Datasheet

HP OmniBook 7 Laptop Next Gen AI 16-bh0000nax

AI performance and portability with a brilliant 16” display.

Tough enough to meet demanding US military-grade standard testing[1], HP OmniBook 7 16 AI PC delivers durability, performance, and portability, powered by the latest AI-enhanced Intel® Core™ Ultra Processor[2] and a brilliant 16” display.



*Product image may differ from actual product

Military-grade-tested[1]. For the toughest tasks.

Engineered and tested to withstand drops, bumps, and extreme temperatures so you can work from anywhere.

Fits your need for power and speed.

Delivers AI power, an all-day, fast-charging battery, and all the ports you could want.

Brilliant viewing

A 16" display delivers brilliant viewing and ultra smooth visuals.

Sustainability in action

Built for a better tomorrow

HP OmniBook 7 16 AI PCs are designed using recycled metals[3] and post-consumer recycled plastics[4].

with

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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.[5]

Intel® Core™ Ultra 7 Series 3 processor
No tradeoffs. Intel® Core™ Ultra Series 3 processors deliver what matters: incredible battery life, powerful performance, and built-in graphics and AI to revolutionize how you create, game, and work anywhere. Feel the power of Intel Inside®.[6]

Intel® Graphics
Stream your favorite shows, hop on video calls, and scroll through photo edits. All with smooth, responsive visuals. Built-in Intel® Graphics handle everyday entertainment and multitasking with ease, no extra GPU, no extra bulk.[7]

OLED display
With display technology that lights each pixel separately, you'll get deeper blacks for richer contrast, enhanced color depth, and more power efficiency than traditional LED screens.

VESA Certified DisplayHDR 500
Brighten your screen with a VESA Certified DisplayHDR 500 panel. Create more and do more with true local dimming and enhanced high-contrast on your HDR display, creating a vivid, lifelike visual experience.*[8]

Low Blue Light
Protect your eyes from harmful blue light with a low blue light display.

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

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.[9]

100% DCI-P3
With 100% DCI-P3, experience a wider color range and cinema-grade visuals—richer reds, deeper greens, and vibrant color that elevates movies, photos, and creative work.[10]

Poly Camera Pro
Poly Camera Pro elevates your video calls with AI to enjoy crystal clear video, customizable settings and professional grade features for a truly immersive video conferencing and collaboration experience.

Utilizing recycled metals
HP incorporates increasing amounts of recycled, renewable, and non-virgin raw materials. Because little things make a big difference, this product includes a percentage of recycled metals in the design.[11]

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.[12]

ENERGY STAR® certified
Save energy and money with ENERGY STAR®, certified by the EPA so you will use less energy and save money where it counts most.[13]

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.[14]

Intel® Wi-Fi 7 BE211 and Bluetooth® 6.0 wireless card
Boost your connectivity and productivity with the Intel Wi-Fi 7 (2x2) and Bluetooth® 6.0 wireless card, for faster speeds, improved stability and ultimate reliability – even in crowded environments – across all your devices.[15]

Camera Shutter
No more unsightly tape and tacky gum to hide your private moments. Ensure your privacy and security with a visible, physical shutter that turns off your PC's camera when not in use.

1TB PCIe® Gen4 NVMe™ M.2 SSD
With high-speed data transfer, the 1 TB PCIe Gen4 NVMe M.2 SSD offers lightning fast speed and efficient storage.[16]

Poly Studio Audio
HP + Poly together will continuously accelerate innovation across our hybrid solutions, including AI-generated technology. With pitch perfect audio, you'll get the best experience to collaborate anywhere with audio tuned by Poly Studio.

Dual speakers
Pump up the volume to your favorite music, movie or game with dual-stereo speakers.

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.

LPDDR5X RAM
Experience speedy and responsive performance with the power efficient LPDDR5X memory. Designed to support higher data rates with less latency, plus faster file transfers and application load.

Backlit keyboard
Keep going even in dimly lit rooms or aboard red-eye flights. With an illuminated keyboard, you can type comfortably in more environments.

Recommended accessories and services (not included)



HP 480 Comfort Bluetooth Mouse
8T6M3AA



HP 100 Sanitizable Mouse Pad
8X594AA



HP 100W GaN Wall Charger
CS9V8AA



3-year pickup and return
UM963E

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Specifications





Performance

Operating system
Windows 11 Home
Processor
Intel® Core™ Ultra 7 356H (up to 4.7 GHz with Intel® Turbo Boost Technology, 18 MB L3 cache, 16 cores, 16 threads)[6,7]
Processor family: Intel® Core™ Ultra 7 processor
Neural Processing Unit (NPU): Intel® AI Boost (50 NPU TOPS)
Chipset
Intel® integrated SoC
Memory
24 GB LPDDR5x-7467 MT/s (onboard)
Transfer rates up to 7467 MT/s.
Number of User-accessible Memory Slots: 0
Storage
1 TB PCIe® Gen4 NVMe™ M.2 SSD
100 GB Dropbox storage for 3 months[1]
Graphics
Integrated: Intel® Graphics;
Audio
DTS:X Ultra™; Dual speakers; HP Audio Boost; Poly Studio
Display
40.6 cm (16") diagonal, 2K (2048 x 1280), OLED, multitouch-enabled, 120 Hz, 0.2 ms response time, UWVA, edge-to-edge glass, micro-edge, Low Blue Light, SDR 400 nits, HDR 620 nits, 100% DCI-P3[17,21,26,28]
Screen-to-body ratio
88%[18]
Power
100 W AC power adapter (recommended, sold separately);
Battery type
4-cell, 70 Wh Li-ion polymer[23]
Battery and Power
Supports battery fast charge: approximately 50% in 30 minutes[5]

Connectivity

Wireless connectivity
Intel® Wi-Fi 7 BE211 (2x2) and Bluetooth® 6.0 wireless card [12,46]
Ports
1 USB Type-A 10Gbps signaling rate; 1 USB Type-A 5Gbps signaling rate; 1 HDMI-out 2.1; 1 headphone/microphone combo; 1 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery 3.1, DisplayPort™ 2.1, HP Sleep and Charge); 1 USB Type-C® 10Gbps signaling rate (USB Power Delivery 3.1, DisplayPort™ 1.4a, HP Sleep and Charge)[19]
Expansion slots
2 M.2 (SSD)
Webcam
5MP IR camera with temporal noise reduction and integrated dual array digital microphones

Sustainability

Ecolabels
EPEAT® Gold with Climate+[27]
Energy star certified
ENERGY STAR® certified
Sustainable impact specifications
Ocean-bound plastic in speaker enclosure(s) and bezel; Recycled metal in cover, keyboard frame, base and hinge cap(s); Keyboard keycaps and scissors contain post-consumer recycled plastic[39,40,41]

Design

Product color
Glacier silver aluminum
Sandblasted anodized finish

Software

HP apps
HP Support Assistant; HP Connection Optimizer; OMEN Gaming Hub
Software
Copilot in Windows with Copilot key; Poly Camera Pro;
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: E45G1EA #ABU
UPC/EAN code: 885981164596
Weight
1.96 kg;
Packed: 3.01 kg
Dimensions
35.78 x 25.48 x 1.5 cm;
Packed: 8 x 42.3 x 30.3 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, backlit, soft gray keyboard with numeric keypad
HP Imagepad
Security management
Mic mute key; Camera privacy shutter; Trusted Platform Module (Firmware TPM) support

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Footnotes

Messaging Footnotes

[1] Testing is not intended to demonstrate fitness of U.S. Department of Defense (DoD) contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Pack.
[2] 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 is not a measurement of clock speed. 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, and other factors.
[3] Recycled metal is expressed as a percentage of the total weight of the metal according to ISO 14021 definitions for metal parts over 25 grams.
[4] Recycled plastic is expressed as a percentage of the total weight plastic. Post-consumer recycled is based on the definition set in the EPEAT standard for computers, IEEE 1680.1-2018 standard.
[5] 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.
[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 is not a measurement of higher performance.
[7] For more complete information on configurations and workloads, visit www.Intel.com/PerformanceIndex.
[8] High dynamic range (HDR) content required to view HDR images. DisplayHDR™ is the high-performance Monitor and Display Compliance Test Specification from VESA specifying HDR (High Dynamic Range) quality. See http://displayhdr.org for more details. Display measured diagonally
[9] The flicker-free capability eliminates screen flickering through integrating DC-dimming LED backlights.
[10] All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.
[11] Laptops manufactured with recycled metal material in product cover. Percentage of recycled metal varies by product.
[12] Percentage of ocean-bound plastic contained in each component varies by product.
[13] ENERGY STAR and the ENERGY STAR logo are registered trademarks of the U.S. Environmental Protection Agency.
[14] 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.
[15] 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. Bluetooth® 6.0 operation requires Microsoft OS/Chrome OS support. Until Microsoft OS/Chrome OS support is available, Bluetooth® 6.0 will function as Bluetooth® 5.4 or lower. Bluetooth® is a trademark owned by its proprietor and used by HP Inc. under license.
[16] For hard drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35GB of system disk is reserved for system recovery software.

Technical Specifications Footnotes

[1] 100 GB of free Dropbox storage for 3 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. Calculated to the nearest whole percent may vary +/-0.5%.
[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.
[26] DisplayHDR™ is the high-performance Display Compliance Test Specification from VESA specifying HDR (High Dynamic Range) quality. See http://displayhdr.org for more details.
[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.
[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® 6.0 operation requires Microsoft OS/Chrome OS support. Until Microsoft OS/Chrome OS support is available, Bluetooth® 6.0 will function as Bluetooth® 5.4 or lower.
[50] Copilot in Excel requires AutoSave to be enabled, meaning the file must be saved to OneDrive; it doesn't function with unsaved files. Copilot features in Outlook apply to accounts with @outlook.com, @hotmail.com, @live.com, or @msn.com email addresses and are available in Outlook.com, Outlook built into Windows, Outlook on Mac, and iOS and Android apps. AI features only available to Microsoft 365 Family subscription owner and cannot be shared; usage limits apply. Learn more Learn more Understanding AI credits - Microsoft Support . Microsoft Copilot features in Microsoft 365 are not available in China or Macao SAR.
[51] 1 supports Gen4 SSD, 1 supports Gen5 SSD.

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