

HP OmniBook X 16 inch Laptop AI PC 16-aw0033dx



Designed to empower, built to perform, engineered to last

Style meets strength in the HP OmniBook X 16 AI PC. With AI-powered performance from an Intel® Core™ Ultra 7 processor, NVIDIA® GeForce® RTX™ 4050 graphics, and a vibrant display.

Product overview

- **Strength that delivers, reliability that endures:** Proven to withstand, this device meets military-grade standards and undergoes rigorous testing to handle drops, shocks, and extreme environments, keeping up with your toughest challenges you never have to slow down.
- **Smarter power. Smoother performance. Limitless productivity.** Experience enhanced AI processing, smoother graphics, and seamless multitasking. Powered by an Intel® Core™ 7 Ultra processor and NVIDIA® GeForce® RTX™ 4050 graphics. Connect easily with multiple ports, including a Thunderbolt™ 4 with USB-C® and stay productive longer with HP Fast Charge.
- **Immersive visuals. Cutting-edge tools. Meaningful connections.** Immerse yourself in stunning visuals on a 16 inch 2K OLED touch display.⁽²⁴⁾ Look and sound your best in every video call with the AI-enhanced Poly Camera Pro, featuring a 5MP IR camera with Auto Switch HDR^(89d) for dynamic lighting adjustments, and crystal-clear audio tuning by Poly Studio. Whether you're working or streaming, enjoy premium quality and effortless collaboration.
- **Built for a better tomorrow:** Designed using recycled metals and post-consumer recycled plastics. The EPEAT® Gold with Climate+ and ENERGY STAR® certified design highlights our commitment to reducing environmental impact while achieving exceptional energy efficiency.

Key specifications

- **Operating system:** Windows 11 Home⁽¹⁾
- **Processor:** Intel® Core™ Ultra 7 255H^(2e)
- **NPU:** Intel® AI Boost (13 NPU TOPS)^(6c)
- **Display:** 16-inch 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
- **Memory:** 32 GB DDR5-5600 MT/s (2 x 16 GB)
- **Internal storage:** 2 TB PCIe® Gen4 NVMe™ M.2 SSD⁽¹⁵⁾
- **Graphics:** NVIDIA® GeForce RTX™ 4050 Laptop GPU (6 GB GDDR6 dedicated)⁽¹³⁾
- **Sound:** Poly Studio with dual speakers
- **Battery life:**
 - Up to 8 hours and 15 minutes (mixed usage)^(85a)
 - Up to 13 hours (video playback)⁽⁷⁵⁾
 - Up to 11 hours (wireless streaming)⁽⁸⁰⁾
- **Wireless:** Wi-Fi 6E (2x2)^(19d) and Bluetooth® 5.3 wireless card⁽²⁵⁾⁽²⁶⁾ (supporting gigabit data rate)^(7e)
- **Security:** Camera privacy shutter, Mic mute key
- **Camera:** 5MP IR camera with temporal noise reduction and integrated dual array digital microphones^{(89)(89b)}
- **Product weight:** 4.6 lb^(7d)
- **Keyboard:** Full-size, backlit, soft grey keyboard with numeric keypad

Product features

- **Get a fresh perspective with Windows 11:** 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.⁽¹⁾
- **Microsoft Copilot:** Kickstart your creativity and productivity with Microsoft Copilot. Complements your capabilities and creativity with intelligent assistance and relevant answers. And now with the Copilot key, you can access this AI-powered intelligent assistant with a single press of a button.⁽⁴¹⁾
- **Intel® Core™ Ultra 7 255H processor:** Push on the go AI acceleration and graphics to new heights with an Intel® Core Ultra processor. Scaled performance for immersive gaming, fluent creation and all-day productivity on your sleek devices.
- **NVIDIA® GeForce RTX™ 4050:** The NVIDIA® GeForce RTX™ 4050 graphics are beyond fast for gamers and creators. Experience lifelike virtual worlds, ultra-high FPS gaming, revolutionary new ways to create, and unprecedented workflow acceleration.
- **2K OLED 120 Hz touchscreen:** Get sharper and more detailed visuals for editing and content creation with OLED, with 2048x1280 resolution, up to 400 Nits of brightness and 120Hz switchable refresh rate, so you can enjoy the clarity you want for all your creativity to flow.⁽²⁸⁾
- **100% DCI-P3:** Showcase your creations in all their colors on the 100% DCI-P3 display for stunning color accuracy and true-to-life colors.
- **VESA Certified DisplayHDR 500:** Pixel dimming presents true black color, high contrast, and low blue light that makes it easier on your eyes to experience richer, deeper colors with 4K HDR support for amazing picture quality.⁽¹²⁾

Additional product features

- **Eyesafe® Certified display:** Protects your eyes from harmful blue light without distorting colors to reduce eyestrain when working for long periods of time.
- **HP Fast Charge:** Go from 0 to 50% charge in approximately 30 minutes.⁽⁷²⁾
- **Effortlessly connected:** Enjoy faster speeds, improved performance, greater capacity and lower latencies than earlier iterations with Wi-Fi 6E and Bluetooth® 5.3 wireless card.^{(19c)(25)(26)}
- **HP 5MP IR camera with HDR switch:** Take visually stunning works of art with HP 5MP IR camera with HDR switch capabilities. With High Dynamic Range and 16:10 aspect ratio you get HD content natively, so you can capture more gradients between lights and darks for truer color accuracy.^(89d)
- **PCIe® Gen4 NVMe™ M.2 SSD:** With high-speed data transfer, the PCIe® Gen4 NVMe™ M.2 SSD offers fast speed and efficient storage.
- **Poly Studio Audio with dual speakers:** 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.
- **HP Audio Boost 2.0:** Powered by Smart Amp technology provides you loud, rich, and dynamic sound.
- **Try PC Game Pass for free:** Play hundreds of high-quality PC games on your new HP device with 3 free months of PC Game Pass – including EA play. With new games being added all the time, there's always something new to play.⁽⁶⁰⁾

Product design

- **88% screen to body ratio:** Revolutionize your display and see more of what you love with this slim bezel design. Enjoy an immersive multimedia experience with a maximized viewing area.
- **Backlit keyboard:** Keep going comfortably even in darker environments.
- **Backlit lattice-less keyboard:** A smoothly backlit lattice-less keyboard provides properly spaced keys, square forms and enlarged lettering. Optimized for precise typing.
- **Camera shutter:** Ensure your privacy with a visible shutter that turns off your PC's camera.
- **Microphone mute:** Enjoy greater peace of mind with a dedicated mic mute button that you can easily activate and know it's on or off with an LED indicator light.

Created with the planet in mind

- HP is dedicated to driving progress toward a more sustainable future and making responsible choices for the environment and our customers. We are innovating new ways to reduce the amount of materials in our products and packaging—and to use more recycled materials in their design. Together we can make a difference.
 - Built with the environment in mind, this laptop is designed using sustainable materials like:
 - Ocean-bound plastic in bezel and speaker enclosures^(63d)
 - Top cover, base, keyboard deck and hinge caps contain recycled metal^(63d)
 - Keyboard keycaps and scissors contain post-consumer recycled plastic^(63j)
 - HP's outer boxes and fiber cushions used in packaging are 100% sustainably sourced and recyclable^(63e)
 - ENERGY STAR® certified⁽⁶²⁾
 - EPEAT® Gold with Climate+ registered^(27d)

Warranty and support

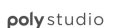
Our Customer Support Team consistently provides quick, responsive assistance in the U.S., Canada and Latin America.

Included with your product:

- **HP's Hardware Limited Warranty:** Full warranty details are included with your product.
- **Technical Support for Software & Initial set-up:** Warranty details are included with your product.

Support Options:

- **HP Support Assistant - HPSA:** Optimized to enhance your support experience. Help for your PC and HP printers whenever you need it.⁽⁵⁶⁾
- **Online Support:** For technical support with this product, visit HP Customer Support <http://support.hp.com>.⁽⁸⁾
- **Social Media Support:** To find solutions, ask questions, and share tips, join us on the HP Support Community at community.hp.com, on Twitter at twitter.com/HPSupport, and Facebook at facebook.com/HPSupport.⁽⁹⁾



Specifications

Operating system	• Windows 11 Home ⁽¹⁾
Processor	• Intel® Core™ Ultra 7 255H ^(2a) • 16-Core • Intel® AI Boost (13 NPU TOPS) ^(6c)
Processor speed	• Up to 5.1 GHz with Intel® Turbo Boost Technology ^(2b)
Processor cache	• 24 MB L3 cache
Memory	• 32 GB DDR5-5600 MT/s (2 x 16 GB)
Accessible memory slots	• Memory slot not user accessible
Video graphics	• NVIDIA® GeForce RTX™ 4050 Laptop GPU (6 GB GDDR6 dedicated) ⁽¹³⁾
Internal storage	• 2 TB PCIe® Gen4 NVMe™ M.2 SSD ⁽¹⁵⁾
Finish and features	• Top cover: meteor silver aluminum with a sandblasted anodized finish • Keyboard deck: meteor silver aluminum with a sandblasted anodized finish
Camera	• 5MP IR camera with temporal noise reduction and integrated dual array digital microphones ^{(9)(9)(9a)}
Display	• 16-inch 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 500 nits, 100% DCI-P3, 1,000,000:1 ⁽²⁰⁾
Screen to body ratio	• 88% ^(8d)
Wireless	• Wi-Fi 6E (2x2) ^{(1)(a)} and Bluetooth® 5.3 wireless card ^{(2)(2a)} (supporting gigabit data rate) ^(7a)
Sound	• Poly Studio with dual speakers • DTS:X® Ultra
Integrated keyboard	• Full-size, backlit, soft grey keyboard with numeric keypad • HP Imagepad
External notebook ports	• 1 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 2.1, HP Sleep and Charge) ^{(4)(2)(5)(5a)(6a)} • 1 USB Type-C® 10Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4a, HP Sleep and Charge) ^{(4)(2)(5)(8)(a)} • 1 USB Type-A 5 Gbps signaling rate • 1 USB Type-A 10Gbps signaling rate • 1 Headphone/microphone combo • 1 HDMI 2.1
Dimensions	• Unpackaged: 14.08 in (W) x 10.03 in (D) x 0.59 in (H) ^{(7)(a)} • Front height is measured at 0.44 in, rear height is measured at 0.59 in, and maximum height is measured at 0.78 in. • Packaged: 16.65 in (L) x 3.15 in (W) x 11.93 in (H)
Weight	• Unpackaged: 4.6 lb ^{(7)(b)} • Packaged: 7.56 lb
Security	• Camera privacy shutter • Mic mute key
Power	• 4-cell, 70 Wh Li-ion polymer battery ⁽²¹⁾ • 100 W USB Type-C® power adapter ⁽⁴⁾⁽²⁾
Battery life	• Up to 8 hours and 15 minutes (mixed usage) ^{(8)(5a)} • Up to 13 hours (video playback) ⁽⁷⁾⁽⁵⁾ • Up to 11 hours (wireless streaming) ^{(8)(b)}
Warranty and support	• 1-year limited hardware warranty. Additional information available at www.support.hp.com ⁽⁸⁾ • 1-year limited technical support for software and initial setup (from date of purchase) ⁽⁵⁾⁽³⁾

Learn more at hp.com

Software and technology

Help and support	• myHP: Customize, optimize, and secure your device with tips and tricks and easy-to-access settings, and receive helpful messages and information to keep things running smoothly. • HP Support Assistant: Included with your computer, this free self-help tool makes it easier than ever to get help with your HP PC and printers. ^(5a)
Security and protection	• HP BIOS Protection: Get peace of mind knowing your PC BIOS is protected. HP BIOS Protection automatically checks its health and recovers itself. ⁽²⁾⁽³⁾ • Presence Sensing: Experience optimal security and efficiency with Presence Sensing. Automatically lock and wake your PC, saving power and getting back to work quickly. Easy access with a single click from myHP. ⁽¹⁷⁷⁾
Partner offers	• Adobe Offer: Get a complimentary 1 month trial of the best creativity and productivity apps from Adobe with the purchase of a computer from HP. Create anything you can imagine – photos, videos, graphics, webpages, PDFs, and more. Get started with the app that best fits your need. ^{(8)(a)} • McAfee 30-day trial: Secure your privacy and data when browsing on public Wi-Fi with VPN, included in your free McAfee 30-day trial. ⁽⁸⁾⁽⁹⁾ • Dropbox cloud storage: Store and synchronize your content online with Dropbox. Get 100GB of storage for one year to access, manage, and share your photos, music, and files from anywhere with Internet access. ⁽⁸⁾⁽²²⁾ • Try PC Game Pass for free: Play hundreds of high-quality PC games on your new HP device with 3 free months of PC Game Pass. ^(6a)
System performance	• HP Connection Optimizer: Get consistent and reliable Wi-Fi performance with software that automatically switches between the most efficient wireless access points. ⁽⁹⁾ • Battery Manager: Improves battery lifespan with Battery Manager. Reduce wear and continually protect optimum battery capacity.
Work and lifestyle	• Microsoft Copilot: Microsoft Copilot gives you intelligent answers. Access with just the touch of the Copilot key. ⁽⁴¹⁾ • Advanced AI Noise reduction: Enjoy clearer team conversations with AI Noise reduction. Using the Advanced Personal Mode, it tracks only your voice during conference calls while automatically filtering out noises and other speakers for distinctively focused communications. • HP Enhanced Lighting: Easily enhance brightness, color and lighting effects to look your best during video calls with integrated HP Enhanced Lighting app. • Poly Camera Pro: Elevate your video calls with AI from any camera connected to enhance virtual interactions, customizable settings, and professional grade features across all collaboration and streaming apps, without sacrificing performance or battery. ⁽⁹⁾
Gaming and entertainment	• DTS:X® Ultra technology: By producing authentic, spatially accurate 3D sound, this technology gives games, movies, and music a level of depth and immersion for the best entertainment experience possible. • OMEN Gaming Hub: Your one place for everything to make your gaming experience better. From software enhancements to hardware control, and live services, OMEN Gaming Hub elevates play in an easy and simple way.
Additional information	
Product number	• B9N9ROUA#ABA
Ad embargo date	• 07/06/2025
UPC Code	• 199251361586
Country of origin	• China
Pallet information	• Dimensions: 47.24 in (L) x 39.37 in (W) x 42.29 in (H) • Total weight: 714.4 lb • Layers: 3 • Products per layer: 30

⁽¹⁾ 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>. ^(2a) 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, Pentium, Intel Core, Celeron, Iris X®, Intel logo and the Intel Inside logo are trademarks of Intel Corporation in the U.S. and other countries. ^(2b) Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See intel.com/technology/turboboost for more information. GHz refers to internal clock speed of the processor. Other factors besides clock speed may impact system and application performance. ^(6a) 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. ^(7a) Wi-Fi 6E is designed to support gigabit data rate when transferring files between two devices connected to the same router. Requires a wireless router, sold separately. ⁽⁸⁾ McAfee is preinstalled 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 and the McAfee logo are trademarks or registered trademarks of McAfee, Inc. in the United States and other countries. ⁽⁹⁾ Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. ⁽¹²⁾ Graphics output may be limited based on the maximum resolution of the display. ⁽¹³⁾ ©2022 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. ⁽¹⁵⁾ Actual formatted capacity is less. Portion of internal storage is reserved for preloaded content. ^(19a) 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. ⁽²⁰⁾ All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower. ⁽²¹⁾ 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. ⁽²²⁾ 100GB of free online storage for one year from date of registration. For complete details and terms of use, including cancellation policies, visit the website at dropbox.com. Internet service required and not included. ⁽²³⁾ HP BIOS Protection works with Windows 11 that ships with your PC. ⁽²⁴⁾ Display measured diagonally. ⁽²⁵⁾ 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. ⁽²⁶⁾ Bluetooth® is a trademark owned by its proprietor and used by HP Inc. under license. ^(27a) See www.epat.net for registration status and tier levels by country. ⁽⁴⁰⁾ Percent of active plus nonactive viewing area to active viewing area plus border. Measure with lid vertical to the desk. ⁽⁴¹⁾ Copilot key feature availability varies by market, see aka.ms/keysupport. Copilot is NOT available in China, Russia, Belarus, and embargoed regions Cuba, Iran, North Korea, Crimea. ⁽⁴²⁾ USB Type-C® and USB-C® are trademarks of USB Implementers Forum. ⁽⁵⁰⁾ DisplayPort™ and the DisplayPort™ logo are trademarks owned by the Video Electronics Standards Association (VESA®) in the United States and other countries. ⁽⁵¹⁾ Thunderbolt is a trademark of Intel Corporation or its subsidiaries in the U.S. and/or other countries. ⁽⁵³⁾ Call 1.800.474.6836 or support.hp.com for more information on Care Packs available after standard warranty expires. After standard warranty expires, an incident fee may apply. ⁽⁵⁶⁾ For more information visit hp.com/go/hpsupportassistant. (Link will vary outside of the U.S.) HP Support Assistant is only available on Windows-based PCs. Internet connection required for updating and connecting to HP Support. ⁽⁶⁰⁾ 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. ⁽⁶²⁾ ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency. ^(63a) Percentage of ocean-bound plastic contained in each component varies by product. ^(63b) Percentage of recycled metal varies by product. ^(63c) 100% outer box/corrugate cushion packaging made from sustainably sourced certified and recycled fibers. Fiber cushions made from 100% recycled wood fiber and organic material. Excludes plastic bags and plastic foam sheeting. ^(63v) Keyboard components contain post-consumer recycled plastic. Percentage of post consumer recycled contained in each component varies by product. ⁽⁶⁴⁾ For best results with HP Sleep and Charge, use a USB charging protocol standard cable or cable adapter with an external device. ⁽⁷²⁾ 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. ⁽⁷⁵⁾ Battery life tested by HP using continuous FHD video playback, 1080p (1920x1080) resolution, 200 nits brightness, system audio level as image default, player audio level at 100%, played full-screen from local storage, headphone attached or through speaker (if no audio jack port), wireless on but not connected. Actual battery life will vary depending on configuration and maximum capacity will naturally decrease with time and usage. ⁽⁷⁶⁾ Weight and system dimensions may fluctuate due to configuration and manufacturing variances. ^(76a) Front height measurement is near the front edge where the chassis bottom cover taper begins. Back height measurement is near the back edge where the chassis bottom cover taper ends, excluding transition area to rubber feet. ⁽⁷⁷⁾ See URL for more details. <https://learn.microsoft.com/en-us/windows-hardware/design/device-experiences/sensors-presence-sensing> ⁽⁸⁰⁾ Battery life tested by HP using continuous Netflix video playback, Microsoft Edge Browser, 200 nits brightness, system audio level as image default, headphone attached or through speaker (if no audio jack port), played full-screen, wireless on. Actual battery life will vary depending on configuration and maximum capacity will naturally decrease with time and usage. ^(85a) 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 bapco.com/products/mobilemark-25/ for additional details. ^(88a) 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 transferable. 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. ⁽⁸⁹⁾ Features may require software or other 3rd party applications to provide the described functionality. Internet service required and not included. ^(89b) Camera resolution refers to the image sensor active pixels. The actual image capture pixels and aspect ratio depend on the app selected. ^(89c) The default aspect ratio for the camera is set to 16:9, users have the option to adjust it to 16:10 from within the camera settings. Actual product may vary from image shown on datasheet. © Copyright 2025 HP Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing shall be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein. Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. All other trademarks are property of their respective owners. 04/7/2025_r2 tq

