3.0x4 NVMe QLC, up to 32 Gbps	Up to 1 TB

## Media-card reader

The following table lists the media cards supported by your Inspiron 16 5635.


**Table 11. Media-card reader specifications**

Description	Values
Media-card type	One SD card slot
Media-cards supported	<ul style="list-style-type: none"><li>Secure Digital (SD)</li><li>Secure Digital High Capacity (SDHC)</li><li>Secure Digital Extended Capacity (SDXC)</li></ul>
 <b>NOTE:</b> The maximum capacity supported by the media-card reader varies depending on the standard of the media card installed in your computer.	

## Keyboard

The following table lists the keyboard specifications of your Inspiron 16 5635.

**Table 12. Keyboard specifications**

Description	Values
Keyboard type	<ul style="list-style-type: none"><li>Backlit keyboard</li><li>Standard keyboard</li></ul>
Keyboard layout	QWERTY
Number of keys	<ul style="list-style-type: none"><li>United States and Canada: 79 keys</li><li>United Kingdom: 80 keys</li><li>Japan: 83 keys</li></ul>
Keyboard size	X=19.05 mm key pitch Y=18.05 mm key pitch
Keyboard shortcuts	<p>Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. To type the alternate character, press Shift and the desired key. To perform secondary functions, press Fn and the desired key.</p> <p> <b>NOTE:</b> You can define the primary behavior of the function keys (F1–F12) changing <b>Function Key Behavior</b> in BIOS setup program.</p> <p>For more information, see <a href="#">Keyboard shortcuts</a>.</p>

# Keyboard shortcuts

**NOTE:** Keyboard characters may differ depending on the keyboard language configuration. Keys used for shortcuts remain the same across all language configurations.

Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. The symbol shown on the lower part of the key refers to the character that is typed out when the key is pressed. If you press shift and the key, the symbol shown on the upper part of the key is typed out. For example, if you press **2**, **2** is typed out; if you press **Shift + 2**, **@** is typed out.

The keys F1-F12 at the top row of the keyboard are function keys for multi-media control, as indicated by the icon at the bottom of the key. Press the function key to invoke the task represented by the icon. For example, pressing F1 mutes the audio (refer to the table below).

However, if the function keys F1-F12 are needed for specific software applications, multi-media functionality can be disabled by pressing **fn + Esc**. Subsequently, multi-media control can be invoked by pressing **fn** and the respective function key. For example, mute audio by pressing **fn + F1**.

**NOTE:** You can also define the primary behavior of the function keys (F1–F12) by changing **Function Key Behavior** in BIOS setup program.

**Table 13. List of keyboard shortcuts**

Function key	Re-defined key (for multi-media control)	Behavior
F1	fn + F1	Mute audio
F2	fn + F2	Decrease volume
F3	fn + F3	Increase volume
F4	fn + F4	Play/Pause
F5	fn + F5	Toggle keyboard backlight (optional)
F6	fn + F6	Decrease brightness
F7	fn + F7	Increase brightness
F8	fn + F8	Switch to external display
F10	fn + F10	Print screen
F11	fn + F11	Home
F12	fn + F12	End

The **fn** key is also used with selected keys on the keyboard to invoke other secondary functions.

**Table 14. List of keyboard shortcuts**

Function key	Behavior
fn + B	Pause/Break
fn + S	Toggle scroll lock
fn + R	System request
fn + T	Toggle Ultra performance mode
fn + right ctrl	Open application menu
fn + / <b>NOTE:</b> Brazilian keyboard only	Open application menu
fn + Space bar	Open Emoji menu
fn + esc	Toggle fn-key lock
fn + left arrow	Home

**Table 14. List of keyboard shortcuts (continued)**

Function key	Behavior
fn + right arrow	End

## Camera

The following table lists the camera specifications of your Inspiron 16 5635.

**Table 15. Camera specifications**

Description	Values
Number of cameras	One
Camera type	RGB FHD Camera
Camera location	Front camera
Camera sensor type	CMOS-sensor technology
Camera resolution:	
Still image	2.07 megapixel
Video	1920 x 1080 (HD) at 30 fps
Diagonal viewing angle:	82 degrees

## Touchpad

The following table lists the touchpad specifications of your Inspiron 16 5635.

**Table 16. Touchpad specifications**

Description	Values
Touchpad resolution:	>300 DPI
Touchpad dimensions:	
Horizontal	133 mm (5.24 in.)
Vertical	90 mm (3.54 in.)
Touchpad gestures	For more information about touchpad gestures available on Windows, see the Microsoft knowledge base article at <a href="https://support.microsoft.com">support.microsoft.com</a> .

## Power adapter


The following table lists the power adapter specifications of your Inspiron 16 5635.

**Table 17. Power adapter specifications**

Description	Values
Type	65 W DC adapter




**Table 17. Power adapter specifications (continued)**

Description		Values
Connector dimensions:		
	External diameter	4.50 mm
	Internal diameter	2.90 mm
Input voltage		100 VAC–240 VAC
Input frequency		50 Hz–60 Hz
Input current (maximum)		1.60 A/1.70 A
Output current (continuous)		3.34 A
Rated output voltage		19.50 VDC
Temperature range:		
	Operating	0°C to 40°C (32°F to 104°F)
	Storage	-40°C to 70°C (-40°F to 158°F)
 <b>CAUTION:</b> Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.		


## Battery

The following table lists the battery specifications of your Inspiron 16 5635.

**Table 18. Battery specifications**

Description		Values
Battery type		4-cell polymer (54 Wh), Li-ion battery
Battery voltage		15 V
Battery weight (maximum)		0.24 kg (0.53 lb)
Battery dimensions:		
	Height	271.90 mm
	Width	82 mm
	Depth	5.75 mm
Temperature range:		
	Operating	0°C to 50°C (32°F to 122°F)
	Storage	-20°C to 60°C (-4°F to 140°F)
Battery operating time		Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.
Battery charging time (approximate)		2hr ( Express charge ), 3hr ( Standard charge) hours (when the computer is off)
 <b>NOTE:</b> Control the charging time, duration, start and end time, and so on using the Dell Power Manager		

**Table 18. Battery specifications (continued)**

Description	Values
application. For more information on the Dell Power Manager see, <i>Me and My Dell</i> on <a href="http://www.dell.com">www.dell.com</a> .	
Coin-cell battery	CR2032
 <b>CAUTION: Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.</b>	

## Display

The following table lists the display specifications of your Inspiron 16 5635.

**Table 19. Display specifications**

Description	Option one	Option two	Option three	Option four
Display type	Full High Definition (FHD+), ComfortView	Full High Definition (FHD+), ComfortView Plus	Full High Definition (FHD+), ComfortView Plus	2.5K, ComfortView Plus
Display-panel technology	Wide Viewing Angle (WVA)	Wide Viewing Angle (WVA)	Wide Viewing Angle (WVA)	Wide Viewing Angle (WVA)
Display-panel dimensions (active area):				
Height	344.68 mm (13.57 in.)	344.68 mm (13.57 in.)	344.68 mm (13.57 in.)	344.68 mm (13.57 in.)
Width	215.42 mm (8.48 in.)	215.42 mm (8.48 in.)	215.42 mm (8.48 in.)	215.42 mm (8.48 in.)
Diagonal	406.46 mm (16 in.)	406.46 mm (16 in.)	406.46 mm (16 in.)	406.46 mm (16 in.)
Display-panel native resolution	1920 x 1200	1920 x 1200	1920 x 1200	2560 x 1600
Luminance (typical)	250 nits	300 nits	300 nits	300 nits
Megapixels	2.30	2.30	2.30	4.09
Color gamut	NTSC 45%	sRGB 100%, typical	sRGB 100%, typical	sRGB 100%, typical
Pixels Per Inch (PPI)	141	141	141	189
Contrast ratio (typ)	<ul style="list-style-type: none"> <li>800:1 (minimum)</li> <li>1000:1 (typical)</li> </ul>	<ul style="list-style-type: none"> <li>1000:1 (minimum)</li> <li>1200:1 (typical)</li> </ul>	<ul style="list-style-type: none"> <li>1000:1 (minimum)</li> <li>1200:1 (typical)</li> </ul>	<ul style="list-style-type: none"> <li>1000:1 (minimum)</li> <li>1200:1 (typical)</li> </ul>
Response time (min)	35 ms	35 ms	35 ms	35 ms
Refresh rate	60 Hz	60 Hz	60 Hz	120 Hz
Horizontal view angle	<ul style="list-style-type: none"> <li>+/- 85 degrees, typical</li> <li>+/- 80 degrees, minimum</li> </ul>	<ul style="list-style-type: none"> <li>+/- 85 degrees, typical</li> <li>+/- 80 degrees, minimum</li> </ul>	<ul style="list-style-type: none"> <li>+/- 85 degrees, typical</li> <li>+/- 80 degrees, minimum</li> </ul>	<ul style="list-style-type: none"> <li>+/- 85 degrees, typical</li> <li>+/- 80 degrees, minimum</li> </ul>

**Table 19. Display specifications (continued)**

Description	Option one	Option two	Option three	Option four
Vertical view angle	<ul style="list-style-type: none"> <li>+/- 85 degrees, typical</li> <li>+/- 80 degrees, minimum</li> </ul>	<ul style="list-style-type: none"> <li>+/- 85 degrees, typical</li> <li>+/- 80 degrees, minimum</li> </ul>	<ul style="list-style-type: none"> <li>+/- 85 degrees, typical</li> <li>+/- 80 degrees, minimum</li> </ul>	<ul style="list-style-type: none"> <li>+/- 85 degrees, typical</li> <li>+/- 80 degrees, minimum</li> </ul>
Pixel pitch	0.18 mm	0.18 mm	0.18 mm	0.13 mm
Power consumption (maximum)	4.15 W	4.40 W	4.40 W	4 W
Anti-glare vs glossy finish	Anti-glare	Reflective	Anti-glare	Anti-glare
Touch options	No	Yes	No	No

## Fingerprint reader (optional)

The following table lists the specifications of the optional fingerprint-reader of your Inspiron 16 5635.

**Table 20. Fingerprint reader specifications**

Description	Values
Fingerprint-reader sensor technology	Trans-capacitive sensing
Fingerprint-reader sensor resolution	500 dpi
Fingerprint-reader sensor pixel size	100 x 88 pixels

## GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Inspiron 16 5635.

**Table 21. GPU—Integrated**

Controller	External display support	Memory size	Processor
AMD Radeon Graphics	<ul style="list-style-type: none"> <li>One HDMI 1.4 port</li> <li>1 USB 3.2 Gen 2 port with DisplayPort and Power Delivery</li> </ul>	Shared system memory	AMD Ryzen 5
AMD Radeon Graphics	<ul style="list-style-type: none"> <li>One HDMI 1.4 port</li> <li>1 USB 3.2 Gen 2 port with DisplayPort and Power Delivery</li> </ul>	Shared system memory	AMD Ryzen 7

## GPU—Discrete

The following table lists the specifications of the discrete Graphics Processing Unit (GPU) supported by your Inspiron 16 5635.

**Table 22. GPU—Discrete**

Controller	Memory size	Memory type
No discrete graphics	N/A	N/A

## Multiple display support matrix

The following table lists the multiple display support matrix for your Inspiron 16 5635.

**Table 23. Multiple display support matrix**


Graphics Card	Direct Graphics Controller Direct Output Mode	Supported external displays with computer internal display on	Supported external displays with computer internal display off
AMD Radeon Graphics	Not applicable	3	4

## Operating and storage environment

This table lists the operating and storage specifications of your Inspiron 16 5635.

**Airborne contaminant level:** G1 as defined by ISA-S71.04-1985

**Table 24. Computer environment**

Description	Operating	Storage
Temperature range	0°C to 35°C (32°F to 95°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10% to 90% (non-condensing)	0% to 95% (non-condensing)
Vibration (maximum)*	0.66 GRMS	Not applicable
Shock (maximum)	110 G†	Not applicable
 <b>CAUTION:</b> Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.		

\* Measured using a random vibration spectrum that simulates user environment.

† Measured using a 2 ms half-sine pulse.

## Dell Support policy

For information on Dell support policy, search in the Knowledge Base Resource at [www.dell.com/support](http://www.dell.com/support).

## ComfortView

 **WARNING:** Prolonged exposure to blue light from the display may lead to long-term effects such as eye strain, eye fatigue, or damage to the eyes.

Blue light is a color in the light spectrum which has a short wavelength and high energy. Chronic exposure to blue light, particularly from digital sources, may disrupt sleep patterns and cause long-term effects such as eye strain, eye fatigue, or damage to the eyes.

ComfortView mode can be enabled and configured using the Dell CinemaColor application.


ComfortView mode complies with TÜV Rheinland's requirement for low blue light software solutions.

Low blue light: Dell ComfortView software technology reduces harmful blue light emissions to make extended screen time easy on your eyes.

To reduce the risk of eye strain, it is also recommended that you:

- Position the display at a comfortable viewing distance between 20 and 28 inches (50 and 70 cm) from your eyes.
- Blink frequently to moisten your eyes, wet your eyes with water, or apply suitable eye drops.
- Look away from your display, and gaze at a distant object at 20 ft (609.60 cm) away for at least 20 seconds during each break.
- Take an extended break for 20 minutes every two hours.

## ComfortView Plus

 **WARNING: Prolonged exposure to blue light from the display may lead to long-term effects such as eye strain, eye fatigue, or damage to the eyes.**

Blue light is a color in the light spectrum which has a short wavelength and high energy. Chronic exposure to blue light, particularly from digital sources, may disrupt sleep patterns and cause long-term effects such as eye strain, eye fatigue, or damage to the eyes.

The display on this computer is designed to minimize blue light and complies with TÜV Rheinland's requirement for low blue light hardware solutions.

Low blue light mode is enabled at the factory, so no further configuration is necessary.











To reduce the risk of eye strain, it is also recommended that you:

- Position the display at a comfortable viewing distance between 20 and 28 inches (50 and 70 cm) from your eyes.
- Blink frequently to moisten your eyes, wet your eyes with water, or apply suitable eye drops.
- Look away from your display, and gaze at a distant object at 20 ft (609.60 cm) away for at least 20 seconds during each break.
- Take an extended break for 20 minutes every two hours.

# Working inside 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 you have read the safety information that shipped with your computer.

-  **WARNING:** Before working inside your computer, read the safety information that is shipped with your computer. For more safety best practices, see the Regulatory Compliance home page at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
-  **WARNING:** Disconnect your computer from 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 your computer to an electrical outlet.
-  **CAUTION:** To avoid damaging the computer, ensure that the work surface is flat, dry, and clean.
-  **CAUTION:** To avoid damaging the components and cards, handle them by their edges, and avoid touching the pins and the contacts.
-  **CAUTION:** You should only perform troubleshooting and repairs as authorized or directed by the Dell technical assistance team. Damage due to servicing that is not authorized by Dell is not covered by your warranty. See the safety instructions that is shipped with the product or at [www.dell.com/regulatory\\_compliance](http://www.dell.com/regulatory_compliance).
-  **CAUTION:** Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate static electricity which could harm internal components.
-  **CAUTION:** When you disconnect a cable, pull it by its connector or its pull tab, not the cable itself. Some cables have connectors with locking tabs or thumbscrews that you must disengage before disconnecting the cable. When disconnecting cables, keep them evenly aligned to avoid bending the connector pins. When connecting cables, ensure that the ports and the connectors are correctly oriented and aligned.
-  **CAUTION:** Press and eject any installed card from the media-card reader.
-  **CAUTION:** Exercise caution when handling rechargeable Li-ion batteries in laptops. Swollen batteries should not be used and should be replaced and disposed properly.
-  **NOTE:** The color of your computer and certain components may appear differently than shown in this document.

## Before working inside your computer


### Steps


1. Save and close all open files and exit all open applications.
2. Shut down your computer. For Windows operating system, click **Start** >  **Power** > **Shut down**.
  -  **NOTE:** If you are using a different operating system, see the documentation of your operating system for shut-down instructions.
3. Disconnect your computer and all attached devices from their electrical outlets.
4. Disconnect all attached network devices and peripherals, such as keyboard, mouse, and monitor from your computer.

5. Remove any media card and optical disk from your computer, if applicable.
6. Enter the service mode, if you are able to power on your computer.


### Service Mode

Service Mode is used to cut-off power, without disconnecting battery cable from system board prior conducting repairs in the computer.

 **CAUTION:** If you are unable to turn on the computer to put it into Service Mode or the computer does not support Service Mode then proceed to disconnect the battery cable. To disconnect the battery cable, follow the steps in [Removing the battery](#).

 **NOTE:** Ensure that your computer is shut down and the AC adapter is disconnected.

- a. Hold **<B>** key on the keyboard and press the power button for 3 seconds or until the Dell logo appears on the screen.
- b. Press any key to continue.
- c. If the AC adapter is not disconnected, a message prompting you to remove the AC adapter appears on the screen. Remove the AC adapter and then press any key to continue the **Service Mode** procedure. The **Service Mode** procedure automatically skips the following step if the **Owner Tag** of the computer is not set up in advance by the user.
- d. When the ready-to-proceed message appears on the screen, press any key to proceed. The computer emits three short beeps and shuts down immediately.
- e. Once the computer shuts down, it has successfully entered Service Mode.

 **NOTE:** If you are unable to power on your computer or unable to enter service mode skip this process.

## Safety precautions

The safety precautions chapter details the primary steps to be taken before performing any disassembly instructions.

Observe the following safety precautions before you perform any installation or break/fix procedures involving disassembly or reassembly:

- Turn off the system and all attached peripherals.
- Disconnect the system and all attached peripherals from AC power.
- Disconnect all network cables, telephone, and telecommunications lines from the system.
- Use an ESD field service kit when working inside any to avoid electrostatic discharge (ESD) damage.
- After removing any system component, carefully place the removed component on an anti-static mat.
- Wear shoes with non-conductive rubber soles to reduce the chance of getting electrocuted.

## Standby power

Dell products with standby power must be unplugged before you open the case. Systems that incorporate standby power are essentially powered while turned off. The internal power enables the system to be remotely turned on (wake on LAN) and suspended into a sleep mode and has other advanced power management features.

Unplugging, pressing, and holding the power button for 15 seconds should discharge residual power in the system board.

## Bonding

Bonding is a method for connecting two or more grounding conductors to the same electrical potential. This is done through the use of a field service electrostatic discharge (ESD) kit. When connecting a bonding wire, ensure that it is connected to bare metal and never to a painted or non-metal surface. The wrist strap should be secure and in full contact with your skin, and ensure that you remove all jewelry such as watches, bracelets, or rings prior to bonding yourself and the equipment.

## Electrostatic discharge—ESD protection

ESD is a major concern when you handle electronic components, especially sensitive components such as expansion cards, processors, memory DIMMs, and system boards. Very slight charges can damage circuits in ways that may not be obvious, such as intermittent problems or a shortened product life span. As the industry pushes for lower power requirements and increased density, ESD protection is an increasing concern.

Due to the increased density of semiconductors used in recent Dell products, the sensitivity to static damage is now higher than in previous Dell products. For this reason, some previously approved methods of handling parts are no longer applicable.

Two recognized types of ESD damage are catastrophic and intermittent failures.

- **Catastrophic** – Catastrophic failures represent approximately 20 percent of ESD-related failures. The damage causes an immediate and complete loss of device functionality. An example of catastrophic failure is a memory DIMM that has received a static shock and immediately generates a "No POST/No Video" symptom with a beep code emitted for missing or nonfunctional memory.
- **Intermittent** – Intermittent failures represent approximately 80 percent of ESD-related failures. The high rate of intermittent failures means that most of the time when damage occurs, it is not immediately recognizable. The DIMM receives a static shock, but the tracing is merely weakened and does not immediately produce outward symptoms related to the damage. The weakened trace may take weeks or months to melt, and in the meantime may cause degradation of memory integrity, intermittent memory errors, etc.

The more difficult type of damage to recognize and troubleshoot is the intermittent (also called latent or "walking wounded") failure.

Perform the following steps to prevent ESD damage:

- Use a wired ESD wrist strap that is properly grounded. The use of wireless anti-static straps is no longer allowed; they do not provide adequate protection. Touching the chassis before handling parts does not ensure adequate ESD protection on parts with increased sensitivity to ESD damage.
- Handle all static-sensitive components in a static-safe area. If possible, use anti-static floor pads and workbench pads.
- When unpacking a static-sensitive component from its shipping carton, do not remove the component from the anti-static packing material until you are ready to install the component. Before unwrapping the anti-static packaging, ensure that you discharge static electricity from your body.
- Before transporting a static-sensitive component, place it in an anti-static container or packaging.

## ESD field service kit

The unmonitored Field Service kit is the most commonly used service kit. Each Field Service kit includes three main components: anti-static mat, wrist strap, and bonding wire.

### Components of an ESD field service kit

The components of an ESD field service kit are:

- **Anti-Static Mat** – The anti-static mat is dissipative and parts can be placed on it during service procedures. When using an anti-static mat, your wrist strap should be snug and the bonding wire should be connected to the mat and to any bare metal on the system being worked on. Once deployed properly, service parts can be removed from the ESD bag and placed directly on the mat. ESD-sensitive items are safe in your hand, on the ESD mat, in the system, or inside a bag.
- **Wrist Strap and Bonding Wire** – The wrist strap and bonding wire can be either directly connected between your wrist and bare metal on the hardware if the ESD mat is not required, or connected to the anti-static mat to protect hardware that is temporarily placed on the mat. The physical connection of the wrist strap and bonding wire between your skin, the ESD mat, and the hardware is known as bonding. Use only Field Service kits with a wrist strap, mat, and bonding wire. Never use wireless wrist straps. Always be aware that the internal wires of a wrist strap are prone to damage from normal wear and tear, and must be checked regularly with a wrist strap tester in order to avoid accidental ESD hardware damage. It is recommended to test the wrist strap and bonding wire at least once per week.
- **ESD Wrist Strap Tester** – The wires inside of an ESD strap are prone to damage over time. When using an unmonitored kit, it is a best practice to regularly test the strap prior to each service call, and at a minimum, test once per week. A wrist strap tester is the best method for doing this test. If you do not have your own wrist strap tester, check with your regional office to find out if they have one. To perform the test, plug the wrist-strap's bonding-wire into the tester while it is strapped to your wrist and push the button to test. A green LED is lit if the test is successful; a red LED is lit and an alarm sounds if the test fails.
- **Insulator Elements** – It is critical to keep ESD sensitive devices, such as plastic heat sink casings, away from internal parts that are insulators and often highly charged.
- **Working Environment** – Before deploying the ESD Field Service kit, assess the situation at the customer location. For example, deploying the kit for a server environment is different than for a desktop or portable environment. Servers are typically installed in a rack within a data center; desktops or portables are typically placed on office desks or cubicles. Always look for a large open flat work area that is free of clutter and large enough to deploy the ESD kit with additional space to accommodate the type of system that is being repaired. The workspace should also be free of insulators that can cause an ESD event. On the work area, insulators such as Styrofoam and other plastics should always be moved at least 12 inches or 30 centimeters away from sensitive parts before physically handling any hardware components



- **ESD Packaging** – All ESD-sensitive devices must be shipped and received in static-safe packaging. Metal, static-shielded bags are preferred. However, you should always return the damaged part using the same ESD bag and packaging that the new part arrived in. The ESD bag should be folded over and taped shut and all the same foam packing material should be used in the original box that the new part arrived in. ESD-sensitive devices should be removed from packaging only at an ESD-protected work surface, and parts should never be placed on top of the ESD bag because only the inside of the bag is shielded. Always place parts in your hand, on the ESD mat, in the system, or inside an anti-static bag.
- **Transporting Sensitive Components** – When transporting ESD sensitive components such as replacement parts or parts to be returned to Dell, it is critical to place these parts in anti-static bags for safe transport.

## ESD protection summary


It is recommended to use the traditional wired ESD grounding wrist strap and protective anti-static mat at all times when servicing Dell products. In addition, it is critical to keep sensitive parts separate from all insulator parts while performing service and that they use anti-static bags for transporting sensitive components.

## Transporting sensitive components

When transporting ESD sensitive components such as replacement parts or parts to be returned to Dell, it is critical to place these parts in anti-static bags for safe transport.

## After working inside your computer


### About this task


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

### Steps

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

## BitLocker

 **CAUTION:** If BitLocker is not suspended before updating the BIOS, the next time you reboot the system it will not recognize the BitLocker key. You will then be prompted to enter the recovery key to progress, and the system will ask for this on each reboot. If the recovery key is not known this can result in data loss or an unnecessary operating system reinstall. For more information about this subject, For information on *updating the BIOS on Dell systems with BitLocker enabled*, search in the Knowledge Base Resource at [www.dell.com/support](http://www.dell.com/support).

 **CAUTION:** If BitLocker is not suspended, replacing parts like system board or storage drives on a system with BitLocker / Device encryption enabled will also trigger the encryption and lock the user out. The recovery key is required to regain access to Windows. The recovery key is automatically saved to the user's Microsoft Account (MSA) when the device is encrypted and can be retrieved from <https://account.microsoft.com/devices/recoverykey>

For more information, refer to Windows Support article: [Finding your BitLocker recovery key in Windows](#)

## Recommended tools

The procedures in this document may require the following tools:

- Phillips screwdriver #0
- Phillips screwdriver #1
- Torx #5 (T5) screwdriver
- Plastic scribe
















## Screw list

**NOTE:** When removing screws from a component, it is recommended to note the screw type, the quantity of screws, and then place them in a screw storage box. This is to ensure that the correct number of screws and correct screw type is restored when the component is replaced.


**NOTE:** Some computers have magnetic surfaces. Ensure that the screws are not left attached to such surfaces when replacing a component.

**NOTE:** Screw color may vary with the configuration ordered.

**Table 25. Screw list**

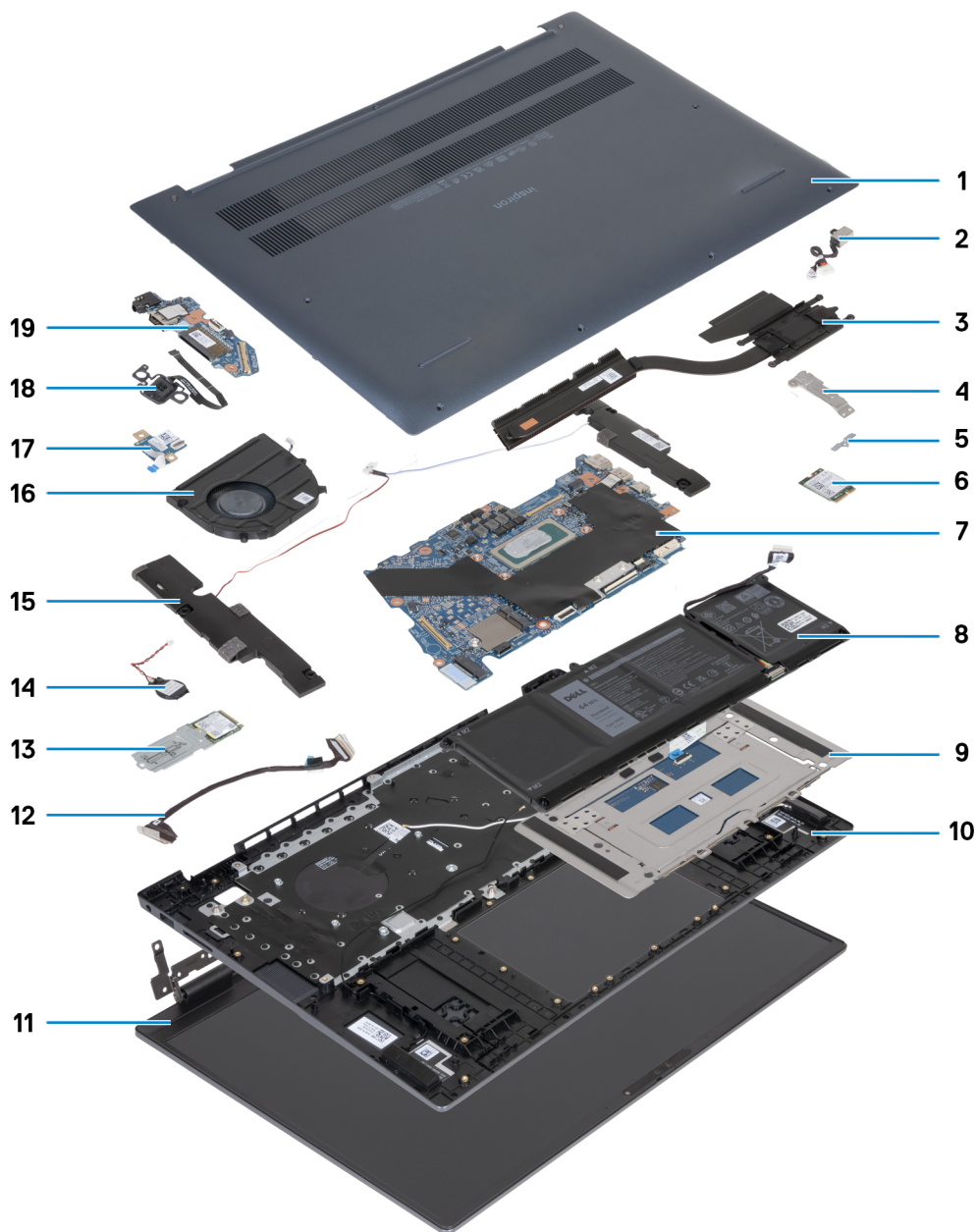
Component	Screw type	Quantity	Screw image
Base cover	M2x7.5 - captive screws	2	
Base cover	M2x4	7	
Battery	M2x3	5	
Wireless card	M2x3	1	
Solid-state drive	M2x3	1	
Solid-state drive	M2x1.8	1	
Fan	M2x3	3	
Heat sink	Captive screw	4	
System board	M2x1.8	2	
USB Type-C bracket	M2x4	2	
Power button with fingerprint reader	M2x3	1	
Power-button board	M2x3	2	
I/O board	M2x3	1	
Touchpad bracket	M2x2	5	
Touchpad bracket	M2x1.8	7	

**Table 25. Screw list (continued)**

Component	Screw type	Quantity	Screw image
Display hinges	M2.5x5	5	

## Major components of Inspiron 16 5635


The following image shows the major components of Inspiron 16 5635.



1. Base cover

2. Power-adaptor port

3. Heat sink
5. Wireless card bracket
7. System board
9. Touchpad module
11. Display assembly
13. M.2 2230 solid-state drive with bracket
15. Speaker module
17. Power-button board
19. I/O board
4. USB-C bracket
6. Wireless card
8. Battery
10. Palm-rest and keyboard assembly
12. I/O board cable
14. Coin-cell battery
16. Fan
18. Fingerprint module

 **NOTE:** Dell provides a list of components and their part numbers for the original system configuration purchased. These parts are available according to warranty coverages purchased by the customer. Contact your Dell sales representative for purchase options.

# Removing and installing Customer Replaceable Units (CRUs)

The replaceable components in this chapter are Customer Replaceable Units (CRUs).

**CAUTION:** Customers can replace only the Customer Replaceable Units (CRUs) following the safety precautions and replacement procedures.

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

## Base cover

### Removing the base cover

#### Prerequisites

1. Follow the procedure in [Before working inside your computer](#).

#### About this task

**NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

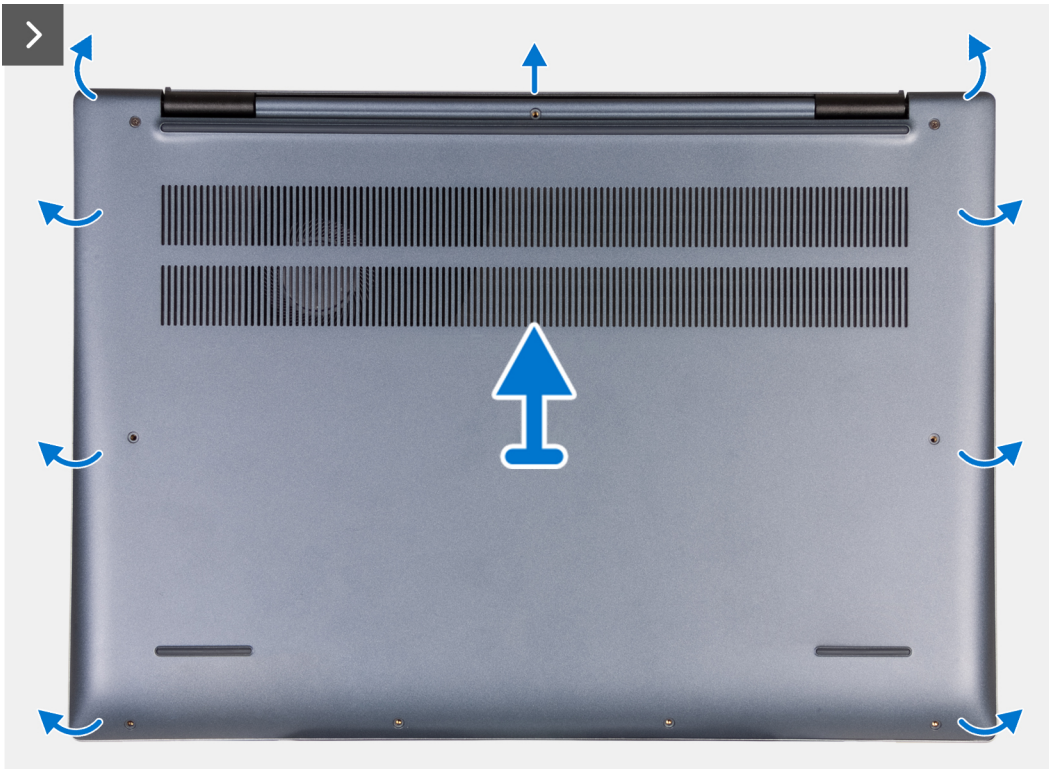
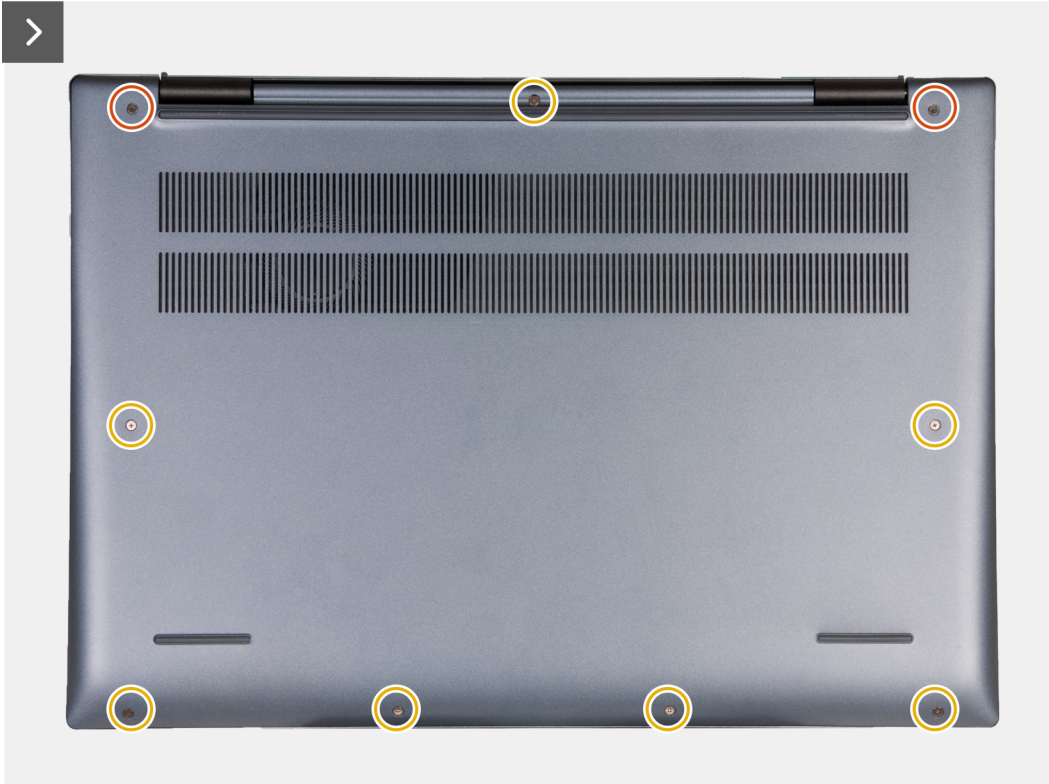
The following image(s) indicate the location of the base cover and provides a visual representation of the removal procedure.



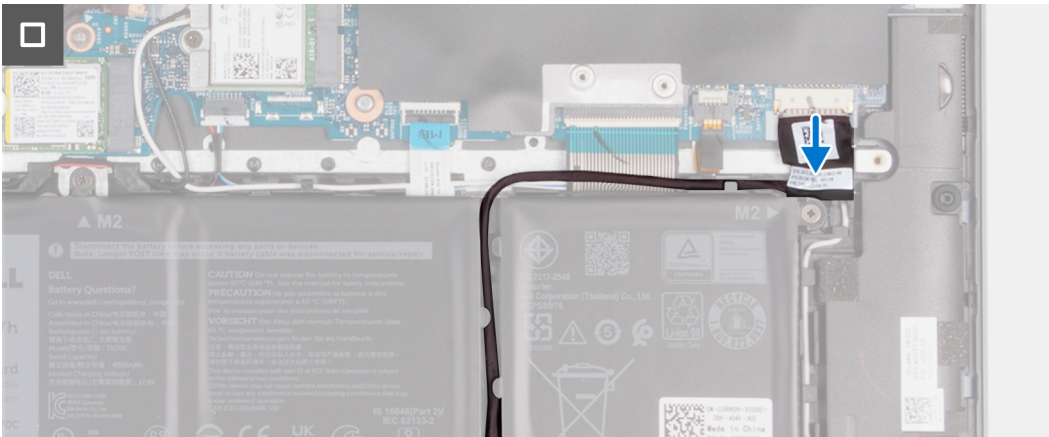
2x



7x  
M2x4







### Steps

1. Remove the seven screws (M2x4) that secure the base cover to the palm-rest and keyboard assembly.
2. Loosen the two captive screws that secure the base cover to the palm-rest and keyboard assembly.
3. Using a plastic scribe, pry the base cover from the top left and continue to work on the sides to open the base cover.
4. Lift and slide the base cover off the palm-rest assembly.
5. Peel the tape that secures the battery cable to the battery
6. Disconnect the battery cable

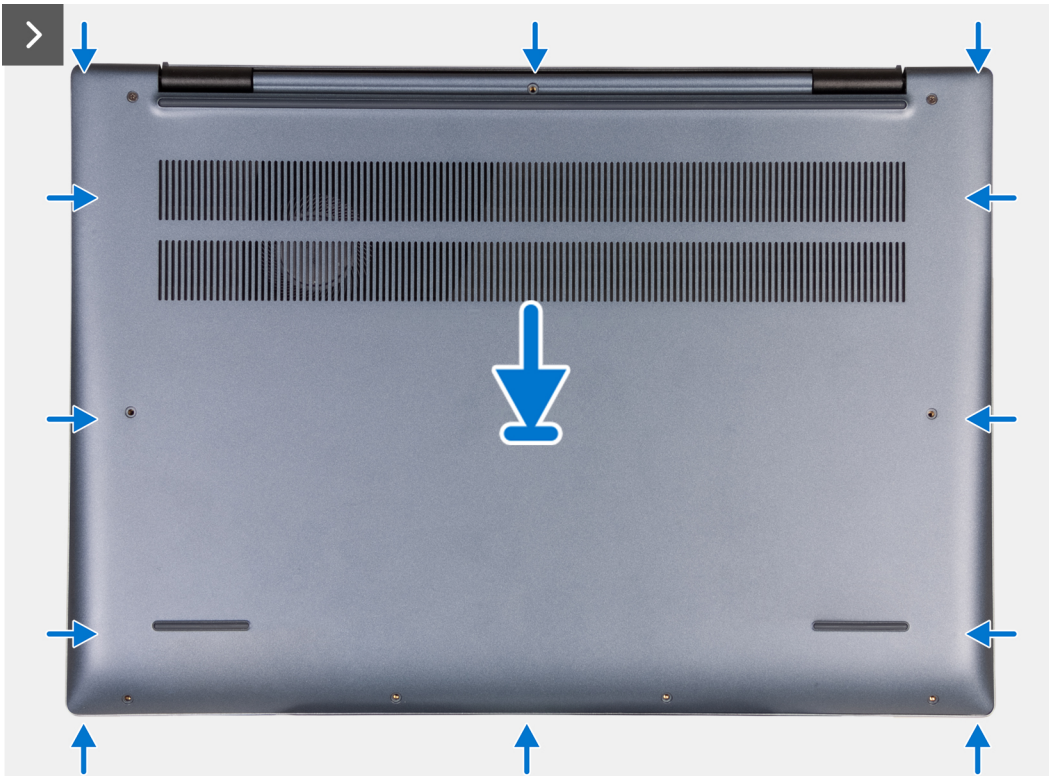
## Installing the base cover

### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

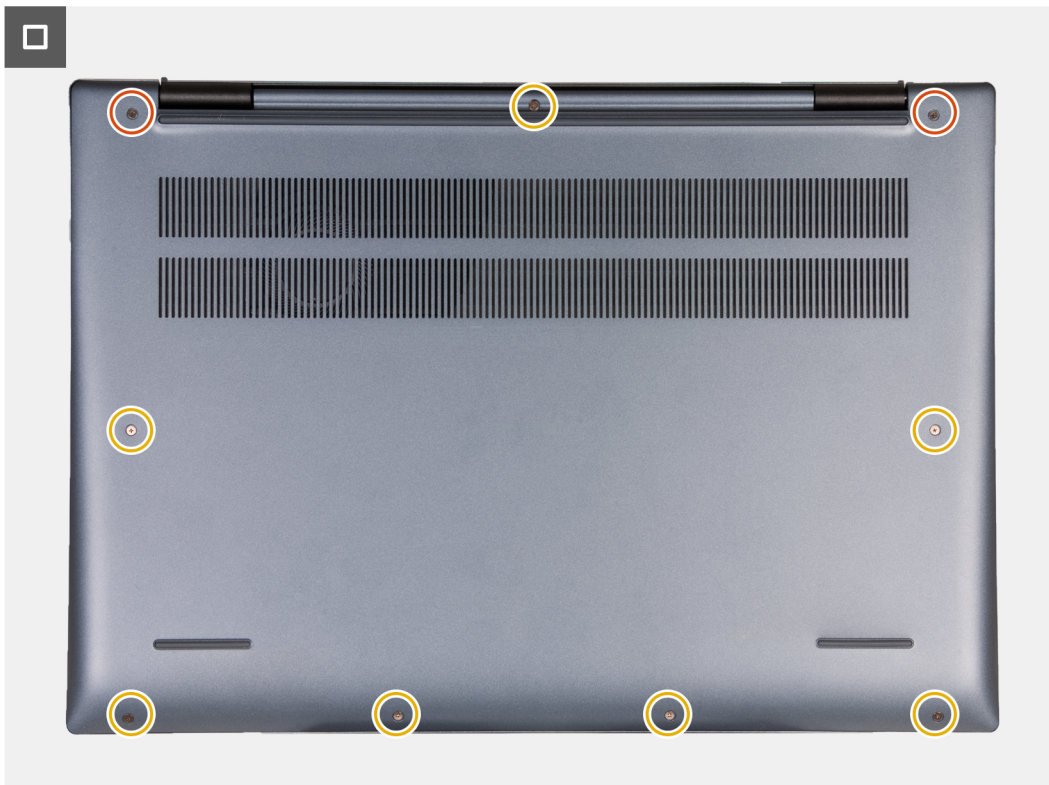
**NOTE:** The following image(s) shows the base cover and provides a visual representation of the installation procedure.



2x



7x  
M2x4





### Steps

1. Ensure the battery cable has been connected to the system board.
2. Place and snap the base cover into place on the palm-rest and keyboard assembly.
3. Tighten the two captive screws on the base cover.
4. Replace the seven screws (M2x4) to secure the base cover to the palm-rest and keyboard assembly.

### Next steps

1. Follow the procedure in [After working inside your computer](#).


## Wireless card

### Removing the wireless card

#### Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).

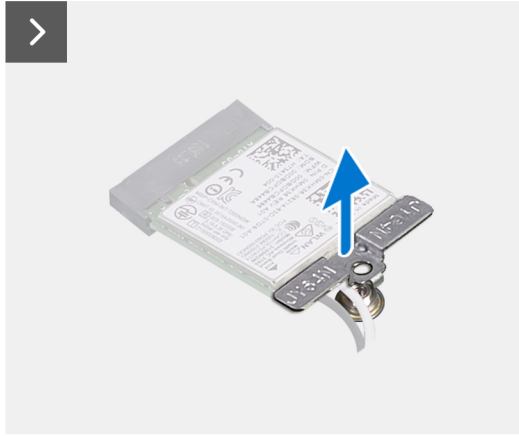
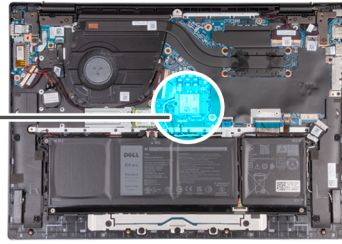
#### About this task

 **NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the wireless card and provides a visual representation of the removal procedure.



1x  
M2x3



### Steps

1. Remove the screw (M2x3) that secures the wireless-card bracket to the system board.
2. Lift the wireless-card bracket off the wireless card.
3. Disconnect the antenna cables from the wireless card.
4. Slide and remove the wireless card from the wireless-card slot.

## Installing the wireless card

### Prerequisites

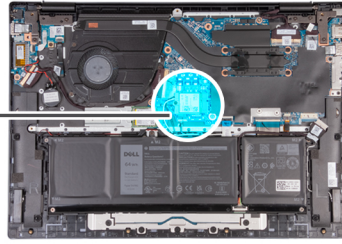
If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the wireless card and provides a visual representation of the installation procedure.



1x  
M2x3



### Steps

1. Align the notch on the wireless card with the tab on the wireless-card slot and insert the wireless card at an angle into the wireless-card slot.
2. Connect the antenna cables to the wireless card.
3. Align and place the wireless-card bracket on the wireless card.
4. Replace the screw (M2x3) to secure the wireless-card bracket to the system board and palm-rest and keyboard assembly.

### Next steps

1. Install the [base cover](#).
2. Follow the procedure in [After working inside your computer](#).

# Solid-state drive

## Removing the M.2 2230 solid-state drive

### Prerequisites

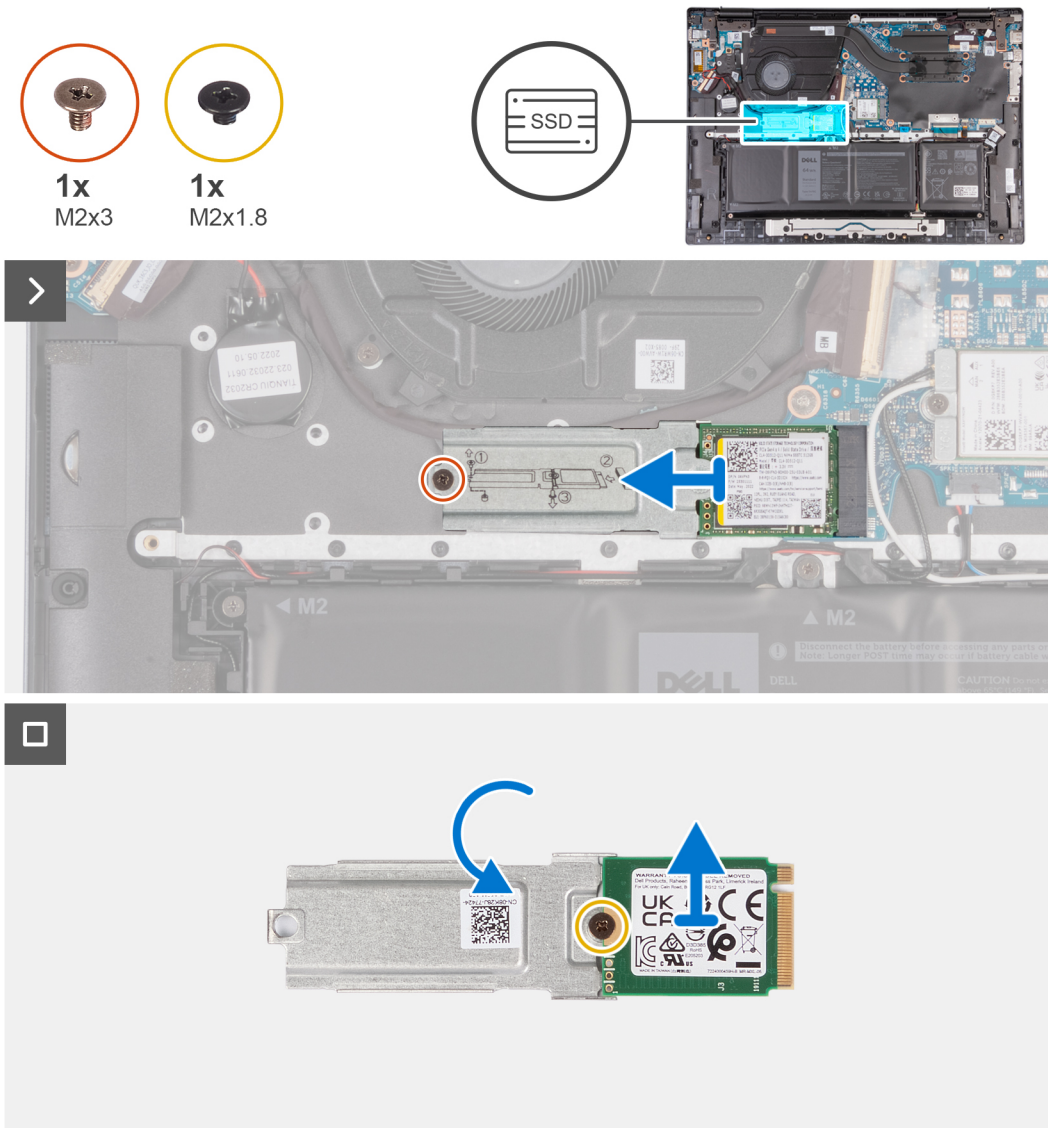
1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).

### About this task

**NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

**NOTE:** If you are replacing the M.2 2230 solid-state drive with an M.2 2280 solid-state drive, the following images indicate how to remove the M.2 2230 solid-state drive from the M.2 2230 solid-state drive bracket.

The following image(s) indicate the location of the M.2 2230 solid-state drive and provides a visual representation of the removal procedure.



### Steps

1. Remove the M2x3 screw that secures the M.2 2230 solid-state drive with bracket from the solid-state drive slot.
2. Slide the M.2 2230 solid-state drive with bracket from the peg and lift it from the system board.
3. Remove the M2x1.8 screw that secures the M.2 2230 solid-state drive to the M.2 solid-state drive bracket.
4. Lift the M.2 2230 solid-state drive off the M.2 solid-state drive bracket.

## Installing the M.2 2230 solid-state drive

### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

**i** **NOTE:** This computer supports two solid-state drive form factors.

- M.2 2230
- M.2 2280

If you are replacing a M.2 2280 solid-state drive with an M.2 2230 solid-state drive, the following images indicate how to install the solid-state drive bracket to the M.2 2230 solid-state drive card before installing the 2230 solid-state drive to the computer.

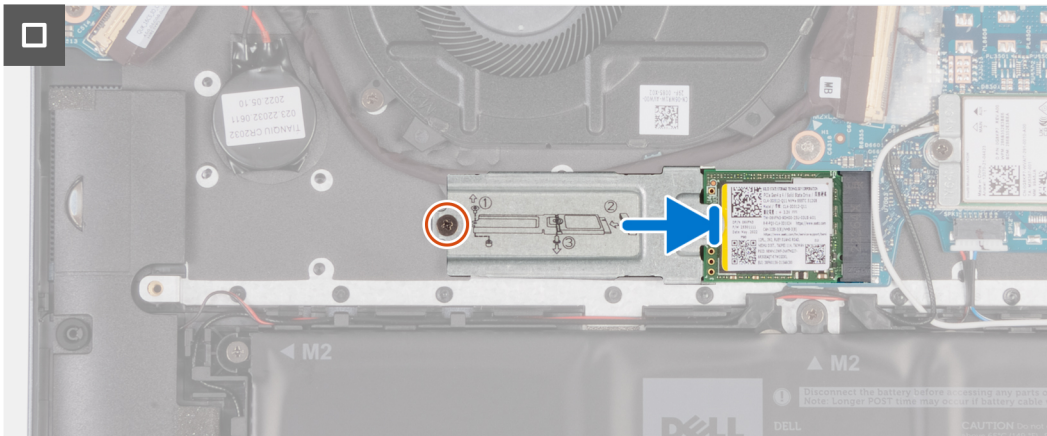
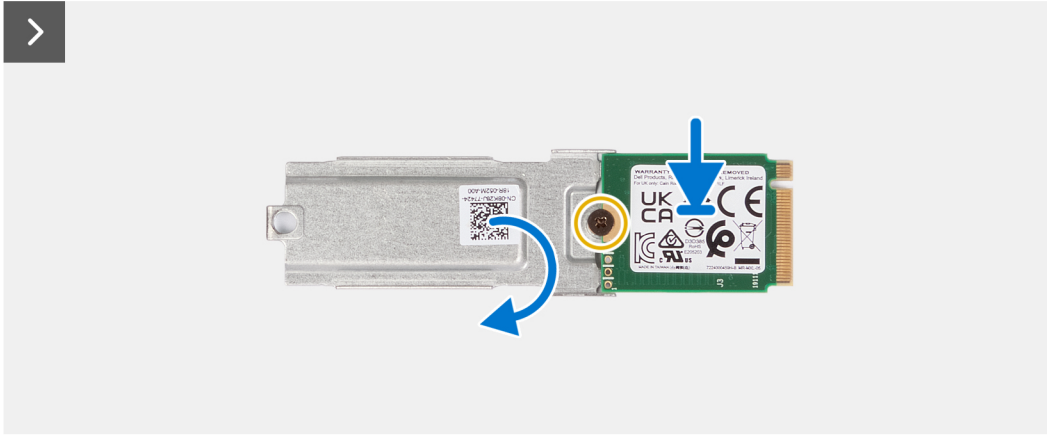
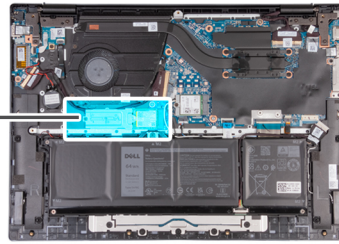
The following image(s) indicate the location of the M.2 2230 solid-state drive and provides a visual representation of the installation procedure.



1x  
M2x3



1x  
M2x1.8



### Steps

1. With the printed side of the solid-state drive facing up, align the screw hole on the M.2 2230 solid-state drive with the screw hole on the M.2 solid-state drive bracket.
2. Secure the M.2 2230 solid-state drive to the M.2 solid-state drive bracket with a M2x1.8 screw.
3. Align the notch on the M.2 2230 solid-state drive with the tab on the solid-state drive slot.
4. Gently slide the M.2 2230 solid-state drive with bracket into the solid-state drive slot.
5. Replace the M2x3 screw to secure the M.2 solid-state drive with bracket to the system board.

### Next steps

1. Install the [base cover](#).
2. Follow the procedure in [After working inside your computer](#).

## Removing the M.2 2280 solid-state drive

### Prerequisites

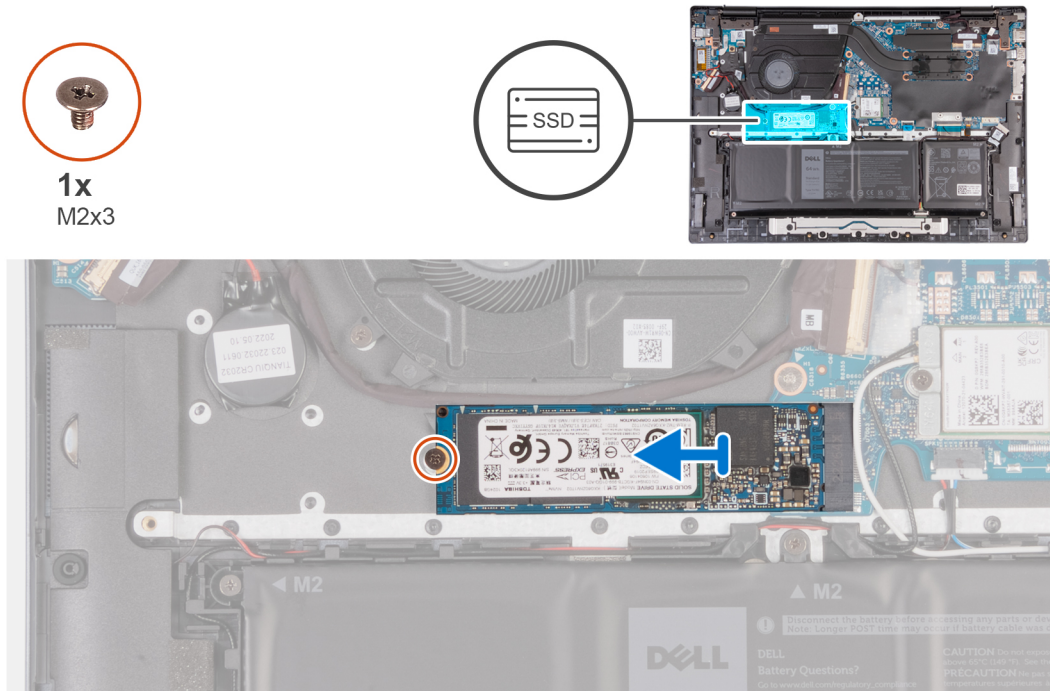
1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).



### About this task

**NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the M.2 2280 solid-state drive and provides a visual representation of the removal procedure.



### Steps

1. Remove the screw (M2x3) that secures the M.2 2280 solid-state drive to the system board.
2. Slide and remove the M.2 2280 solid-state drive from the solid-state drive slot.

## Installing the M.2 2280 solid-state drive

### Prerequisites

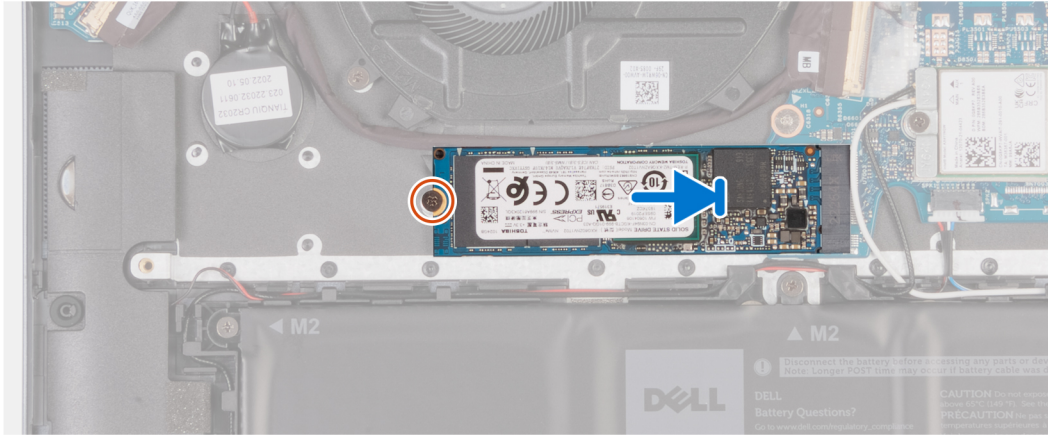
If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the M.2 2280 solid-state drive and provides a visual representation of the installation procedure.



1x  
M2x3



### Steps

1. Align the notch on the M.2 2280 solid-state drive with the tab on the solid-state drive slot.
2. Gently slide the M.2 2280 solid-state drive into the solid-state drive slot.
3. Replace the screw (M2x3) to secure the M.2 2280 solid-state drive to the system board.

### Next steps

1. Install the [base cover](#).
2. Follow the procedure in [After working inside your computer](#).

## Fan

### Removing the fan

#### Prerequisites

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).

#### About this task

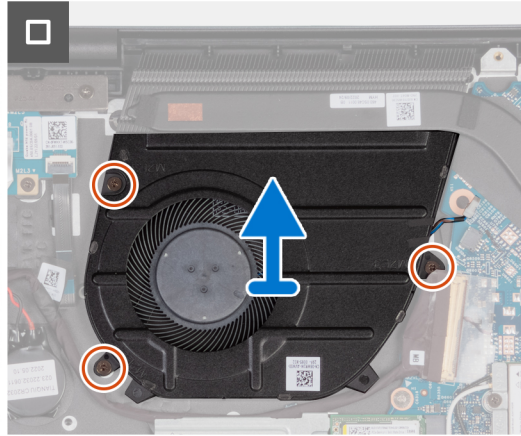
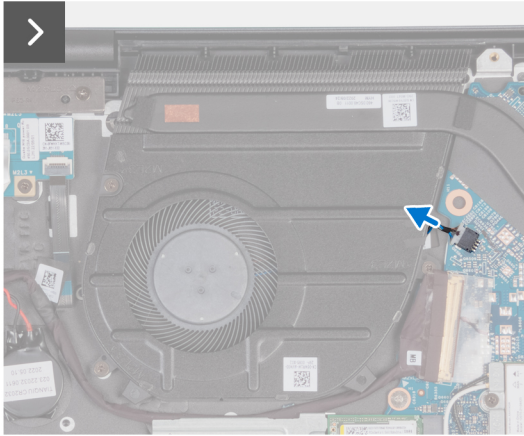
**NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the fan and provides a visual representation of the removal procedure.





3x  
M2x3



### Steps

1. Disconnect the fan cable from the system board.
2. Remove the three screws (M2x3) that secure the left fan to the palm-rest and keyboard assembly.
3. Lift the fan off the palm-rest and keyboard assembly.

## Installing the fan

### Prerequisites

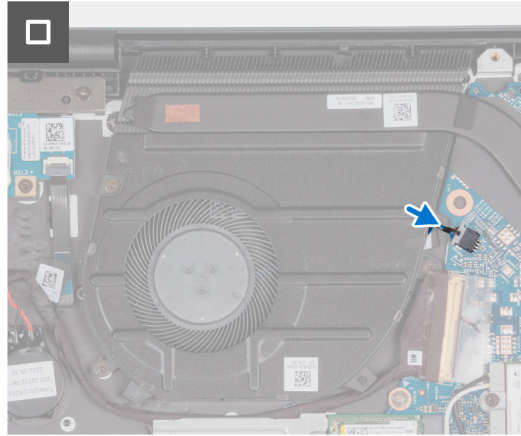
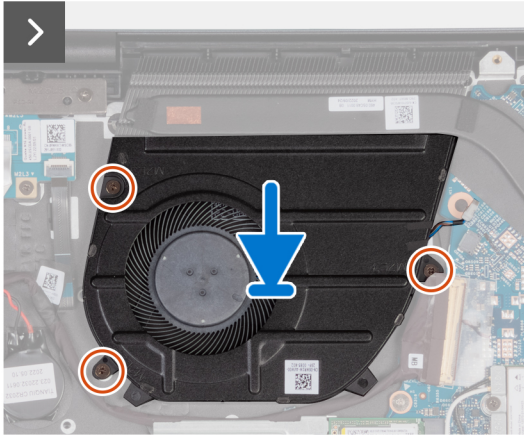
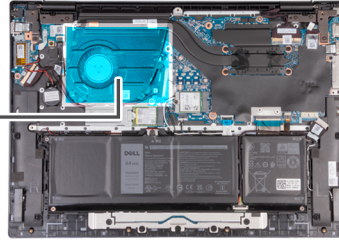
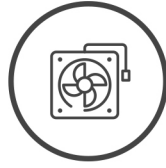
If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the fan and provides a visual representation of the installation procedure.



**3x**  
M2x3



### Steps

1. Align the screw holes of the fan with the screw holes on the palm-rest and keyboard assembly.
2. Replace the three screws (M2x3) to secure the fan to the palm-rest and keyboard assembly.
3. Connect the fan cable to the system board.

### Next steps

1. Install the [base cover](#).
2. Follow the procedure in [After working inside your computer](#).

# Removing and installing Field Replaceable Units (FRUs)

The replaceable components in this chapter are Field Replaceable Units (FRUs).

**CAUTION:** The information in this section is intended for authorized service technicians only.

**CAUTION:** To avoid any potential damage to the component or loss of data, ensure that an authorized service technician replaces the Field Replaceable Units (FRUs).

**CAUTION:** Dell Technologies recommends that this set of repairs, if needed, to be conducted by trained technical repair specialists.

**CAUTION:** As a reminder, your warranty does not cover damages that may occur during the courses of FRU repairs that are not authorized by Dell Technologies.

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

## Battery

### Rechargeable Li-ion battery precautions

**CAUTION:**

- Exercise caution when handling rechargeable Li-ion batteries.
- Discharge the battery completely before removing it. Disconnect the AC power adapter from the system and operate the computer solely on battery power—the battery is fully discharged when the computer no longer turns on when the power button is pressed.
- Do not crush, drop, mutilate, or penetrate the battery with foreign objects.
- Do not expose the battery to high temperatures, or disassemble battery packs and cells.
- Do not apply pressure to the surface of the battery.
- Do not bend the battery.
- Do not use tools of any kind to pry on or against the battery.
- Ensure any screws during the servicing of this product are not lost or misplaced, to prevent accidental puncture or damage to the battery and other system components.
- If the battery gets stuck inside your computer as a result of swelling, do not try to release it as puncturing, bending, or crushing a rechargeable Li-ion battery can be dangerous. In such an instance, contact Dell technical support for assistance. See [www.dell.com/contactdell](http://www.dell.com/contactdell).
- Always purchase genuine batteries from [www.dell.com](http://www.dell.com) or authorized Dell partners and resellers.
- Swollen batteries should not be used and should be replaced and disposed properly. For guidelines on how to handle and replace swollen rechargeable Li-ion batteries, see [Handling swollen rechargeable Li-ion batteries](#).

### Removing the battery

#### Prerequisites

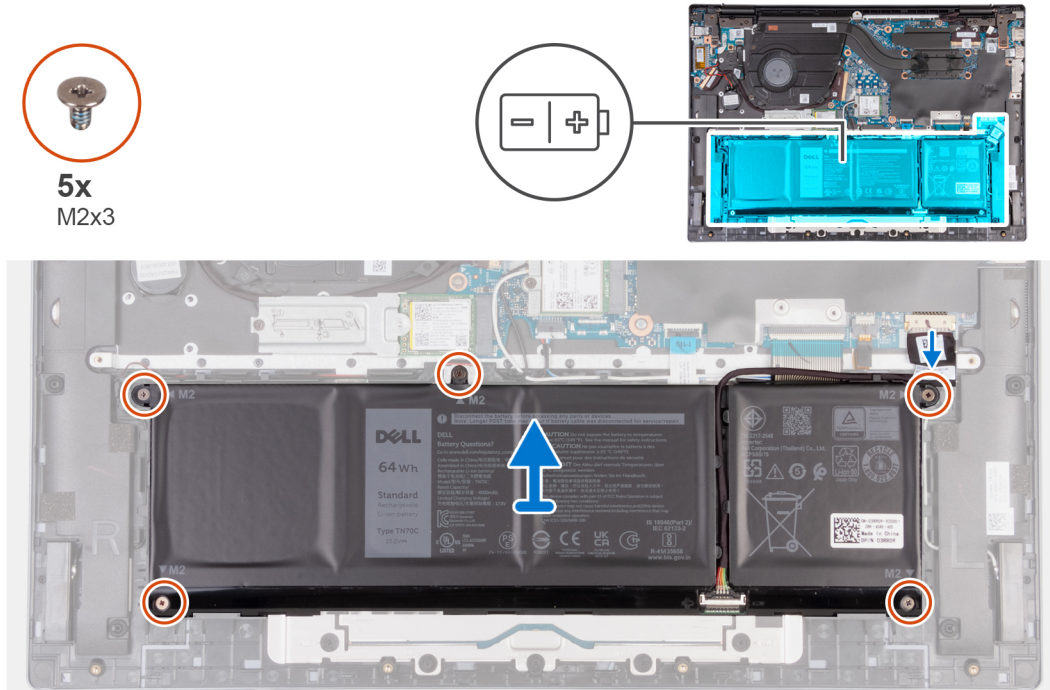
**CAUTION:** The information in this section is intended for authorized service technicians only.

1. Follow the procedure in [Before working inside your computer.](#)

### About this task

**NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the battery and provides a visual representation of the removal procedure.



### Steps

1. Ensure that the battery cable is disconnected, and disengage it from the tabs on the system board.
2. Remove the five screws (M2x4) that secure the battery to the palm-rest and keyboard assembly.
3. Lift the battery off the palm-rest and keyboard assembly.

## Installing the battery

### Prerequisites

**CAUTION:** The information in this section is intended for authorized service technicians only.

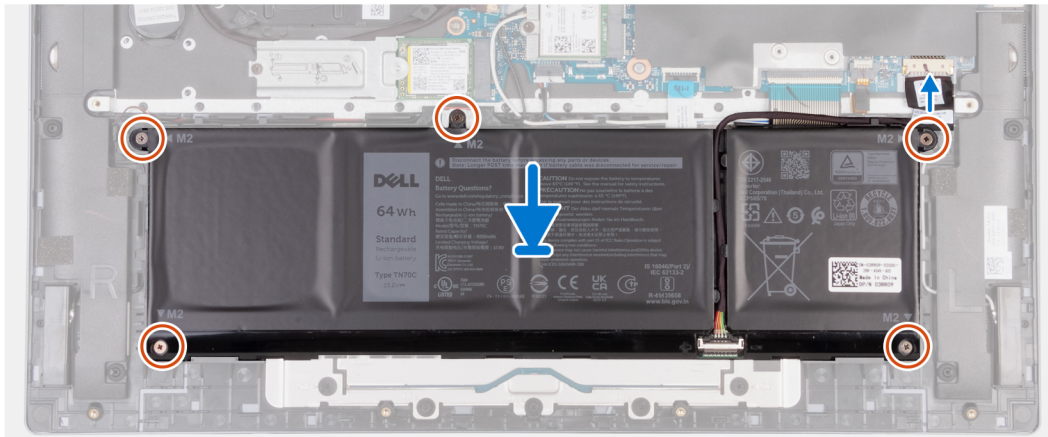
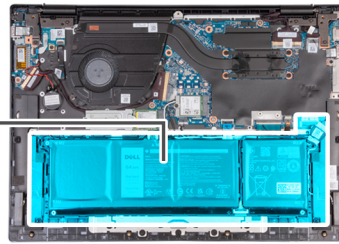
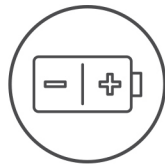
If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the battery and provides a visual representation of the installation procedure.



5x  
M2x3



### Steps

1. Align the screw holes on the battery with the screw holes on the palm-rest and keyboard assembly.
2. Replace the five screws (M2x4) to secure the battery to the palm-rest and keyboard assembly.
3. Route the battery cable through the tabs and reconnect it to the system board.
4. Adhere the tape that secures the battery cable to the battery

### Next steps

1. Install the [base cover](#).
2. Follow the procedure in [After working inside your computer](#).

## Heat sink

### Removing the heat sink

#### Prerequisites

**CAUTION:** The information in this section is intended for authorized service technicians only.

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).

#### About this task

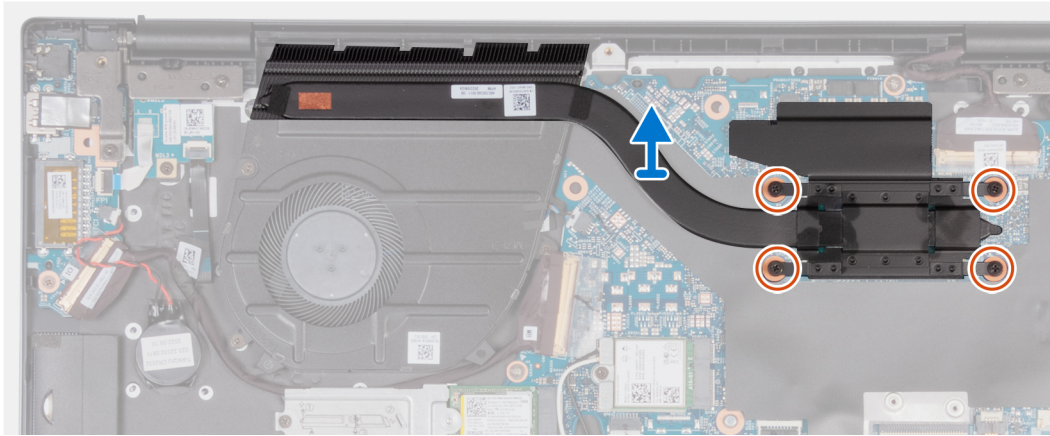
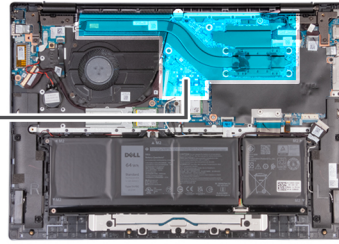
**NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the heat sink and provides a visual representation of the removal procedure.





4x



### Steps

1. In reverse sequential order (4>3>2>1), loosen the four captive screws that secure the heat sink to the system board.
2. Lift the heat sink off the system board.

## Installing the heat sink

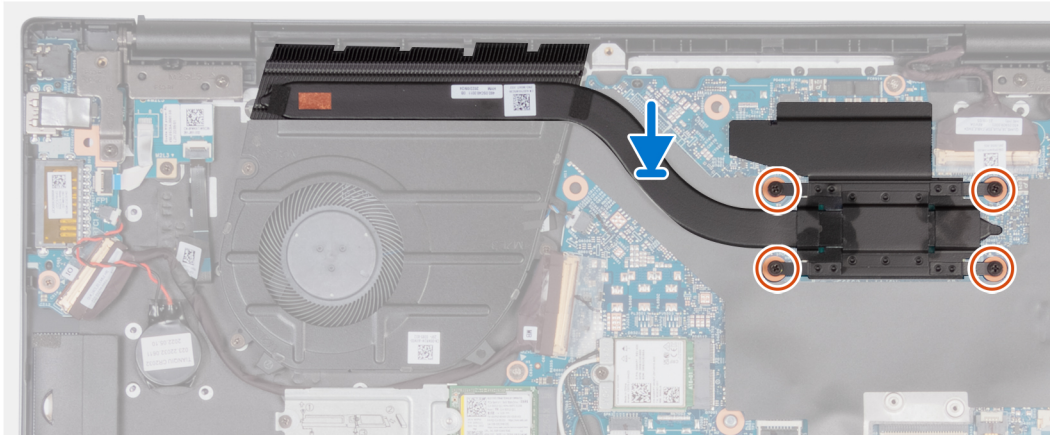
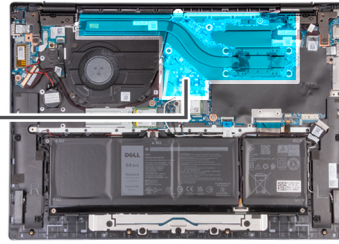
### Prerequisites

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

**⚠ CAUTION:** The information in this section is intended for authorized service technicians only.

The following image(s) indicate the location of the heat sink and provides a visual representation of the installation procedure.



### Steps

1. Align the captive screws on the heat sink to the screw holes on the system board.
2. In sequential order (1>2>3>4), tighten the four captive screws to secure the heat sink to the system board.

### Next steps

1. Install the [base cover](#).
2. Follow the procedure in [After working inside your computer](#).

## Speaker


### Removing the speakers

#### Prerequisites

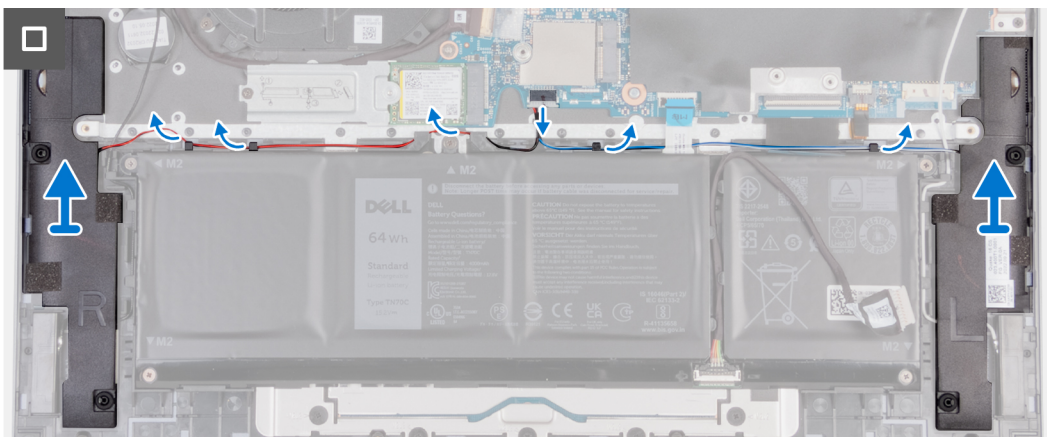
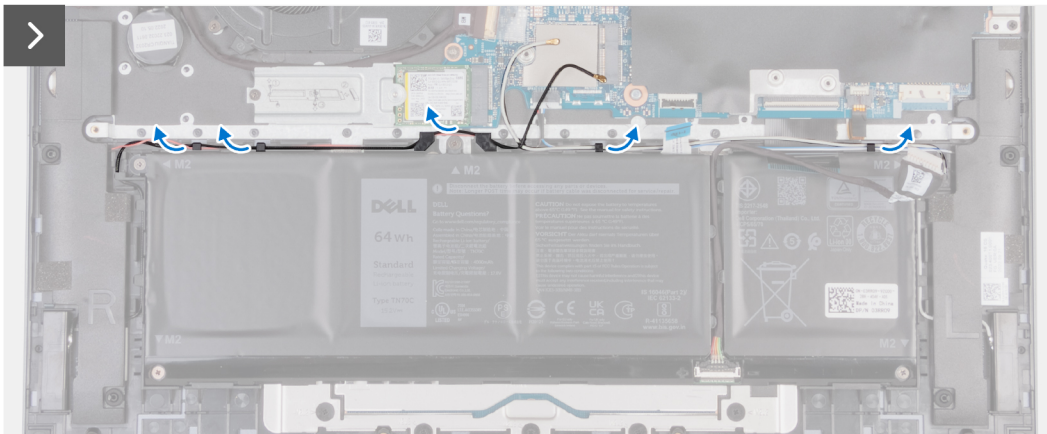
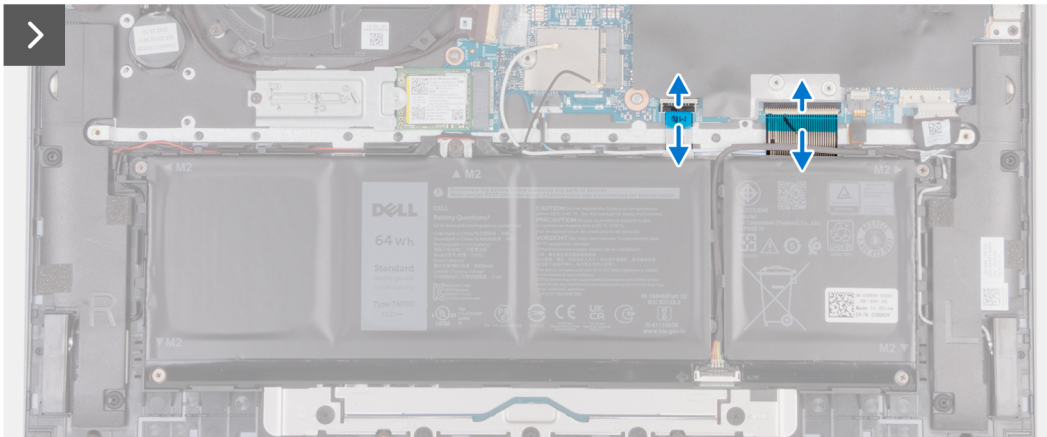
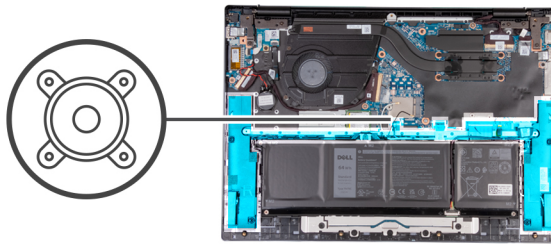
 **CAUTION:** The information in this section is intended for authorized service technicians only.

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).

#### About this task

 **NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the speakers and provides a visual representation of the removal procedure.



### Steps

1. Open the latch and disconnect the touchpad cable from the system board.
2. Open the latch and disconnect the keyboard cable from the system board.
3. Peel the tapes that secure the WLAN cable to the system board.
4. Remove the speaker cable from the routing guides on the palm-rest and keyboard assembly.



5. Lift the speakers along with their cables off the palm-rest and keyboard assembly.

## Installing the speakers

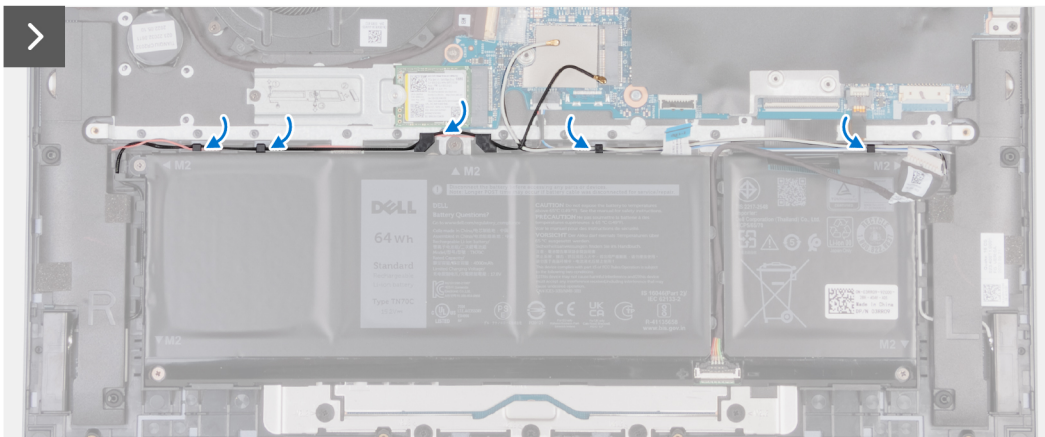
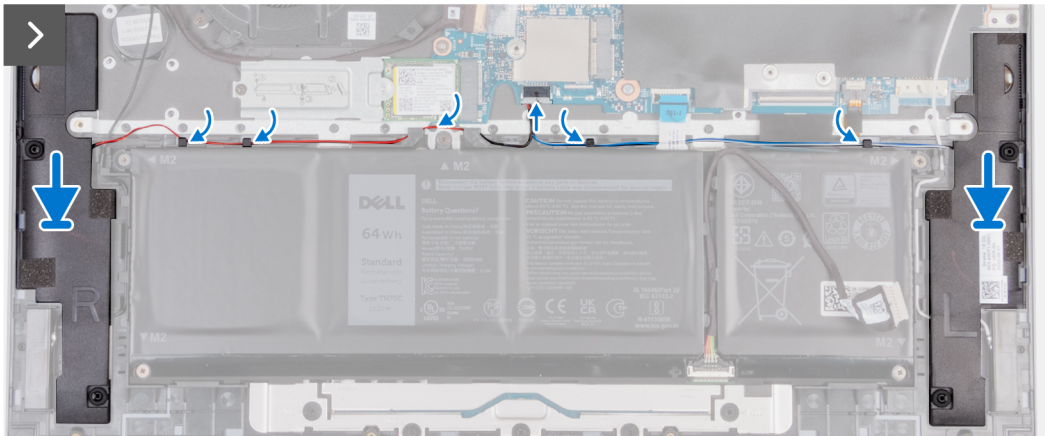
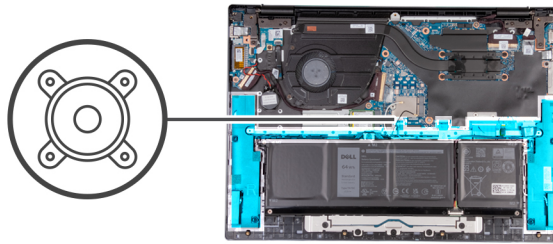
### Prerequisites

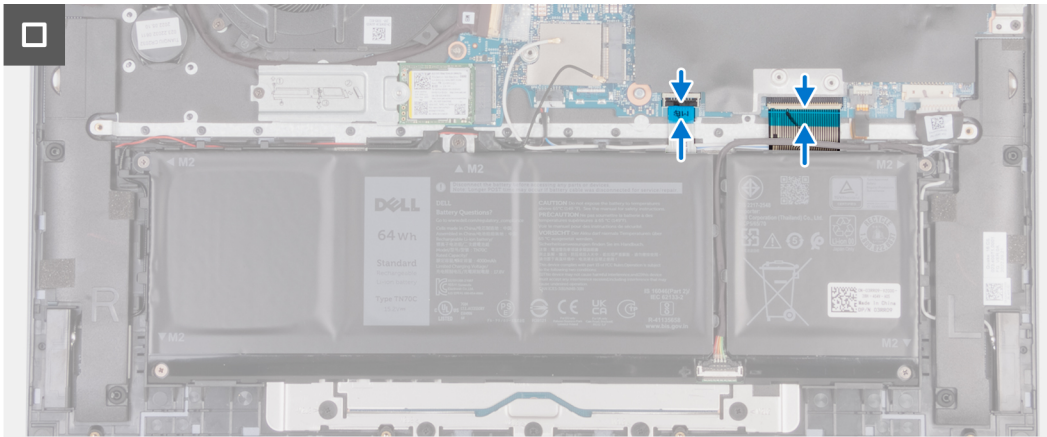
**CAUTION:** The information in this section is intended for authorized service technicians only.

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the speakers and provides a visual representation of the installation procedure.





### Steps

1. Using the alignment posts, place the speakers on the palm-rest and keyboard assembly.
2. Ensure that the alignment posts are routed through the rubber grommets on the speaker.  
Note
3. Route the speaker cable through the routing guides on the palm-rest and keyboard assembly.
4. Adhere the tapes to secure the WLAN cable to the system board.
5. Connect the keyboard cable to the system board and close the latch.
6. Connect the touchpad cable to the system board and close the latch.

### Next steps

1. Install the [battery](#).
2. Install the [base cover](#).
3. Follow the procedure in [After working inside your computer](#).

## Coin-cell battery

### Removing the coin-cell battery

#### Prerequisites

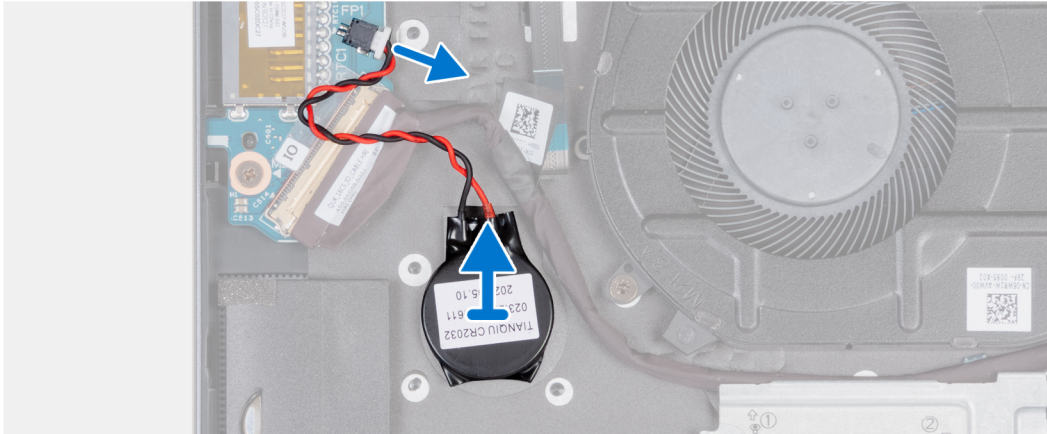
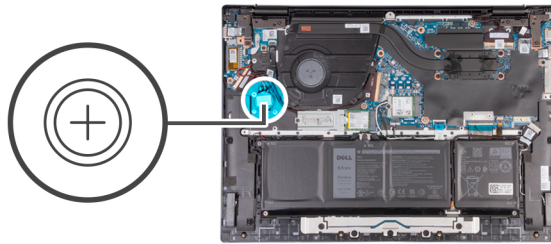
**CAUTION:** The information in this section is intended for authorized service technicians only.

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).

#### About this task

**NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the coin-cell battery and provides a visual representation of the removal procedure.



### Steps

1. Disconnect the coin-cell battery cable from the system board.
2. Lift and remove the coin-cell battery off the system board.

## Installing the coin-cell battery

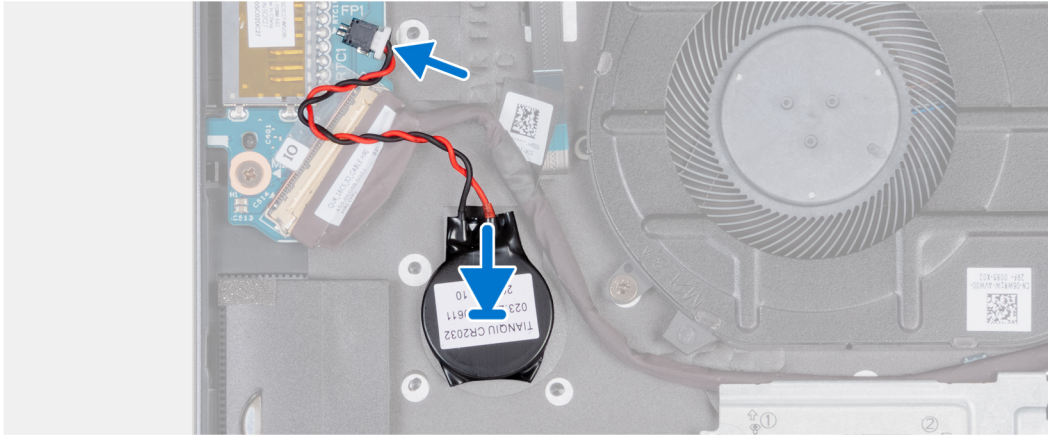
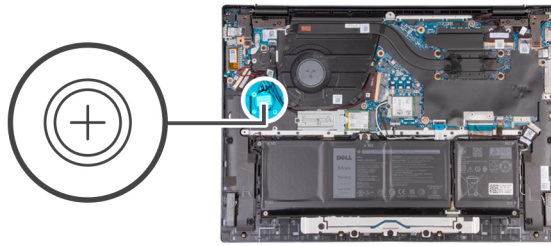
### Prerequisites

**CAUTION:** The information in this section is intended for authorized service technicians only.

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the coin-cell battery and provides a visual representation of the installation procedure.



### Steps

1. Adhere the coin-cell battery to the system board.
2. Connect the coin-cell battery cable to the system board.

### Next steps

1. Install the [base cover](#).
2. Follow the procedure in [After working inside your computer](#).

## I/O board

### Removing the I/O board

#### Prerequisites

**CAUTION:** The information in this section is intended for authorized service technicians only.

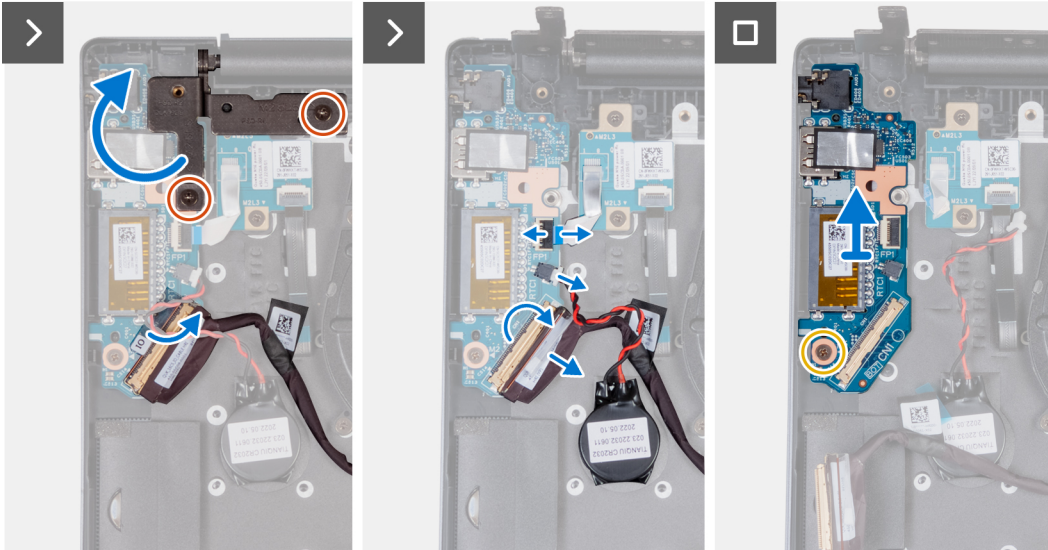
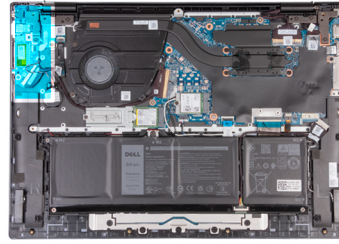
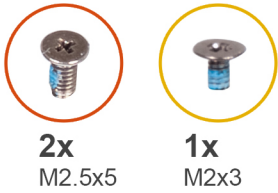
1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).

#### About this task

**NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the io board and provides a visual representation of the removal procedure.





### Steps

1. Remove the two screws (M2.5x5) that secure the left display hinge to the system board.
2. Open the left display hinge at an angle of 90 degrees.
3. Peel the tape that secures the I/O-board cable connector to the I/O board.
4. Open the latch and disconnect the I/O-board cable cable from the I/O board.
5. Disconnect the coin-cell battery from the I/O board.
6. Open the latch and disconnect the fingerprint-reader cable from the I/O board.
7. Remove the M2x3 screw that secures the I/O board to the palm-rest and keyboard assembly.
8. Lift the I/O board off the palm-rest and keyboard assembly.

## Installing the I/O board

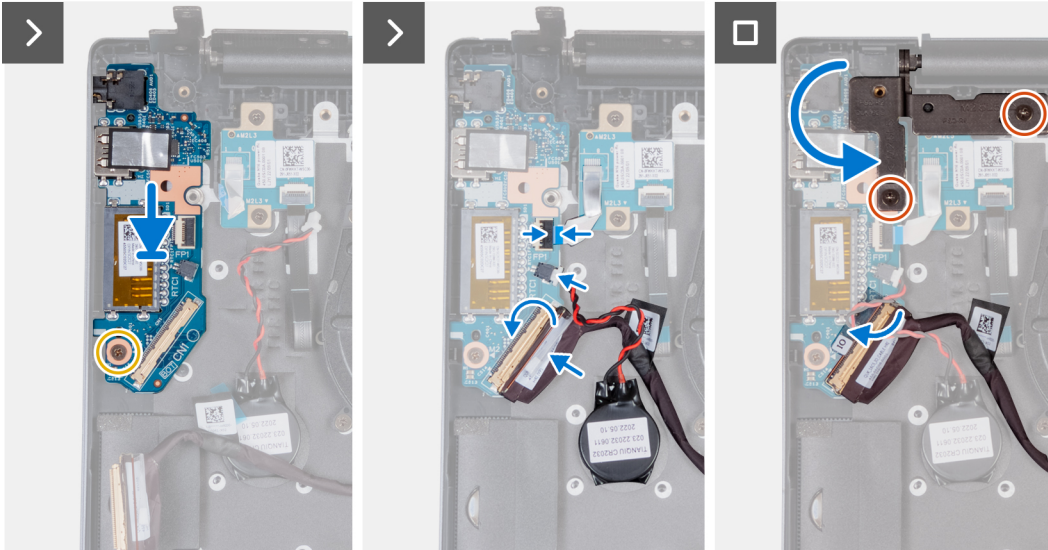
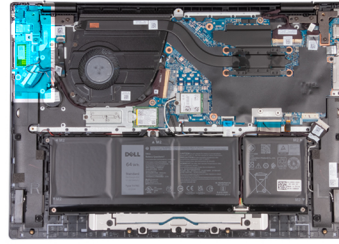
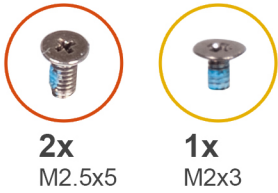
### Prerequisites

**CAUTION:** The information in this section is intended for authorized service technicians only.

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the io board and provides a visual representation of the installation procedure.



### Steps

1. Align the screw holes on the I/O board with the screw holes on the system board and palm-rest and keyboard assembly.
2. Align the ports on the I/O board with the slots on the palm-rest and keyboard assembly.  
Note
3. Place the I/O board on the palm-rest and keyboard assembly.
4. Replace the M2x3 screw to secure the I/O board to the palm-rest and keyboard assembly.
5. Connect the I/O-board cable to the I/O board.
6. Close the latch and replace the clear adhesive tape.
7. Connect the fingerprint-reader cable to the I/O board and close the latch to secure the cable.
8. Connect the coin-cell battery from the I/O board.
9. Close the left display hinge and align the screw holes on the left display hinge with the screw holes on the palm-rest and keyboard assembly.
10. Replace the two screws (M2.5x5) to secure the left display hinge to the palm-rest and keyboard assembly.

### Next steps

1. Install the [base cover](#).
2. Follow the procedure in [After working inside your computer](#).

## Power button with optional fingerprint reader

### Removing the power button with fingerprint reader

#### Prerequisites

**CAUTION:** The information in this section is intended for authorized service technicians only.

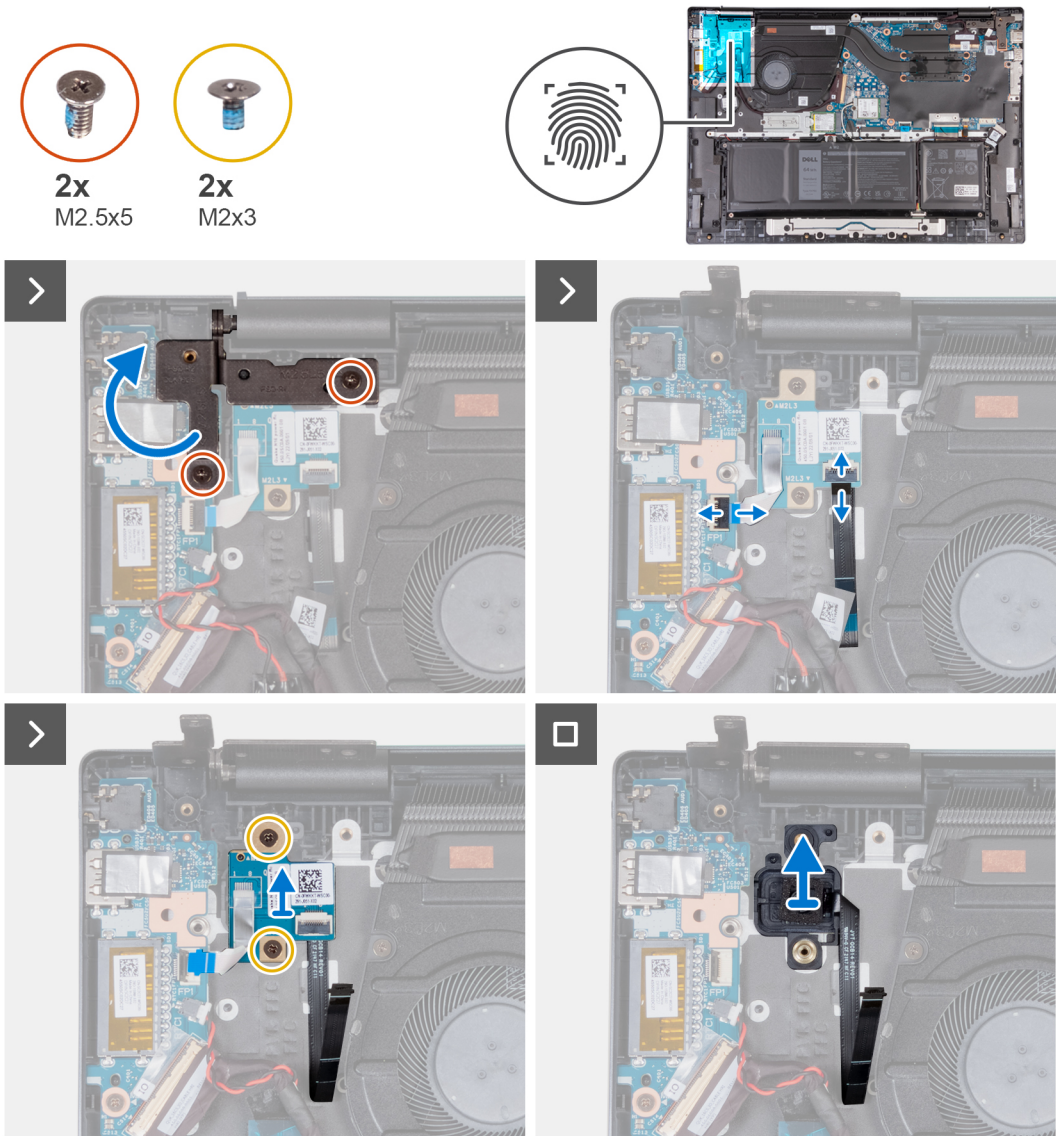
1. Follow the procedure in [Before working inside your computer](#).

2. Remove the [base cover](#).

**About this task**

**NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the power button with fp and provides a visual representation of the removal procedure.



**Steps**

1. Remove the two screws (M2.5x5) that secure the left display hinge to the system board.
2. Open the left display hinge at an angle of 90 degrees.
3. Open the latch and disconnect the power-button board cable from the I/O board.
4. Open the latch and disconnect the finger-print reader cable from the power-button board.
5. Remove the two screws (M2x3) that secure the power-button board to the palm-rest and keyboard assembly.
6. Lift the power-button board off the palm-rest and keyboard assembly.
7. Lift the power button with optional fingerprint reader off the palm-rest and keyboard assembly.



# Installing the power button with fingerprint reader

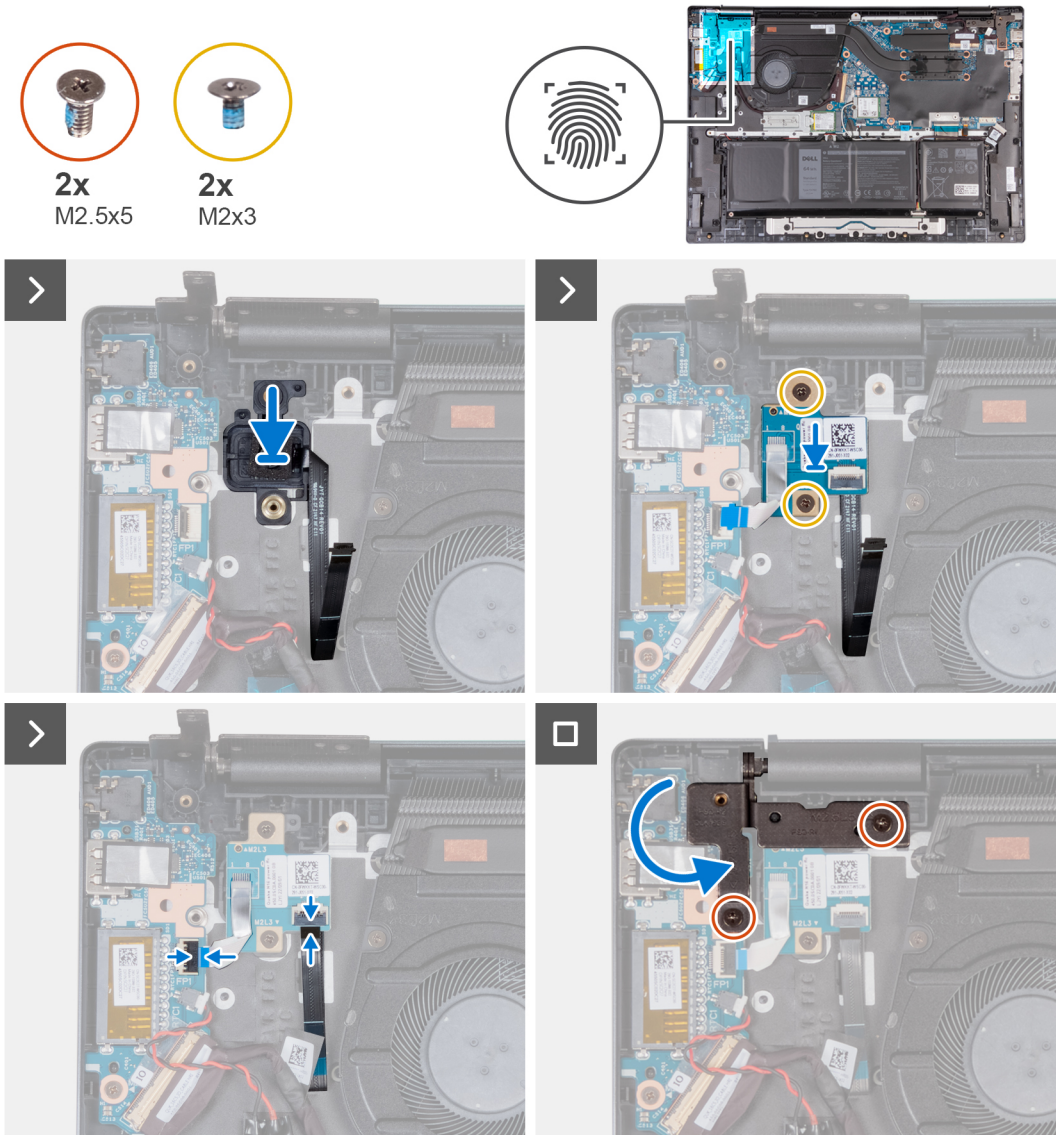
## Prerequisites

**CAUTION:** The information in this section is intended for authorized service technicians only.

If you are replacing a component, remove the existing component before performing the installation process.

## About this task

The following image(s) indicate the location of the power button with fp and provides a visual representation of the installation procedure.



## Steps

1. Place the power button with optional fingerprint reader on the palm-rest and keyboard assembly.
2. Place the power-button board on the power button.
3. Align the screw holes on the power-button board with the screw holes on the palm-rest and keyboard assembly.
4. Replace the two screws (M2x3) to secure the power-button board to the palm-rest and keyboard assembly.
5. Connect the power-button board cable to I/O board and close the latch.
6. Connect the finger-print reader cable to the power-button board and close the latch.



7. Close the left display hinge and align the screw holes on the left display hinge with the screw holes on the palm-rest and keyboard assembly.
8. Replace the two screws (M2.5x5) to secure the left display hinge to the palm-rest and keyboard assembly.

**Next steps**

1. Install the [base cover](#).
2. Follow the procedure in [After working inside your computer](#).

## Power button

### Removing the power button

**Prerequisites**

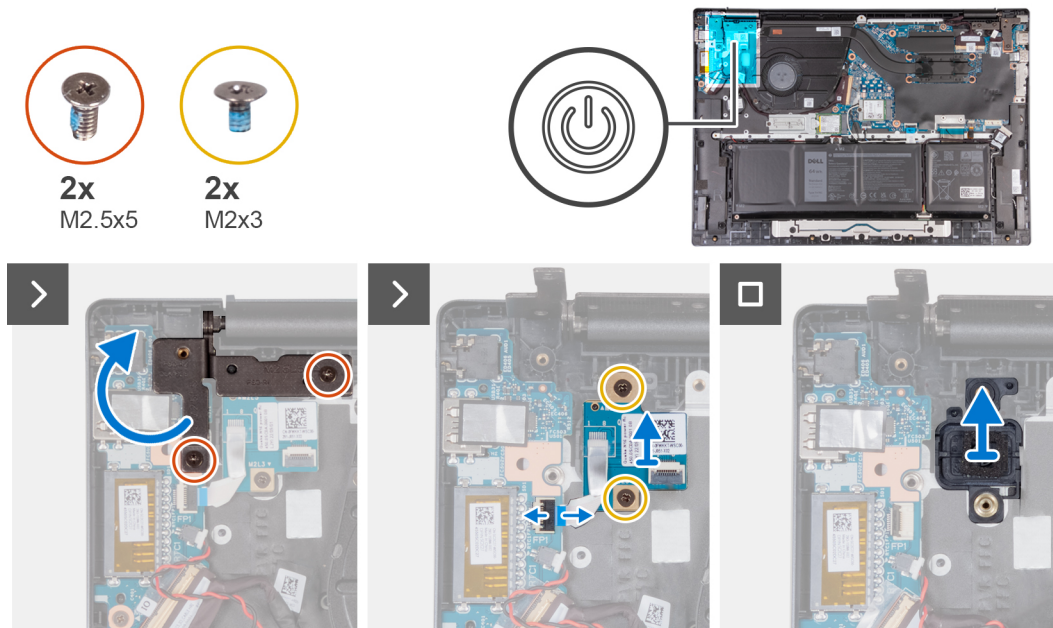
**CAUTION:** The information in this section is intended for authorized service technicians only.

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).

**About this task**

**NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the power button and provides a visual representation of the removal procedure.



**Steps**

1. Remove the two screws (M2.5x5) that secure the left display hinge to the system board.
2. Open the left display hinge at an angle of 90 degrees.
3. Remove the two screws (M2x3) that secure the power-button board to the palm-rest and keyboard assembly.
4. Open the latch and disconnect the power-button board cable from the I/O board.
5. Lift the power-button board off the palm-rest and keyboard assembly.
6. Lift the power button off the palm-rest and keyboard assembly.

# Installing the power button

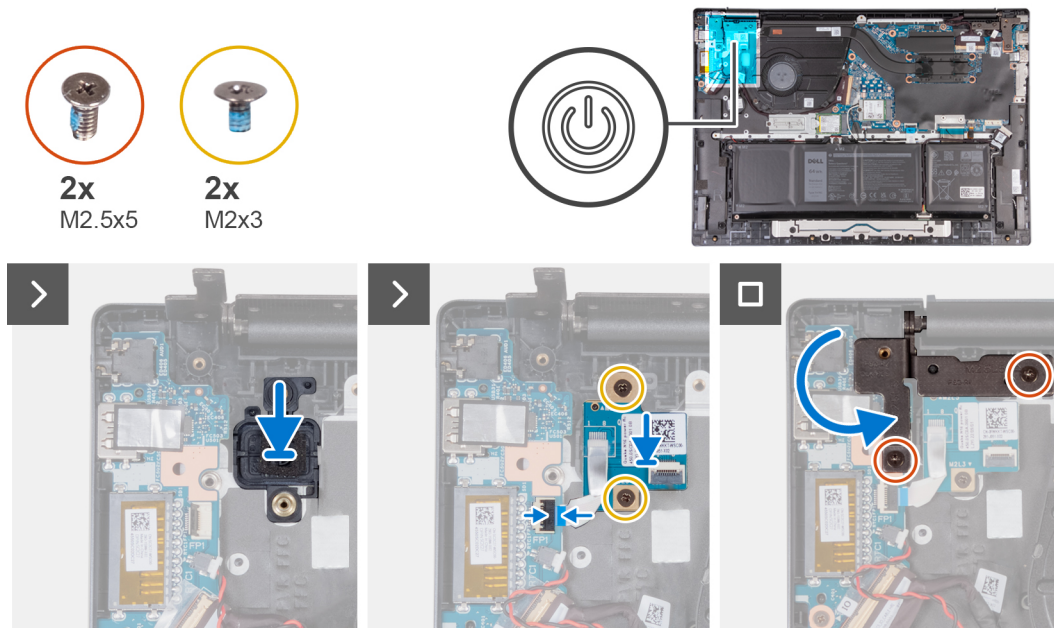
## Prerequisites

**CAUTION:** The information in this section is intended for authorized service technicians only.

If you are replacing a component, remove the existing component before performing the installation process.

## About this task

The following image(s) indicate the location of the power button and provides a visual representation of the installation procedure.



## Steps

1. Place the power button on the palm-rest and keyboard assembly.
2. Place the power-button board on the power button.
3. Align the screw holes on the power-button board with the screw holes on the palm-rest and keyboard assembly.
4. Replace the two screws (M2x3) to secure the power-button board to the palm-rest and keyboard assembly.
5. Connect the power-button board cable to I/O board and close the latch.
6. Close the left display hinge and align the screw holes on the left display hinge with the screw holes on the palm-rest and keyboard assembly.
7. Replace the two screws (M2.5x5) to secure the left display hinge to the palm-rest and keyboard assembly.

## Next steps

1. Install the [base cover](#).
2. Follow the procedure in [After working inside your computer](#).

# Power-adapter port

## Removing the power-adapter port

### Prerequisites

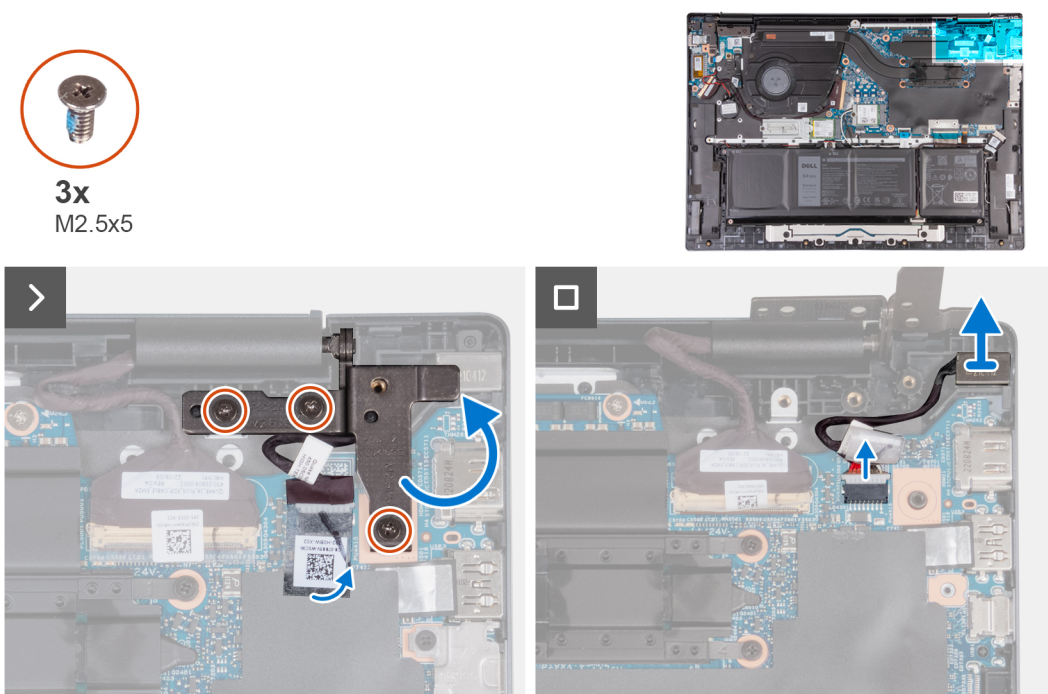
**CAUTION:** The information in this section is intended for authorized service technicians only.

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).

### About this task

**NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the power-adapter port and provides a visual representation of the removal procedure.



### Steps

1. Remove the three screws (M2.5x5) that secure the right display hinge to the system board.
2. Open the right display hinge at an angle of 90 degrees.
3. Peel the tapes that secure the power-adapter port cable to the system board.
4. Disconnect the power-adapter port cable from the system board.
5. Lift the power-adapter port and its cable off the palm-rest and keyboard assembly.

## Installing the power-adapter port

### Prerequisites

**CAUTION:** The information in this section is intended for authorized service technicians only.

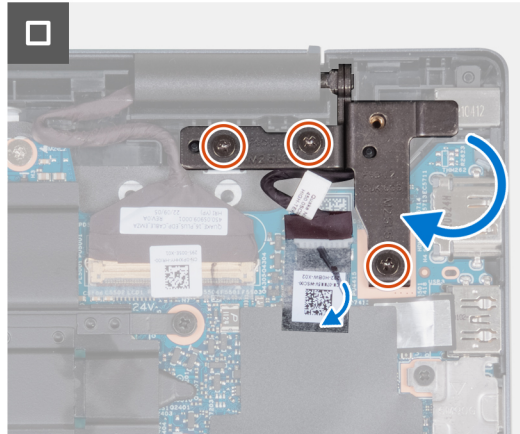
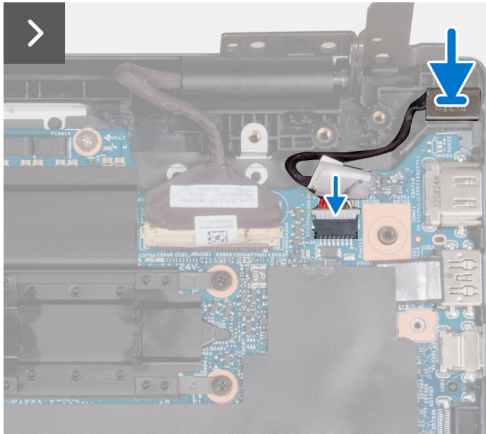
If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the power-adapter port and provides a visual representation of the installation procedure.



**3x**  
M2.5x5



### Steps

1. Place the power-adapter port into the slot on the palm-rest and keyboard assembly.
2. Connect the power-adapter port cable to the system board.
3. Adhere the tapes to secure the power-adapter port cable to the system board.
4. Close the right display hinge and align the screw holes on the right display hinge with the screw holes on the system board.
5. Replace the three screws (M2.5x5) to secure the right display hinge to the system board.

### Next steps

1. Install the [base cover](#).
2. Follow the procedure in [After working inside your computer](#).

## Display assembly


### Removing the display assembly

#### Prerequisites

 **CAUTION:** The information in this section is intended for authorized service technicians only.

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).

#### About this task

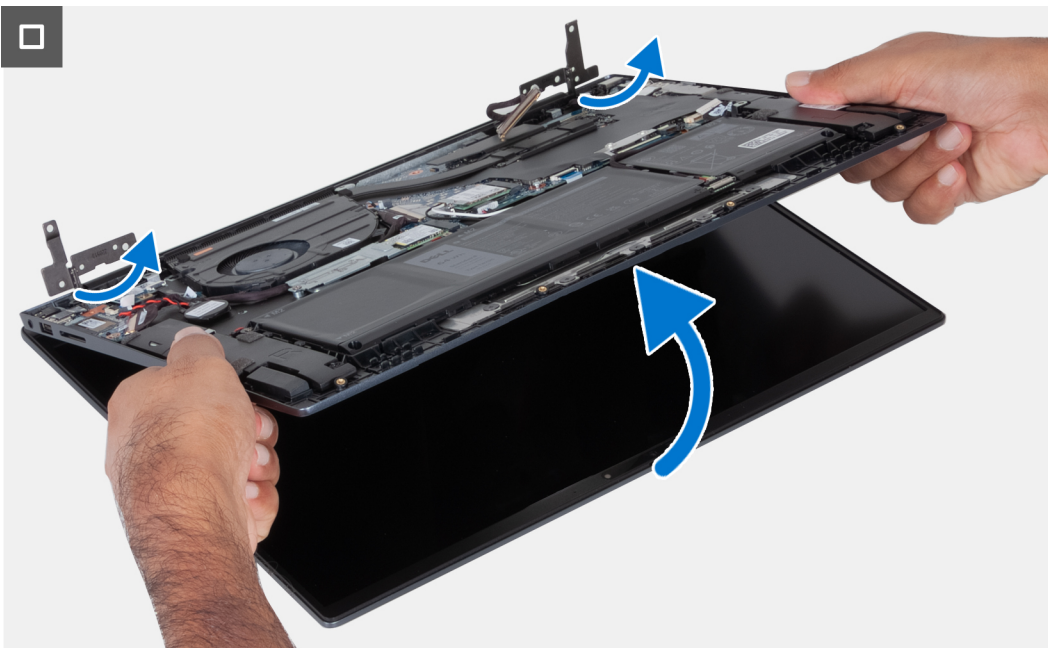
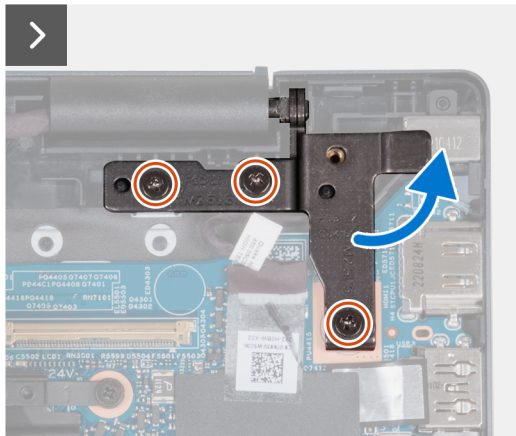
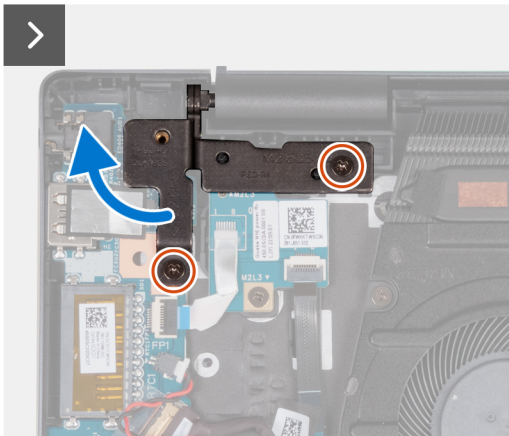
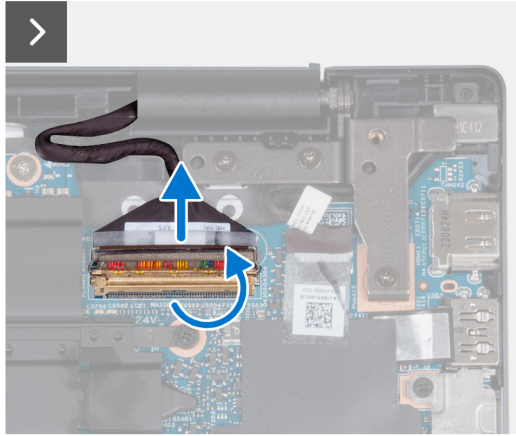
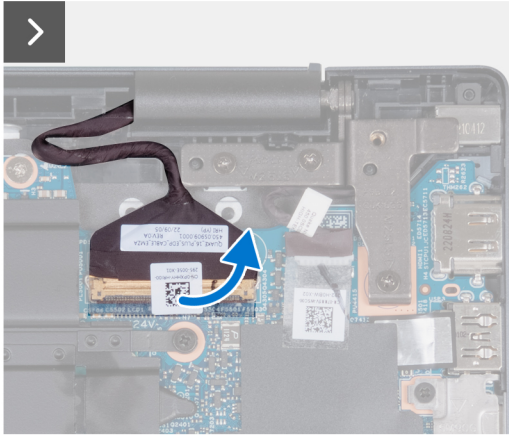
 **NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the display assembly and provides a visual representation of the removal procedure.





5x  
M2.5x5



### Steps

1. Peel the tape that secures the display-cable connector latch to the system board.
2. Open the latch and disconnect the display cable from the system board.
3. Remove the two screws (M2.5x5) that secure the left display hinge to the system board.
4. Open the left display hinge at an angle of 90 degrees.
5. Remove the three screws (M2.5x5) that secure the right display hinge to the system board.
6. Open the right display hinge at an angle of 90 degrees.
7. At an angle, gently lift the palm-rest and keyboard assembly off the display assembly.

## Installing the display assembly

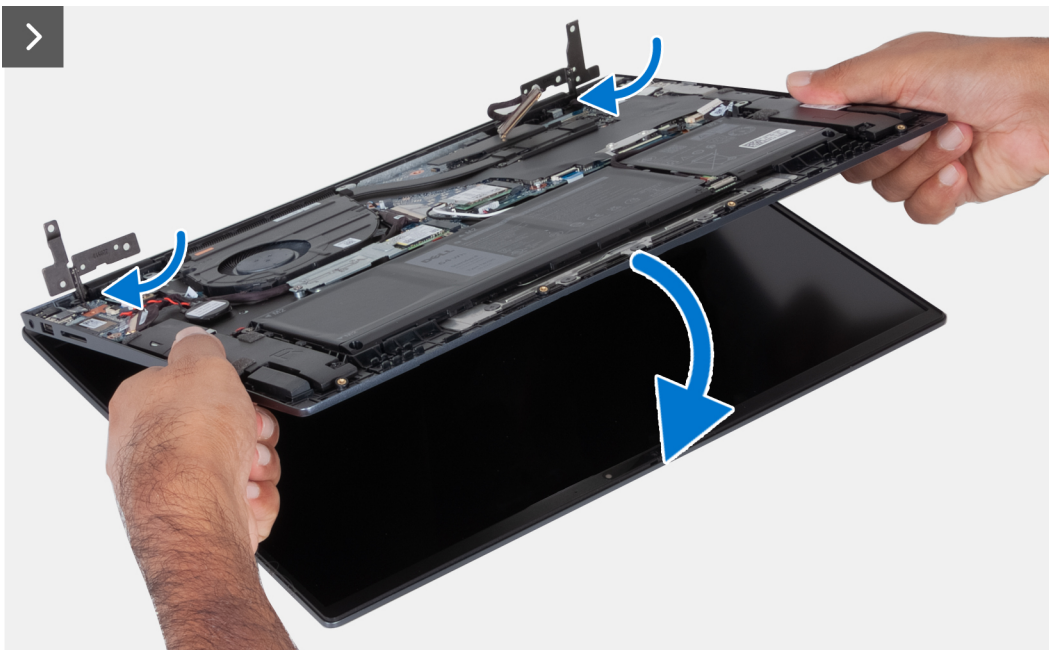
### Prerequisites

 **CAUTION:** The information in this section is intended for authorized service technicians only.

If you are replacing a component, remove the existing component before performing the installation process.

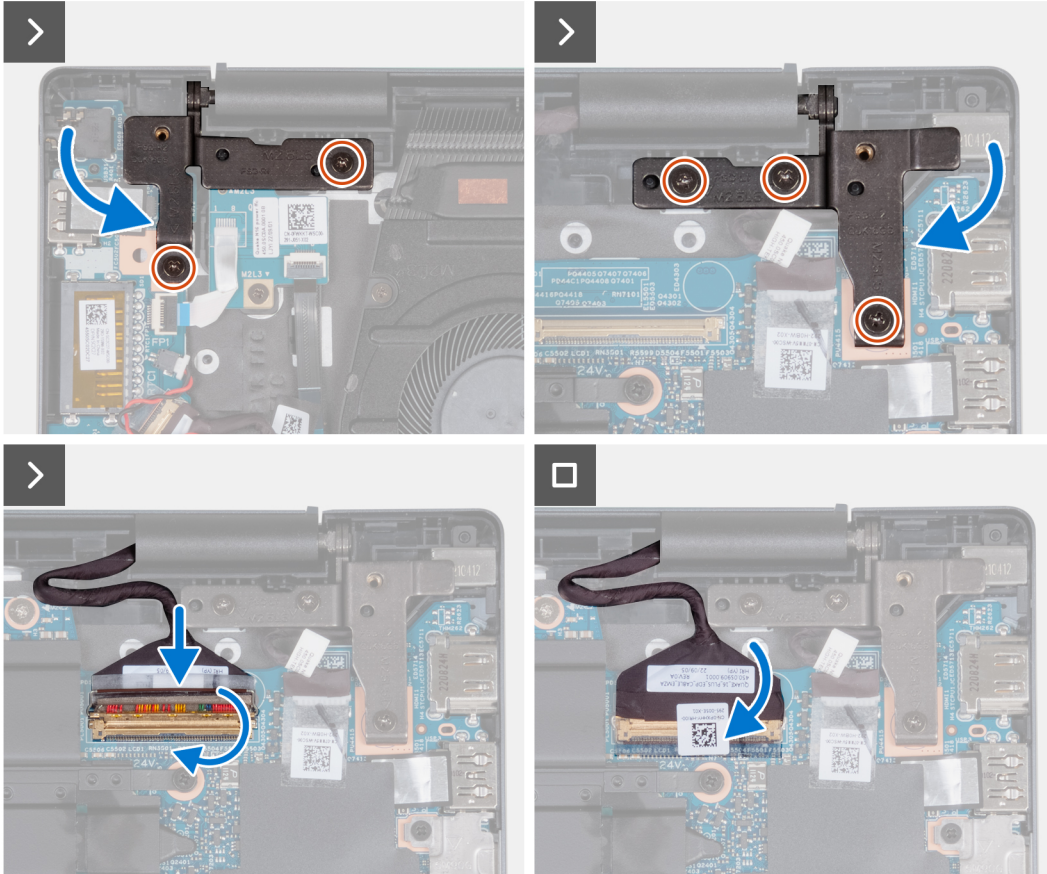
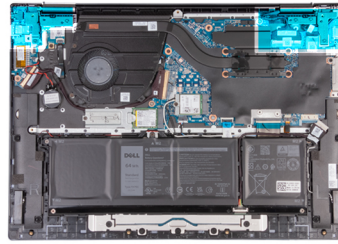
### About this task

The following image(s) indicate the location of the display assembly and provides a visual representation of the installation procedure.





5x  
M2.5x5



### Steps

1. Place the display assembly on a clean and flat surface with the display panel facing up.
2. Gently place the palm-rest and keyboard assembly under the display hinges.
3. Close the left display hinge and align the screw holes on the left display hinge with the screw holes on the palm-rest and keyboard assembly.
4. Replace the two screws (M2.5x5) to secure the left display hinge to the palm-rest and keyboard assembly.
5. Close the right display hinge and align the screw holes on the right display hinge with the screw holes on the palm-rest and keyboard assembly.
6. Replace the three screws (M2.5x5) to secure the right display hinge to the palm-rest and keyboard assembly.
7. Connect the display cable to the system board and close the latch.
8. Adhere the tape to secure the display-cable connector latch to the system board.

### Next steps

1. Install the [base cover](#).
2. Follow the procedure in [After working inside your computer](#).



# System board

## Removing the system board

### Prerequisites

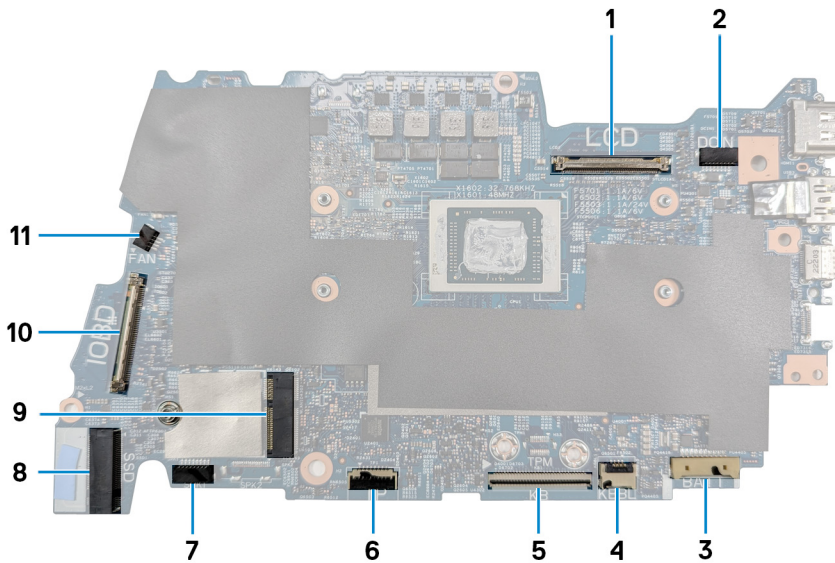
**CAUTION:** The information in this section is intended for authorized service technicians only.

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [heat sink](#).
4. Remove the [M.2 2230 solid-state drive](#) or [M.2 2280 solid-state drive](#), whichever applicable.
5. Remove the [wireless card](#).

### About this task

- NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.
- NOTE:** The system board can be removed and installed along with the heat sink, when you replace the palm-rest and keyboard assembly. This simplifies the removal and installation procedure and also prevents damage to the thermal bond between the system board and heat sink.

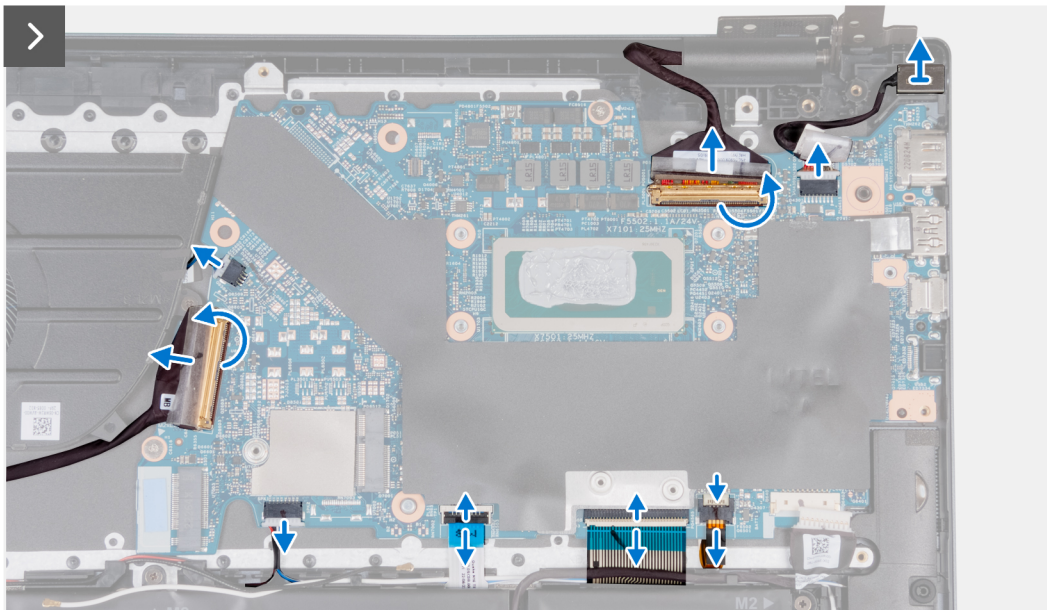
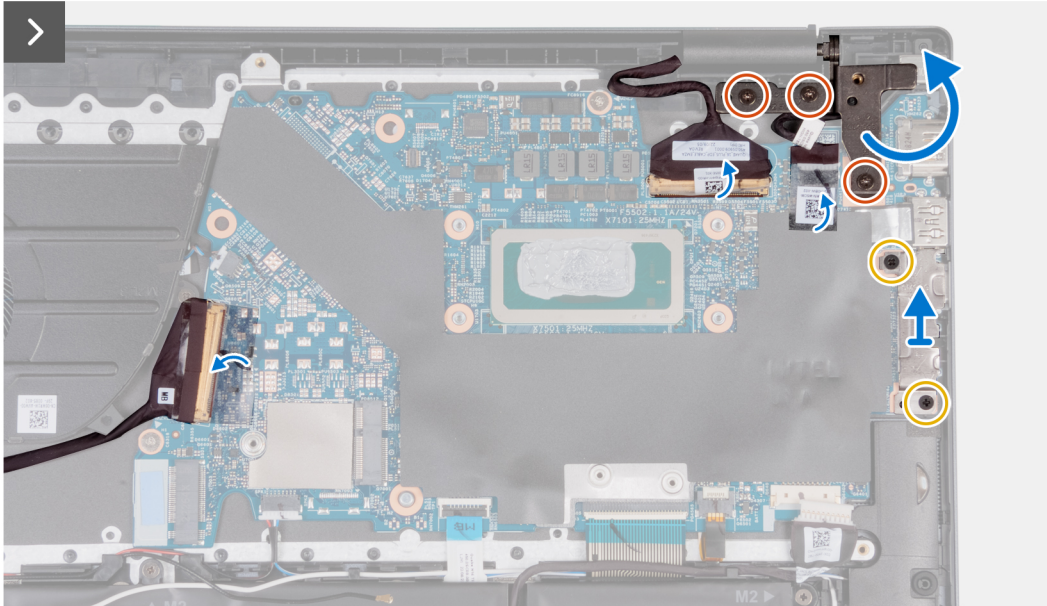
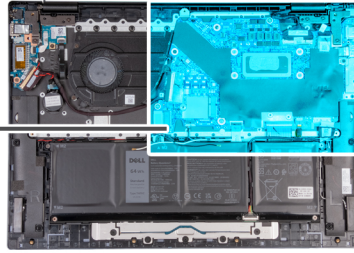
The following image indicates the connectors on your system board.



1. Display cable connector
2. Power-cable connector
3. Battery-cable connector
4. Keyboard-backlight cable connector
5. Keyboard cable connector
6. Touchpad-cable connector
7. Speaker cable connector
8. M.2 SSD connector
9. Wireless-card slot
10. I/O board-cable connector
11. Fan-cable connector

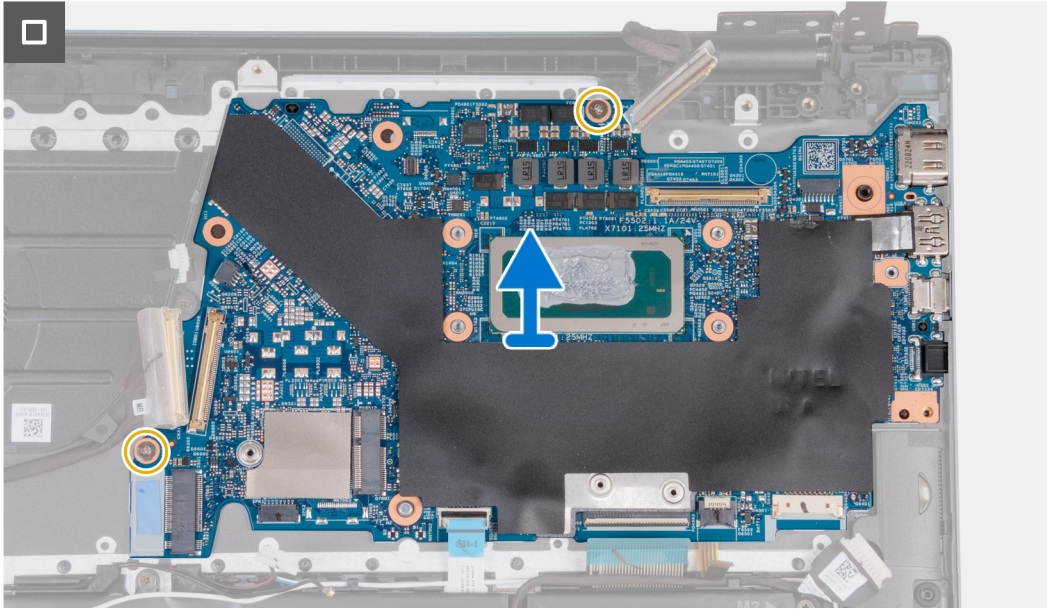
The following image(s) indicate the location of the system board and provides a visual representation of the removal procedure.







2x  
M2x1.8



### Steps

1. Remove the three screws (M2.5x5) that secure the right display hinge to the system board.
2. Open the right display hinge at an angle of 90 degrees.
3. Remove the two screws (M2x4) that secure the USB-C bracket to the system board.
4. Lift the USB-C bracket off the system board.
5. Peel the tape that secures the display-cable connector latch to the system board.
6. Open the latch and disconnect the display cable from the system board.
7. Peel the tapes that secure the power-adapter port cable to the system board.
8. Disconnect the power-adapter port cable from the system board.
9. Peel the tapes that secure the I/O board cable to the system board.
10. Open the latch and disconnect the I/O board cable to the system board.
11. Disconnect the battery cable from the system board.
12. Open the latch and disconnect the keyboard cable from the system board.
13. Open the latch and disconnect the touchpad cable from the system board.
14. Disconnect the keyboard-backlight cable from the system board.
15. Disconnect the fan cable from the system board.
16. Remove the two screws (M2x1.8) that secure the system board to the palm-rest and keyboard assembly.
17. Lift the system board at angle off the palm-rest and keyboard assembly, to clear the ports from the port openings.

## Installing the system board

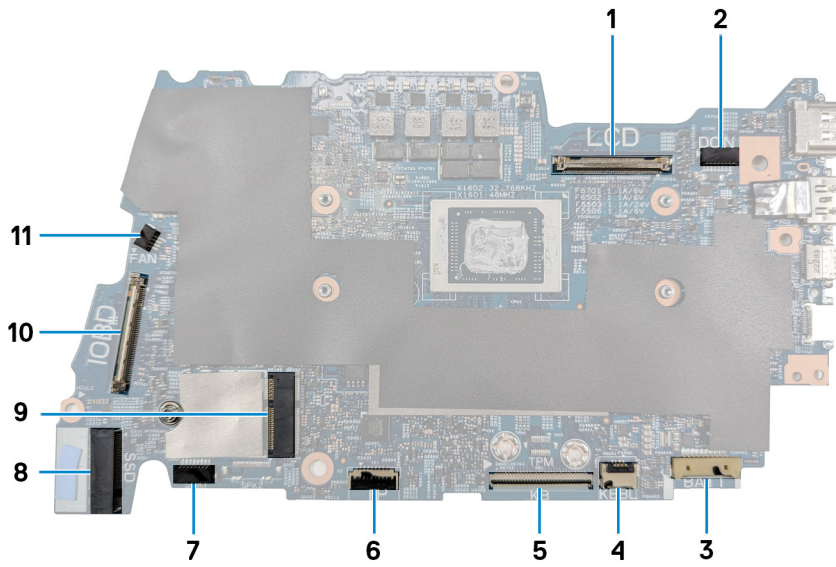
### Prerequisites

**⚠ CAUTION:** The information in this section is intended for authorized service technicians only.

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image indicates the connectors on your system board.



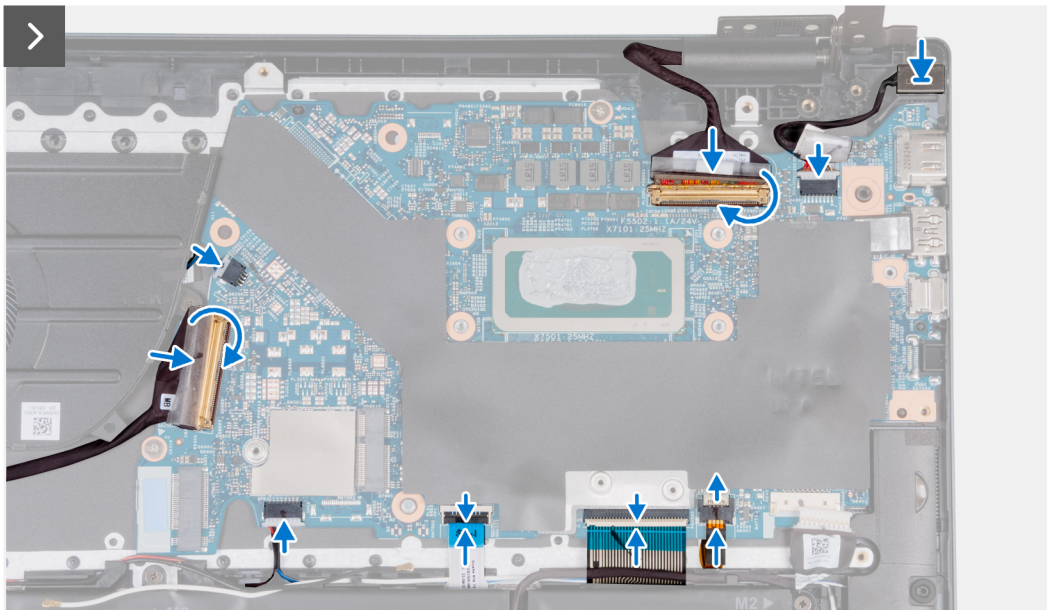
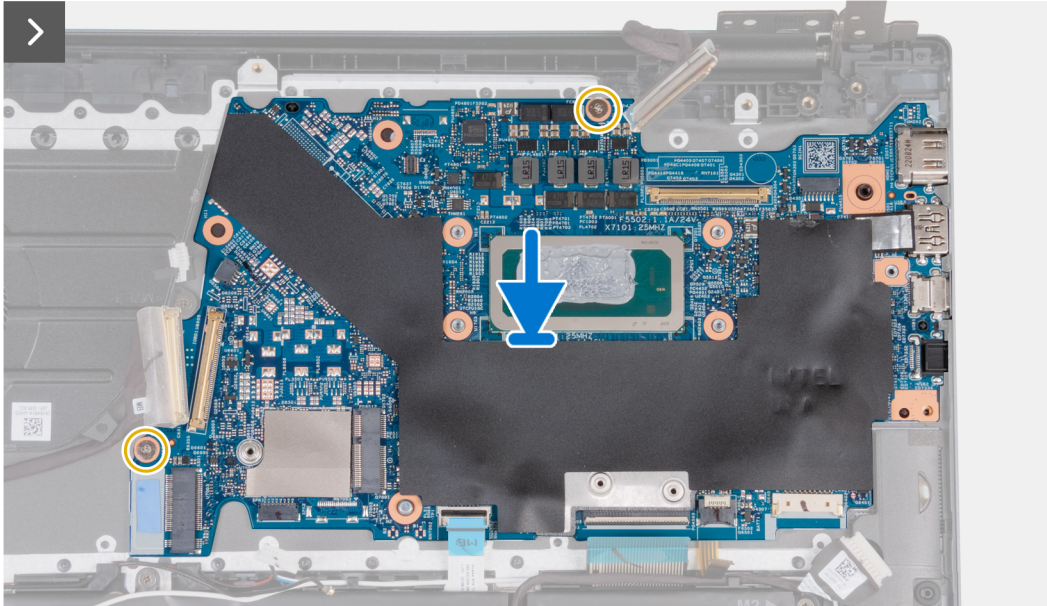
1. Display cable connector
2. Power-cable connector
3. Battery-cable connector
4. Keyboard-backlight cable connector
5. Keyboard cable connector
6. Touchpad-cable connector
7. Speaker cable connector
8. M.2 SSD connector
9. Wireless-card slot
10. I/O board-cable connector
11. Fan-cable connector

The following image(s) indicate the location of the system board and provides a visual representation of the installation procedure.





2x  
M2x1.8

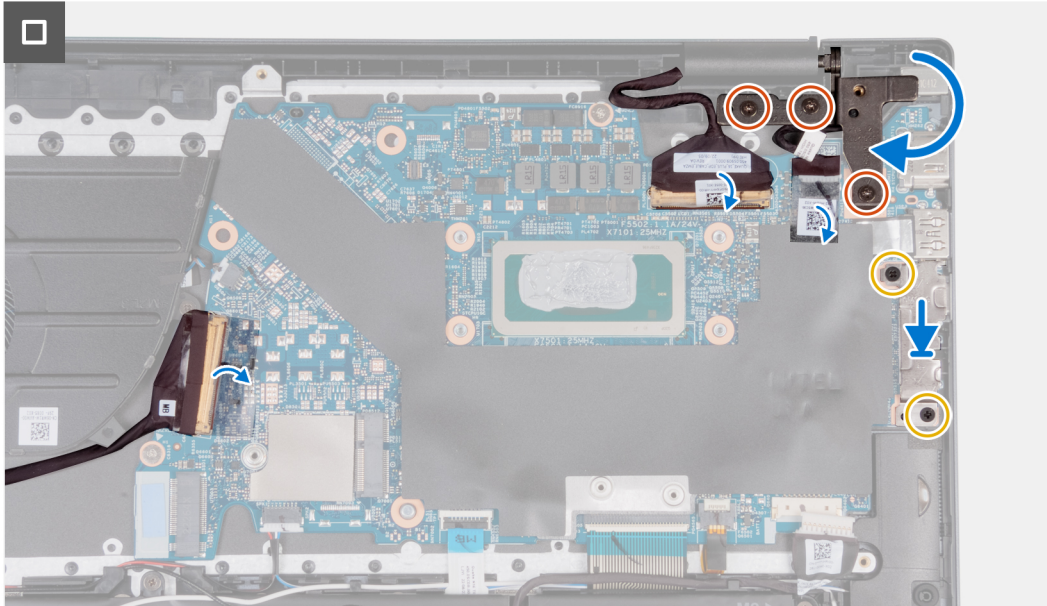




**3x**  
M2.5x5



**2x**  
M2x4



### Steps

1. Install the system board at an angle and ensure that the ports are properly aligned with the port openings.
2. Place the system board on the palm-rest and keyboard assembly.
3. Align the screw holes on the system board with the screw holes on the palm-rest and keyboard assembly.
4. Replace the two screws (M2x1.8) to secure the system board to the palm-rest and keyboard assembly.
5. Connect the fan cable to the system board.
6. Connect the keyboard-backlight cable to the system board.
7. Connect the touchpad cable to the system board and close the latch.
8. Connect the keyboard cable to the system board and close the latch.
9. Connect the battery cable to the system board.
10. Align the screw holes of the Type-C port-bracket with the screw holes of the system board.
11. Replace the two screws (M2x4) to secure the Type-C port-bracket to the system board.
12. Connect the power-adapter port cable to the system board.
13. Adhere the tapes to secure the power-adapter port cable to the system board.
14. Connect the display cable from the system board and close the latch.
15. Adhere the tape to secure the display-cable connector latch to the system board.
16. Connect the power-adapter port cable to the system board.
17. Adhere the tapes to secure the power-adapter port cable to the system board.
18. Connect the display cable to the system board and close the latch.
19. Adhere the tape to secure the display-cable connector latch to the system board.
20. Connect the I/O board cable to the system board and close the latch.
21. Adhere the tape to secure the I/O board cable connector latch to the system board.
22. Close the right display hinge and align the screw holes on the right display hinge with the screw holes on the palm-rest and keyboard assembly.
23. Replace the three screws (M2.5x5) to secure the right display hinge to the palm-rest and keyboard assembly.

### Next steps

1. Install the [wireless card](#).
2. Install the [M.2 2230 solid-state drive](#) or [M.2 2280 solid-state drive](#), whichever applicable.
3. Install the [heat sink](#).
4. Install the [base cover](#).
5. Follow the procedure in [After working inside your computer](#).

## Touchpad

### Removing the touchpad

#### Prerequisites

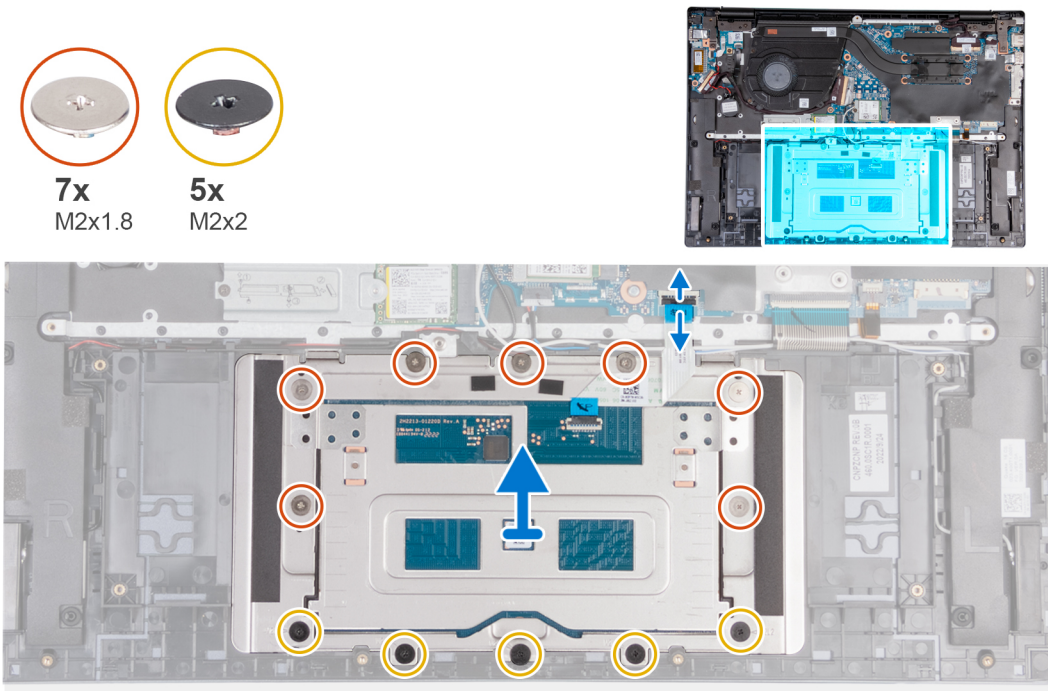
**CAUTION:** The information in this section is intended for authorized service technicians only.

1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [battery](#).

#### About this task

**NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

The following image(s) indicate the location of the touchpad and provides a visual representation of the removal procedure.



#### Steps

1. Open the latch of the touchpad connector and disconnect the touchpad cable from the touchpad.
2. Remove the five screws (M2x2) and seven screws (M2x1.8) that secure the touchpad bracket to the palm-rest and keyboard assembly.
3. Lift the touchpad bracket off the palm-rest and keyboard assembly.
4. Lift the touchpad assembly off the palm-rest and keyboard assembly.



## Installing the touchpad

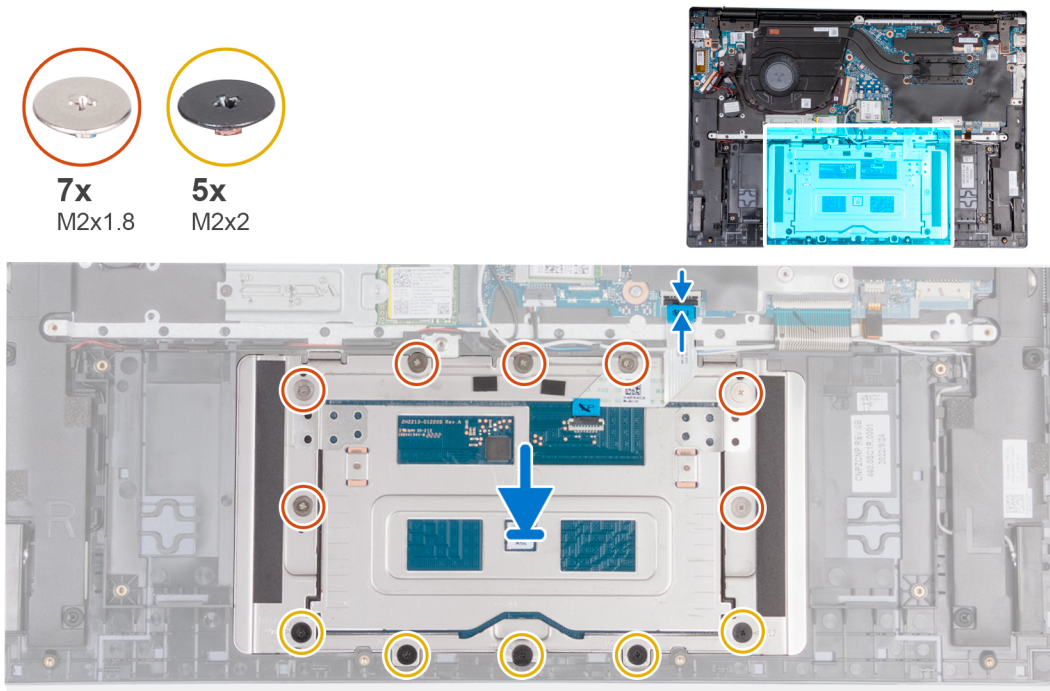
### Prerequisites

**CAUTION:** The information in this section is intended for authorized service technicians only.

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

The following image(s) indicate the location of the touchpad and provides a visual representation of the installation procedure.



### Steps

1. Slide the touchpad onto the palm-rest and keyboard assembly.
2. Align the touchpad bracket and place it on the palm-rest and keyboard assembly.
3. Replace the five screws (M2x2) and seven screws (M2x1.8) to secure the touchpad bracket to the palm-rest and keyboard assembly.
4. Connect the touchpad cable to the touchpad and close the latch.

### Next steps

1. Install the [battery](#).
2. Install the [base cover](#).
3. Follow the procedure in [After working inside your computer](#).

## Palm-rest and keyboard assembly

## Removing the palm-rest and keyboard assembly

### Prerequisites

**CAUTION:** The information in this section is intended for authorized service technicians only.

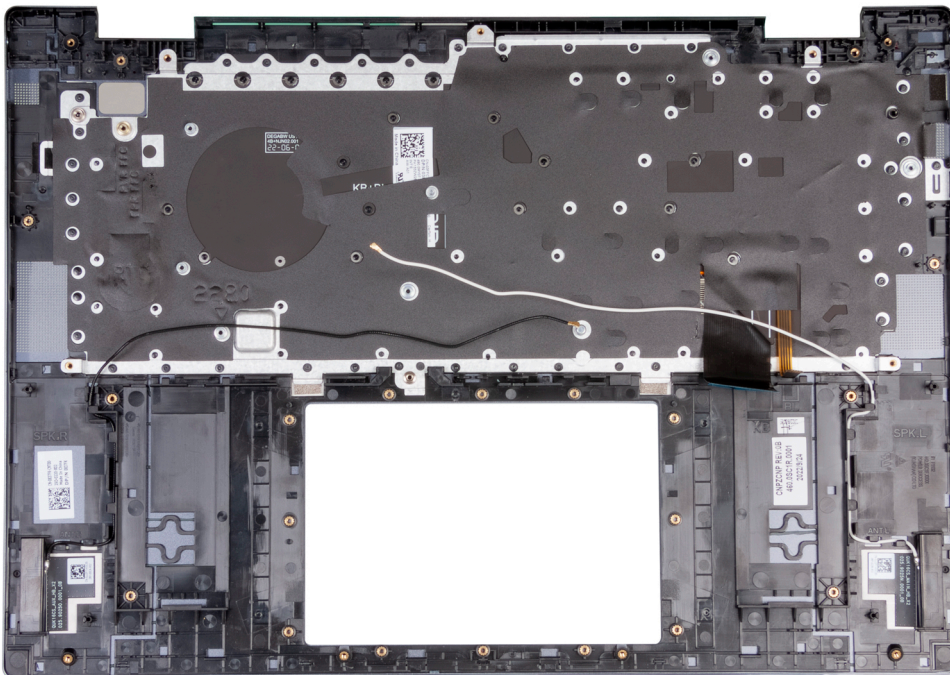
1. Follow the procedure in [Before working inside your computer](#).
2. Remove the [base cover](#).
3. Remove the [fan](#).
4. Remove the [wireless card](#).
5. Remove the [M.2 2230 solid-state drive](#) or [M.2 2280 solid-state drive](#), whichever applicable.
6. Remove the [battery](#).
7. Remove the [speakers](#).
8. Remove the [coin-cell battery](#).
9. Remove the [I/O board](#).
10. Remove the [power button](#) or [power button with fingerprint reader](#), whichever applicable.
11. Remove the [power-adapter port](#).
12. Remove the [display assembly](#).
13. Remove the [system board](#).
14. Remove the [touchpad](#).

### About this task

**i** **NOTE:** Before removing the base cover, ensure that there is no SD card installed in the SD card slot on your computer.

**i** **NOTE:** The system board can be removed and installed along with the heat sink, when you replace the palm-rest and keyboard assembly. This simplifies the removal and installation procedure and also prevents damage to the thermal bond between the system board and heat sink.

The following image(s) indicate the location of the palm-rest and keyboard assembly and provides a visual representation of the removal procedure.



### Steps

After performing the pre-requisites, you are left with the palm-rest and keyboard assembly.

## Installing the palm-rest and keyboard assembly

### Prerequisites

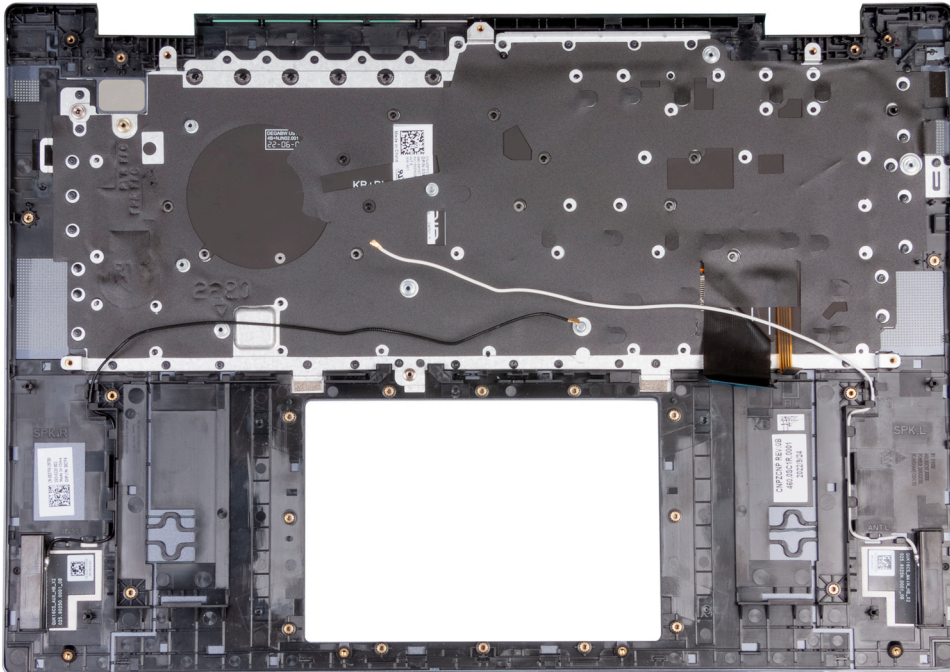
**⚠ CAUTION:** The information in this section is intended for authorized service technicians only.

If you are replacing a component, remove the existing component before performing the installation process.

### About this task

**NOTE:** The system board can be removed and installed along with the heat sink, when you replace the palm-rest and keyboard assembly. This simplifies the removal and installation procedure and also prevents damage to the thermal bond between the system board and heat sink.

The following image(s) indicate the location of the palm-rest and keyboard assembly and provides a visual representation of the installation procedure.



### Steps

Place the palm-rest and keyboard assembly on a flat and clean surface and perform the post-requisites to install the palm-rest and keyboard assembly.

### Next steps

1. Install the [touchpad](#).
2. Install the [system board](#).
3. Install the [display assembly](#).
4. Install the [power-adaptor port](#).
5. Install the [power button](#) or [power button with fingerprint reader](#), whichever applicable..
6. Install the [I/O board](#).
7. Install the [coin-cell battery](#).
8. Install the [speakers](#).
9. Install the [battery](#).
10. Install the [M.2 2230 solid-state drive](#) or [M.2 2280 solid-state drive](#), whichever applicable.
11. Install the [wireless card](#).
12. Install the [fan](#).
13. Install the [base cover](#).
14. Follow the procedure in [After working inside your computer](#).

# Software

This chapter details the supported operating systems along with instructions on how to install the drivers.

## Operating system

Your Inspiron 16 5635 supports the following operating systems:

- Windows 11 Pro, 64-bit
- Windows 11 Pro National Education, 64-bit
- Windows 11 Home, 64-bit
- Windows 11 Home in S mode, 64-bit

## Drivers and downloads

When troubleshooting, downloading or installing drivers it is recommended that you read the Dell Knowledge Base article, Drivers and Downloads FAQ [000123347](#).

# BIOS setup

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

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

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

Use the BIOS Setup program for the following purposes:

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

## Entering BIOS setup program

### About this task

Turn on (or restart) your computer and press F2 immediately.

## Navigation keys

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

**Table 26. Navigation keys**

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:</b> For the standard graphics browser only.
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.

## One time boot menu

To enter **one time boot menu**, turn on your computer, and then press F2 immediately.

**NOTE:** It is recommended to shutdown the computer if it is on.

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 (if available)
- **i** **NOTE:** XXX denotes the SATA drive number.
- Optical Drive (if available)
- SATA Hard Drive (if available)
- Diagnostics
- **i** **NOTE:** Choosing **Diagnostics**, will display the **ePSA diagnostics** screen.

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

## One Time Boot menu

To enter **One Time Boot menu**, turn on your computer, and then press F12 immediately.

**i** **NOTE:** It is recommended to shutdown the computer if it is on.

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 (if available)
- **i** **NOTE:** XXX denotes the SATA drive number.
- Optical Drive (if available)
- SATA Hard Drive (if available)
- Diagnostics

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

## System setup options

**i** **NOTE:** Depending on this computer and its installed devices, the items that are listed in this section may or may not be displayed.

**Table 27. System setup options—System information menu**

Overview	
BIOS Version	Displays the BIOS version number.
Service Tag	Displays the Service Tag of the computer.
Asset Tag	Displays the Asset Tag of the computer.
Manufacture Date	Displays the manufacture date of the computer.
Ownership Date	Displays the ownership date of the computer.
Express Service Code	Displays the express service code of the computer.
Ownership Tag	Displays the ownership tag of the computer.
Signed Firmware Update	Displays whether the signed firmware update is enabled. Default: Enabled
<b>Battery</b>	Displays the battery health information.
Primary	Displays the primary battery.
Battery Level	Displays the battery level.
Battery State	Displays the battery state.



**Table 27. System setup options—System information menu (continued)**

<b>Overview</b>	
Health	Displays the battery health.
AC Adapter	Displays whether an AC adapter is connected. If connected, the AC adapter type.
<b>PROCESSOR</b>	
Processor Type	Displays the processor type.
Maximum Clock Speed	Displays the maximum processor clock speed.
Minimum Clock Speed	Displays the minimum processor clock speed.
Current Clock Speed	Displays the current processor clock speed.
Core Count	Displays the number of cores on the processor.
Processor ID	Displays the processor identification code.
Processor L2 Cache	Displays the processor L2 Cache size.
Processor L3 Cache	Displays the processor L3 Cache size.
Microcode Version	Displays the microcode version.
Intel Hyper-Threading Capable	Displays whether the processor is Hyper-Threading (HT) capable.
64-Bit Technology	Displays whether 64-bit technology is used.
<b>MEMORY</b>	
Memory Installed	Displays the total computer memory installed.
Memory Available	Displays the total computer memory available.
Memory Speed	Displays the memory speed.
Memory Channel Mode	Displays single or dual channel mode.
Memory Technology	Displays the technology that is used for the memory.
DIMM A Size	Displays the memory configuration of DIMM A.
DIMM B Size	Displays the memory configuration of DIMM B.
<b>DEVICES</b>	
Panel Type	Displays the Panel Type of the computer.
Video Controller	Displays the integrate graphics information of the computer.
Video Memory	Displays the video memory information of the computer.
Wi-Fi Device	Displays the Wi-Fi device installed in the computer.
Native Resolution	Displays the native resolution of the computer.
Video BIOS Version	Displays the video BIOS version of the computer.
Audio Controller	Displays the audio controller information of the computer.
Bluetooth Device	Displays whether a Bluetooth device is installed in the computer.
LOM MAC Address	Displays the MAC address of the LAN on Motherboard (LOM)

**Table 28. System setup options—Boot Configuration menu**

<b>Boot Configuration</b>	
<b>Boot Sequence</b>	
Boot Mode: UEFI only	Displays the boot mode of this computer.
Boot Sequence	Specifies the order that the BIOS searches the list of devices to find an operating system to boot.  By default, ONBOARD NIC (IPV4) is selected

**Table 28. System setup options—Boot Configuration menu (continued)**

<b>Boot Configuration</b>	
	By default, ONBOARD NIC (IPV6) is selected By default, UEFI Hard Drive is selected
<b>Secure Boot</b>	
Enable Secure Boot	Enables secure boot using only validated boot software. Default: OFF
Secure Boot Mode	Modifies the behavior of Secure Boot to allow evaluation or enforcement of UEFI driver signatures. Deployed Mode should be selected for normal operation of Secure Boot. By default, Deployed Mode is selected.
<b>Expert Key Management</b>	
Enable Custom Mode	Allows the PK, KEK, db, and dbx security key databases to be modified. Default: OFF <b>i</b> <b>NOTE:</b> If Custom Mode is not enabled, any changes made with respect to the keys will not be saved.
Custom Mode Key Management	Allows for selection of key database. <ul style="list-style-type: none"> <li>• Save to File will save the key to a user-selected file.</li> <li>• Replace from File will replace the current key with a key from a user-selected file.</li> <li>• Append from File will add a key to the current database from a user-selected file.</li> <li>• Delete will delete the selected key.</li> <li>• Reset All Keys will reset all four keys to their default settings.</li> </ul> By default, PK security key database is selected. By default, Save to File is selected.

**Table 29. System setup options—Integrated Devices menu**

<b>Integrated Devices</b>	
<b>Date/Time</b>	
Date	Sets the computer date in MM/DD/YYYY format. Changes to the date take effect immediately.
Time	Sets the computer time in HH/MM/SS 24-hour format. You can switch between 12-hour and 24-hour clock. Changes to the time take effect immediately.
<b>Camera</b>	
Enable Camera	Enables or disables the camera. By default, Enable Camera is selected.
<b>Audio</b>	
	Enables or disables all integrated audio controller. Default: ON
Enable Microphone	Enables or disables microphone. By default, Enable Microphone is selected.
Enable Internal Speaker	Enables or disables internal speaker. By default, Enable Internal Speaker is selected.

**Table 29. System setup options—Integrated Devices menu (continued)**

<b>Integrated Devices</b>	
<b>USB Configuration</b>	Enables or disables booting from USB mass storage devices such as external hard drive, optical drive, and USB drive.  By default, Enable USB Boot Support is selected.

**Table 30. System setup options—Storage menu**

<b>Storage</b>	
<b>SATA/NVMe Operation</b>	Configures operating mode of the integrated storage device controller.  Default: RAID On. Storage device is configured to support RAID functions. When enabled, all NVMe and SATA devices will be mapped under VMD controller. Windows RST (Intel Rapid Restore Technology) driver, or Linux kernel VMD driver must be loaded in order to boot the OS.
<b>Storage Interface</b>	
Port Enablement	Enables or disables the onboard drives.  Default: ON
<b>Drive Information</b>	Displays the information of various onboard drives.

**Table 31. System setup options—Display menu**

<b>Display</b>	
<b>Display Brightness</b>	
Brightness on battery power	Sets the screen brightness when the computer is running on battery power.  Default: 50
Brightness on AC power	Sets the screen brightness when the computer is running on AC power.  Default: 100

**Table 32. System setup options—Passwords menu**

<b>Passwords</b>	
<b>Admin Password</b>	Enables the user to set, change, or delete the administrator (admin) password. The admin password enables several security features
<b>System Password</b>	Enables the user to set, change, or delete the system password.
<b>Internal HDD-1 Password</b>	Enables the user to set, change, or delete the Internal HDD-1 password.

**Table 33. System setup options—Update, Recovery menu**

<b>Update, Recovery</b>	
<b>SupportAssist OS Recovery</b>	Enables or disables the boot flow for SupportAssist OS Recovery tool, in the event of certain system error.  Default: ON
<b>BIOSConnect</b>	Enables or disables cloud Service OS recovery if the main OS fails to boot within the number of failures equal or greater than the value specified by Dell Auto OS Recovery Threshold, and local Service does not boot, or is not installed.  Default: ON
<b>Dell Auto OS Recovery Threshold</b>	Controls the automatic boot flow for SupportAssist System Resolution Console and for Dell operating system Recovery tool.

**Table 33. System setup options—Update,Recovery menu (continued)**

<b>Update,Recovery</b>	
	Default: 2.

**Table 34. System setup options—System Management menu**

<b>System Management</b>	
<b>Service Tag</b>	Displays the Service Tag of the computer.
<b>Asset Tag</b>	Creates a system Asset Tag that can be used by an IT administrator to uniquely identify a particular system. Once set in BIOS, the Asset Tag cannot be changed.

**Table 35. System setup options—Pre-boot Behavior menu**

<b>Pre-boot Behavior</b>	
<b>Adapter warnings</b>	
Enable Adapter warnings	Enables or disables the computer to display adapter warning messages when adapters with too little power capacity are detected. Default: ON
<b>Warnings and Errors</b>	Selects an action on encountering a warning or error during boot. Default: Prompt on Warnings and Errors. Stop, prompt, and wait for user input when warnings or errors are detected.
	<b>NOTE:</b> Errors deemed critical to the operation of the computer hardware will always halt the computer.

**Table 36. System setup options—System Logs menu**

<b>System Logs</b>	
<b>BIOS Event Log</b>	
Clear Bios Event Log	Select keep or clear BIOS events. Default: Keep
<b>Thermal Event Log</b>	
Clear Thermal Event Log	Select keep or clear Thermal events. Default: Keep
<b>Power Event Log</b>	
Clear POWER Event Log	Select keep or clear Power events. Default: Keep

## Updating the BIOS

### Updating the BIOS in Windows

#### Steps

1. Go to [www.dell.com/support](http://www.dell.com/support).
2. Click **Product support**. In the **Search support** box, enter the Service Tag of your computer, and then click **Search**.

**NOTE:** If you do not have the Service Tag, use the SupportAssist feature to automatically identify your computer. You can also use the product ID or manually browse for your computer model.

3. Click **Drivers & Downloads**. Expand **Find drivers**.
4. Select the operating system installed on your computer.
5. In the **Category** drop-down list, select **BIOS**.
6. Select the latest version of BIOS, and click **Download** to download the BIOS file for your computer.
7. After the download is complete, browse the folder where you saved the BIOS update file.
8. Double-click the BIOS update file icon and follow the on-screen instructions.

For more information about how to update the system BIOS, search in the Knowledge Base Resource at [www.dell.com/support](http://www.dell.com/support).

## Updating the BIOS using the USB drive in Windows

### Steps

1. Follow the procedure from step 1 to step 6 in [Updating the BIOS in Windows](#) to download the latest BIOS setup program file.
2. Create a bootable USB drive. For more information, search the Knowledge Base Resource at [www.dell.com/support](http://www.dell.com/support).
3. Copy the BIOS setup program file to the bootable USB drive.
4. Connect the bootable USB drive to the computer that needs the BIOS update.
5. Restart the computer and press **F12**.
6. Select the USB drive from the **One Time Boot Menu**.
7. Type the BIOS setup program filename and press **Enter**.  
The **BIOS Update Utility** appears.
8. Follow the on-screen instructions to complete the BIOS update.

## Updating the BIOS from the F12 One Time Boot menu


Update your computer BIOS using the BIOS update.exe file that is copied to a FAT32 USB drive and booting from the F12 **One Time Boot** menu.

### About this task

#### BIOS Update

You can run the BIOS update file from Windows using a bootable USB drive or you can also update the BIOS from the F12 **One Time Boot** menu on the computer.

Most of the Dell computers built after 2012 have this capability, and you can confirm by booting your computer to the F12 **One Time Boot** Menu to see if BIOS FLASH UPDATE is listed as a boot option for your computer. If the option is listed, then the BIOS supports this BIOS update option.

 **NOTE:** Only computers with BIOS Flash Update option in the F12 **One Time Boot** menu can use this function.

### Updating from the One Time Boot menu

To update your BIOS from the F12 **One Time Boot** menu, you need the following:

- USB drive formatted to the FAT32 file system (key does not have to be bootable)
- BIOS executable file that you downloaded from the Dell Support website and copied to the root of the USB drive
- AC power adapter that is connected to the computer
- Functional computer battery to flash the BIOS

Perform the following steps to perform the BIOS update flash process from the F12 menu:

 **CAUTION:** Do not turn off the computer during the BIOS update process. The computer may not boot if you turn off your computer.

### Steps

1. From a turn off state, insert the USB drive where you copied the flash into a USB port of the computer.
2. Turn on the computer and press F12 to access the **One Time Boot** Menu, select BIOS Update using the mouse or arrow keys then press Enter.  
The flash BIOS menu is displayed.

3. Click **Flash from file**.
4. Select external USB device.
5. Select the file and double-click the flash target file, and then click **Submit**.
6. Click **Update BIOS**. The computer restarts to flash the BIOS.
7. The computer will restart after the BIOS update is completed.

## System and setup password


**Table 37. System and setup password**

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

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

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

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

 **NOTE:** System and setup password feature is disabled.

## Assigning a system setup password

### Prerequisites

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

### About this task

To enter the system setup, press F12 immediately after a power-on or reboot.

### Steps

1. In the **System BIOS** or **System Setup** screen, select **Security** and press Enter.  
The **Security** screen is displayed.
2. Select **System/Admin 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.
  - At least one special character: ! " # \$ % & ' ( ) \* + , - . / : ; < = > ? @ [ \ ] ^ \_ ` { | }
  - Numbers 0 through 9.
  - Upper case letters from A to Z.
  - Lower case letters from a to z.
3. Type the system password that you entered earlier in the **Confirm new password** field and click **OK**.
4. Press Esc and save the changes as prompted by the pop-up message.
5. Press Y to save the changes.  
The computer restarts.



# Deleting or changing an existing system setup password


## Prerequisites

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.

## About this task

To enter the System Setup, press F12 immediately after a power-on or reboot.

## Steps

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**, update, or delete the existing system password, and press Enter or Tab.
4. Select **Setup Password**, update, or delete the existing setup password, and press Enter or Tab.  
 **NOTE:** If you change the System and/or Setup password, reenter 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 restarts.

# Clearing CMOS settings

## About this task

 **CAUTION:** Clearing CMOS settings will reset the BIOS settings on your computer.


## Steps

1. Remove the [base cover](#).
2. Disconnect the battery cable from the system board.
3. Remove the [coin-cell battery](#).
4. Wait for one minute.
5. Replace the [coin-cell battery](#).
6. Connect the battery cable to the system board.
7. Replace the [base cover](#).

# Clearing BIOS (System Setup) and System passwords

## About this task

To clear the system or BIOS passwords, contact Dell technical support as described at [www.dell.com/contactdell](http://www.dell.com/contactdell).

 **NOTE:** For information on how to reset Windows or application passwords, refer to the documentation accompanying Windows or your application.

# Troubleshooting

## Handling swollen rechargeable Li-ion batteries

Like most laptops, Dell laptops use Lithium-ion batteries. One type of Lithium-ion battery is the rechargeable Li-ion battery. Rechargeable Li-ion batteries have increased in popularity in recent years and have become standard in the electronics industry due to customer preferences for a slim form factor (especially with newer ultra-thin laptops) and long battery life. Inherent to rechargeable Li-ion battery technology is the potential for swelling of the battery cells.

Swollen battery may impact the performance of the laptop. To prevent possible further damage to the device enclosure or internal components leading to malfunction, discontinue the use of the laptop and discharge it by disconnecting the AC adapter and letting the battery drain.

Swollen batteries should not be used and should be replaced and disposed of properly. We recommend contacting Dell product support for options to replace a swollen battery under the terms of the applicable warranty or service contract, including options for replacement by a Dell authorized service technician.

The guidelines for handling and replacing rechargeable Li-ion batteries are as follows:

- Exercise caution when handling rechargeable Li-ion batteries.
- Discharge the battery before removing it from the system. To discharge the battery, unplug the AC adapter from the system and operate the system only on battery power. When the system will no longer power on when the power button is pressed, the battery is fully discharged.
- Do not crush, drop, mutilate, or penetrate the battery with foreign objects.
- Do not expose the battery to high temperatures, or disassemble battery packs and cells.
- Do not apply pressure to the surface of the battery.
- Do not bend the battery.
- Do not use tools of any type to pry on or against the battery.
- If a battery gets stuck in a device as a result of swelling, do not try to free it as puncturing, bending, or crushing a battery can be dangerous.
- Do not attempt to reassemble a damaged or swollen battery into a laptop.
- Swollen batteries that are covered under warranty should be returned to Dell in an approved shipping container (provided by Dell)—this is to comply with transportation regulations. Swollen batteries that are not covered under warranty should be disposed of at an approved recycling center. Contact Dell product support at <https://www.dell.com/support> for assistance and further instructions.
- Using a non-Dell or incompatible battery may increase the risk of fire or explosion. Replace the battery only with a compatible battery purchased from Dell that is designed to work with your Dell computer. Do not use a battery from other computers with your computer. Always purchase genuine batteries from <https://www.dell.com> or otherwise directly from Dell.

Rechargeable Li-ion batteries can swell for various reasons such as age, number of charge cycles, or exposure to high heat. For more information on how to improve the performance and lifespan of the laptop battery and to minimize the possibility of occurrence of the issue, search Dell Laptop Battery in the Knowledge Base Resource at [www.dell.com/support](http://www.dell.com/support).

## Locate the Service Tag or Express Service Code of your Dell computer

Your Dell computer is uniquely identified by a Service Tag or Express Service Code. To view relevant support resources for your Dell computer, we recommend entering the Service Tag or Express Service Code at [www.dell.com/support](http://www.dell.com/support).


For more information on how to find the Service Tag for your computer, see [Locate the Service Tag on your computer](#).

# Dell SupportAssist Pre-boot System Performance Check diagnostics

## About this task

SupportAssist diagnostics (also known as system diagnostics) performs a complete check of your hardware. The Dell SupportAssist Pre-boot System Performance Check diagnostics 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

 **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.

For more information, see <https://www.dell.com/support/kbdoc/000180971>.

## Running the SupportAssist Pre-Boot System Performance Check


### Steps

1. Turn on your computer.
2. As the computer boots, press the F12 key as the Dell logo appears.
3. On the boot menu screen, select the **Diagnostics** option.
4. Click the arrow at the bottom left corner.  
Diagnostics front page is displayed.
5. Click the arrow in the lower-right corner to go to the page listing.  
The items detected are listed.
6. To run a diagnostic test on a specific device, press Esc and click **Yes** to stop the diagnostic test.
7. Select the device from the left pane and click **Run Tests**.
8. If there are any issues, error codes are displayed.  
Note the error code and validation number and contact Dell.

## Built-in self-test (BIST)

### M-BIST

M-BIST (Built In Self-Test) is the system board's built-in self-test diagnostics tool that improves the diagnostics accuracy of system board embedded controller (EC) failures.

 **NOTE:** M-BIST can be manually initiated before POST (Power On Self Test).

### How to run M-BIST

 **NOTE:** M-BIST must be initiated on the system from a power-off state either connected to AC power or with battery only.

1. Press and hold both the **M** key on the keyboard and the **power button** to initiate M-BIST.
2. With both the **M** key and the **power button** held down, the battery indicator LED may exhibit two states:
  - a. OFF: No fault detected with the system board
  - b. AMBER: Indicates a problem with the system board
3. If there is a failure with the system board, the battery status LED will flash one of the following error codes for 30 seconds:


**Table 38. LED error codes**

Blinking Pattern		Possible Problem
Amber	White	
2	1	CPU Failure
2	8	LCD Power Rail Failure
1	1	TPM Detection Failure
2	4	Memory/RAM failure

4. If there is no failure with the system board, the LCD will cycle through the solid color screens described in the LCD-BIST section for 30 seconds and then power off.

## LCD Power rail test (L-BIST)

L-BIST is an enhancement to the single LED error code diagnostics and is automatically initiated during POST. L-BIST will check the LCD power rail. If there is no power being supplied to the LCD (that is if the L-BIST circuit fails), the battery status LED will flash either an error code [2,8] or an error code [2,7].

 **NOTE:** If L-BIST fails, LCD-BIST cannot function as no power will be supplied to the LCD.

### How to invoke L-BIST Test:

1. Press the power button to start the system.
2. If the system does not start up normally, look at the battery status LED:
  - If the battery status LED flashes an error code [2,7], the display cable may not be connected properly.
  - If the battery status LED flashes an error code [2,8], there is a failure on the LCD power rail of the system board, hence there is no power supplied to the LCD.
3. For cases, when a [2,7] error code is shown, check to see if the display cable is properly connected.
4. For cases when a [2,8] error code is shown, replace the system board.


## LCD Built-in Self Test (BIST)

Dell laptops have a built-in diagnostic tool that helps you determine if the screen abnormality you are experiencing is an inherent problem with the LCD (screen) of the Dell laptop or with the video card (GPU) and PC settings.

When you notice screen abnormalities like flickering, distortion, clarity issues, fuzzy or blurry image, horizontal or vertical lines, color fade etc., it is always a good practice to isolate the LCD (screen) by running the Built-In Self Test (BIST).

### How to invoke LCD BIST Test

1. Power off the Dell laptop.
2. Disconnect any peripherals that are connected to the laptop. Connect only the AC adapter (charger) to the laptop.
3. Ensure that the LCD (screen) is clean (no dust particles on the surface of the screen).
4. Press and hold **D** key and **Power on** the laptop to enter LCD built-in self test (BIST) mode. Continue to hold the D key, until the system boots up.
5. The screen will display solid colors and change colors on the entire screen to white, black, red, green, and blue twice.
6. Then it will display the colors white, black and red.
7. Carefully inspect the screen for abnormalities (any lines, fuzzy color or distortion on the screen).
8. At the end of the last solid color (red), the system will shut down.

 **NOTE:** Dell SupportAssist Pre-boot diagnostics upon launch, initiates an LCD BIST first, expecting a user intervention confirm functionality of the LCD.

# System-diagnostic lights

This section lists the system-diagnostic lights of your Inspiron 16 5635.

**Table 39. System-diagnostic lights**

Blinking pattern		Problem description
Amber	White	
1	1	TPM detection failure
1	2	Unrecoverable SPI flash failure
1	3	Short in hinge cable tripped OCP1
1	4	Short in hinge cable tripped OCP2
1	5	EC unable to program i-Fuse
1	6	EC internal failure
2	1	Processor failure
2	2	System board: BIOS or ROM (Read-Only Memory) failure
2	3	No memory or RAM (Random-Access Memory) detected
2	4	Memory or RAM (Random-Access Memory) failure
2	5	Invalid memory installed
2	6	System-board or chipset error
2	7	Display failure - SBIOS message
2	8	Display failure - EC detection of power rail failure
3	1	CMOS battery failure
3	2	PCI, video card/chip failure
3	3	BIOS recovery image not found
3	4	Recovery image found but invalid
3	5	Power-rail failure
3	6	System BIOS Flash incomplete
3	7	Management Engine (ME) error

**NOTE:** Blinking 3-3-3 LEDs on Lock LED (Caps-Lock or Num-Lock), Power button LED (without Fingerprint reader), and Diagnostic LED indicates failure to provide input during LCD panel test on Dell SupportAssist Pre-boot System Performance Check diagnostics.

## Recovering the operating system

When your computer is unable to boot to the operating system even after repeated attempts, it automatically starts Dell SupportAssist OS Recovery.

Dell SupportAssist OS Recovery is a standalone tool that is preinstalled in all Dell computers installed with Windows operating system. It consists of tools to diagnose and troubleshoot issues that may occur before your computer boots to the operating system. It enables you to diagnose hardware issues, repair your computer, back up your files, or restore your computer to its factory state.



You can also download it from the Dell Support website to troubleshoot and fix your computer when it fails to boot into their primary operating system due to software or hardware failures.

For more information about the Dell SupportAssist OS Recovery, see *Dell SupportAssist OS Recovery User's Guide* at [www.dell.com/serviceabilitytools](http://www.dell.com/serviceabilitytools). Click **SupportAssist** and then, click **SupportAssist OS Recovery**.

## Real-Time Clock (RTC Reset)

The Real Time Clock (RTC) reset function allows you or the service technician to recover Dell systems from No POST/No Power/No Boot situations. The legacy jumper enabled RTC reset has been retired on these models.

Start the RTC reset with the system powered off and connected to AC power. Press and hold the power button for thirty (30) seconds

. The system RTC Reset occurs after you release the power button.


## Backup media and recovery options

It is recommended to create a recovery drive to troubleshoot and fix problems that may occur with Windows. Dell proposes multiple options for recovering Windows operating system on your Dell PC. For more information, see [Dell Windows Backup Media and Recovery Options](#).

## Wi-Fi power cycle

### About this task

If your computer is unable to access the Internet due to Wi-Fi connectivity issues a Wi-Fi power cycle procedure may be performed. The following procedure provides the instructions on how to conduct a Wi-Fi power cycle:

 **NOTE:** Some ISPs (Internet Service Providers) provide a modem/router combo device.

### Steps

1. Turn off your computer.
2. Turn off the modem.
3. Turn off the wireless router.
4. Wait for 30 seconds.
5. Turn on the wireless router.
6. Turn on the modem.
7. Turn on your computer.

## Drain residual flea power (perform hard reset)

### About this task

Flea power is the residual static electricity that remains in the computer even after it has been powered off and the battery is removed.

For your safety, and to protect the sensitive electronic components in your computer, you are requested to drain residual flea power before removing or replacing any components in your computer.


Draining residual flea power, also known as a performing a "hard reset", is also a common troubleshooting step if your computer does not power on or boot into the operating system.

### To drain residual flea power (perform a hard reset)

### Steps

1. Turn off your computer.

2. Disconnect the power adapter from your computer.
3. Remove the base cover.
4. Remove the battery.
5. Press and hold the power button for 20 seconds to drain the flea power.
6. Install the battery.
7. Install the base cover.
8. Connect the power adapter to your computer.
9. Turn on your computer.



 **NOTE:** For more information about performing a hard reset, search in the Knowledge Base Resource at [www.dell.com/support](http://www.dell.com/support).

# Getting help and contacting Dell

## Self-help resources


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


**Table 40. Self-help resources**

Self-help resources	Resource location
Information about Dell products and services	<a href="http://www.dell.com">www.dell.com</a>
My Dell app	
Tips	
Contact Support	In Windows search, type <code>Contact Support</code> , and press Enter.
Online help for operating system	<a href="http://www.dell.com/support/windows">www.dell.com/support/windows</a> <a href="http://www.dell.com/support/linux">www.dell.com/support/linux</a>
Access top solutions, diagnostics, drivers and downloads, and learn more about your computer through videos, manuals and documents.	Your Dell computer is uniquely identified by a Service Tag or Express Service Code. To view relevant support resources for your Dell computer, enter the Service Tag or Express Service Code at <a href="http://www.dell.com/support">www.dell.com/support</a> .  For more information on how to find the Service Tag for your computer, see <a href="#">Locate the Service Tag on your computer</a> .
Dell knowledge base articles for a variety of computer concerns	<ol style="list-style-type: none"> <li>1. Go to <a href="http://www.dell.com/support">www.dell.com/support</a>.</li> <li>2. On the menu bar at the top of the Support page, select <b>Support &gt; Knowledge Base</b>.</li> <li>3. In the Search field on the Knowledge Base page, type the keyword, topic, or model number, and then click or tap the search icon to view the related articles.</li> </ol>

## Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see [www.dell.com/contactdell](http://www.dell.com/contactdell).

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

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