OMEN MAX Gaming Laptop 16-ah0007na

Built to break limits

The OMEN 16 MAX gaming laptop provides unparalleled performance both at-home or on-the-go. With next-gen NVIDIA® GPUs and Intel® Core™ Ultra CPUs[1], a new Unleashed Mode for manual overclocking, and a thermal architecture built to cut down on both throttling and long term wear, dedicated gamers can achieve their best for years to come.

*Product image may differ from actual product

Performance you control
Throttle less and carry more with the latest Intel® Core™ Ultra CPUs[1] and next-gen NVIDIA® RTX™ graphics.

Put your throttling on ice
Self-cleaning fans, a vapor chamber, and liquid metal ensure your laptop stays cool and reduces maintenance.

Instant pair with HyperX
Instantly connect up to three HyperX devices to your laptop at once, like a mouse, headset, and controller.

Sustainability in action

Light the way you play
Customize your lattice-less RGB keyboard and other lighting options in OGH to represent your unique style.

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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.[2]

Desktop-level performance anywhere
Level up your PC with advanced performance, enhanced AI, and a CPU designed to defy expectations[3]

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.

Wide Quad Extended Graphics Array Display
Get lost in the captivating definition with 2560 × 1600 pixels.[4]

Eyesafe® Certified Display
Eyesafe® certified displays meet TÜV low blue light requirements and Eyesafe® standards for protecting your eyes from harmful blue light without distorting colors to reduce eyestrain when working for long periods of time.[5]

3ms response time
How fast your display's pixels respond is crucial for a smooth picture. With a 3-millisecond response time, your action-filled content will look crisp and fluid without motion blur.[6]

Flicker-free
Using DC Dimming technology that controls brightness by adjusting direct current rather than cycling the backlight, we can eliminate screen flickering for more comfortable viewing.[7]

16:10 aspect ratio
A 16:10 aspect ratio lets you see more of your content with less scrolling.

100% sRGB
Showcase your creations in all their colors on the 100% sRGB display for maximum color broadness and accuracy.

Try PC Game Pass for free with your new HP device
Play hundreds of high-quality PC games with your new HP gaming device and 3 free months of PC Game Pass – including EA play. With new games added all the time, there's always something new to play.[8]

Incorporating ocean-bound plastics
HP incorporates increasing amounts of recycled, renewable, and non-virgin raw materials. Built with the environment in mind, this product includes a percentage of ocean-bound plastic in the design.[9]

Keyboard contains post-consumer recycled plastic
We're bringing a more thoughtful design to our keyboards by using post-consumer recycled plastic in the design.[10]

HP Fast Charge
When your laptop is low on power, no one has time to wait hours to recharge. Power down your device and go from 0 to 50% charge in approximately 30 minutes.[11]

Enjoy a smooth wireless experience with a Wi-Fi 7 (2x2) and Bluetooth® 5.4 combo.
Enjoy a smooth wireless experience with a Wi-Fi 7 (2x2) and Bluetooth® 5.4 combo.[12]

HP True Vision FHD IR camera
Log in safely through Windows Hello with the infrared sensor. With an 88-degree, wide-angle field of view, you can video chat with your entire family or group of friends in stunning detail.[13]

Thunderbolt™ 4 with USB™ Type-C®
The latest Thunderbolt™ solution lets you power your device or connect up to two 4K displays with a single cable and blazing 40Gbps signaling rate.

McAfee® LiveSafe™
Protect your operating system with a free 30-day McAfee® LiveSafe™ subscription.[14]

HP Audio Boost
Take your audio experience to the next level with smart amplification technology giving you loud, clear and dynamic sound.

Audio tuned by HyperX
Immerse yourself in the sweet sounds of audio mixed and tuned by HyperX.

Dual channel memory
With dual channel technology, two channels work simultaneously to double the communication speed between the memory controller and the RAM increasing system performance.

HP Imagepad with multi-touch gesture
This true multi-touch touchpad supports four finger gestures and lets you scroll, zoom, and navigate with a simple touch.

Recommended accessories and services (not included)

HyperX Cloud III Wireless - Gaming Headset
77Z46AA

HyperX Knight Backpack
8C525AA

HyperX Pulsefire Haste 2 Pro - 4K Wireless Gaming Mouse
A1KY5AA

3-year pickup and return
U4819E

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Specifications

Performance

Operating system
Windows 11 Home

Processor
Intel® Core™ Ultra 9 275HX (up to 5.4 GHz with Intel® Turbo Boost Technology, 36 MB L3 cache, 24 cores, 24 threads)[6,7]
Processor family: Intel® Core™ Ultra 9 processor

Chipset
Intel® HM870

Memory
32 GB DDR5-5600 MT/s (2 x 16 GB)
Transfer rates up to 5600 MT/s.
Number of User-accessible Memory Slots: 2

Storage
1 TB PCIe® Gen5 NVMe™ Performance M.2 SSD
25 GB Dropbox storage for 12 months[1]

Graphics
Discrete: NVIDIA® GeForce RTX™ 5080 Laptop GPU (16 GB GDDR7 dedicated) ;
Advanced Optimus

Audio
DTS:X® Ultra; Dual speakers; HP Audio Boost; HyperX

Display
40.6 cm (16") diagonal, WQXGA (2560 x 1600), 60-240 Hz, 3 ms response time, IPS, micro-edge, anti-glare, Low Blue Light, 500 nits, 100% sRGB[17,21,28]

Screen-to-body ratio
88.81%[18]

Power
330 W AC power adapter;

Battery type
6-cell, 83 Wh Li-ion polymer[23]

Battery and Power
Supports battery fast charge: approximately 50% in 30 minutes[5]

Connectivity

Network interface
Integrated 10/100/1000/2500 GbE LAN

Wireless connectivity
Intel® Wi-Fi 7 BE200 (2x2) and Bluetooth® 5.4 wireless card [12,46]
HP Extended Range Wireless LAN

Ports
2 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 2.1, HP Sleep and Charge); 2 USB Type-A 10Gbps signaling rate; 1 AC smart pin; 1 HDMI 2.1; 1 headphone/microphone combo; 1 RJ-45[19,42]

Webcam
HP True Vision 1080p FHD IR camera with temporal noise reduction and integrated dual array digital microphones

Sustainability

Sustainable impact specifications
Ocean-bound plastic in bezel; Keyboard keycaps and scissors contain post-consumer recycled plastic; Recycled metal in cover, base and hinge cap(s)[39,40,41]

Design

Product color
Shadow black aluminum in cover and base, light bar, RGB in keyboard frame, black chrome logo
Sandblasted and paint finish

Software

HP apps
HP Support Assistant; HP Connection Optimizer; OMEN Gaming Hub

Software
Otter.ai;
1 month trial for new Microsoft 365 customers[24]

Service & support
McAfee Online Protection 30-day trial; 1-month Adobe free trial offer; PC Game Pass 3-month trial [2,25]

Additional information

Part Number
P/N: B8BL1EA #ABU
UPC/EAN code: 198990491172

Weight
2.68 kg;
Packed: 4.74 kg

Dimensions
35.65 x 26.9 x 2.29 cm (front); 35.65 x 26.9 x 2.48 cm (rear);
Packed: 9.4 x 42.8 x 33.2 cm

Manufacturer Warranty
1 year (1/1/0) limited warranty includes 1 year of parts and labor. No on-site repair. Terms and conditions vary by country. Certain restrictions and exclusions apply.

Keyboard
Full-size, per key RGB backlit, shadow black keyboard with numeric keypad and NKRO Anti-Ghosting Key technology
HP Imagepad

Features
NVIDIA® G-SYNC® support

Security management
Camera privacy shutter; Trusted Platform Module (Firmware TPM) support

Sensors
IR thermal sensor

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Footnotes

Messaging Footnotes

[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 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.

[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. Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See http://www.intel.com/technology/turboboost/ for more information. Features and software that require a NPU may require software purchase, subscription or enablement by a software or platform provider, and third-party software may have specific configuration or compatibility requirements. Potential NPU inferencing performance varies by use, configuration, software and other factors.

[4] WQXGA content is required to view WQXGA images.

[5] All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower. Eyesafe® Display for Low Blue Light is the Display Compliance Test Specification quality. See https://eyesafe.com for more details. Display measured diagonally

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

[7] The flicker-free capability eliminates screen flickering through integrating DC-dimming LED backlights.

[8] Xbox Game Pass sold separately. Credit card required. Unless you cancel, you will be charged the then-current regular membership rate when the promotional period ends. Terms, exclusions, and streaming limits apply. Xbox Cloud Gaming (Beta): select devices and regions. After term, active membership required to play games and online multiplayer. Game catalog varies over time, region, and by device. DLC sold separately; if a game is removed from catalog or your membership ends, you will need to purchase the game separately to use your DLC. If you're already an Xbox Live Gold and/or Game Pass for Console/PC member, any days remaining in your membership(s) will be converted to Ultimate using a conversion ratio. Future code redemptions also subject to conversion ratio. All conversions to Ultimate are final. Details and system requirements at www.xbox.com/gamepass. Offer valid in all Xbox Game Pass markets excluding Russia. Digital Direct: Your digital content will be delivered directly to your device during set-up; no codes required. PC Game Pass: Subscription continues automatically at regular monthly price unless cancelled. Subject to xbox.com/subscriptionterms

[9] Percentage of ocean-bound plastic contained in each component varies by product.

[10] Keyboard components contain post-consumer recycled plastic. Percentage of post consumer recycled contained in each component varies by product.

[11] Recharges your battery up to 50% within 30 minutes when the system is off using "shut down" command, using HP adapter provided with the notebook or recommended power adapter disclosed in specifications (see http://store.hp.com). 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.

[12] Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 is backwards compatible with prior 802.11 specs. Wi-Fi 7 is designed to support gigabit data rate when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 80MHz and higher channels. Wi-Fi 7 (802.11ax) is not supported in Belarus where Wi-Fi settings will be optimized to local regulatory requirements (802.11ac).

[13] Features may require software or other 3rd party applications to provide the described functionality.

[14] Internet service required and not included. Subscription required after 30 days.

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.

[2] Internet access required and not included. McAfee is pre-installed on your PC and an account is required for activation. Subscription renewal required after trial period. VPN feature is not available in India, China, Syria or North Korea. McAfee is not compatible with Windows 11 in S mode. You'll need to permanently switch out of S mode. There's no charge to switch out of S mode, but you won't be able to turn it back on.

[5] Recharges your battery up to 50% within 30 minutes when the system is off using "shut down" command, using HP adapter provided with the notebook or recommended power adapter disclosed in specifications (see http://store.hp.com). 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.

[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.

[12] Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 7 (802.11BE) functionality requires Windows 11 2024, select Intel® Core™ or Intel® Core™ Ultra processor, and a Wi-Fi 7 router, sold separately. Wi-Fi 7 is backwards compatible with prior 802.11 specs. Available in countries where Wi-Fi 7 is supported. The specification for 802.11BE is a draft specification and is not final. If the final specification differs from the draft specification, it may affect the ability of the device to communicate with other 802.11BE devices.

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

[18] Percent of active plus nonactive viewing area to active viewing area plus border. Measure with lid vertical to the desk.

[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.

[23] Actual battery Watt-hours (Wh) will vary from design capacity. Battery capacity will naturally decrease with shelf life, time, usage, environment, temperature, system configuration, loaded apps, features, power management settings and other factors.

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

[25] Offer available worldwide (excluding China and embargoed countries or other countries identified as restricted by applicable law or regulation) to new and existing subscribers who are 18+. Click on the Adobe icon in the start menu to redeem a 1-month free trial membership for select Adobe software. The software is tied to the device and is not transferrable. If you would like to sign up for an auto-renewing subscription, you can provide your payment method at sign-up. By adding a payment method, your subscription will automatically renew at the then current rate on your renewal date until you cancel. If you cancel before the end of the one-month free trial, you won't be charged. You can cancel your subscription anytime via your Adobe Account page or by contacting Customer Support. Please see current prices for Adobe products available in this offer. Offer not available to Education, OEM, or volume licensing customers. Subject to availability where the recipient resides. Additional terms and conditions may apply. VOID WHERE PROHIBITED OR RESTRICTED BY LAW.

[27] Based on U.S. EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. EPEAT® status varies by country. Visit www.epeat.net for more information.

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

[37] Weight and system dimensions may fluctuate due to configuration and manufacturing variances.

[39] Percentage of ocean-bound plastic contained in each component varies by product.

[40] Laptops manufactured with recycled metal material in product cover. Percentage of recycled metal varies by product.

[41] Keyboard components contain post-consumer recycled plastic. Percentage of post consumer recycled contained in each component varies by product.

[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.

[45] The Flicker-free capability is eliminating screen flickering through integrating DC-dimming LED backlights or LED emissions. OLED panel is functional with DC-DIMMING when above 100nits.

[46] Bluetooth® 5.4 operation requires Microsoft OS/Chrome OS support. Until Microsoft OS/Chrome OS support is available, Bluetooth® 5.4 will function as Bluetooth® 5.3 or lower.

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