



OMEN Laptop - 17-cb1099nf (21W87EA)

Overview

Big rig power. Compact design.

Stunning desktop-grade power in a sleek, portable design keeps you playing your best wherever gaming takes you. Take on the most demanding AAA game titles with NVIDIA® graphics and an Intel® Core™ processor[1]. Immerse yourself in smooth gameplay on a narrow-bezel display with fast refresh rates.



Desktop-grade performance

Get the power of a desktop in your laptop. With an Intel® Core™ processor[1], NVIDIA® graphics, and accelerated storage, nothing holds you back.



Designed for power

The OMEN 17 Laptop's sleek, modern design is engineered to produce desktop-grade power. With an advanced thermal cooling solution and single-panel access to internals for easy upgradability, nothing stops you from playing at your best.



Fast, fluid gameplay

Crisp gameplay is crucial if you want to play at your best. With a high resolution and refresh rate, on-screen visuals are swift and smooth, while a narrow bezel display delivers edge-to-edge immersion.

Features



Windows 10

Do great things confidently with the familiar feel of Windows - only better.^[2]



10th Generation Intel® Core™ processor

Take mobile gaming and content creation to the next-level with breakthrough performance. Let your connectivity flow with fast downloads and smooth streaming with optional Wi-Fi 6 and optional lighting fast Thunderbolt™ 3 support.^[3]



Four Zone RGB keyboard

Allows you to backlight 4 independent zones with different RGB lighting. WASD keys are outlined to highlight key controls. It's all easily controlled through the OMEN Command Center.



NVIDIA® GeForce® RTX 2070 SUPER™ graphics

Experience the future of gaming with incredible realism. With breakthrough ray tracing technology powered by NVIDIA® Turing™ architecture, enjoy smooth gaming and incredible visuals.

1080p

Full HD display

Sit back and enjoy crystal-clear visuals and images with the vibrant quality of 2 million pixels. The 1920 x 1080 resolution gives all your digital content a new dimension.^[4]

32 GB

DDR4 RAM

Designed to run more efficiently and more reliably at faster speeds, DDR4 is the future of RAM. With its higher bandwidth, everything from multi-tasking to playing games gets a performance boost.

[1] Multi-core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.

[2] Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.microsoft.com>.

[3] Multi-core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance. Internet service required and not included. 4K content required to view full 4K images. Graphics output may be limited based on the maximum resolution of the display.

[4] Full high-definition (FHD) content is required to view FHD images.

Specifications

Operating system	Windows 10 Home 64
Product color	Shadow black aluminum
Processor family	10th Generation Intel® Core™ i7 processor
Processor	Intel® Core™ i7-10750H (2.6 GHz base frequency, up to 5.0 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 6 cores) ^[6,7]
Chipset	Intel® HM470
Memory	32 GB DDR4-2933 SDRAM (2 x 16 GB)
Internal Storage	1 TB PCIe® NVMe™ M.2 SSD
Product design	Sandblasted hairline brush keyboard frame
Optical drive	Optical drive not included
Graphics	Integrated
Graphics (integrated)	Intel® UHD Graphics
Display	43.9 cm (17.3") diagonal, FHD (1920 x 1080), 144 Hz, 7 ms response time, IPS, anti-glare, 300 nits, 100% sRGB
Display	17.3" diagonal, FHD (1920 x 1080), 144 Hz, 7 ms response time, IPS, anti-glare, 300 nits, 100% sRGB
Display size (diagonal)	43.9 cm (17.3")
Display size (diagonal)	17.3"
Audio features	Audio by Bang & Olufsen; DTS:X® Ultra; OMEN Audio Control Support DTS:X® Ultra; Dual speakers; HP Audio Boost 2.0
Minimum dimensions (W x D x H)	40.5 x 28.5 x 2.99 cm <i>(Dimensions vary by configuration)</i>
Minimum dimensions (W x D x H)	15.94 x 11.22 x 1.18 in
Weight	Starting at 3.23 kg <i>(Weight varies by configuration)</i>
Weight	Starting at 7.12 lb
Keyboard	Full-size, 4-zone RGB backlit, shadow black keyboard with numeric keypad and 26-Key Rollover Anti-Ghosting Key technology
Pointing device	Touchpad with multi-touch gesture support; Precision Touchpad Support
Input devices	Accelerometer
Webcam	HP Wide Vision 720p HD camera with integrated dual array digital microphones
Ports	1 Thunderbolt™ 3 (40Gbps signaling rate) with SuperSpeed USB Type-C® 10Gbps signaling rate (DisplayPort™ 1.4, HP Sleep and Charge); 1 SuperSpeed USB Type-A 5Gbps signaling rate (HP Sleep and Charge); 2 SuperSpeed USB Type-A 5Gbps signaling rate; 1 Mini DisplayPort™; 1 HDMI 2.0a; 1 RJ-45; 1 AC smart pin; 1 headphone/microphone combo; 1 microphone ^[19]

Expansion slots	1 multi-format SD media card reader
Package dimensions (W x D x H)	6.9 x 59.8 x 34.5 cm
Package weight	4.7 kg
Network interface	Integrated 10/100/1000 GbE LAN
Wireless	Intel® Wi-Fi 6 AX201 (2x2) and Bluetooth® 5 combo (Supporting Gigabit file transfer speeds)
Power supply type	230 W Smart AC power adapter
Battery type	4-cell, 70 Wh Li-ion polymer
Battery life	Up to 4 hours and 15 minutes ^[3]
Battery recharge time	Supports battery fast charge: approximately 50% in 45 minutes ^[5]
Battery weight	10.12 oz
Battery weight	287 g
Energy efficiency	ENERGY STAR® certified; EPEAT® Silver registered
Pre-installed software	Netflix
Software included	McAfee LiveSafe™
Software - Productivity & finance	1 month trial for new Microsoft 365 customers ^[24]
Cloud service	Dropbox ^[1]
UPC number	195122732509

Additional specifications

Battery capacity	70
Battery capacity uom	Wh
Battery cells number	4
Battery life video playback	Up to 3 hours and 45 minutes
Battery type	Li-ion polymer
Bluetooth version	Bluetooth® 5
Brightness	300 nits
Color gamut	100% sRGB
Display	43.9 cm (17.3") diagonal FHD display
Display	17.3" diagonal FHD display
Display brightness	300
Display brightness uom	nits
Display panel technology	IPS
Display refresh rate	144
Display refresh rate uom	Hz
Display resolution (pixels)	1920 x 1080
Display resolution standard	FHD
Display response time	7
Display response time uom	ms
Display size (diagonal) uom	"
Display size (diagonal, imperial)	17.3
Display size (diagonal, metric)	43.9
Display size (diagonal, metric) uom	cm
Display surface treatment	anti-glare
ECC memory	No
Graphics	Discrete
Graphics (discrete)	NVIDIA® GeForce® RTX 2070 SUPER™ (8 GB GDDR6 dedicated)
Graphics card brand	NVIDIA®
Graphics card family	GeForce®
Graphics card memory size	8
Graphics card memory size uom	GB
Graphics card memory type	GDDR6
MDA key selling point	Windows 10 Home or other operating systems available

Memory and storage	32 GB memory; 1 TB SSD storage
Memory layout (slots & size)	2 x 16 GB
Memory module type	DIMM
Memory size	32
Memory speed	2933
Memory speed uom	MHz
Memory type	DDR4
Model Number	RTX 2070 SUPER™
Number of User-accessible Memory Slots	2
Number of memory slots	2
Package depth, imperial (extended size)	23.54
Package depth, metric (extended size)	59.8
Package dimensions (W x D x H)	2.71 x 23.54 x 13.58 in
Package height, imperial (extended size)	13.58
Package height, metric (extended size)	34.5
Package weight	10.38 lbs
Package width, imperial (extended size)	2.71
Package width, metric (extended size)	6.9
Packaging unit of measure (imperial)	in
Packaging unit of measure (metric)	cm
Processor Brand	Intel®
Processor base frequency	2.6
Processor base frequency uom	GHz
Processor cache	12 MB L3
Processor core	6
Processor family	Core™ i7
Processor frequency technology	Intel® Turbo Boost Technology
Processor generation	10th Generation
Processor maximum frequency	5.0
Processor maximum frequency uom	GHz

Processor model	10750H
Processor speed	2.6 GHz
Processor threads	12
Product brand name	HP
Storage capacity 01	1
Storage capacity uom 01	TB
Storage form factor 01	M.2
Storage interface 01	PCIe®
Storage interface protocol 01	NVMe™
Storage type	SSD
Storage type 01	SSD
Touchscreen	No
Wireless Model	Wi-Fi 6 AX201
Wireless antenna	2x2
Wireless standard	Wi-Fi 6
Wireless supplier	Intel®

[1] New Dropbox users are eligible to get 25 GB of Dropbox space free for 12 months from date of registration. For complete details and terms of use, including cancellation policies, visit the Dropbox website at <https://www.dropbox.com/help/space/hp-promotion>. Internet service required and not included.

[3] Windows 10 MobileMark 18 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See <https://bapco.com/products/mobilemark-2018/> for additional details.

[5] Recharges your battery up to 50% within 45 minutes when the system is off (using "shut down" command). Recommended for use with the HP adapter provided with the notebook, not recommended with a smaller capacity battery charger. After charging has reached 50% capacity, charging speed will return to normal speed. Charging time may vary +/-10% due to System tolerance. Available on select HP products. See <http://store.hp.com> for a full list of product features.

[6] Multi-core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.

[7] Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See <http://www.intel.com/technology/turboboost/> for more information.

[19] HP Sleep and Charge requires USB Type-A/Type-C charging protocol standard cable or dongle with external device for full functionality.

[24] Must activate within 180 days of Windows activation.

Accessories

Cases and Covers

★ : Recommended

Cases

OMEN Transceptor 17 Duffel Bag	7MT82AA ★
HP 17.3 Value Topload Case	TOE18AA

Backpacks

HP 17.3 in OMEN Gaming Backpack	K5Q03AA
OMEN X by HP Transceptor Backpack	3KJ69AA
OMEN by HP Gaming Backpack	4YJ80AA

Audio/Multimedia and Communication Devices

Headsets

OMEN by HP Mindframe Prime Headset	6MF35AA ★	
OMEN by HP Headset 800	1KF76AA ★	
HP Bluetooth Headset 400	2ZW81AA	
HP Bluetooth Headset 400	2ZW82AA	obsolete
HP Bluetooth Headset 500	2J875AA	
HP Boom Mic Headset 150	2EM62AA	
HP Earbuds Black Headset 150	X7B04AA	
HP H2800 Black Headset	J8F10AA	
HP In-Ear Headphone 100	1KF54AA	
HP In-Ear Headphone 100	1KF55AA	
HP In-Ear Headphone 100	1KF56AA	
HP In-Ear Headset 150	2AP90AA	
HP In-Ear Headset 150	2AP91AA	
HP In-Ear Headset 150	2AP92AA	
HP In-Ear Headset 150	2AP93AA	
HP On-Ear Headphone 200	2VB08AA	
HP Pavilion Gaming Headset 400	4BX31AA	
HP Pavilion Gaming Headset 600	4BX33AA	
HP Pavilion Gaming Headset 600	5RY19AA	
HP Stereo Headset H2800	2AP94AA	

HP Stereo Headset H2800	2AP95AA
HP X1000 Wireless Gaming Headset	7HC42AA
HP X1000 Wireless Gaming Headset	7HC43AA
OMEN Frequency Wireless Headset	9FL60AA
OMEN by HP Mindframe Prime Headset	6MF36AA
Omen X by HP Mindframe Headset	3XT27AA

Headphones

OMEN Dyad Earbuds	8JE67AA ★
HP Black Doha In-Ear Headset 150	Z3M53AA

Speakers

HP Gaming Speakers X1000	8PB07AA
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Keyboards/Mice and Input Devices

Mice

OMEN by HP Outpost Mousepad	6CM14AA ★
OMEN by HP Photon Wireless Mouse	6CL96AA ★
OMEN by HP Mouse Pad 300	1MY15AA ★
OMEN by HP Reactor Mouse	2VP02AA ★
OMEN Vector Mouse	8BC53AA ★
OMEN by HP Hard Mouse Pad 200	2VP01AA ★
HP Bluetooth Travel Mouse	6SP25AA
HP Bluetooth® Mouse 250	6CR73AA
HP Bluetooth® Mouse Z5000	2HW67AA
HP Dual Mode Mouse	6CR71AA
HP ENVY Rechargeable Mouse 500	2LX92AA
HP ENVY Rechargeable Mouse 500	2WX69AA
HP Elite Presenter Mouse	3YF38AA
HP Pavilion Gaming Mouse 200	5JS07AA
HP Pavilion Gaming Mouse 300	4PH30AA
HP Pavilion Gaming Mouse 300	4PH31AA
HP Pavilion Gaming Mouse Pad 300	4PZ84AA
HP Pavilion Gaming Mouse Pad 400	5JH72AA
HP Retractable Wired Mouse 100	6GJ71AA
HP Spectre Bluetooth Mouse 500	1AM58AA

HP Spectre Rechargeable Mouse 700	3NZ70AA
HP Spectre Rechargeable Mouse 700	3NZ71AA
HP Spectre Rechargeable Mouse 700	4YH33AA
HP Spectre Rechargeable Mouse 700	4YH34AA
HP Spectre Rechargeable Mouse 700	5VD59AA
HP Wired Mouse 100	6VY96AA
HP Wired Mouse 1000	4QM14AA
HP Wireless Mouse 200	2HU82AA
HP Wireless Mouse 200	2HU83AA
HP Wireless Mouse 200	2HU84AA
HP Wireless Mouse 200	2HU85AA
HP Wireless Mouse 200	2VY31AA
HP Wireless Mouse 200	2VY33AA
HP Wireless Mouse 200	X6W31AA
HP Wireless Mouse 201	3XA55AA
HP Wireless Mouse 202	2NE06AA
HP Wireless Mouse 220	3FV66AA
HP Wireless Mouse 220	7KX10AA
HP Wireless Mouse 220	7KX11AA
HP Wireless Mouse 220	7KX12AA
HP Wireless Mouse 220 with Pouch	6JA61AA
HP Wireless Mouse 220 with Pouch	6JA62AA
HP Wireless Mouse 220 with Pouch	6JA63AA
HP Wireless Mouse 250	3FV67AA
HP Wireless Mouse X200	6VY95AA
HP Wireless Mouse X3000	2HW69AA
HP Wireless Mouse Z3700	4VY81AA
HP Wireless Mouse Z3700	4VY82AA
HP Wireless Mouse Z3700	6SD49AA
HP Wireless Mouse Z3700	7UH85AA
HP Wireless Mouse Z3700	7UH86AA
HP Wireless Mouse Z3700	7UH87AA
HP Wireless Mouse Z3700	7UH88AA
HP Wireless Mouse Z3700	7UH89AA
HP Wireless Mouse Z4000	2HW66AA
HP Wireless Mouse Z4000	H5N61AA

HP X220 Backlit Gaming Mouse	8DX48AA
HP X3000 Wireless Mouse	H2C22AA
HP X4500 Wireless (Black) Mouse	H2W16AA
HP X4500 Wireless (Metal Black) Mouse	H2W26AA
HP X500 Wired Mouse	E5E76AA
HP X900 Wired Mouse	V1S46AA
HP Z3200 Black Wireless Mouse	JOE44AA
HP Z3200 White Wireless Mouse	E5J19AA
HP Z3700 Black Wireless Mouse	VOL79AA
HP Z3700 Blue Wireless Mouse	VOL81AA
HP Z3700 Ceramic White Wireless Mouse	171D8AA
HP Z3700 Forest Teal Wireless Mouse	171D9AA
HP Z3700 Gold Wireless Mouse	X7Q43AA
HP Z3700 Red Wireless Mouse	VOL82AA
HP Z3700 Silver Wireless Mouse	X7Q44AA
HP Z3700 White Wireless Mouse	VOL80AA
HP Z5000 Bluetooth Mouse	E5C13AA
HP Z5000 Dark Ash Silver Wireless Mouse	W2Q00AA
OMEN Vector Essential Mouse	8BC52AA
OMEN Vector Wireless Mouse	2B349AA
OMEN by HP Mouse 400	3ML38AA
OMEN by HP Mouse 600	1KF75AA
OMEN by HP Mouse Pad 100	1MY14AA
OMEN by HP Mouse Pad 200	3ML37AA
OMEN by HP Reactor Mouse	7ZF19AA

Keyboards

OMEN by HP Sequencer Keyboard	2VN99AA ★
OMEN by HP Encoder Keyboard	6YW76AA ★
OMEN by HP Keyboard 1100	1MY13AA ★
HP Classic Wired Keyboard	WZ972AA
HP K1500 Keyboard	H3C52AA
HP K1500 Keyboard	J8F16AA
HP K2500 Wireless Keyboard	E5E77AA
HP Keyboard 100	2UN30AA
HP Pavilion Gaming Keyboard 500	3VN40AA

HP Pavilion Gaming Keyboard 550	9LY71AA
HP Pavilion Gaming Keyboard 800	5JS06AA
HP Pavilion Wired Keyboard 300	4CE96AA
HP Pavilion Wireless Keyboard 400	4XL88AA
HP Pavilion Wireless Keyboard 600	4CE98AA
HP Pavilion Wireless Keyboard 600	4CF02AA
HP Spectre Rechargeable Keyboard 1000	2ER92AA
OMEN Spacer Wireless TKL Keyboard	9BU31AA
OMEN by HP Encoder Keyboard	6YW75AA

Keyboard and Mouse Kits

HP C2500 Desktop	H3C53AA
HP C2500 Desktop	J8F15AA
HP C2710 Combo Keyboard	M7P30AA
HP Pavilion Keyboard and Mouse 200	9DF28AA
HP Pavilion Wired Keyboard and Mouse 400	4CE97AA
HP Pavilion Wireless Keyboard and Mouse 800	4CE99AA
HP Pavilion Wireless Keyboard and Mouse 800	4CF00AA
HP Wired Keyboard and Mouse 160	6HD76AA
HP Wireless Keyboard and Mouse 250	6JU16AA
HP Wireless Keyboard and Mouse 300	3ML04AA

Networking Products

Switches/Hubs/Routers/Converters/Repeaters

HP ENVY USB-C Hub	5LX63AA
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Graphics Cards

Graphics Connectors/Adapters

HP HDMI to VGA Cable Adapter	X1B84AA
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Batteries/Chargers/Adapters

Power Adapters

HP Pavilion USB-C™ to HDMI 2.0 Adapter	2PC54AA
OMEN by HP Power Adapter 330W	2DR32AA

Cables/Cable Kits/Cable Adapters

Cable Adapters

HP Spectre USB-C Travel Dock	2SR85AA
HP USB Type-C to RJ45 Adapter	V8Y76AA
HP USB-C Dock	YOK80AA
HP USB-C to Multi-port Hub	1BG94AA
HP USB-C to USB-A Hub	Z8W90AA
HP USB-C to VGA Display Adapter	P7Z54AA

Docking and Port Replicators

Docking Stations

HP Thunderbolt Dock 120W with HDMI Adapter	6HP48AA
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PC Drives and Storage

PC DVD+RW Drives

HP USB External DVDRW Drive	F6V97AA
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