


Alienware m16 R2

Owner's Manual

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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.

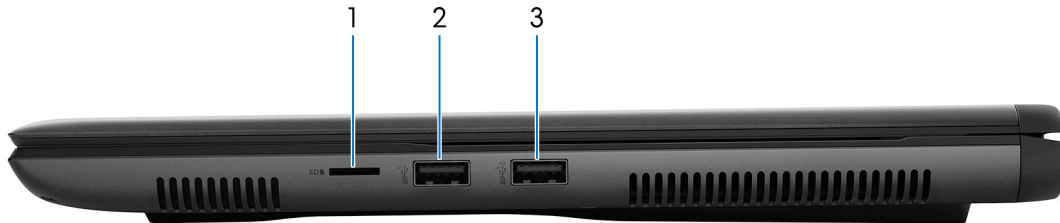
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Contents

Chapter 1: Views of Alienware m16 R2	7
Right	7
Left	7
Front	8
Back	9
Top	10
Bottom	11
Service Tag	11
Battery charge and status light	12
Chapter 2: Set up your Alienware m16 R2	13
Chapter 3: Specifications of Alienware m16 R2	14
Dimensions and weight	14
Processor	14
Chipset	15
Operating system	15
Memory	16
External ports	16
Internal slots	17
Ethernet	17
Wireless module	17
Audio	18
Storage	18
Media-card reader	18
Keyboard	19
Keyboard shortcuts	19
Camera	21
Touchpad	21
Power adapter	22
Battery	22
GPU—Integrated	23
GPU—Discrete	23
External display support	24
Display	24
Operating and storage environment	25
Dell support policy	25
Dell low blue light display	25

Views of Alienware m16 R2

Right



1. microSD-card slot

Read from and write to the microSD card.

2. USB 3.2 Gen 1 port

Connect devices such as external storage devices, printers, and external displays. Provides data transfer speeds up to 10 Gbps.

3. USB 3.2 Gen 1 port with PowerShare

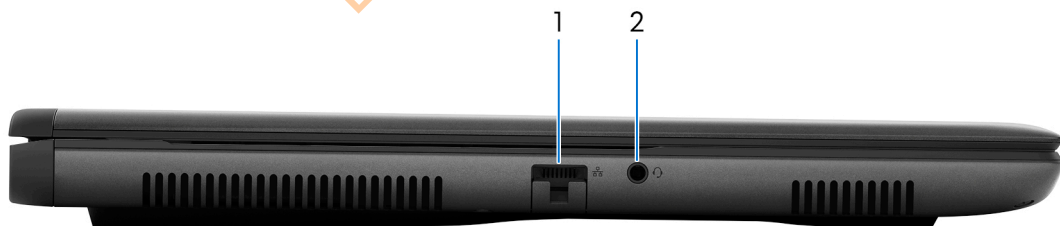
Connect devices such as external storage devices and printers.

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 a hibernating 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 a sleep state. In such cases, turn on the computer to charge the device.

Left



1. Network port

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

2. Universal audio jack

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

Front



1. Left microphone

Provides digital sound input for audio recording and voice calls.

2. Infrared emitter

Emit infrared light, which enables the infrared camera to sense and track motion.

3. Infrared camera

Enhances security when paired with Windows Hello face authentication.

4. Camera

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

5. Camera-status light

Turns on when the camera is in use.

6. Right microphone

Provides digital sound input for audio recording and voice calls.

Back



1. Thunderbolt 4.0 port with Power Delivery

Provides data transfer rates of up to 40 Gbps for USB4 and Thunderbolt 4. Supports USB4, DisplayPort 1.4, Thunderbolt 4, and also enables you to connect to an external display using a display adapter.

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

NOTE: You can connect a Dell Docking Station to the Thunderbolt 4 ports. For more information, search in the Knowledge Base Resource at www.dell.com/support.

NOTE: USB4 is backward compatible with USB 3.2, USB 2.0, and Thunderbolt 3.

NOTE: Thunderbolt 4 supports two 4K displays or one 8K display.

2. USB 3.2 Gen 2 (Type-C) port with DisplayPort

Connect devices such as external storage devices, printers, and external displays. Provides data transfer rate of up to 10 Gbps. Supports DisplayPort 1.4 and also enables you to connect an external display using a display adapter.

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

3. HDMI 2.1 port

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

4. Power-adaptor port

Connect a power adapter to provide power to your computer.

Top



1. Touchpad

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

2. Left-click area

Press to left-click.

3. Right-click area

Press to right-click.

4. Power button (Alien head)

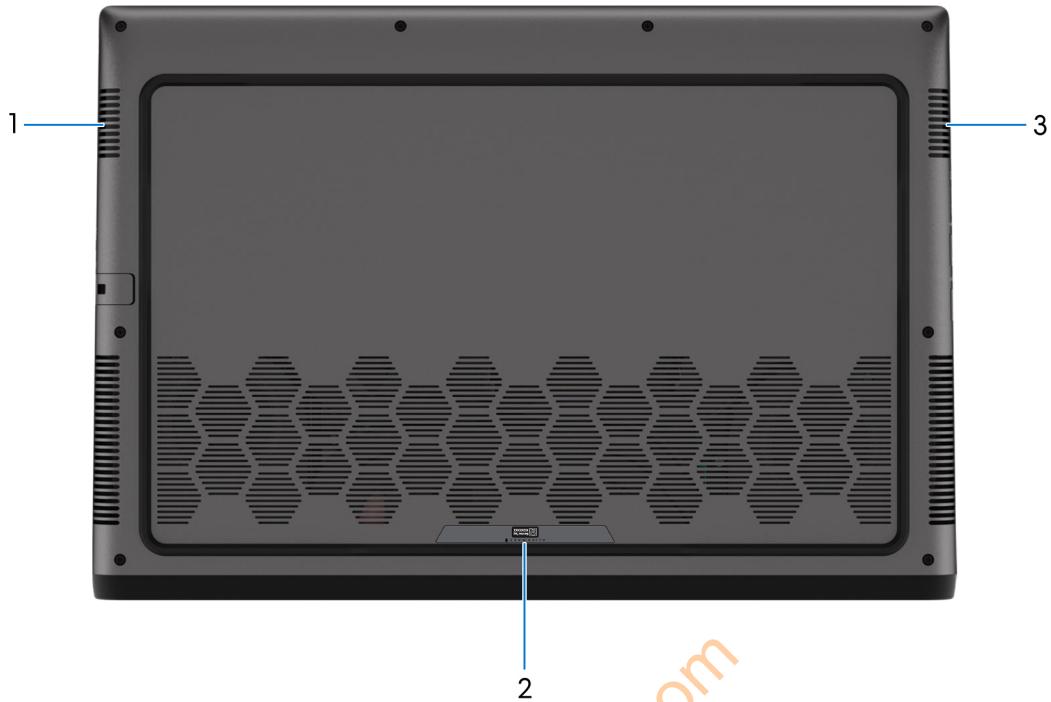
Press to turn on the computer if it is turned off, in sleep state, or in hibernate state.

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

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

(i) NOTE: You can customize the power-button behavior in Windows.

Bottom



1. Left speaker

Provides audio output.

2. Service Tag label

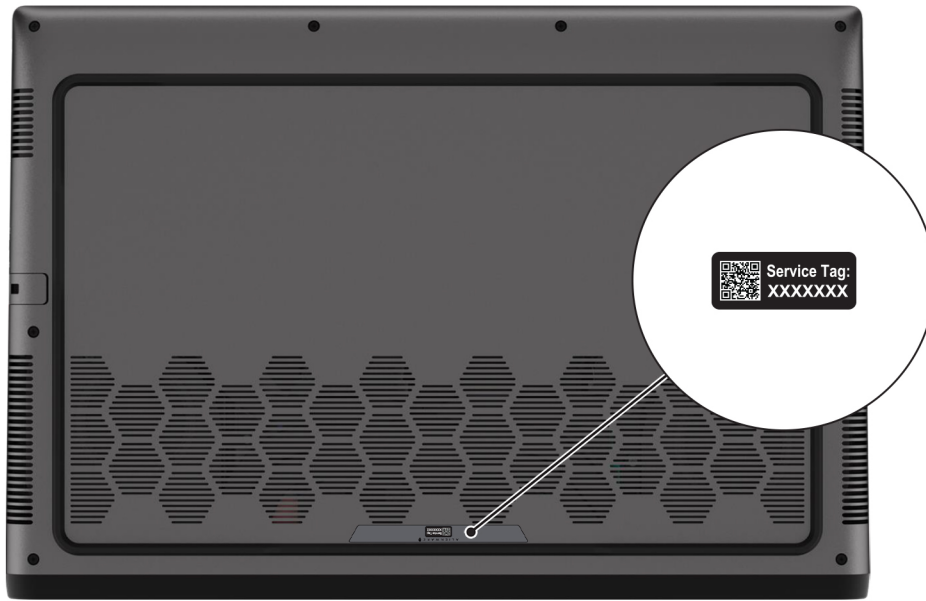
The Service Tag is a unique alphanumeric identifier that enables Dell service technicians to identify the hardware components in your computer and access warranty information.

3. Right speaker

Provides audio output.

Service Tag

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



Battery charge and status light

The following table lists the battery charge and status light behavior of your Alienware m16 R2.

Table 1. Battery charge and status light behavior

Power Source	LED Behavior	System Power State	Battery Charge Level
AC Adapter	Off	S0 - S5	Fully Charged
AC Adapter	Solid White	S0 - S5	< Fully Charged
Battery	Off	S0 - S5	11-100%
Battery	Solid Amber (590+/-3 nm)	S0 - S5	< 10%

- S0 (ON) - System is turned on.
- S4 (Hibernate) - The system consumes the least power compared to all other sleep states. The system is almost at an OFF state, except for a trickle power. The context data is written to a hard drive.
- S5 (OFF) - The system is in a shutdown state.

Set up your Alienware m16 R2

About this task

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

Steps

Connect the power adapter and press the power button.




Specifications of Alienware m16 R2

Dimensions and weight

The following table lists the height, width, depth, and weight of your Alienware m16 R2.

Table 2. Dimensions and weight

Description	Values
Height:	
Front height	19.99 mm (0.79 in.)
Rear height	23.50 mm (0.93 in.)
Width	363.90 mm (14.33 in.)
Depth	249.90 mm (9.81 in.)
Weight  NOTE: The weight of your computer depends on the configuration that is ordered and manufacturing variability.	2.60 kg (5.73 lb)

Processor

The following table lists the details of the processors that are supported for your Alienware m16 R2.

Table 3. Processor

Description	Option one	Option two
Processor type	Intel Core Ultra 7 processor 155H	Intel Core Ultra 9 processor 185H
Processor wattage	45	45
Processor total core count	16	16
Performance-cores	6	6
Efficient-cores	8	8
Processor total thread counts <i>i</i> NOTE: Intel Hyper-Threading Technology is only available on Performance-cores.	22	22
Processor speed	Up to 4.80 GHz	Up to 5.10 GHz
Performance-cores frequency		
Processor base frequency	1.40 GHz	2.30 GHz
Maximum turbo frequency	4.80 GHz	5.10 GHz
Efficient-cores frequency		
Processor base frequency	0.90 GHz	1.80 GHz
Maximum turbo frequency	3.80GHz	3.80 GHz
Processor cache	24 MB	24 MB
Integrated graphics	Intel Arc Graphics	Intel Arc Graphics

Chipset

The following table lists the details of the chipset that is supported for your Alienware m16 R2.

Table 4. Chipset

Description	Values
Chipset	Integrated with the processor
Processor	Intel Core Ultra 7 processor 155H
DRAM bus width	128-bit (per 64-bit channel)
Flash EPROM	64 MB
PCIe bus	Up to Gen 5.0

Operating system

Your Alienware m16 R2 supports the following operating systems:

- Windows 11 Home (64-bit)

- Windows 11 Professional (64-bit)

Memory

The following table lists the memory specifications of your Alienware m16 R2.

Table 5. Memory specifications

Description	Values
Memory slots	Two-SODIMM slots
Memory type	DDR5
Memory speed	5600 MT/s <i>i</i> NOTE: The memory configuration varies depending on the country or region the computer is purchased in.
Maximum memory configuration	64 GB
Minimum memory configuration	8 GB
Memory size per slot	8 GB, 16 GB, 32 GB, and 64 GB
Memory configurations supported	<ul style="list-style-type: none"> • 8 GB, 1 x 8 GB, DDR5, 5600 MT/s • 16 GB, 1 x 16 GB, DDR5, 5600 MT/s • 16 GB, 2 x 8 GB, DDR5, 5600 MT/s, dual-channel • 32 GB, 1 x 32 GB, DDR5, 5600 MT/s • 32 GB, 2 x 16 GB, DDR5, 5600 MT/s, dual-channel • 64 GB, 2 x 32 GB, DDR5, 5600 MT/s, dual-channel

External ports

The following table lists the external ports of your Alienware m16 R2.

Table 6. External ports

Description	Values
Network port	One RJ45 port
USB ports	<ul style="list-style-type: none"> • One USB 3.2 Gen 1 port • One USB 3.2 Gen 1 port with PowerShare • One USB 3.2 Gen 2 (Type-C) port with DisplayPort • One Thunderbolt 4 port with Power Delivery
Audio port	One universal audio jack (RCA, 3.5 mm)
Video port	One HDMI 2.1 port
Media-card reader	One microSD-card slot
Power-adaptor port	One 7.40 mm x 5.10 mm DC-in
Security-cable slot	Not supported

Internal slots

The following table lists the internal slots of your Alienware m16 R2.

Table 7. Internal slots

Description	Values
M.2	Two M.2 2280 solid-state drive slots <i>i</i> NOTE: To learn more about the features of different types of M.2 cards, search in the Knowledge Base Resource at www.dell.com/support .

Ethernet

The following table lists the wired Ethernet Local Area Network (LAN) specifications of your Alienware m16 R2.

Table 8. Ethernet specifications

Description	Values
Model number	Killer E3100 integrated Ethernet controller
Transfer rate	2500 Mbps for Killer E3100 Ethernet controller

Wireless module

The following table lists the Wireless Local Area Network (WLAN) modules that are supported on your Alienware m16 R2.

Table 9. Wireless module specifications

Description	Option one	Option two
Model number	Intel Killer AX1675x	Intel BE202
Transfer rate	Up to 2400 Mbps	Up to 2400 Mbps
Frequency bands supported	2.4 GHz/ 5 GHz/ 6 GHz	2.4 GHz/ 5 GHz/ 6 GHz
Wireless standards	<ul style="list-style-type: none"> • Wi-Fi 802.11a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6E (WiFi 802.11ax) 	<ul style="list-style-type: none"> • Wi-Fi 802.11a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6E (WiFi 802.11ax) • Wi-Fi 7 (WiFi 802.11be)
Encryption	<ul style="list-style-type: none"> • 64-bit/128-bit WEP • AES-CCMP • TKIP 	<ul style="list-style-type: none"> • 64-bit/128-bit WEP • AES-CCMP • TKIP
Bluetooth wireless card	Bluetooth 5.3 wireless card	Bluetooth 5.4 wireless card
	<i>i</i> NOTE: 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 Alienware m16 R2.

Table 10. Audio specifications

Description	Values
Audio controller	Realtek ALC3254
Stereo conversion	Supported
Internal audio interface	High-definition audio interface
External audio interface	<ul style="list-style-type: none">One universal audio jack (RCA, 3.5 mm)One HDMI 2.1 port
Number of speakers	Two
Internal-speaker amplifier	Supported
External volume controls	Keyboard shortcut controls
Speaker output:	
Average speaker output	2 W + 2 W = 4 W
Peak speaker output	2.5 W + 2.5 W = 5 W
Subwoofer output	Not supported
Microphone	Digital-array microphones in camera assembly

Storage

This section lists the storage options on your Alienware m16 R2.

Your Alienware m16 R2 supports two M.2 2280 solid-state drive slots.

NOTE: The primary drive of your Alienware m16 R2 varies with the storage configuration. The primary drive of your computer is the M.2 2280 drive where the operating system is installed.

Table 11. Storage specifications

Storage type	Interface type	Capacity
M.2 2280 solid-state drive	PCIe Gen4 x4 NVMe, up to 64 Gbps	Up to 4 TB per slot

Media-card reader

The following table lists the media cards that are supported on your Alienware m16 R2.

Table 12. Media-card reader specifications

Description	Values
Media-card type	One microSD-card slot
Media-cards supported	<ul style="list-style-type: none">Micro Secure Digital (microSD)

Table 12. Media-card reader specifications (continued)

Description	Values
	<ul style="list-style-type: none">• Micro Secure Digital High Capacity (microSDHC)• Secure Digital Extended Capacity (microSDXC)
<p>NOTE: The maximum capacity supported by the media-card reader varies depending on the standard of the media card that is installed on your computer.</p>	

Keyboard

The following table lists the keyboard specifications of your Alienware m16 R2.

Table 13. Keyboard specifications

Description	Values
Keyboard type	<ul style="list-style-type: none">• 1-zone RGB backlit keyboard• RGB backlit, per key
Keyboard layout	QWERTY
Number of keys	<ul style="list-style-type: none">• United States and Canada: 85 keys• United Kingdom: 86 keys• Japan: 89 keys
Keyboard size	X=19.05 mm key pitch Y=19.05 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>NOTE: You can define the primary behavior of the function keys (F1–F12) changing Function Key Behavior in BIOS setup program.</p> <p>For more information, see Keyboard shortcuts.</p>

Keyboard shortcuts

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 alternative characters or to perform secondary functions. The symbol that is 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 that is 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 multimedia control that is 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 disables or enables performance boost (refer to the table below).

However, if the function keys F1–F12 are needed for specific software applications, multimedia functionality can be disabled by pressing **fn + Esc**. Subsequently, multimedia control can be invoked by pressing **FN** and the respective function key. For example, disable or enable performance boost 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 14. List of keyboard shortcuts

Keys	Description
	Disable or enable Performance Boost.
	Enable or disable Stealth mode. When Stealth mode is enabled, AlienFX lighting is turned off. Performance settings change to Quiet mode. NOTE: The AlienFX lighting zone varies depending on the configuration of your computer.
	Adjust keyboard backlight brightness.
	Switch to external display.
	Open Quick Settings.
	Decrease display brightness.
	Increase display brightness.
	Disable or enable touchpad.





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

Table 15. List of macro keys

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

Your computer comes with dedicated keys that enable you to control audio features of the computer with a single key press.

Table 16. List of keys to control audio features

Keys	Description
	Mute microphone
	Mute speakers
	Increase volume
	Decrease volume

Camera

The following table lists the camera specifications of your Alienware m16 R2.

Table 17. Camera specifications

Description		Values
Number of cameras		One
Camera type		One FHD-RGB Infrared camera
Camera location		Front camera
Camera sensor type		CMOS sensor technology
Camera resolution:		
	Still image	2.07 megapixels
	Video	1920 x 1080 (FHD) at 30 fps
Infrared camera resolution:		
	Still image	0.23 megapixels
	Video	640 x 360 at 30 fps
Diagonal viewing angle:		
	Camera	80.2 degrees
	Infrared camera	86.6 degrees

Touchpad

The following table lists the touchpad specifications of your Alienware m16 R2.


Table 18. Touchpad specifications

Description		Values
Touchpad resolution:		
	Horizontal	>300 DPI
	Vertical	749
Touchpad dimensions:		
	Horizontal	115 mm (4.53 in.)
	Vertical	70 mm (2.76 in.)
Touchpad gestures		For more information about touchpad gestures available on Windows, see the Microsoft Knowledge Base article at support.microsoft.com .

Power adapter

The following table lists the power adapter specifications of your Alienware m16 R2.

Table 19. Power adapter specifications

Description		Option one	Option two
Type		280 W AC adapter	240 W SFF AC adapter
Connector dimensions:			
	External diameter	7.40 mm	7.40 mm
	Internal diameter	5.10 mm	5.10 mm
Power-adapter dimensions:			
	Height	26.50 mm (1.04 in.)	23.00 mm (0.91 in.)
	Width	105.00 mm (4.13 in.)	78.00 mm (3.07 in.)
	Depth	206.00 mm (8.10 in.)	152.00 mm (5.98 in.)
Input voltage		100 VAC–240 V	100 VAC–240 VAC
Input frequency		50 Hz–60 Hz	50 Hz–60 Hz
Input current (maximum)		3.50 A	3.50 A
Output current (continuous)		14.36 A	12.31 A
Rated output voltage		19.50 VDC	19.50 VDC
Temperature range:			
	Operating	32°C to 104°C (89.60°F to 219.20°F)	32°C to 95°C (89.60°F to 203.00°F)
	Storage	-40°C to 70°C (-40.00°F to 158.00°F)	-40°C to 158°C (-40.00°F to 316.40°F)
 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.			

Battery

The following table lists the battery specifications of your Alienware m16 R2.

Table 20. Battery specifications

Description	Values	
Battery type	6-cell lithium-ion (90 Wh)	
Battery voltage	11.70 VDC	
Battery weight (maximum)	0.34 kg (0.75 lb)	
Battery dimensions:		
	Height	7.56 mm (0.30 in.)

Table 20. Battery specifications (continued)

Description		Values
	Width	294.90 mm (11.61 in)
	Depth	77.50 mm (3.05 in.)
Temperature range:		
	Operating	<ul style="list-style-type: none"> • Charging: 0°C to 50°C (32°F to 122°F) • Discharging: 0°C to 70°C (32°F to 158°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) ⓘ NOTE: Control the charging time, duration, start and end time, and so on, using the Dell Power Manager application. For more information about Dell Power Manager, search in the Knowledge Base Resource at www.dell.com/support .		When the computer is turned off: <ul style="list-style-type: none"> • ExpressCharge2: from 0% to 80% in about 35 minutes. • ExpressCharge: Two hours • Standard Charge: Three hours
Coin-cell battery		None
⚠ 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.		
⚠ CAUTION: Dell Technologies recommends that you charge the battery regularly for optimal power consumption. If your battery charge is depleted, connect the power adapter, turn on your computer, and then restart your computer to reduce the power consumption.		

GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Alienware m16 R2.

Table 21. GPU—Integrated

Controller	Memory size	Processor
Intel Arc Graphics	Shared system memory	<ul style="list-style-type: none"> • Intel Core Ultra processor 7 • Intel Core Ultra processor 9

GPU—Discrete

The following table lists the specifications of the discrete Graphics Processing Unit (GPU) supported by your Alienware m16 R2.

Table 22. GPU—Discrete

Controller	Memory size	Memory type
NVIDIA GeForce RTX 4050 ⓘ NOTE: Available only on computers shipped with Intel Core Ultra 7 processor.	6 GB	GDDR6
NVIDIA GeForce RTX 4060	8 GB	GDDR6

Table 22. GPU—Discrete (continued)

Controller	Memory size	Memory type
NVIDIA GeForce RTX 4070	8 GB	GDDR6

External display support

The following table lists the external display support for your Alienware m16 R2.

Table 23. External display support

Graphics card	Supported external displays with laptop display enabled	Supported external displays with laptop display disabled
Intel Arc Graphics	2	2
NVIDIA GeForce RTX 4050 <i>i</i> NOTE: Available only on computers shipped with Intel Core Ultra 7 processor.	2	2
NVIDIA GeForce RTX 4060	2	2
NVIDIA GeForce RTX 4070	2	2

Display

The following table lists the display specifications of your Alienware m16 R2.

Table 24. Display specifications

Description	Values
Display type	16-inch, Quad High-Definition Plus (QHD+)
Touch options	Not supported
Display-panel technology	Wide Viewing Angle (WVA)
Display-panel dimensions (active area):	
Height	215.42 mm
Width	344.68 mm
Diagonal	406.46 mm
Display-panel native resolution	2560 x 1600
Luminance (typical)	300 nits
Megapixels	4.1
Color gamut	sRGB 100%
Pixels Per Inch (PPI)	188.70
Contrast ratio (minimum)	1000:1

Table 24. Display specifications (continued)


Description	Values
Response time (maximum)	<ul style="list-style-type: none"> • With overdrive: 3 ms • Without overdrive: 7 ms
Refresh rate	240
Horizontal view angle	+/- 85 degrees
Vertical view angle	+/- 85 degrees
Pixel pitch	0.13 mm
Power consumption (maximum)	6 W
Anti-glare vs glossy finish	Anti-glare

Operating and storage environment

This table lists the operating and storage specifications of your Alienware m16 R2.

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

Table 25. 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)	5% to 95% (non-condensing)
Vibration (maximum)*	0.66 GRMS	Not applicable
Shock (maximum)	140 G†	Not applicable
Altitude range	-15.20 m to 3048.00 m (-49.87 ft to 10000.00 ft)	-15.20 m to 10668.00 m (-49.87 ft to 35000.00 ft)
 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.		

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

† Measured using a 2 ms half-sine pulse.

Dell support policy

For information about Dell support policy, search in the Knowledge Base Resource at www.dell.com/support.

Dell low blue light display

 **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.