

Specifications of Alienware m15 R3

Dimensions and weight

The following table lists the height, width, depth, and weight of your Alienware m15 R3.

Table 1. Dimensions and weight

Description	Values
Height:	
Front height	<ul style="list-style-type: none">18.30 mm (0.72 in.)17.90 mm (0.70 in.) for computers shipped with 300 Hz monitors
Rear height	19.70 mm (0.78 in.)
Width	360.30 mm (14.19 in.)
Depth	<ul style="list-style-type: none">276.20 mm (10.87 in.)275.90 mm (10.86 in.) for computers shipped with 300 Hz monitors
Weight (maximum)	2.50 kg (5.51 lb)
	NOTE: The weight of your computer depends on the configuration ordered and manufacturing variability.

Processor

The following table lists the details of the processors supported by your Alienware m15 R3.

Table 2. Processor

Description	Option one	Option two	Option three
Processor type	10 th Generation Intel Core i5	10 th Generation Intel Core i7	10 th Generation Intel Core i9k
Processor wattage	45 W	45 W	45 W
Processor core count	4	6	8
Processor thread count	8	12	16
Processor speed	Up to 4.5 GHz	Up to 5 GHz	Up to 5.3 GHz
Processor cache	8 MB	12 MB	16 MB
Integrated graphics	Intel UHD graphics	Intel UHD graphics	Intel UHD graphics

Chipset

The following table lists the details of the chipset supported by your Alienware m15 R3.

Table 3. Chipset

Description	Values
Chipset	HM470
Processor	10 th Generation Intel Core i5/i7/i9K

Description	Values
DRAM bus width	128-bit
Flash EPROM	16 MB
PCIe bus	Up to Gen3

Operating system

Your Alienware m15 R3 supports the following operating systems:

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

Memory

The following table lists the memory specifications of your Alienware m15 R3.

Table 4. Memory specifications

Description	Values
Memory slots	Onboard system memory <i>i</i> NOTE: The memory is integrated to the system board and cannot be upgraded after purchase.
Memory type	Dual-channel DDR4
Memory speed	2667 MHz
Maximum memory configuration	32 GB
Minimum memory configuration	8 GB
Memory configurations supported	<ul style="list-style-type: none"> • 8 GB, 2 x 4GB, dual-channel DDR4, 2667 MHz • 16GB, 2 x 8GB, dual-channel DDR4, 2667 MHz • 32GB, 2 x 16GB, dual-channel DDR4, 2667 MHz

External ports

The following table lists the external ports of your Alienware m15 R3.

Table 5. External ports

Description	Values
Network port	One RJ-45 port
USB ports	<ul style="list-style-type: none"> • 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 port	One headset (headphone and microphone combo) port
Video port	<ul style="list-style-type: none"> • One HDMI 2.0 port • One mini DisplayPort 1.4 • One Thunderbolt 3 (USB 3.1 Gen 2 Port)
Media-card reader	One microSD card slot
Docking port	One external graphics display port

Description	Values
Power-adaptor port	One 7.4 mm x 5.1 mm E4 DC-in
Security	One security-cable slot (wedge-shaped)

NOTE: This external graphics display port is compatible with the Alienware Graphics Amplifier.

Internal slots

The following table lists the internal slots of your Alienware m15 R3.

Table 6. Internal slots

Description	Values
M.2	<ul style="list-style-type: none"> Two M.2 2230/2280 slots for solid-state drives One M.2 2230 slot for solid-state drive

NOTE: To learn more about the features of different types of M.2 cards, see the knowledge base article [SLN301626](https://www.dell.com/support/SLN301626) at www.dell.com/support.

Ethernet

The following table lists the wired Ethernet Local Area Network (LAN) specifications of your Alienware m15 R3.

Table 7. Ethernet specifications

Description	Values
Model number	Killer E3000 PCI-e Gigabit ethernet controller
Transfer rate	10/100/1000/2500 Mbps

Wireless module

The following table lists the Wireless Local Area Network (WLAN) module specifications of your Alienware m15 R3.

Table 8. Wireless module specifications

Description	Values
Model number	Killer Wi-Fi 6 AX1650
Transfer rate	Up to 2400 Mbps
Frequency bands supported	2.4 GHz/5 GHz
Wireless standards	<ul style="list-style-type: none"> WiFi 802.11a/b/g Wi-Fi 4 (WiFi 802.11n) Wi-Fi 5 (WiFi 802.11ac) Wi-Fi 6 (WiFi 802.11ax)
Encryption	<ul style="list-style-type: none"> 64-bit/128-bit WEP AES-CCMP TKIP
Bluetooth	Bluetooth 5

Audio

The following table lists the audio specifications of your Alienware m15 R3.

Table 9. Audio specifications

Description	Values
Audio controller	Realtek ALC3281-CG
Stereo conversion	Supported
Internal audio interface	High definition audio interface
External audio interface	<ul style="list-style-type: none">One headset (headphone and microphone combo) portHDMI 1.4b port
Number of speakers	4-Way (woofer/tweeter) stereo speaker design
Internal-speaker amplifier	Supported
External volume controls	Keyboard shortcut controls
Speaker output:	
Average speaker output	4 W
Peak speaker output	5 W
Subwoofer output	Supported
Microphone	Digital-array microphones in camera assembly

Storage

This section lists the storage options on your Alienware m15 R3.

Your Alienware m15 R3 supports one of the following storage configurations:

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

The primary drive of your Alienware m15 R3 varies with the storage configuration. For computers with the M.2 2230/2280 solid-state drive, the primary drive is the designated boot drive.

Table 10. Storage specifications

Storage type	Interface type	Capacity
M.2 2230 solid-state drive	PCIe Gen3 x4 NVMe, up to 32 Gbps	Up to 512 GB
M.2 2280 solid-state drive	PCIe Gen3 x4 NVMe, up to 32 Gbps	Up to 2 TB

Media-card reader

The following table lists the media cards supported by your Alienware m15 R3.

Table 11. Media-card reader specifications

Description	Values
Media-card type	One microSD card slot

Description	Values
Media-cards supported	<ul style="list-style-type: none"> ▪ Micro Secure Digital (mSD) ▪ Micro Secure Digital High Capacity (mSDHC) ▪ Micro Secure Digital Extended Capacity (mSDXC)

NOTE: The maximum capacity supported by the media-card reader varies depending on the standard of the media card installed in your computer.

Keyboard

The following table lists the keyboard specifications of your Alienware m15 R3.

Table 12. Keyboard specifications

Description	Values
Keyboard type	<ul style="list-style-type: none"> ▪ Per-key RGB backlit keyboard ▪ 4-zone RGB backlit keyboard
Keyboard layout	QWERTY
Number of keys	<ul style="list-style-type: none"> ▪ United States and Canada: 82 keys ▪ United Kingdom: 83 keys ▪ Japan: 86 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>

Camera

The following table lists the camera specifications of your Alienware m15 R3.

Table 13. Camera specifications

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

Touchpad

The following table lists the touchpad specifications of your Alienware m15 R3.

Table 14. Touchpad specifications

Description	Values
Touchpad resolution:	
Horizontal	1217
Vertical	681
Touchpad dimensions:	
Horizontal	105 mm (4.13 in.)
Vertical	60 mm (2.36 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

The following table lists the power adapter specifications of your Alienware m15 R3.

Table 15. Power adapter specifications

Description	Option 1	Option 2	Option 3
Type	E4 130W	E4 180W	E4 240W
Connector dimensions:			
External diameter	7.40 mm	7.40 mm	7.40 mm
Internal diameter	5.10 mm	5.10 mm	5.10 mm
Input voltage	100 VAC–240 VAC	100 VAC–240 VAC	100 VAC–240 VAC
Input frequency	50 Hz–60 Hz	50 Hz–60 Hz	50 Hz–60 Hz
Input current (maximum)	2.50 A	2.34 A	5 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

The following table lists the battery specifications of your Alienware m15 R3.

Table 16. Battery specifications

Description	Option 1	Option 2
Battery type	56 WHr, 3-cell "smart" lithium-ion battery	86 WHr, 6-cell "smart" lithium-ion battery

Description	Option 1	Option 2
Battery voltage	11.40 VDC	11.40 VDC
Battery weight (maximum)	0.26 kg (0.57 lb)	0.34 kg (0.75 lb)
Battery dimensions:		
Height	77.70 mm (3.06 in.)	77.70 mm (3.06 in.)
Width	295.20 mm (11.62 in.)	295.20 mm (11.62 in.)
Depth	7.56 mm (0.30 in.)	7.56 mm (0.30 in.)
Temperature range:		
Operating	0°C to 60°C (32°F to 140°F)	0°C to 60°C (32°F to 140°F)
Storage	-20°C to 60°C (-4°F to 140°F)	-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.	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.
Battery charging time (approximate)	3 hours (when the computer is off) <i>i</i> NOTE: Control the charging time, duration, start and end time, and so on using the Dell Power Manager application. For more information on the Dell Power Manager see, <i>Me and My Dell</i> on www.dell.com/	3 hours (when the computer is off) <i>i</i> NOTE: Control the charging time, duration, start and end time, and so on using the Dell Power Manager application. For more information on the Dell Power Manager see, <i>Me and My Dell</i> on www.dell.com/
Battery life span (approximate)	300 discharge/charge cycles	300 discharge/charge cycles
Coin-cell battery	Not supported	Not supported

Display

The following table lists the display specifications of your Alienware m15 R3.

Table 17. Display specifications

Description	Option one	Option two	Option three
Display type	15.6-inch Full High Definition (FHD)	15.6-inch Full High Definition (FHD)	15.6-inch Ultra High Definition (UHD)
Display-panel technology	Wide-Viewing Angle (WVA)	Wide-Viewing Angle (WVA)	Organic Light-Emitting Diode (OLED)
Display-panel dimensions (active area):			
Height	193.59 mm (7.62 in.)	193.59 mm (7.62 in.)	193.62 mm (7.62 in.)
Width	344.16 mm (13.55 in.)	344.16 mm (13.55 in.)	344.22 mm (13.55 in.)
Diagonal	394.87 mm (15.55 in.)	394.87 mm (15.55 in.)	394.94 mm (15.55 in.)
Display-panel native resolution	1920x1080	1920x1080	3840x2160
Luminance (typical)	300 nits	300 nits	400 nits

Description	Option one	Option two	Option three
Megapixels	2.07	2.07	8.29
Color gamut	72% (NTSC)	100% (sRGB)	100% (DCI-P3)
Pixels Per Inch (PPI)	141	141	282
Contrast ratio (min)	800:1	1000:1	100,000:1
Response time (max)	7 ms	3 ms	1 ms
Refresh rate	144 Hz	300 Hz	60 Hz
Horizontal view angle	85	85	85
Vertical view angle	85	85	85
Pixel pitch	0.18 mm	0.18 mm	0.09 mm
Power consumption (maximum)	7.80 W	6.3 W	14.8 W
Anti-glare vs glossy finish	Anti-glare	Anti-glare	TrueLife
Touch options	No	No	No

GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Alienware m15 R3.

Table 18. GPU—Integrated

Controller	External display support	Memory size	Processor
Intel UHD graphics	<ul style="list-style-type: none"> ▪ One HDMI 2.0 port ▪ One mini DisplayPort 1.4 ▪ One Thunderbolt 3 (USB 3.1 Gen 2 Port) 	Shared system memory	10 th Generation Intel Core i5/i7/i9K

GPU—Discrete

The following table lists the specifications of the discrete graphics processing unit (GPU) supported by your Alienware m15 R3.

Table 19. GPU—Discrete

Controller	External display support	Memory size	Memory type
NVIDIA GeForce GTX 1650 Ti	<ul style="list-style-type: none"> ▪ One HDMI 2.0 port ▪ One mini DisplayPort 1.4 ▪ One Thunderbolt 3 (USB 3.1 Gen 2 Port) 	4 GB	GDDR6
NVIDIA GeForce GTX 1660 Ti	<ul style="list-style-type: none"> ▪ One HDMI 2.0 port ▪ One mini DisplayPort 1.4 ▪ One Thunderbolt 3 (USB 3.1 Gen 2 Port) 	6 GB	GDDR6
NVIDIA GeForce RTX 2060	<ul style="list-style-type: none"> ▪ One HDMI 2.0 port ▪ One mini DisplayPort 1.4 ▪ One Thunderbolt 3 (USB 3.1 Gen 2 Port) 	6 GB	GDDR6

Controller	External display support	Memory size	Memory type
NVIDIA GeForce RTX 2070	<ul style="list-style-type: none"> ▪ One HDMI 2.0 port ▪ One mini DisplayPort 1.4 ▪ One Thunderbolt 3 (USB 3.1 Gen 2 Port) 	8 GB	GDDR6
NVIDIA GeForce RTX 2070 SUPER	<ul style="list-style-type: none"> ▪ One HDMI 2.0 port ▪ One mini DisplayPort 1.4 ▪ One Thunderbolt 3 (USB 3.1 Gen 2 Port) 	8 GB	GDDR6
NVIDIA GeForce RTX 2080 SUPER Max-Q	<ul style="list-style-type: none"> ▪ One HDMI 2.0 port ▪ One mini DisplayPort 1.4 ▪ One Thunderbolt 3 (USB 3.1 Gen 2 Port) 	8 GB	GDDR6
AMD RX5500M	<ul style="list-style-type: none"> ▪ One HDMI 2.0 port ▪ One mini DisplayPort 1.4 ▪ One Thunderbolt 3 (USB 3.1 Gen 2 Port) 	4 GB	GDDR6

Operating and storage environment

This table lists the operating and storage specifications of your Alienware m15 R3.

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

Table 20. 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 (-49.87 ft to 10000 ft)	-15.2 m to 10668 m (-49.87 ft to 35000 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.