

OMEN Gaming Laptop 16-wf1003nc (A85ZCEA)



Enjoy powerful fun anywhere.

The OMEN by HP 16 inch gaming laptop is ready to go wherever you are. Enjoy desktop-level power with a 14th Gen Intel® Core™ processor[1] and a modern NVIDIA® graphics card, both regulated by enhanced internal cooling. The screen is equally impressive with high resolution, smooth framerates, and anti-glare features.



Desktop levels of power anywhere

The processor, graphics card, and memory to handle the neediest of games wherever you may be.

Laptop cooling excellence

Performance doesn't matter if your laptop sounds like a jet engine, so choose OMEN's enhanced thermal design.

Buttery smooth 16.1" display

Expect immersion with a massive 3-sided bezel edge, high resolution 16.1" display with anti-glare features.

Featuring

Get a fresh perspective

From a rejuvenated Start menu, to new ways to connect to your favorite people, news, games, and content—Windows 11 is the place to think, express, and create in a natural way. [3]

Game without compromise. Go beyond performance with Intel Core and Intel Core Ultra Processors

Be everything you want to be, in-game and out with optimized performance and new features. Play harder and work smarter with Intel Core Processors. [4]

Beyond Fast

NVIDIA® GeForce RTX™ 40 Series GPUs are beyond fast. Powered by the NVIDIA Ada Lovelace architecture which delivers a leap in both performance and AI-powered graphics. Experience lifelike virtual worlds with ray tracing and ultra-high FPS gaming. [5]

NVIDIA® G-SYNC™

By synchronizing the refresh rates of your GPU and display, NVIDIA® G-SYNC™ technology delivers gameplay that's sharp, fluid, and stutter-free with minimal input lag.

QHD IPS antiglare display

Get lost in the captivating QHD resolution with IPS technology. Coupled with an antiglare screen to reduce light reflection, this display provides a remarkable entertainment experience. [6]



Specifications

Operating system	Windows 11 Home
Product color	Shadow black aluminum
Processor family	Intel® Core™ i9 14th generation processor
Processor	Intel® Core™ i9-14900HX (up to 5.8 GHz with Intel® Turbo Boost Technology, 36 MB L3 cache, 24 cores, 32 threads) [6,7]
Chipset	Intel® HM770
Memory	32 GB DDR5-5600 MHz RAM (2 x 16 GB)
Internal Storage	2 TB PCIe® Gen4 NVMe™ TLC M.2 SSD
Product design	Paint finish cover and base, anodized keyboard frame
Graphics	Discrete
Graphics (discrete)	NVIDIA® GeForce RTX™ 4080 Laptop GPU (12 GB GDDR6 dedicated)
Display	40.9 cm (16.1") diagonal, QHD (2560 x 1440), 240 Hz, 3 ms response time, IPS, micro-edge, anti-glare, Low Blue Light, 300 nits, 100% sRGB
Display	16.1" diagonal, QHD (2560 x 1440), 240 Hz, 3 ms response time, IPS, micro-edge, anti-glare, Low Blue Light, 300 nits, 100% sRGB ^[17,21,28]
Display size (diagonal)	40.9 cm (16.1")
Display size (diagonal)	16.1"
Audio	DTS:X® Ultra; Dual speakers; HP Audio Boost; HyperX
Minimum dimensions (W x D x H)	36.9 x 25.94 x 2.35 cm
Weight	2.39 kg
Keyboard	Full-size, per key RGB backlit, shadow black keyboard and 26-Key Rollover Anti-Ghosting Key technology
Pointing device	HP Imagepad
Input devices	IR thermal sensor
Camera	HP True Vision 1080p FHD camera with temporal noise reduction and integrated dual array digital microphones
Ports	1 USB Type-A 5Gbps signaling rate; 1 USB Type-A 5Gbps signaling rate (HP Sleep and Charge); 2 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4, HP Sleep and Charge); 1 HDMI 2.1; 1 RJ-45; 1 AC smart pin; 1 headphone/microphone combo ^[19,42]
Package dimensions (W x D x H)	6.9 x 55.2 x 34.5 cm
Package weight	4.28 kg
Network interface	Integrated 10/100/1000 GbE LAN
Wireless	Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card ^[12,46]
Power supply type	280 W Smart AC power adapter
Battery type	6-cell, 83 Wh Li-ion polymer (^[23])
Battery life	Up to 4 hours and 45 minutes ^[3]
Battery recharge time	Supports battery fast charge: approximately 50% in 30 minutes ^[5]
Energy star certified	ENERGY STAR® certified
Special features	NVIDIA® G-SYNC® support
Sustainable impact specifications	Ocean-bound plastic in speaker enclosure(s) and bezel; Keyboard mechanism made from agriculture waste; Recycled metal in keyboard frame; Keyboard keycaps and scissors contain post-consumer recycled plastic
Security management	Camera privacy shutter; Trusted Platform Module (Firmware TPM) support
Pre-installed software	Intel® Unison™
Software included	1-month Adobe free trial offer; Xbox Game Pass 1-month free trial
Software - Productivity & finance	1 month trial for new Microsoft 365 customers ^[24]
Cloud service	25 GB Dropbox storage for 12 months ^[1]
UPC number	198415762245
Manufacturer Warranty	2 year (2/2/0) limited warranty includes 2 years of parts and labor. No on-site repair. Terms and conditions vary by country. Certain restrictions and exclusions apply.
What's in the box	HyperX Cloud II Core Wireless Gaming Headset

Top Recommended Displays, Accessories and Services

OMEN by HP Displays

OMEN by HP 27 inch UHD 144Hz Gaming Monitor - OMEN 27k	780G8AA
OMEN by HP 27 inch FHD 240Hz Gaming Monitor - OMEN 27s	780G5AA
OMEN by HP 31.5 inch QHD 165Hz Curved Gaming Monitor - OMEN 32c	780K6AA

Messaging Footnotes

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

[3] 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 is automatically updated and enabled. High speed internet and Microsoft account required. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.

[4] Intel and Core are trademarks of Intel Corporation in the U.S. and other countries.

[5] ©2024 NVIDIA Corporation. NVIDIA, the NVIDIA logo, GeForce, and GeForce RTX are registered trademarks and/or trademarks of NVIDIA Corporation in the United States and other countries. All other trademarks and copyrights are the property of their respective owners.

[6] Quad high-definition (QHD) content is required to view QHD images.

Technical Specifications Footnotes

[1] 25 GB of free Dropbox storage 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] MobileMark 25 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-25/> for additional details.

[5] Recharges your battery up to 50% within 30 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.

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

[12] Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. And available in countries where 6GHz is supported.

[17] All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.

[19] For best results with HP Sleep and Charge, use a USB charging protocol standard cable or cable adapter with an external device.

[21] TUV Low Blue Light is the Display Compliance Test Specification quality. See <https://www.certipedia.com/?locale=en#search> for more details.

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

[28] Eyesafe® Display for Low Blue Light is the Display Compliance Test Specification quality. See <https://eyesafe.com> for more details.

[42] For optimal performance and battery chargeability while gaming and rendering, use the power adapter that ships with the PC. You can use the 100W/20V Type-C adapter or power bank when running light loading tasks. System-off charging is only supported on 20V Type-C adapter or power bank.

[46] Bluetooth® 5.3 operation requires Microsoft OS/Chrome OS support. Until Microsoft OS/Chrome OS support is available, Bluetooth® 5.3 will function as Bluetooth® 5.2 or lower.

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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 is automatically updated and enabled. High speed internet and Microsoft account required. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.

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