

# Latitude 7310

## Setup and Specifications

1.0.0.0



## 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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# Set up your computer

## About this task

This section discusses setting up your Dell Latitude 7310 system for the first time, including setting up the Internet connectivity and, personalizing with Dell apps.

## Steps

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

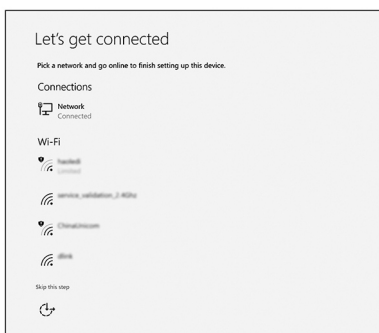


**NOTE:** To conserve battery power, the battery might enter power-saving mode.

2. Finish operating system initial setup.

### For Windows:

- a. Connect to a network or Windows updates.



**NOTE:** If connecting to a secured wireless network, enter the password for the wireless network access when prompted.

- b. Sign in to your Microsoft account or create an account.

Make it yours

Your Microsoft account opens a world of benefits. [Learn more](#)

Email or phone

Password

[Forgot my password](#)

No account? [Create one!](#)

[Microsoft privacy statement](#)

[Sign in](#)

c. On the **Support and Protection** screen, enter your contact details.

**For Ubuntu:**

Follow the on-screen instructions to complete the setup. For more information about installing and configuring Ubuntu, see the knowledge base articles [SLN151664](#) and [SLN151748](#) at [www.dell.com/support](http://www.dell.com/support).

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

**Table 1. Locate Dell apps**

	<p><b>Dell Product Registration</b></p> <p>Register your system unit with Dell.</p>
	<p><b>Dell Help and Support</b></p> <p>Access help and support for your system.</p>
	<p><b>SupportAssist</b></p> <p>Proactively checks the health of your system hardware and software.</p> <p><b>NOTE: Renew or upgrade your warranty by clicking the warranty expiry date in SupportAssist.</b></p>
	<p><b>Dell Update</b></p> <p>Utility updates your system with critical fixes and important device drivers as they become available.</p>
	<p><b>Dell Digital Delivery</b></p> <p>Download software applications including software that is purchased but not preinstalled on your system.</p>

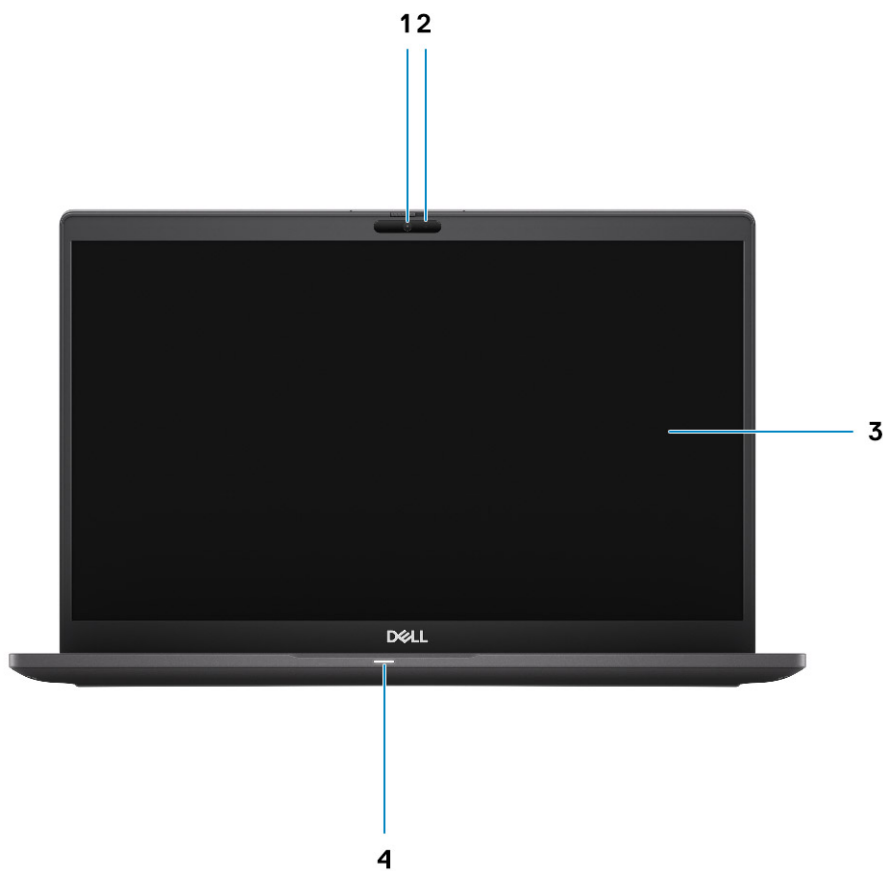
4. **NOTE: Create a recovery drive to troubleshoot and fix problems that may occur with Windows.**

Create recovery drive for Windows. For more information, see [Create a USB recovery drive for Windows](#).

## Chassis overview

### Display view

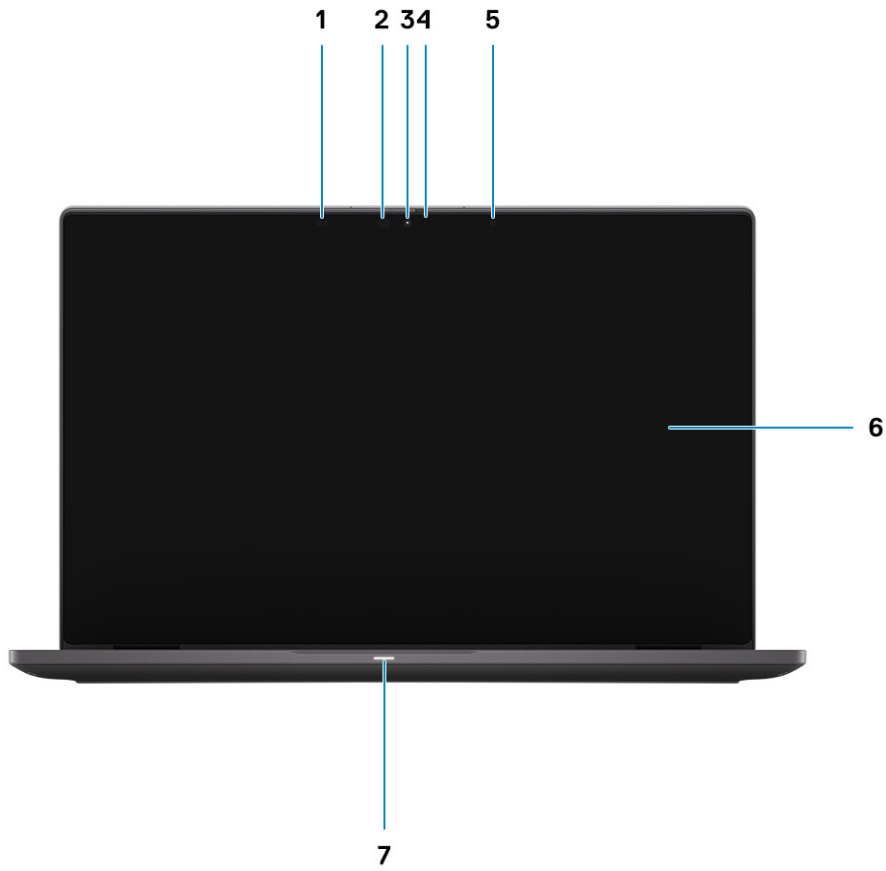
### Laptop



1. RGB or IR Camera (optional)
3. LCD panel

2. Camera status LED
4. Battery status LED

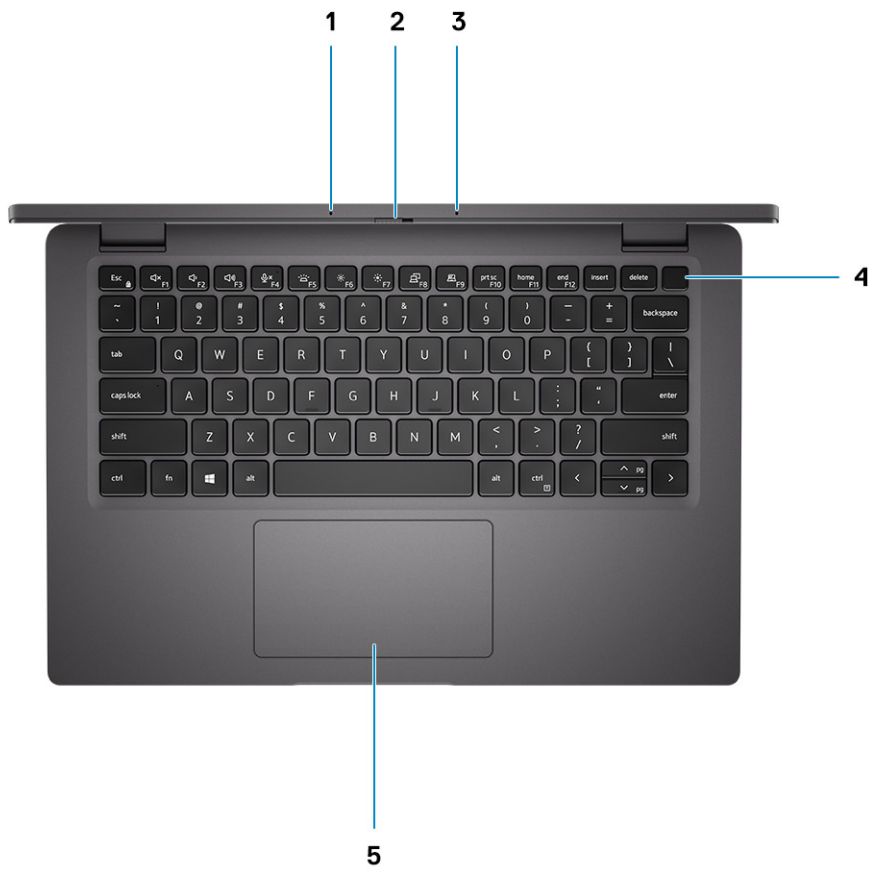
## 2-in-1



1. Proximity sensor
2. IR emitter (optional)
3. RGB or IR Camera (optional)
4. Camera status LED
5. Ambient Light Sensor (ALS) sensor
6. LCD panel
7. Battery status LED



# Palmrest view



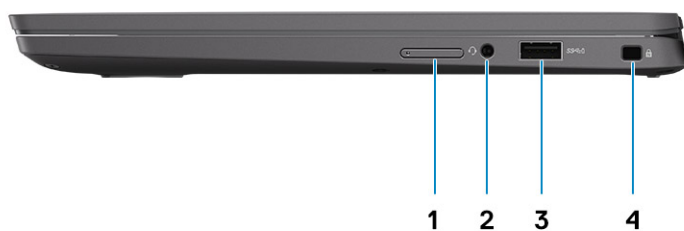
1. Microphone array
2. SafeView switch
3. Microphone array
4. Power button (Optional: Fingerprint reader)
5. Touchpad

## Left view



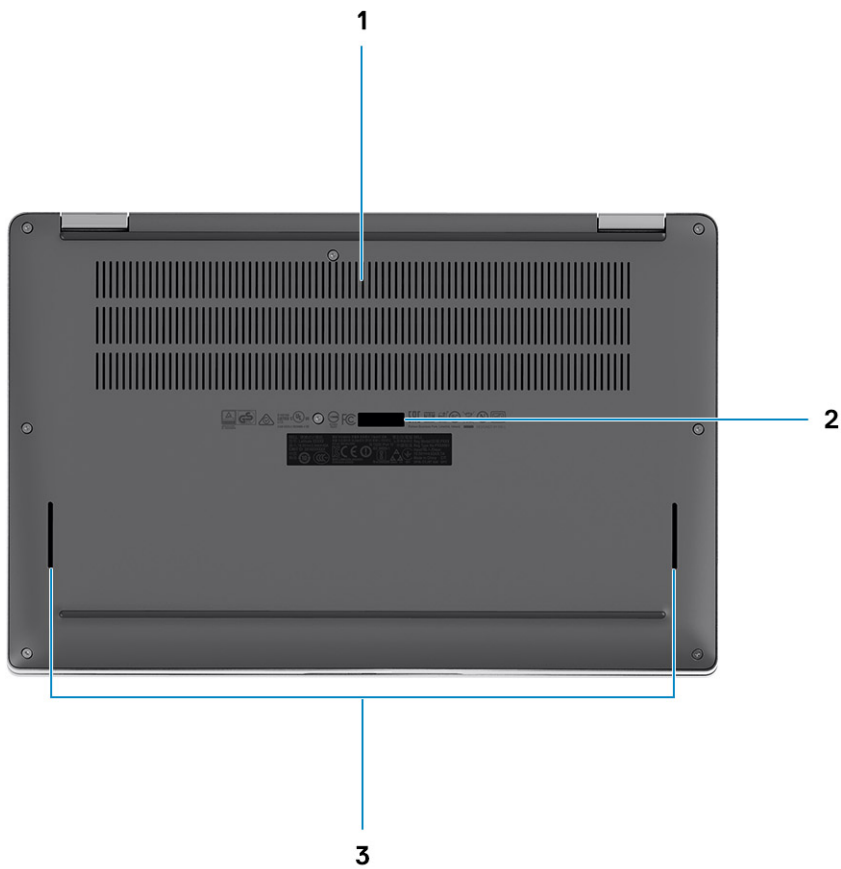
1. HDMI 2.0 port
2. USB 3.2 Gen 2 Type-C port with DisplayPort (alt mode), Thunderbolt 3.0 with Power Delivery(PD)
3. USB 3.2 Gen 2 Type-C port with DisplayPort (alt mode) and Thunderbolt 3.0 with PD
4. micro-SD card reader slot
5. Smart card reader slot (optional)

## Right view



1. SIM card slot (optional with WWAN configuration only)
2. Universal Audio Jack
3. USB 3.2 Gen 1 Type-A port with PowerShare
4. Wedge shaped lock slot

## Bottom view



1. Cooling vents
2. Service tag label
3. Speaker grills

## Modes

This section illustrates various usage modes of a Latitude 7310 Laptop and 2-in-1 computer:

### Notebook mode

**NOTE:** This usage mode applies to both laptop and 2-in-1 configurations.



## 2-in-1 Modes

**i** NOTE: These usage mode applies 2-in-1 configurations only.

### Tablet mode



### Stand mode



## Tent mode



## Keyboard shortcuts

This section describes the primary and secondary function associated with each of the Function Keys and their combination with function lock.

**NOTE:** Keyboard characters may differ depending on the keyboard language configuration. Keys that are 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, multimedia 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 2. List of function shortcuts**

Keys	Primary behavior	Secondary behavior (Fn + Key)
Esc	Esc	Fn Toggle
F1	Speaker mute	F1 behavior
F2	Volume decrease (-)	F2 behavior
F3	Volume increase (+)	F3 behavior
F4	Mic mute	F4 behavior
F5	Keyboard backlight	F5 behavior
F6	Screen brightness down (-)	F6 behavior
F7	Screen brightness up (+)	F7 behavior
F8	Toggle display (Win+P)	F8 behavior
F9	Toggle e-Privacy panel (optional with e-Privacy panel))	F9 behavior
F10	Print screen	F10 behavior
F11	Home	F11 behavior
F12	End	F12 behavior

# List of other keyboard shortcuts

Table 3. List of other keyboard shortcuts



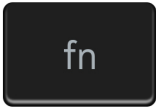




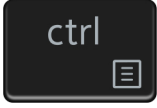

Function key combinations	Behavior
 + 	Pause/Break
 + 	Toggle scroll lock
 + 	System request
 + 	Open application menu

Table 4. List of other keyboard shortcuts

Function key combinations	Behavior
<b>Fn+Ctrl+B</b>	Break
<b>Fn+Shift+B</b>	Unobtrusive mode  <b>NOTE: Option is disabled by default, needs to be activated in the BIOS.</b>
<b>Fn+Up Arrow (↑)</b>	Page-up
<b>Fn+Down Arrow (↓)</b>	Page-down

# Specifications of Latitude 7310

## Dimensions and weights

The following table lists the height, width, depth, and weight of your Latitude 7310.

### Laptop

**Table 5. Dimensions and weight**

Description	Values
Height:	
Front height	0.69 in. (17.55 mm)
Rear height	0.72 in. (18.27 mm)
Width	12.07 in. (306.5 mm)
Depth	8.0 in. (203.19 mm)
Weight (starting)	2.69 lb (1.22 kg)

### 2-in-1

**Table 6. Dimensions and weight**

Description	Values
Height :	
Front height	0.67 in. (17.07 mm)
Rear height	0.76 in. (19.21 mm)
Width	12.07 in. (306.5 mm)
Depth	8.0 in. (203.19 mm)
Weight (starting)	2.91 lb (1.32 kg)

 **NOTE:** The weight of your computer depends on the configuration ordered and manufacturing variability.

## Processors

**Table 7. Processors**

Description	Values			
Processors	10 <sup>th</sup> Generation Intel Core i5-10210U (non-vPro)	10 <sup>th</sup> Generation Intel Core i5-10310U (vPro)	10 <sup>th</sup> Generation Intel Core i7-10610U (vPro)	10 <sup>th</sup> Generation Intel Comet Lake Core i7-10810U (vPro)



**Table 7. Processors (continued)**

Description	Values			
Wattage	15 W	15 W	15 W	15 W
Core count	4	4	4	6
Thread count	8	8	8	12
Speed	1.6 GHz to 4.2 GHz	1.7 GHz to 4.4 GHz	1.8 to 4.9 GHz	1.1 GHz to 4.9 GHz
Cache	6 MB	6 MB	8 MB	12 MB
Integrated graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics

## Chipset

**Table 8. Chipset**

Description	Values
Chipset	Intel Comet Lake U PCH
Processor	10 <sup>th</sup> Generation Intel Come Lake Core i5/i7 processors
DRAM bus width	64-bit
PCIe bus	Up to Gen3

## Operating system

- Windows 10 Home (64-bit)
- Windows 10 Professional (64-bit)
- Ubuntu 18.04 LTS (not available for 2-in-1 system configurations)

## Memory

The following table lists the memory specifications of your Latitude 7310.

**Table 9. Memory specifications**

Description	Values
Memory slots	Built on system board
Memory type	Dual-channel DDR4
Memory speed	2666 MHz
Maximum memory configuration	32 GB
Minimum memory configuration	4 GB
Memory configurations supported	<ul style="list-style-type: none"> <li>• 4 GB, 1 x 4 GB</li> <li>• 8 GB, 2 x 4 GB</li> <li>• 16 GB, 2 x 8 GB</li> <li>• 32 GB, 2 x 16 GB</li> </ul>

## External ports


The following table lists the external ports on your Latitude 7310.

**Table 10. External ports**

Description	Values
USB ports	<ul style="list-style-type: none"> <li>Two USB 3.2 Gen 1 Type-A ports, one with PowerShare</li> <li>Two USB 3.2 Gen 2 Type-C ports with Power Delivery, DisplayPort over USB Type-C, and Thunderbolt 3</li> <li>One Universal Audio Jack</li> <li>One HDMI 2.0 port</li> </ul>
Audio port	One Universal Audio Jack
Video port	<ul style="list-style-type: none"> <li>One HDMI 2.0 port</li> <li>Two USB 3.2 Gen 2 Display port USB Type-C ports</li> </ul>
Media-card reader	One micro-SD Card reader
Docking port	Supported by USB Type-C port
Power-adaptor port	Two USB 3.2 Gen 2 Type-C ports with Power Delivery
Security	One Wedge-shaped lock slot

## Internal connectors

**Table 11. Internal ports and connectors**

Description	Values
One M.2 Key-M (2280 or 2230) for solid-state drive	<ul style="list-style-type: none"> <li>Class 35: 128 GB, 256 GB, 512 GB 2230 SSD</li> <li>Class 40: 256 GB, 512 GB, 1 TB 2280 SSD</li> <li>Class 40: 256 GB, 512 GB 2280 SED</li> </ul>
One M.2 2230 Key-E for WWAN card	<ul style="list-style-type: none"> <li>Laptop: Qualcomm Snapdragon X20 LTE-A (DW5829e) eSIM capable</li> <li>2-in-1: Qualcomm Snapdragon X20 LTE-A (DW5821e) eSIM capable</li> </ul>
 <b>NOTE:</b> To learn more about the features of different types of M.2 cards, see the knowledge base article <a href="#">SLN301626</a> .	

## Wireless module

The following table lists the Wireless Local Area Network (WLAN) and Wireless Wide Area Network (WWAN) module specifications of your Latitude 7310.

### WLAN modules

The WiFi module on this system is built on the system board.

**Table 12. Wireless module specifications**

Description	Option one	Option two
Model number	Intel Wireless-AC 9560, 2x2, 802.11ac with Bluetooth 5.1 (non-vpro)	Intel Wi-Fi 6 AX201, 2x2, 802.11ax with Bluetooth 5.1 (vpro)
Transfer rate	<ul style="list-style-type: none"> <li>· 802.11ac - Up to 867 Mbps</li> <li>· 802.11n - Up to 450 Mbps</li> <li>· 802.11a/g - Up to 54 Mbps</li> <li>· 802.11b - Up to 11 Mbps</li> </ul>	<ul style="list-style-type: none"> <li>· 2.4 GHz 40M: Up to 574 Mbps</li> <li>· 5 GHz 80M: Up to 1.2 Gbps</li> <li>· 5 GHz 160M: Up to 2.4 Gbps</li> </ul>
Frequency bands supported	2.4 GHz/5 GHz	2.4 GHz/5 GHz
Wireless standards	IEEE 802.11a/b/g/n/ac MU-MIMO RX	IEEE 802.11a/b/g/n/ac/ax, 160MHz channel use
Encryption	<ul style="list-style-type: none"> <li>· 64/128-bit WEP/AES-CCMP</li> <li>· PAP, CHAP, TLS, GTC, MS-CHAP, MS-CHAPv2</li> </ul>	<ul style="list-style-type: none"> <li>· 64/128-bit WEP</li> <li>· 128-bit AES-CCMP</li> <li>· TKIP</li> </ul>
Bluetooth	Bluetooth 5.1	Bluetooth 5.1

## WWAN modules

The following list provides the mobile broadband module options available on Latitude 7310

### 1. 2-in-1:

- Qualcomm Snapdragon X20 Gigabit LTE CAT 16 (DW5821e; e-SIM enabled), WW excluding China, Turkey, US
- Qualcomm Snapdragon X20 Gigabit LTE CAT 16 (DW5821e) WW
- Qualcomm Snapdragon X20 Gigabit LTE CAT 16 (DW5821e) for AT&T, Verizon and Sprint, US only

### 2. Laptop:

- Qualcomm Snapdragon X20 LTE-A CAT 9 (DW5829e; e-SIM enabled) WW excluding China, Turkey, US
- Qualcomm Snapdragon X20 LTE-A CAT 9 (DW5829e) WW
- Qualcomm Snapdragon X20 LTE-A CAT 9 (DW5829e) for AT&T, Verizon and Sprint, US only

## Audio

**Table 13. Audio specification**

Descriptions	Values
Type	High-definition audio
Controller	Realtek ALC3254
Stereo conversion	Supported
Internal interface	High-definition audio
External interface	Universal audio jack
Speakers	Two
Internal speaker amplifier	Supported (audio codec integrated)
External volume controls	Keyboard shortcut controls
Speaker output:	

**Table 13. Audio specification (continued)**

Descriptions		Values
	Average	2 W
	Peak	2.5 W
Microphone		Dual-array microphones

## Storage

This section lists the storage options on your Latitude 7310.

Your computer supports one of the following configurations:

- M.2 2230, PCIe x4 NVMe, Class 35 SSD
- M.2 2280, PCIe x4 NVMe, Class 40 SSD
- M.2 2280, PCIe x4 NVMe, Class 40 SED

**NOTE:** The primary drive of your computer varies with the storage configuration. For computers with a M.2 drive, the M.2 drive is the primary drive.

**Table 14. Storage specifications**

Storage type	Interface type	Capacity
M.2 2230, PCIe x4 NVMe, Class 35 SSD	PCIe x4 NVMe 3.0	up to 512 GB
M.2 2280, PCIe x4 NVMe, Class 40 SSD	PCIe x4 NVMe 3.0	up to 1 TB
M.2 2280, PCIe x4 NVMe, Class 40 SED	PCIe x4 NVMe 3.0	up to 512 GB

## Media-card reader

**Table 15. Media-card reader specifications**

Description	Values
Type	micro-SD Card reader
Cards supported	<ul style="list-style-type: none"> <li>• micro-Secure Digital (SD)</li> <li>• micro-Secure Digital High Capacity (SDHC)</li> <li>• micro-SD Extended Capacity (SDXC)</li> </ul>

## Keyboard

**Table 16. Keyboard specifications**

Description	Values
Type	<ul style="list-style-type: none"> <li>• Standard spill resistant keyboard (Optional backlit)</li> </ul>
Layout	QWERTY/KANJI
Number of keys	<ul style="list-style-type: none"> <li>• United States and Canada: 81 keys</li> <li>• United Kingdom: 82 keys</li> <li>• Japan: 85 keys</li> </ul>
Size	X=18.07 mm key pitch

**Table 16. Keyboard specifications (continued)**

Description	Values
	Y=18.07 mm key pitch
Shortcut keys	<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. For more information see the <a href="#">Keyboard shortcuts</a> section.</p> <p><b>NOTE:</b> You can define the primary behavior of the function keys (F1–F12) changing Function Key Behavior in BIOS setup program.</p>

## Camera

The following table lists the camera specifications of your Latitude 7310.

**Table 17. Camera specifications**

Description	Values
Number of cameras	One
Camera type	<ul style="list-style-type: none"> <li>• 2.7 mm HD (1280 x 720 at 30 fps) RGB Webcam</li> <li>• 3 mm HD (1280 x 720 at 30 fps) RGB/IR Webcam with ALS and Proximity Sensor</li> <li>• 6 mm HD (1280 x 720 at 30 fps) RGB Webcam</li> <li>• 6 mm HD (1280 x 720 at 30 fps) RGB/IR Webcam with ALS and Proximity Sensor</li> </ul>
Camera location	Front
Camera sensor type	CMOS sensor technology
Camera resolution:	
Still image	1280 x 720 (HD)
Video	1280 x 720 (HD) at 30 fps
Infrared camera resolution:	
Still image	1280 x 720 (HD)
Video	1280 x 720 (HD) at 30 fps
Diagonal viewing angle:	
Camera	78.6 degrees
Infrared camera	78.6 degrees

# Touchpad

**Table 18. Touchpad specifications**

Description		Values
Resolution:		
	Horizontal	3054
	Vertical	1790
Dimensions:		
	Horizontal	105 mm (4.13 in.)
	Vertical	65 mm (2.56 in.)

## Touchpad gestures

For more information about touchpad gestures for Windows 10, see the Microsoft knowledge base article [4027871](https://support.microsoft.com/4027871) at [support.microsoft.com](https://support.microsoft.com).

## Fingerprint reader (optional)

The following table lists the specifications of the optional fingerprint-reader of your Latitude 7310.

**Table 19. Fingerprint reader specifications**

Description	Values	
	Option 1	Option 2
Fingerprint-reader sensor technology	Capacitive	Capacitive
Fingerprint-reader sensor resolution (dpi)	363	500
Fingerprint-reader sensor pixel size	76 x 100	108 x 88

## Power adapter

The following table lists the power adapter specifications of your Latitude 7310.

**Table 20. Power adapter specifications**

Description	Option one	Option two
Type	65 W, USB Type-C adapter	90 W, USB Type-C adapter
Input voltage	100 VAC/240 VAC	100 VAC/240 VAC
Input frequency	50 Hz/60 Hz	50 Hz/60 Hz
Input current (maximum)	1.50 A	1.70 A
Output current (continuous)	3.25 A	4.5 A
Rated output voltage	19.50 VDC	19.50 VDC
Temperature range:		

**Table 20. Power adapter specifications (continued)**

Description		Option one	Option two
	Operating	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)
	Storage	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)

## Battery

**Table 21. Battery specifications**

Specifications		Option 1	Option 2	Option 3
Type		Li-ion Polymer, 3-cell 39 WHr	Li-ion Polymer, 4-cell 52 WHr	Li-ion Polymer, 4-cell 52 WHr (LCL)
Voltage (VDC)		11.4 V	7.6 V	7.6 V
Weight (maximum)		0.207 kg (0.46 lb)	0.257 kg (0.56 lb)	0.257 kg (0.56 lb)
Dimensions:				
	Height	251 mm (9.88 in.)	251 mm (9.88 in.)	251 mm (9.88 in.)
	Width	85.8 mm (3.38 in.)	85.8 mm (3.38 in.)	85.8 mm (3.38 in.)
	Depth	5 mm (0.19 in.)	5 mm (0.19 in.)	5 mm (0.19 in.)
Temperature range:				
	Operating	<ul style="list-style-type: none"> <li>Charging: 0°C to 45°C (32°F to 113°F)</li> <li>Discharging: 0°C to 70°C (32°F to 158°F)</li> </ul>		
	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)		<ul style="list-style-type: none"> <li>ExpressCharge Boost (0% up to 35% ) : 20 minutes</li> <li>Express charge : 2 hours</li> <li>Standard charge: 3 hours</li> </ul> <p><b>NOTE:</b> Control the charging time, duration, start and end time, and so on using the Dell Power Manger application. For more information on the Dell Power Manger see, <a href="https://www.dell.com/support/home/product-support/product/power-manager/docs">https://www.dell.com/support/home/product-support/product/power-manager/docs</a></p>		
Life span (approximate)		1 Year or 300 discharge/charge cycles		3 Years or 1000 discharge/charge cycles
ExpressCharge		Supported	Supported	Supported
User replaceable		No (FRU)	No (FRU)	No (FRU)
Coin-cell battery		Main battery reserves 2% of capacity for RTC function.		
Coin-cell Operating time		68 days with 39 WHr battery		
		<p><b>NOTE:</b> Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.</p>		

**NOTE:**

For batteries with the ExpressCharge feature, the battery will typically have at least an 80% charge after about an hour of charging with the system off, and fully charged in about 2 hours with the system off.

Enabling ExpressCharge requires that both the computer and the battery used be ExpressCharge capable. If these requirements are not met, ExpressCharge will not be enabled.

## Display

The following tables lists the display specifications of your Latitude 7310.

**Table 22. 2-in-1 Display specifications**

Description	Options 1	Option 2
Display type	13-in. FHD SLP with Corning Gorilla Glass 6 (GG6)	13-in. FHD Digital Privacy SafeScreen with GG6
Display-panel technology	Wide Viewing Angle (WVA)	Wide Viewing Angle (WVA)
Display-panel dimensions (active area):		
	Height	165.24 mm (6.50 in.)
	Width	293.76 mm (11.56 in.)
	Diagonal	337.08 mm (13.3 in.)
Display-panel native resolution	1920 x 1080	1920 x 1080
Luminance (typical)	270	270
Megapixels	2.07	2.07
Color gamut	sRGB 100%	sRGB 100%
Pixels Per Inch (PPI)	166	166
Contrast ratio (min)	1000:1	1000:1
Response time (max)	35 ms	35 ms
Refresh rate	60 Hz	60 Hz
Horizontal view angle	80/80 degrees (min)	<ul style="list-style-type: none"> <li>· Sharing Mode: 80/80 degrees (min)</li> <li>· Privacy Mode (brightness &lt; 40%) : 30/30 degrees (max)</li> </ul>
Vertical view angle	80/80 degrees (min)	<ul style="list-style-type: none"> <li>· Sharing Mode: 80/80 degrees (min)</li> <li>· Privacy Mode (brightness &lt; 40%) : 30/30 degrees (max)</li> </ul>
Pixel pitch	0.153 mm	0.153 mm
Power consumption (maximum)	2.2 W + 0.16 W (Touch)	<ul style="list-style-type: none"> <li>· Sharing Mode: 2.36 W</li> <li>· Privacy Mode : 2.46 W + Touch Power: 0.16 W</li> </ul>
Anti-glare vs glossy finish	Anti-reflection/Anti-Smudge coating	Anti-reflection/Anti-smudge coating
Touch options	Touch with Active Pen Support	Touch with Active Pen Support



**Table 23. Laptop display specifications**

Description	Option 1	Option 2	Option 3	Option 4
Display type	13.3-in. High Definition (HD)	13.3-in. Full HD (FHD) Super Low Power (SLP)	13.3-in. FHD	13.3-in. FHD Digital Privacy SafeScreen
Display-panel technology	Twisted Nematic (TN)	Wide Viewing Angle (WVA)	Wide Viewing Angle (WVA)	Wide Viewing Angle (WVA)
Display-panel dimensions (active area):				
Height (mm)	293.83 (11.57 in.)	293.76 mm (11.56 in.)	293.76 mm (11.56 in.)	293.76 mm (11.56 in.)
Width (mm)	165.24 (6.50 in.)	165.24 (6.50 in.)	165.24 (6.50 in.)	165.24 (6.50 in.)
Diagonal (mm)	337.08 (13.3 in.)	337.04 (13.3 in.)	337.04 (13.3 in.)	337.04 (13.3 in.)
Display-panel native resolution	1366 x 768	1920 x 1080	1920 x 1080	1920 x 1080
Luminance (typical)	220 nt	300 nt	300 nt	300 nt
Megapixels	1.05	2.07	2.07	2.07
Color gamut	NTSC 45%	sRGB 100%	NTSC 72%	sRGB 100%
Pixels Per Inch (PPI)	118	166	166	166
Contrast ratio (min)	1000:1	1000:1	1000:1	1000:1
Response time (max)	25 ms	35 ms	35 ms	35 ms
Refresh rate	60 Hz	60 Hz	60 Hz	60 Hz
Horizontal view angle	40/40 degrees (min)	80/80 degrees (min)	80/80 degrees (min)	<ul style="list-style-type: none"> <li>· Sharing Mode: 80/80 degrees (min)</li> <li>· Privacy Mode (brightness &lt; 40%) : 30/30 degrees (max)</li> </ul>
Vertical view angle	10/30 degrees (min)	80/80 degrees (min)	80/80 degrees (min)	<ul style="list-style-type: none"> <li>· Sharing Mode: 80/80 degrees (min)</li> <li>· Privacy Mode (brightness &lt; 40%) : 30/30 degrees (max)</li> </ul>
Pixel pitch	0.2151 mm	0.153 mm	0.153 mm	0.153 mm
Power consumption (maximum)	2.85 W	2.0 W	4.8 W	<ul style="list-style-type: none"> <li>· Sharing Mode: 2.3 W</li> <li>· Privacy Mode (brightness &lt; 40%) : 2.4 W (max)</li> </ul>
Anti-glare vs glossy finish	Anti-glare	Anti-glare	Anti-glare	Anti-glare
Touch options	Non-touch	Non-touch	Touch (no active pen support)	Non-touch

# GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Latitude 7310.

**Table 24. GPU—Integrated**

Controller	External display support	Memory size	Processor
Intel UHD Graphics	<ul style="list-style-type: none"> <li>Two DisplayPort over USB Type-C with Thunderbolt 3.0 port</li> <li>One HDMI 2.0 port</li> </ul>	Shared system memory	10 <sup>th</sup> Generation Intel Comet Lake Core i5/i7 processors

# Computer environment

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

**Table 25. Computer environment**

Description	Operating	Storage
Temperature range	Normal ambient condition 25°C and 40~50% 0°C to Normal ambient condition 25°C and 40~50% 40°C (32°F to 104°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	Normal ambient condition 25°C and 40~50% 10% to Normal ambient condition 25°C and 40~50% 90% (non-condensing)	10% to 95% (non-condensing)
Vibration (maximum)*	0.66 GRMS	1.30 GRMS
Shock (maximum)	140 G†	160 G‡
Altitude (maximum)	0 m to 3048 m (0 ft to 10,000 ft)	0 m to 10,688 m (0 ft to 35,000 ft)

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

† Measured using a 2 ms half-sine pulse when the hard drive is in use.

‡ Measured using a 2 ms half-sine pulse when the hard-drive head is in parked position.

# Security

**Table 26. Security**

Feature	Specifications
Trusted Platform Module (TPM) 2.0	Integrated on the system board
Firmware TPM	Optional
Windows Hello Support	Yes, optional fingerprint on power button Optional IR camera
Cable lock	Wedge-shaped lock
Dell Smartcard Keyboard	Optional
FIPS 140-2 certification for TPM	Yes

**Table 26. Security (continued)**

<b>Feature</b>	<b>Specifications</b>
ControlVault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification	Yes, for FPR, SC and CSC/NFC
Fingerprint Reader Only	Touch Fingerprint reader in power button tied to ControlVault 3
Contacted Smart Card and ControlVault 3	FIPS 201 Smart card reader certification/SIPR

# System 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 27. 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.

## Boot Sequence

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

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

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

- Removable Drive (if available)
- STXXXX Drive (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 SupportAssist 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 F2 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

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

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 28. 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.
Ownership Tag	Displays the ownership 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.
<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.
Health	Displays the battery health.
AC Adapter	Displays whether an AC adapter is installed.

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

<b>Overview</b>	
<b>Processor Information</b>	
Processor Type	Displays the processor type.
Maximum Clock Speed	Displays the maximum processor clock speed.
Core Count	Displays the number of cores on the processor.
Processor L2 Cache	Displays the processor L2 Cache size.
Processor ID	Displays the processor identification code.
Processor L3 Cache	Displays the processor L3 Cache size.
Current Clock Speed	Displays the current processor clock speed.
Minimum Clock Speed	Displays the minimum processor clock speed.
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 Information</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.
<b>Device Information</b>	
Video Controller	Displays the integrate graphics information of the computer.
dGPU Video Controller	Displays the discrete graphics information of the computer.
Video BIOS Version	Displays the video BIOS version of the computer.
Video Memory	Displays the video memory information of the computer.
Panel Type	Displays the Panel Type of the computer.
Native Resolution	Displays the native resolution of the computer.
Audio Controller	Displays the audio controller information of the computer.
Wi-Fi Device	Displays the wireless device information of the computer.
Bluetooth Device	Displays the Bluetooth device information of the computer.

**Table 29. System setup options—Boot options menu**

<b>Boot options</b>	
<b>Advanced Boot Options</b>	
Enable UEFI Network Stack	Enables or disables UEFI Network Stack. Default: OFF.
<b>Boot Mode</b>	
Boot Mode: UEFI only	Displays the boot mode of this computer.
Enable Boot Devices	Enables or disables boot devices for this computer.
Boot Sequence	Displays the boot sequence.
<b>BIOS Setup Advanced Mode</b>	Enables or disables advanced BIOS settings. Default: ON.

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

Boot options	
<b>UEFI Boot Path Security</b>	Enables or disables the system to prompt the user to enter the Admin password when booting a UEFI boot path from the F12 boot menu.  Default: Always Except Internal HDD.

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

System Configuration	
<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>Enable SMART Reporting</b>	Enables or disables SMART (Self-Monitoring, Analysis, and Reporting Technology) during computer startup to report hard drive errors.  Default: OFF.
<b>Enable Audio</b>	Enables or disables all integrated audio controller.  Default: ON.
<b>Enable Microphone</b>	Enables or disables microphone.  Default: ON.
<b>Enable Internal Speaker</b>	Enables or disables internal speaker.  Default: ON.
<b>USB Configuration</b>	
Enable Boot Support	Enables or disables booting from USB mass storage devices such as external hard drive, optical drive, and USB drive.
Enable External USB Ports	Enables or disables USB ports to be functional in an operating system environment.
<b>SATA Operation</b>	
	Configures operating mode of the integrated SATA hard drive controller.  Default: RAID. SATA is configured to support RAID (Intel Rapid Restore Technology).
<b>Drives</b>	
M.2 PCIe SSD-0/SATA-2	Enables or disables various onboard drives.  Default: ON.
SATA-0	Default: ON.
Drive Information	Displays the information of various onboard drives.
<b>Miscellaneous Devices</b>	
Enable Camera	Enables or disables the camera.  Default: ON.
Keyboard Illumination	Configures the operating mode of the keyboard illumination feature.  Default: Disabled. The keyboard illumination will always be off.
Keyboard Backlight Timeout on AC	Configures the timeout value for the keyboard when an AC adapter is connected to the computer. The keyboard backlight timeout value is only effect when the backlight is enabled.  Default: 10 seconds.
Keyboard Backlight Timeout on Battery	Configures the timeout value for the keyboard when the computer is running on battery. The keyboard backlight timeout value is only effect when the backlight is enabled.

**Table 30. System setup options—System Configuration menu (continued)**

System Configuration	
Touchscreen	<p>Default: 10 seconds.</p> <p>Enables or disables the touchscreen for the operating system.</p> <p><b>NOTE:</b> Touchscreen will always work in the BIOS setup irrespective of this setting.</p> <p>Default: ON.</p>

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

Video	
<b>LCD Brightness</b>	
Brightness on battery power	Sets the screen brightness when the computer is running on battery power.
Brightness on AC power	Sets the screen brightness when the computer is running on AC power.
<b>EcoPower</b>	<p>Enables or disables EcoPower which increases the battery life by reducing the screen brightness when appropriate.</p> <p>Default: ON.</p>

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

Security	
Enable Admin Setup Lockout	<p>Enables or disables the user from entering BIOS Setup when an Admin Password is set.</p> <p>Default: OFF.</p>
Password Bypass	<p>Bypass the System (Boot) Password and the internal hard drive password prompts during a system restart.</p> <p>Default: Disabled.</p>
Enable Non-Admin Password Changes	<p>Enables or disables the user to change the system and hard drive password without the need for admin password.</p> <p>Default: ON.</p>
<b>Non-Admin Setup Changes</b>	
Allow Wireless Switch Changes	<p>Enables or disables changes to the setup option when an Administrator password is set.</p> <p>Default: OFF.</p>
Enable UEFI Capsule Firmware Updates	Enables or disables BIOS updates through UEFI capsule update packages.
<b>Computrace</b>	Enable or disable the BIOS module interface of the optional Computrace(R) Service from Absolute Software.
<b>Intel Platform Trust Technology On</b>	<p>Enables or disables Platform Trust Technology (PTT) visibility to the operating system.</p> <p>Default: ON.</p>
PPI Bypass for Clear Commands	<p>Enables or disables the operating system to skip BIOS Physical Presence Interface (PPI) user prompts when issuing the Clear command.</p> <p>Default: OFF.</p>
Clear	<p>Enables or disables the computer to clear the PTT owner information, and returns the PTT to the default state.</p> <p>Default: OFF.</p>



**Table 32. System setup options—Security menu (continued)**

Security	
<b>Intel SGX</b>	Enables or disables the Intel Software Guard Extensions (SGX) to provide a secured environment for running code/storing sensitive information.  Default: Software Control
<b>SMM Security Mitigation</b>	Enables or disables additional UEFI SMM Security Mitigation protections.  Default: OFF.  <b>NOTE:</b> This feature may cause compatibility issues or loss of functionality with some legacy tools and applications.
Enable Strong Passwords	Enables or disables strong passwords.  Default: OFF.
<b>Password Configuration</b>	Control the minimum and maximum number of characters that are allowed for Admin and System passwords.
<b>Admin Password</b>	Sets, Changes, or deletes the administrator (admin) password (sometimes called the "setup" password).
<b>System Password</b>	Sets, Changes, or deletes the system password.
Enable Master Password Lockout	Enables or disables the master password support.  Default: OFF.

**Table 33. System setup options—Secure Boot menu**

Secure Boot	
Enable Secure Boot	Enables or disables the computer to boot using only validated boot software.  Default: OFF.  <b>NOTE:</b> For Secure Boot to be enabled, the computer needs to be in UEFI boot mode and the Enable Legacy Option ROMs option needs to be turned off.
Secure Boot Mode	Selects the Secure Boot operation mode.  Default: Deployed Mode.  <b>NOTE:</b> Deployed Mode should be selected for normal operation of Secure Boot.

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

Expert Key Management	
Enable Custom Mode	Enables or disables the keys in the PK, KEK, db, and dbx security key databases to be modified.  Default: OFF.
Custom Mode Key Management	Selects the custom values for expert key management.  Default: PK.

**Table 35. System setup options—Performance menu**

Performance	
Intel Hyper-Threading Technology	Enables or disables the Intel Hyper-Threading Technology to use processor resources more efficiently.  Default: ON.

**Table 35. System setup options—Performance menu (continued)**

Performance	
Intel SpeedStep	Enables or disables the Intel SpeedStep Technology to dynamically adjust processor voltage and core frequency, decreasing average power consumption and heat production. Default: ON.
Intel TurboBoost Technology	Enabled or disabled the Intel TurboBoost mode of the processor. If enabled, the Intel TurboBoost driver increases the performance of the CPU or graphics processor. Default: ON.
Multi-Core Support	Changes the number of CPU cores available to the operating system. The default value is set to the maximum number of cores. Default: All Cores.
Enable C-State Control	Enables or disables the CPU's ability to enter and exit low-power states. Default: ON.

**Table 36. System setup options—Power Management menu**

Power Management	
Wake on AC	Enables the computer to turn on and go to boot when AC power is supplied to the computer. Default: OFF.
Auto on Time	Enables the computer to automatically power on for defined days and times. Default: Disabled. The system will not automatically power up.
Battery Charge Configuration	Enables the computer to run on battery during power usage hours. Use the below options to prevent AC power usage between certain times of each day. Default: Adaptive. Battery settings are adaptively optimized based on your typical battery usage pattern.
Enable Advanced Battery Charge Configuration	Enables Advanced Battery Charge Configuration from the beginning of the day to a specified work period. Advanced Battery Charged maximizes battery health while still supporting heavy use during the work day. Default: OFF.
Block Sleep	Blocks the computer from entering Sleep (S3) mode in the operating system. Default: OFF. <b>i NOTE: If enabled, the computer will not go to sleep, Intel Rapid Start will be disabled automatically, and the operating system power option will be blank if it was set to Sleep.</b>
Enable USB Wake Support	Enables the USB devices to wake the computer from Standby mode. Default: OFF.
Enable Intel Speed Shift Technology	Enables or disables Intel Speed Shift Technology support which enables the operating system to select the appropriate processor performance automatically. Default: ON.
Lid Switch	Enables the computer to power up from the off state whenever the lid is opened. Default: ON.

**Table 37. System setup options—Wireless menu**

Wireless	
<b>Wireless Switch</b>	Determines which wireless devices can be controlled by the Wireless Switch. For Windows 8 systems, this is controlled by an operating system drive directly. As a result, the setting does not affect the Wireless Switch behavior. <b>NOTE:</b> When both WLAN and WiGig are present, enable/disable controls are tied together. Thus, they cannot be enabled or disabled independently.
WLAN	Default: ON.
Bluetooth	Default: ON.
<b>Wireless Device Enable</b>	Enable or disable internal WLAN/Bluetooth devices.
WLAN	Default: ON.
Bluetooth	Default: ON.

**Table 38. System setup options—POST Behavior menu**

POST Behavior	
Numlock Enable	Enables or disables Numlock when the computer boots. Default: ON.
Enable Adapter Warnings	Enables the computer to display adapter warning messages during boot. Default: ON.
Extend BIOS POST Time	Configures the BIOS POST (Power-On Self-Test) load time. Default: 0 seconds.
Fastboot	Configures the speed of the UEFI boot process. Default: Thorough. Performs complete hardware and configuration initialization during boot.
Fn Lock Options	Enables or disables the Fn lock mode. Default: ON.
Lock Mode	Default: Lock Mode Secondary. Lock Mode Secondary = If this option is selected, the F1-F12 keys scan the code for their secondary functions.
Pull Screen Logo	Enabled or disabled the computer to display full screen logo if the image match screen resolution. Default: OFF.
Warnings and Errors	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 39. System setup options—Virtualization menu**

Virtualization	
Intel Virtualization Technology	Enables the computer to run a virtual machine monitor (VMM). Default: ON.

**Table 39. System setup options—Virtualization menu (continued)**

Virtualization	
VT for Direct I/O	Enables the computer to perform Virtualization Technology for Direct I/O (VT-d). VT-d is an Intel method that provides virtualization for memory map I/O.  Default: ON.

**Table 40. System setup options—Maintenance menu**

Maintenance	
Asset Tag	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.
Service Tag	Displays the Service Tag of the computer.
BIOS Recovery from Hard Drive	Enables the computer to recover from a bad BIOS image, as long as the Boot Block portion is intact and functioning.  Default: ON.  <b>i NOTE: BIOS recovery is designed to fix the main BIOS block and cannot work if the Boot Block is damaged. In addition, this feature cannot work in the event of EC corruption, ME corruption, or a hardware issue. The recovery image must exist on an unencrypted partition on the drive.</b>
BIOS Auto-Recovery	Enables the computer to automatically recover the BIOS without user actions. This feature requires BIOS Recovery from Hard Drive to be set to Enabled.  Default: OFF.
Start Data Wipe	<b>⚠ CAUTION: This Secure Wipe Operation will delete information in a way that it cannot be reconstructed.</b>  If enabled, the BIOS will queue up a data wipe cycle for storage devices that are connected to the motherboard on the next reboot.  Default: OFF.
Allow BIOS Downgrade	Controls flashing of the system firmware to previous revisions.  Default: ON.

**Table 41. System setup options—System Logs menu**

System Logs	
Power Event Log	Displays Power events.  Default: Keep.
BIOS Event Log	Displays BIOS events.  Default: Keep.
Thermal Event Log	Displays Thermal events.  Default: Keep.

**Table 42. System setup options—SupportAssist menu**

SupportAssist	
Dell Auto operating system Recovery Threshold	Controls the automatic boot flow for SupportAssist System Resolution Console and for Dell operating system Recovery tool.  Default: 2.
SupportAssist operating system Recovery	Enables or disables the boot flow for SupportAssist operating system Recovery tool in the even of certain system errors.

**Table 42. System setup options—SupportAssist menu (continued)**

<b>SupportAssist</b>
Default: ON.

## 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).

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

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

## Operating system

- Windows 10 Home (64-bit)
- Windows 10 Professional (64-bit)
- Ubuntu 18.04 LTS (not available for 2-in-1 system configurations)

## Downloading the audio driver

### Steps

1. Turn on your computer.
2. Go to [www.dell.com/support](http://www.dell.com/support).
3. Enter the Service Tag of your computer, and then click **Submit**.

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

4. Click **Drivers & downloads**.
5. Click the **Detect Drivers** button.
6. Review and agree to the Terms and Conditions to use **SupportAssist**, then click **Continue**.
7. If necessary, your computer starts to download and install **SupportAssist**.

 **NOTE:** Review on-screen instructions for browser-specific instructions.

8. Click **View Drivers for My System**.
9. Click **Download and Install** to download and install all driver updates detected for your computer.
10. Select a location to save the files.
11. If prompted, approve requests from **User Account Control** to make changes on the system.
12. The application installs all drivers and updates identified.

 **NOTE:** Not all files can be installed automatically. Review the installation summary to identify if manual installation is necessary.

13. For manual download and installation, click **Category**.
14. Click **Audio** in the drop-down list.
15. Click **Download** to download the audio driver for your computer.
16. After the download is complete, navigate to the folder where you saved the audio driver file.
17. Double-click the audio driver file icon and follow the instructions on the screen to install the driver.

## Downloading the graphics driver

### Steps

1. Turn on your computer.
2. Go to [www.dell.com/support](http://www.dell.com/support).
3. Enter the Service Tag of your computer, and then click **Submit**.

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

4. Click **Drivers & downloads**.

5. Click the **Detect Drivers** button.
6. Review and agree to the Terms and Conditions to use **SupportAssist**, then click **Continue**.
7. If necessary, your computer starts to download and install **SupportAssist**.

 **NOTE: Review on-screen instructions for browser-specific instructions.**

8. Click **View Drivers for My System**.
9. Click **Download and Install** to download and install all driver updates detected for your computer.
10. Select a location to save the files.
11. If prompted, approve requests from **User Account Control** to make changes on the system.
12. The application installs all drivers and updates identified.

 **NOTE: Not all files can be installed automatically. Review the installation summary to identify if manual installation is necessary.**

13. For manual download and installation, click **Category**.
14. Click **Video** in the drop-down list.
15. Click **Download** to download the graphics driver for your computer.
16. After the download is complete, navigate to the folder where you saved the graphics driver file.
17. Double-click the graphics driver file icon and follow the instructions on the screen to install the driver.

## Downloading the USB driver

### Steps

1. Turn on your computer.
2. Go to [www.dell.com/support](http://www.dell.com/support).
3. Enter the Service Tag of your computer, and then click **Submit**.

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

4. Click **Drivers & downloads**.
5. Click the **Detect Drivers** button.
6. Review and agree to the Terms and Conditions to use **SupportAssist**, then click **Continue**.
7. If necessary, your computer starts to download and install **SupportAssist**.

 **NOTE: Review on-screen instructions for browser-specific instructions.**

8. Click **View Drivers for My System**.
9. Click **Download and Install** to download and install all driver updates detected for your computer.
10. Select a location to save the files.
11. If prompted, approve requests from **User Account Control** to make changes on the computer.
12. The application installs all drivers and updates identified.

 **NOTE: Not all files can be installed automatically. Review the installation summary to identify if manual installation is necessary.**

13. For manual download and installation, click **Category**.
14. Click **Chipset** in the drop-down list.
15. Click **Download** to download the USB driver for your computer.
16. After the download is complete, browse the folder where you saved the USB driver file.
17. Double-click the USB driver file icon and follow the instructions on the screen to install the driver.

## Downloading the WiFi driver

### Steps

1. Turn on your computer.
2. Go to [www.dell.com/support](http://www.dell.com/support).
3. Enter the Service Tag of your computer, and then click **Submit**.

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

4. Click **Drivers & downloads**.
5. Click the **Detect Drivers** button.
6. Review and agree to the Terms and Conditions to use **SupportAssist**, then click **Continue**.
7. If necessary, your computer starts to download and install **SupportAssist**.

**i** | **NOTE:** Review on-screen instructions for browser-specific instructions.

8. Click **View Drivers for My System**.
9. Click **Download and Install** to download and install all driver updates detected for your computer.
10. Select a location to save the files.
11. If prompted, approve requests from **User Account Control** to make changes on the system.
12. The application installs all drivers and updates identified.

**i** | **NOTE:** Not all files can be installed automatically. Review the installation summary to identify if manual installation is necessary.

13. For manual download and installation, click **Category**.
14. Click **Network** in the drop-down list.
15. Click **Download** to download the WiFi driver for your computer.
16. After the download is complete, navigate to the folder where you saved the WiFi driver file.
17. Double-click the WiFi driver icon and follow the instructions on the screen to install the driver.

## Downloading the media-card reader driver

### Steps

1. Turn on your computer.
2. Go to [www.dell.com/support](http://www.dell.com/support).
3. Enter the Service Tag of your computer, and then click **Submit**.

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

4. Click **Drivers & downloads**.
5. Click the **Detect Drivers** button.
6. Review and agree to the Terms and Conditions to use **SupportAssist**, then click **Continue**.
7. If necessary, your computer starts to download and install **SupportAssist**.

**i** | **NOTE:** Review on-screen instructions for browser-specific instructions.

8. Click **View Drivers for My System**.
9. Click **Download and Install** to download and install all driver updates detected for your computer.
10. Select a location to save the files.
11. If prompted, approve requests from **User Account Control** to make changes on the system.
12. The application installs all drivers and updates identified.

**i** | **NOTE:** Not all files can be installed automatically. Review the installation summary to identify if manual installation is necessary.

13. For manual download and installation, click **Category**.
14. Click **Chipset** in the drop-down list.
15. Click **Download** to download the media-card reader driver for your computer.
16. After the download is complete, navigate to the folder where you saved the media-card reader driver file.
17. Double-click the media-card reader driver file icon and follow the instructions on the screen to install the driver.



# Downloading the chipset driver

## Steps

1. Turn on your computer.
2. Go to [www.dell.com/support](http://www.dell.com/support).
3. Enter the Service Tag of your computer, and then click **Submit**.

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

4. Click **Drivers & downloads**.
5. Click the **Detect Drivers** button.
6. Review and agree to the Terms and Conditions to use **SupportAssist**, then click **Continue**.
7. If necessary, your computer starts to download and install **SupportAssist**.

 **NOTE:** Review on-screen instructions for browser-specific instructions.

8. Click **View Drivers for My System**.
9. Click **Download and Install** to download and install all driver updates detected for your computer.
10. Select a location to save the files.
11. If prompted, approve requests from **User Account Control** to make changes on the computer.
12. The application installs all drivers and updates identified.

 **NOTE:** Not all files can be installed automatically. Review the installation summary to identify if manual installation is necessary.

13. For manual download and installation, click **Category**.
14. Click **Chipset** in the drop-down list.
15. Click **Download** to download the chipset driver for your computer.
16. After the download is complete, browse the folder where you saved the chipset driver file.
17. Double-click the chipset driver file icon and follow the instructions on the screen to install the driver.

# Downloading the network driver

## Steps


1. Turn on your computer.
2. Go to [www.dell.com/support](http://www.dell.com/support).
3. Enter the Service Tag of your computer, and then click **Submit**.

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

4. Click **Drivers & downloads**.
5. Click the **Detect Drivers** button.
6. Review and agree to the Terms and Conditions to use **SupportAssist**, then click **Continue**.
7. If necessary, your computer starts to download and install **SupportAssist**.

 **NOTE:** Review on-screen instructions for browser-specific instructions.

8. Click **View Drivers for My System**.
9. Click **Download and Install** to download and install all driver updates detected for your computer.
10. Select a location to save the files.
11. If prompted, approve requests from **User Account Control** to make changes on the system.
12. The application installs all drivers and updates identified.

 **NOTE:** Not all files can be installed automatically. Review the installation summary to identify if manual installation is necessary.

13. For manual download and installation, click **Category**.
14. Click **Network** in the drop-down list.
15. Click **Download** to download the network driver for your computer.



16. After the download is complete, navigate to the folder where you saved the network driver file.
17. Double-click the network driver file icon and follow the instructions on the screen to install the driver.

# 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 43. Self-help resources**

Self-help resources	Resource location
Information about Dell products and services	<a href="https://www.dell.com/">https://www.dell.com/</a>
Dell Support	
Tips	
Contact Support	In Windows search, type <code>Contact Support</code> , and press Enter.
Online help for operating system	<ul style="list-style-type: none"> <li>Windows: <a href="https://www.dell.com/support/windows">https://www.dell.com/support/windows</a></li> <li>Linux: <a href="https://www.dell.com/support/linux">https://www.dell.com/support/linux</a></li> </ul>
Troubleshooting information, user manuals, set up instructions, product specifications, technical help blogs, drivers, software updates, and so on.	<a href="https://www.dell.com/support/home/">https://www.dell.com/support/home/</a>
Dell knowledge base articles for various of system concerns:	<ol style="list-style-type: none"> <li>Go to <a href="https://www.dell.com/support/home/?app=knowledgebase">https://www.dell.com/support/home/?app=knowledgebase</a>.</li> <li>Type the subject or keyword in the <b>Search</b> box.</li> <li>Click <b>Search</b> to retrieve the related articles.</li> </ol>
Learn and get more information about your product: <ul style="list-style-type: none"> <li>Product specifications</li> <li>Operating system</li> <li>Setting up and using your product</li> <li>Data backup</li> <li>Troubleshooting and diagnostics</li> <li>Factory and system restore</li> <li>BIOS information</li> </ul>	Dell provides several online and telephone-based support and service options. 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. <ul style="list-style-type: none"> <li>Select <b>Detect Product</b>.</li> <li>Locate your product through the drop-down menu under <b>View Products</b>.</li> <li>Enter the <b>Service Tag number</b> or <b>Product ID</b> in the search bar.</li> <li>Once on product support page, scroll down to Manuals and Documents section to preview all the Manuals, documents, and other information for your product.</li> </ul>

# Contacting Dell

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

1. Go to <https://www.dell.com/support/>.
2. Select your country/region from the drop-down menu on the lower right corner of the page.
3. For **customized support**:
  - a. Enter your system Service Tag in the **Enter your Service Tag** field.
  - b. Click **submit**.
    - The support page that lists the various support categories is displayed.
4. For **general support**:
  - a. Select your product category.
  - b. Select your product segment.
  - c. Select your product.
    - The support page that lists the various support categories is displayed.
5. For contact details of Dell Global Technical Support, see <https://www.dell.com/contactdell>.
  -  **NOTE: The Contact Technical Support page is displayed with details to call, chat, or email the Dell Global Technical Support team.**
  -  **NOTE: Availability varies by country/region and product, and some services may not be available in your area.**