ALIENWARE™

Alienware m17 R2
Setup and Specifications

ALIENWARE™

Notes, cautions, and warnings

① **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.**
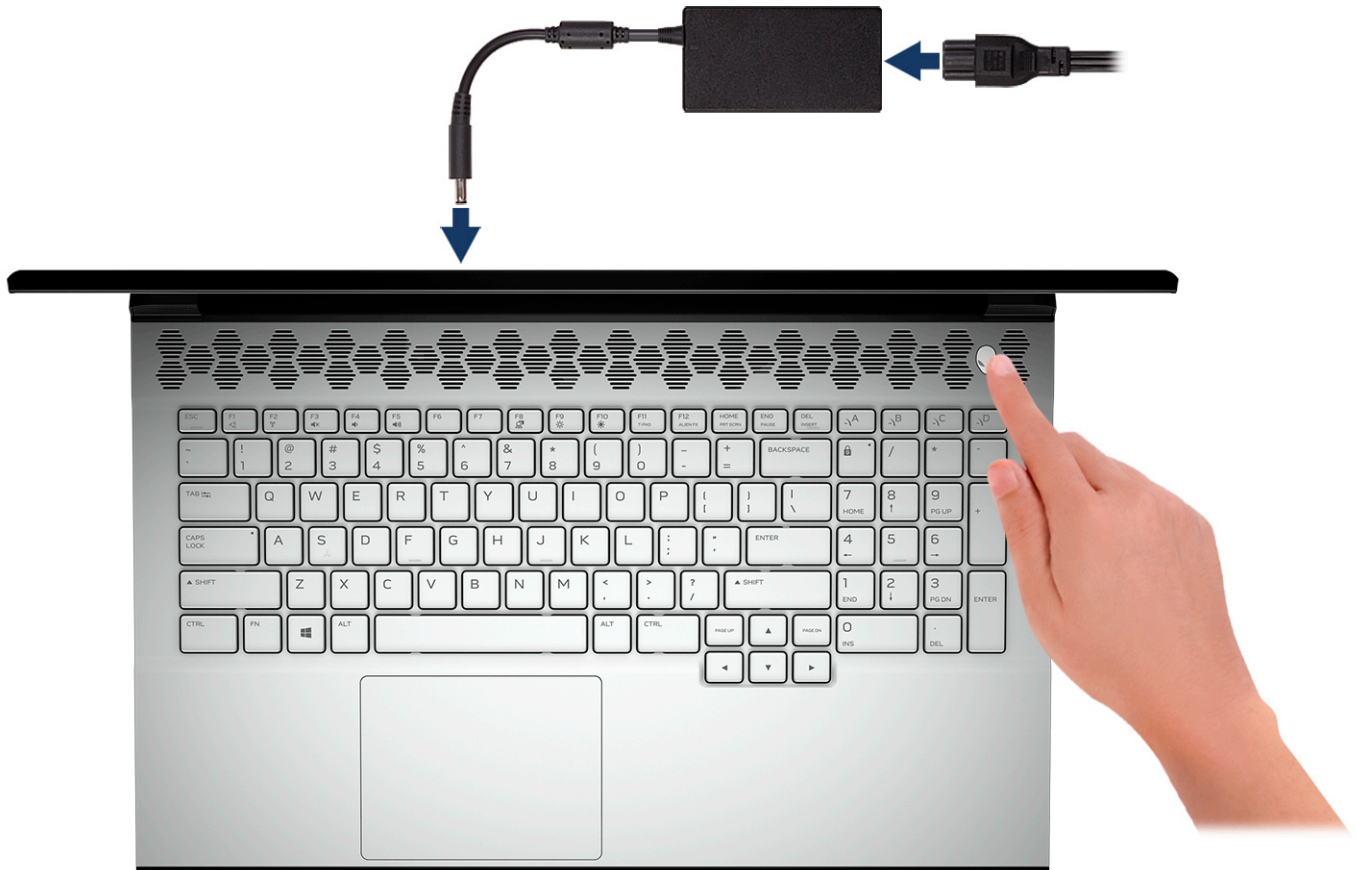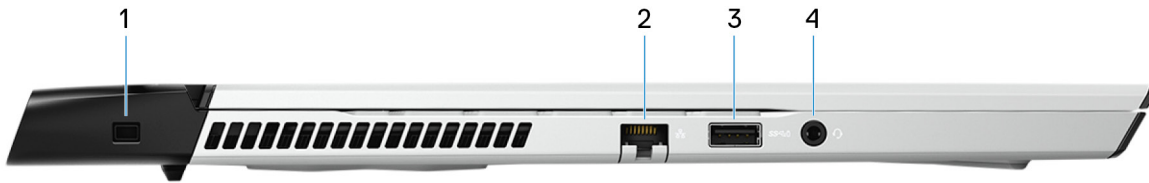
Contents

Set up your Alienware m17 R2

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

Connect the power adapter and press the power button.

Views of Alienware m17 R2

Left

1. **Security-cable slot (wedge-shaped)**

   Connect a security cable to prevent unauthorized movement of your computer.
2. **Network port**

   Connect an Ethernet (RJ45) cable from a router or a broadband modem for network or Internet access.

   ⚠ **CAUTION: To avoid damaging your computer, follow this procedure when disconnecting the ethernet port from the RJ-45 port. When disconnecting the ethernet cable from the RJ-45 port, press down on the securing clip to release it from the port and lift at an angle to disconnect the ethernet port from your computer.**
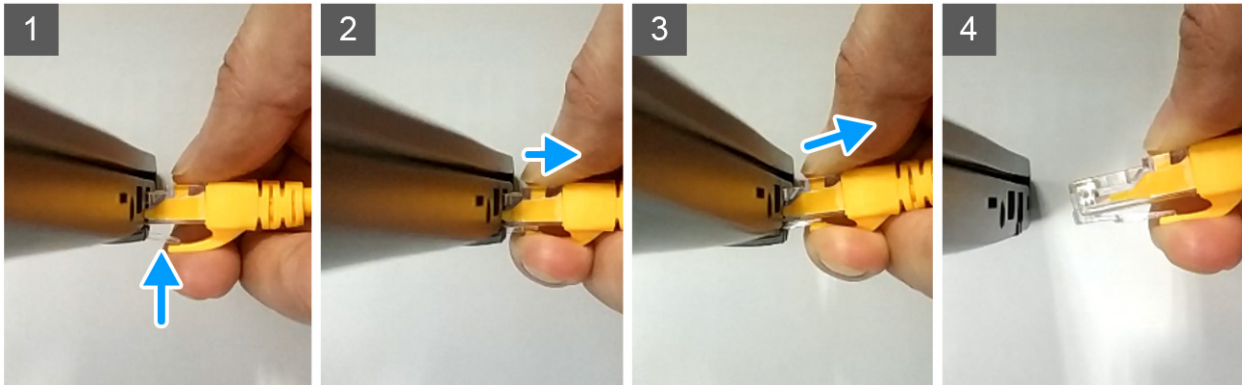
3. **USB 3.1 Gen 1 port with PowerShare**

   Connect peripherals such as external storage devices and printers.

   Provides data transfer speeds up to 5 Gbps. PowerShare enables you to charge your USB devices even when your computer is turned off.

   ⓘ **NOTE: If your computer is turned off or in hibernate state, you must connect the power adapter to charge your devices using the PowerShare port. You must enable this feature in the BIOS setup program.**

   ⓘ **NOTE: Certain USB devices may not charge when the computer is turned off or in sleep state. In such cases, turn on the computer to charge the device.**
4. **Headset port**

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

Right

1. **USB 3.1 Gen 1 ports (2)**

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

Base
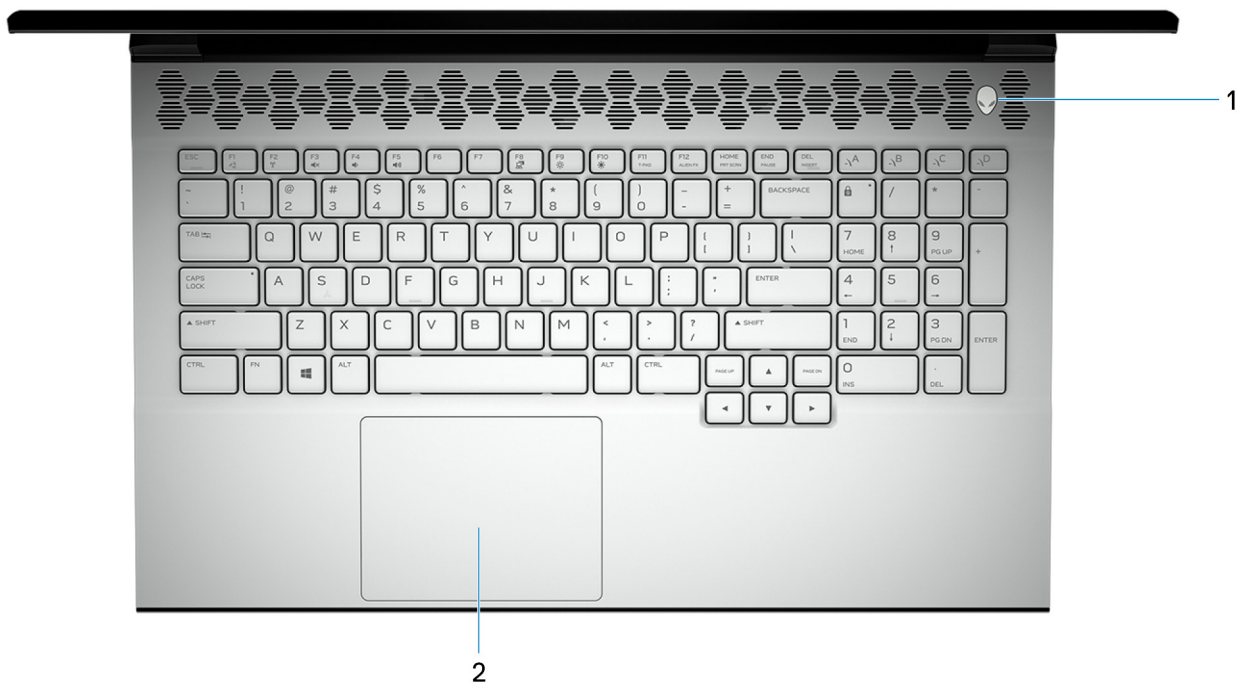
1. **Power button (Alienhead)**

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

   Press to put the computer in sleep state if it is turned on.

   Press and hold for 4 seconds to force shut-down the computer.

   > ⓘ **NOTE: You can customize the power-button behavior in Power Options.**

2. **Touchpad**

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

Display

1. **Left microphone**
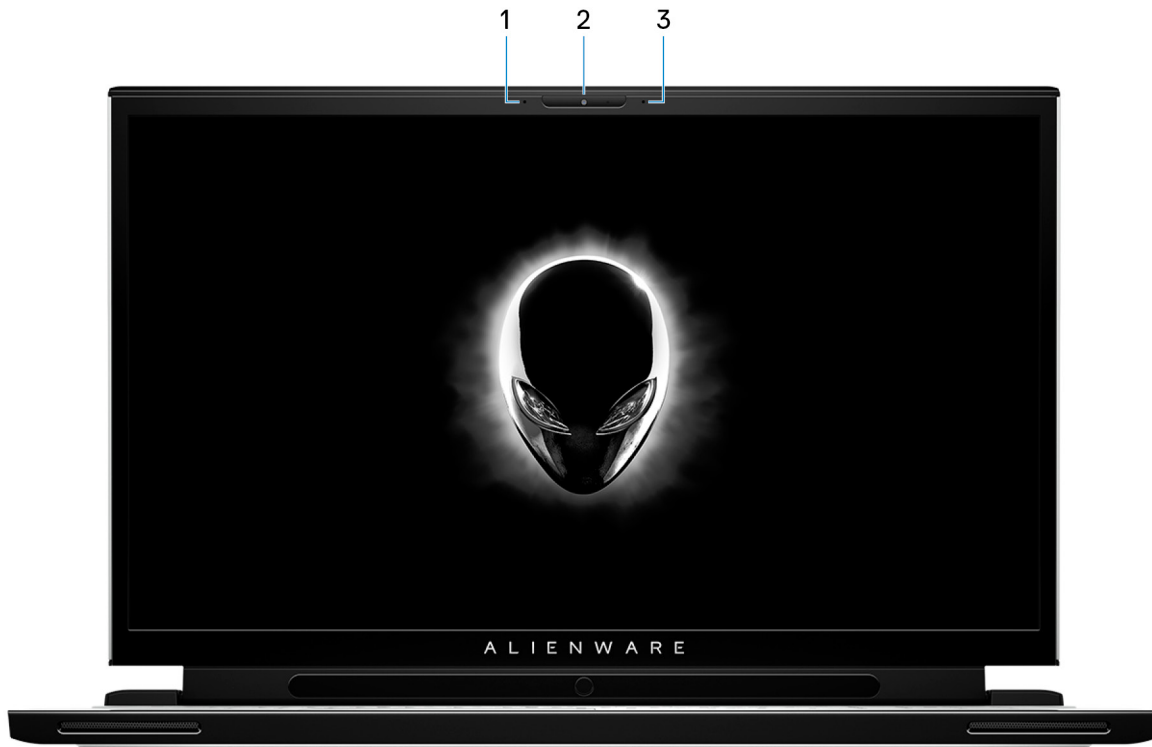
   Provides digital sound input for audio recording and voice calls.
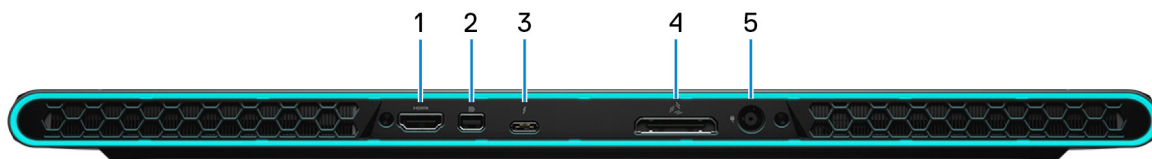2. **Camera**

   Enables you to video chat, capture photos, and record videos.
3. **Right microphone**

   Provides digital sound input for audio recording and voice calls.

Back

1. **HDMI port**

   Connect to a TV or another HDMI-in enabled device. Provides video and audio output.
2. **Mini DisplayPort**

   Connect to a TV or another DisplayPort-in enabled device. Provides video and audio output.
3. **Thunderbolt 3 (USB Type-C) port**

   Supports USB 3.1 Gen 2, DisplayPort 1.2, Thunderbolt 3 and also enables you to connect to an external display using a display adapter.

   Provides data transfer rates up to 10 Gbps for USB 3.1 Gen 2 and up to 40 Gbps for Thunderbolt 3.

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

   Connect an Alienware Graphics Amplifier to enhance the graphics performance.
5. **Power-adapter port**

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

Bottom
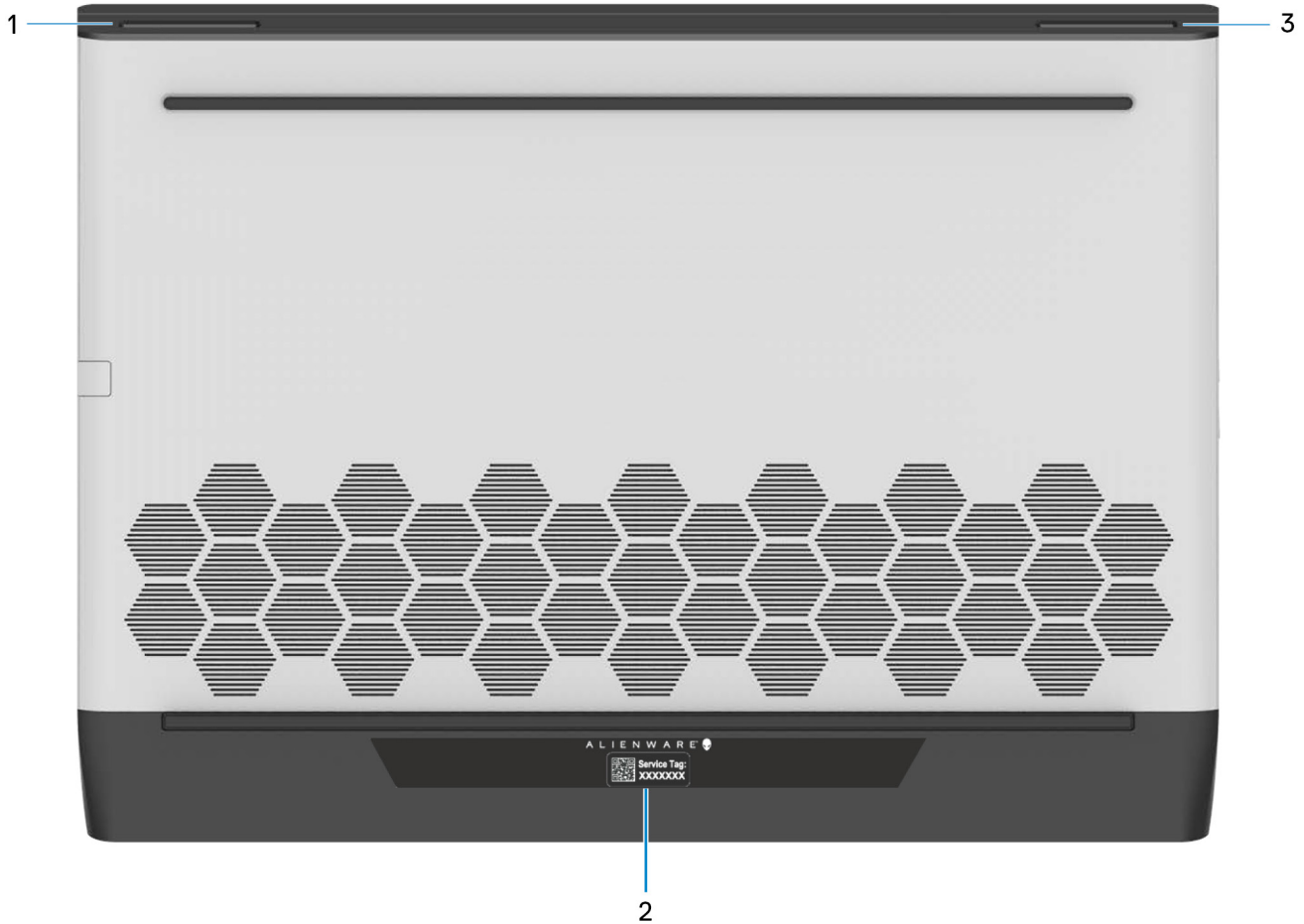
1. **Left speaker**

   Provides audio output.
2. **Service Tag label**

   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.
3. **Right speaker**

   Provides audio output.

Specifications of Alienware m17 R2

Dimensions and weight

Table 1. Dimensions and weight

Description		Values
Height:		
	Front	18.60 mm (0.73 in.)
	Rear	19.50 mm (0.77 in.)
Width		399.80 mm (15.74 in.)
Depth		294.30 mm (11.59 in.)
Weight (maximum)		2.63 kg (5.80 lb) ⓘ **NOTE: The weight of your computer depends on the configuration ordered and the manufacturing variability.**

Processors

Table 2. Processors

Description	Values			
Processors	9th Generation Intel Core i5-9300H	9th Generation Intel Core i7-9750H	9th Generation Intel Core i9-9880H	9th Generation Intel Core i9-9980HK
Wattage	45 W	45 W	45 W	45 W
Core count	4	6	8	8
Thread count	8	12	16	16
Speed	Up to 4.1 GHz	Up to 4.5 GHz	Up to 4.8 GHz	Up to 5 GHz
Cache	8 MB	12 MB	16 MB	16 MB
Integrated graphics	Intel UHD Graphics 630	Intel UHD Graphics 630	Intel UHD Graphics 630	Intel UHD Graphics 630

Chipset

Table 3. Chipset

Description	Values
Chipset	HM370
Processor	9th Generation Intel Core i5/i7/i9
DRAM bus width	64-bit
Flash EPROM	16 MB
PCIe bus	Up to Gen3.0

Operating system

- Windows 10 Home (64-bit)
- Windows 10 Professional (64-bit)

Memory

Table 4. Memory specifications

Description	Values
Type	Onboard system memory, Dual-channel DDR4 ⓘ **NOTE: The memory is integrated on the system board and cannot be upgraded after purchase.**
Speed	2666 MHz
Maximum memory	16 GB
Minimum memory	8 GB
Configurations supported	- 8 GB DDR4 at 2666 MHz (2 x 4 GB) - 16 GB DDR4 at 2666 MHz (2 x 8 GB)

Ports and connectors

Table 5. External ports and connectors

Description	Values
External:	
Network	One RJ-45 port
USB	- Two USB 3.1 Gen 1 ports - One USB 3.1 Gen1 port with PowerShare - One Thunderbolt 3 (USB 3.1 Gen 2) port
Audio	One headset (headphone and microphone combo) port
Video	- One HDMI 2.0 port - One mini DisplayPort 1.4 - One Thunderbolt 3 (USB 3.1 Gen 2) port
Media card reader	Not supported
Docking port	One external graphics display port ⓘ **NOTE: This external graphics display port is compatible with the Alienware Graphics Amplifier.**
Power adapter port	One 7.4 mm x 5.1 mm DC-in
Security	One security-cable slot (wedge-shaped)

Table 6. Internal ports and connectors

Description	Values
Internal:	

Table 6. Internal ports and connectors(continued)

Description	Values
M.2	▪ One M.2 slot for 2230/2280 SATA AHCI/PCIe, NVMe solid–state drive ▪ One M.2 slot for 2230/2280 PCIe, NVMe solid–state drive ⓘ **NOTE: To learn more about the features of different types of M.2 cards, see the knowledge base article SLN301626.**

Communications

Ethernet

Table 7. Ethernet specifications

Description	Values
Model number	▪ Killer E2600 PCI–E Gigabit Ethernet Controller ▪ Killer E3000 PCI–E Gigabit Ethernet Controller
Transfer rate	1000/2500 Mbps

Wireless module

Table 8. Wireless module specifications

Description	Values	
Model number	Intel 8265 ⓘ **NOTE: The wireless card is soldered onto the left I/O-board and cannot be upgraded after purchase.**	Rivet Killer 1650w ⓘ **NOTE: The wireless card is soldered onto the left I/O-board and cannot be upgraded after purchase.**
Transfer rate	Up to 867 Mbps	Up to 2400 Mbps
Frequency bands supported	2.4 GHz/5 GHz	2.4 GHz/5 GHz
Wireless standards	▪ WiFi 802.11a/b/g ▪ Wi-Fi 4 (WiFi 802.11n) ▪ Wi-Fi 5 (WiFi 802.11ac)	▪ Wi-Fi 802.11a/b/g ▪ Wi-Fi 4 (Wi-Fi 802.11n) ▪ Wi-Fi 5 (Wi-Fi 802.11ac) ▪ Wi-Fi 6 (Wi-Fi 802.11ax)
Encryption	▪ 64-bit/128-bit WEP ▪ AES-CCMP ▪ TKIP	▪ 64-bit/128-bit WEP ▪ AES-CCMP ▪ TKIP
Bluetooth	Bluetooth 4.2	Bluetooth 5

Audio

Table 9. Audio specifications

Description	Values
Controller	Realtek ALC3281-CG
Stereo conversion	Supported

Table 9. Audio specifications(continued)

Description	Values
Internal interface	High definition audio interface
External interface	• Universal Audio Jack • HDMI 2.0 port
Speakers	2
Internal speaker amplifier	Supported
External volume controls	Keyboard shortcut controls
Speaker output:	
	Average	2 W
	Peak	2.5 W
Subwoofer output	Not supported
Microphone	Digital-array microphones in camera assembly

Storage

Your computer supports one of the following configurations:

• One M.2 2230/2280 solid-state drive
• Two M.2 2230/2280 solid-state drives
• One M.2 2230 and one M.2 2280 solid-state drives

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 10. Storage specifications

Storage type	Interface type	Capacity
M.2 2280 solid-state drive	SATA AHCI, up to 6 Gbps	Up to 2 TB
M.2 2230/2280 solid-state drive	PCIe Gen3.0x4 NVMe, up to 32 Gbps	Up to 2 TB

Keyboard

Table 11. Keyboard specifications

Description	Values
Type	RGB backlit keyboard
Layout	QWERTY
Number of keys	• United States and Canada: 103 keys • United Kingdom: 104 keys • Japan: 107 keys
Size	X=19.05 mm key pitch Y=19.05 mm key pitch

Table 11. Keyboard specifications(continued)

Description	Values
Shortcut keys	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. ⓘ **NOTE: You can define the primary behavior of the function keys (F1–F12) changing Function Key Behavior in BIOS setup program.** Keyboard shortcuts

Camera

Table 12. Camera specifications

Description		Values
Number of cameras		One camera
Type		HD RGB camera
Location		Front camera
Sensor type		CMOS sensor technology
Resolution:		
	Still image	0.92 megapixel
	Video	1280 x 720 (HD) at 30 fps
Diagonal viewing angle		74.9 degrees

Touchpad

Table 13. Touchpad specifications

Description		Values
Resolution:		
	Horizontal	1229
	Vertical	929
Dimensions:		
	Horizontal	105 mm (4.13 in.)
	Vertical	80 mm (3.15 in.)

Touchpad gestures

For more information about touchpad gestures for Windows 10, see the Microsoft knowledge base article 4027871 at support.microsoft.com.

Power adapter

Table 14. Power adapter specifications

Description	Values		
Type	E4 130W	E4 180W	E4 240W
Diameter (connector)	7.4 mm x 5.1 mm	7.4 mm x 5.1 mm	7.4 mm x 5.1 mm
Input voltage	100 VAC x 240 VAC	100 VAC x 240 VAC	100 VAC x 240 VAC
Input frequency	50 Hz x 60 Hz	50 Hz x 60 Hz	50 Hz x 60 Hz
Input current (maximum)	2.50 A	2.34 A	3.50 A
Output current (continuous)	6.70 A	9.23 A	12.31 A
Rated output voltage	19.50 VDC	19.50 VDC	19.50 VDC
Temperature range:			
Operating	0°C to 40°C (32°F to 104°F)	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)	-40°C to 70°C (-40°F to 158°F)

Battery

Table 15. Battery specifications

Description	Values
Type	6-cell lithium-ion polymer battery
Voltage	11.40 VDC
Weight (maximum)	0.32 kg (0.71 lb)
Dimensions:	
Height	119.31 mm (4.70 in.)
Width	311.40 mm (12.26 in.)
Depth	9.90 mm (0.39 in.)
Temperature range:	
Operating	0°C to 70°C (32°F to 158°F)
Storage	-20°C to 60°C (-4°F to 140°F)
Operating time	Varies depending on operating conditions and can reduce under certain power-intensive conditions
Charging time (approximate)	4 hours (when the computer is off) ⓘ **NOTE: Control the charging time, duration, start and end time, and so on using the Dell Power Manager application.**

Table 15. Battery specifications(continued)

Description	Values
	For more information on the Dell Power Manager see, *Me and My Dell* **on** **www.dell.com/** ⓘ **NOTE: The operating range for battery charging operations is 0°C to 50°C (32°F to 122°F), charging will discontinue when the battery temperature falls out of this range.**
Life span (approximate)	300 discharge/charge cycles
Coin-cell battery	CR2032
Operating time	Varies depending on operating conditions and can reduce under certain power-intensive conditions

Display

Table 16. Display specifications

Description		Values	
Type		Full High Definition (FHD)	Full High Definition (FHD)
Panel technology		Wide Viewing Angle (WVA)	Wide Viewing Angle (WVA)
Luminance (typical)		300 nits	300 nits
Dimensions (Active area):			
	Height	214.81 mm (8.46 in.)	214.81 mm (8.46 in.)
	Width	381.89 mm (15.04 in.)	381.89 mm (15.04 in.)
	Diagonal	438.16 mm (17.25 in.)	438.16 mm (17.25 in.)
Native resolution		1920 x 1080	1920 x 1080
Megapixels		2.07	2.07
Color gamut		72% (NTSC)	72% (NTSC)
Pixels per inch (PPI)		127	127
Contrast ratio (min)		700:1	800:1
Response time (max)		35 ms	19 ms
Refresh rate		60 Hz	144 Hz
Horizontal view angle		85 degrees	85 degrees
Vertical view angle		85 degrees	85 degrees
Pixel pitch		0.20 mm	0.20 mm
Power consumption (maximum)		8 W	8.5 W
Anti-glare vs glossy finish		Anti-glare	Anti-glare

Table 16. Display specifications(continued)

Description	Values	
Touch options	Not supported	Not supported

Video

Table 17. Discrete graphics specifications

Discrete graphics			
Controller	External display support	Memory size	Memory Type
NVIDIA GeForce GTX 1650	• One HDMI 2.0 port • One mini DisplayPort 1.4	4 GB	GDDR5
NVIDIA GeForce GTX 1660 TI	• One HDMI 2.0 port • One mini DisplayPort 1.4	6 GB	GDDR6
NVIDIA GeForce RTX 2060	• One HDMI 2.0 port • One mini DisplayPort 1.4	6 GB	GDDR6
NVIDIA GeForce RTX 2070 Max-Q	• One HDMI 2.0 port • One mini DisplayPort 1.4	8 GB	GDDR6
NVIDIA GeForce RTX 2080 Max-Q	• One HDMI 2.0 port • One mini DisplayPort 1.4	8 GB	GDDR6

Table 18. Integrated graphics specifications

Integrated graphics			
Controller	External display support	Memory size	Processor
Intel UHD 630 Graphics	One Thunderbolt 3 (USB 3.1 Gen 2) port	Shared system memory	9th Generation Intel Core i5/i7/i9

Computer environment

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

Table 19. 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	1.30 GRMS
Shock (maximum)	110 G†	160 G†
Altitude (maximum)	-15.2 m to 3048 m (4.64 ft to 5518.4 ft)	-15.2 m to 10668 m (4.64 ft to 19234.4 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.

Hybrid power

The Hybrid power feature enables your computer to function optimally during the following instances of heavy loading.

Examples of heavy loading include:

- Graphics and processor–intensive applications and/or gaming
- External power loading from devices relying on your computer as a power source such as gaming mice, keyboards, external speakers, and headsets

When during instances of heavy loading, system performance is maintained through hybrid power. Hybrid power coordinates the power drawn from the power adapter and battery, allowing power to be drawn from the battery for up to five percent per hour with the power adapter plugged in. This feature is disabled when the battery falls below 20 percent charge.

The following table shows the different scenarios and benefits of hybrid power:

Table 20. Hybrid power feature description

Battery capacity	Feature description
100%~20%	When the battery charge reaches 100 percent and the power adapter is plugged in, battery stops charging to avoid lithium-ion degradation. Under heavy loading, hybrid power is enabled and battery charge will deplete to maintain system performance. If your computer is no longer under heavy load, battery will resume charging.
<20%	Hybrid function is disabled. Computer will throttle during heavy loading and may encounter performance issues.

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 21. List of keyboard shortcuts

Keys	Description
FN + F1	Disconnect Alienware Graphics Amplifier
FN + F2	Disable/enable wireless
FN + F3 MUTE	Mute audio
FN + F4	Decrease volume
FN + F5	Increase volume
FN + F8	Switch to external display
FN + F9	Decrease brightness
FN + F10	Increase brightness
FN + F11 T-PAD	Disable/enable touchpad
FN + F12 ALIEN FX	Disable/enable AlienFX

Your computer comes with pre-programmable macro keys that enable you to execute multiple actions with a single key press.

Table 22. List of Macro keys

Keys	Description
A	
B	Macro keys ⓘ **NOTE: You can configure modes and assign multiple tasks for the macro keys on the keyboard.**
C	

Table 22. List of Macro keys(continued)

Keys	Description

Alienware Command Center

Alienware Command Center (AWCC) provides a single interface to customize and enhance the gaming experience. The AWCC dashboard displays most recently played or added games, and provides game-specific information, themes, profiles, and access to computer settings. You can quickly access settings such as game-specific profiles and themes, lighting, macros, and audio that are critical to the gaming experience.

AWCC also supports AlienFX 2.0. AlienFX enables you to create, assign, and share game-specific lighting maps to enhance the gaming experience. It also enables you to create your own individual lighting effects and apply them to the computer or attached peripherals. AWCC embeds Peripheral Controls to ensure a unified experience and the ability to link these settings to your computer or game.

AWCC supports the following features:

- FX: Create and manage the AlienFX zones.
- Fusion: Includes the ability to adjust game-specific Power Management, Sound Management, and Thermal Management features.
- Peripheral Management: Enables peripherals to appear in and be managed in Alienware Command Center. Supports key peripheral settings and associates with other functions such as profiles, macros, AlienFX, and game library.

AWCC also supports Sound Management, Thermal Controls, CPU, GPU, Memory (RAM) monitoring. For more information about AWCC, see the *Alienware Command Center Online Help*.

Getting help and contacting Alienware

Self-help resources

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

Table 23. Alienware products and online self-help resources

Self-help resources	Resource location
Information about Alienware products and services	www.alienware.com
Dell Help & Support app	
Tips	
Contact Support	In Windows search, type **Help and Support**, and press **Enter.**
Online help for operating system	www.dell.com/support/windows www.dell.com/support/linux
Troubleshooting information, user manuals, setup instructions, product specifications, technical help blogs, drivers, software updates, and so on	www.alienware.com/gamingservices
Videos providing step-by-step instructions to service your computer	www.youtube.com/alienwareservices

Contacting Alienware

To contact Alienware for sales, technical support, or customer service issues, see www.alienware.com.

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

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