HP OmniBook Ultra Laptop Next Gen AI 16-bk0502sax

The PC that works on your behalf

Create, code, and move from AI development to demanding creative work without compromise. The HP OmniBook Ultra 16 combines NVIDIA RTX Spark™[1] performance, local AI, a vivid 16-inch 3K OLED display, and immersive audio with HP thermal engineering that sustains heavy workloads in an exceptionally thin premium design.



*Product image may differ from actual product

Build and create faster with local AI

Run AI models, create assets, and write code faster with NVIDIA RTX Spark™[1] performance that stays local.

Sustain performance through demanding work

HP thermal engineering keeps demanding AI and creative workflows moving in an exceptionally thin design.

Create with every detail in sight and sound

See true-to-life detail and hear fuller sound with a 3K OLED[2] display and quad speakers with smart amplifiers.

Sustainability in action

Premium design with a lighter footprint

Choose a premium PC made with at least 50% recycled metal[3] and rated EPEAT Gold with Climate+[4].

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Featuring

Windows is fast, powerful, and secure
Windows 11 is fast, powerful, and secure, giving you a dependable foundation to work, create, and stay protected every day.[5]

NVIDIA RTX Spark™
Powered by NVIDIA RTX Spark™, bringing NVIDIA AI, RTX graphics, and unified memory together to redefine Windows PCs for creation, AI development, and gaming on slim and powerful RTX laptops.

Built for Agents and AI
NVIDIA CUDA™, the software that accelerates AI around the world, runs natively on RTX Spark.

Corning® Gorilla® Glass 3
Enhance your device's endurance with Corning® Gorilla® Glass 3, engineered for unparalleled scratch resistance. Helps reduce accidental damage with strong, more durable protection than most displays.

16:9 aspect ratio
A 16:9 aspect ratio lets you see all of your game.

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.[6]

HP Eye Ease
Enjoy every detail without the strain. HP Eye Ease reduces blue light to keep your eyes comfortable while preserving vibrant and accurate colors.[7]

PC Game Pass 3-month trial
Enjoy 3 months of PC Game Pass — free with your new HP device. With new games added all the time, there's always something new to play.[8]

McAfee Premium Individual 30-day trial
Secure your device with award winning antivirus and online protection. Free trial includes secure VPN for privacy and data protection when browsing on public Wi-Fi[9]

Keyboard contains post-consumer recycled plastic
We're bringing a more thoughtful design to our keyboards by using post-consumer recycled plastic setting a value chain in motion: capturing waste, recovering critical materials, and transforming them into new, high-quality products.[10]

Recycled aluminum
This laptop design includes recycled aluminum.[11]

Designed with Purpose
This product includes ocean-bound plastic and post-consumer recycled plastic in the design.[12]

EPEAT Gold with Climate+
EPEAT is a world class ecolabel for electronics and technology products. EPEAT Gold with Climate+ registered products are independently verified and have met rigorous criteria to ensure they have been designed with measurable sustainability features.[13]

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.[14]

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.[15]

Effortlessly connected
Enjoy a smoother wireless experience with a Wi-Fi 7 and Bluetooth® 5.4 combo.[16]

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.

2 TB PCIe® Gen5 NVMe™ Performance M.2 SSD
Unlock next-gen speed with PCIe Gen5, up to 2x faster than PCIe Gen4. Lightning-fast load times, ultra-low latency, and future-ready performance for creators, gamers, and AI developers.[17]

Poly Studio Audio
HP and Poly continue to drive innovation across hybrid solutions, including AI-enabled technologies. Audio features include Poly Studio tuning and quad speakers designed to enhance your listening experience.

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.

Recommended accessories and services (not included)



HP 100 Sanitizable Mouse Pad
8X594AA



HP 140W USB-C Laptop Charger
B7NM4AA



HP Commute 16-inch Laptop Backpack
D5CE6AA



3-year pickup and return
UM963E

Datasheet

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Specifications





Performance

Operating system
Windows 11 Home
Processor
NVIDIA RTX Spark™ N1X with 5120-core GPU and 18-core CPU[6,7]
Processor family: NVIDIA RTX Spark™
Chipset
NVIDIA® integrated SoC
Memory
32 GB LPDDR5x-9400 MT/s (onboard)
Transfer rates up to 9400 MT/s.
Storage
2 TB PCIe® Gen5 NVMe™ Performance M.2 SSD
100 GB Dropbox storage for 3 months[1]
Graphics
Integrated: NVIDIA Blackwell RTX 5120-core GPU;
Audio
Quad speakers; HP Audio Boost; Poly Studio; DTS Virtual:X™
Display
40.6 cm (16") diagonal, 3K (2880 x 1800), OLED, multitouch-enabled, up to 120 Hz, 0.2 ms response time, UWVA, edge-to-edge glass, micro-edge, Corning® Gorilla® Glass 3, Low Blue Light, SDR 500 nits, HDR 1100 nits, 100% DCI-P3[17,21,26]
Screen-to-body ratio
91%[18]
Power
140 W AC power adapter (recommended, sold separately);
Battery and Power
Supports battery fast charge: approximately 50% in 30 minutes[5]

Connectivity

Wireless connectivity
MediaTek Wi-Fi 7 MT7925 (2x2) and Bluetooth® 6.0 wireless card [12,46]
Ports
2 USB Type-A 10Gbps signaling rate; 1 HDMI-out 2.1; 1 headphone/microphone combo; 2 USB Type-C® 40Gbps signaling rate (USB Power Delivery 3.2, DisplayPort™ 2.1, HP Sleep and Charge)[19]
Expansion slots
1 microSD media card reader
Webcam
5MP IR camera with HDR auto switch, temporal noise reduction and integrated dual array digital microphones

Sustainability

Energy star certified
ENERGY STAR® certified
Sustainable impact specifications
Ocean-bound plastic in speaker enclosure(s) and bezel; Keyboard keycaps, scissors and keyboard plate contain post-consumer recycled plastic; Recycled metal in cover, keyboard frame and base[39,40,41]
EPEAT registered
EPEAT Gold with Climate+[55]

Design

Product color
Eclipse gray aluminum
Sandblasted anodized finish

Software

HP apps
HP Support Assistant; HP Connection Optimizer; OMEN Gaming Hub
Software
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: E4YN6EA #ABU
UPC/EAN code: 885981326055
Weight
2.22 kg;
Packed: 3.45 kg
Dimensions
35.58 x 25.65 x 1.57 cm;
Packed: 6.7 x 50 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, darker eclipse gray opaque keyboard
HP Imagepad
Security management
Mic mute key; Camera privacy shutter; Trusted Platform Module (Discrete TPM) support
Sensors
Accelerometer; Gyroscope; IR thermal sensor

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Footnotes

Messaging Footnotes

[1] Multi-core CPU and GPU technologies are designed to improve performance of certain software applications. Not all customers or applications will necessarily benefit from use of these technologies. Performance will vary based on application workload and hardware and software configurations. Product specifications, core counts, product names, and branding are not measurements of performance. Actual performance and results may vary.
[2] All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.
[3] Laptops manufactured with recycled metal material in product cover. Percentage of recycled metal varies by product.
[4] Based on U.S. EPEAT registration according to the EPEAT criteria. EPEAT registered where applicable, tier levels may vary by country. See www.epeat.net for registration status and tier levels by country.
[5] Battery life varies significantly by device and with settings, usage and other factors. See aka.ms/w11claims. Based on speedometer benchmark. Performance will vary significantly by device. See aka.ms/w11claims
[6] All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.
[7] HP Eye Ease hardware that does not impact color accuracy used with Eyesafe. Eyesafe® certified website: https://eyesafe.com.
[8] Claim within 30 days of device activation. New and eligible returning members only. Valid payment method required. Subscription continues automatically at regular monthly price unless cancelled. Subject to xbox.com/subscriptionterms. Benefits vary by Xbox Game Pass plan. Terms and Exclusions apply. Game library varies over time, by region, device, and Xbox Game Pass plan. xbox.com/gamepass. For details on partner subscriptions included with PC Game Pass: https://www.ea.com/ea-play/, https://store.ubisoft.com/ubisoftplus/classics. In-game benefits vary by game, region, and over time. Game must be installed to access in-game benefits. Terms apply, see xbox.com/subscriptionterms for more. Excludes HP Chromebooks.
[9] 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.
[10] Keyboard components contain post-consumer recycled plastic. Percentage of post consumer recycled contained in each component varies by product.
[11] Laptops manufactured with recycled aluminum material in product cover. Percent of recycled aluminum varies by product.
[12] Percentage of ocean-bound plastic and post-consumer recycled plastic varies by product. Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard.
[13] 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. See www.epeat.net for registration status and tier levels by country.
[14] ENERGY STAR and the ENERGY STAR logo are registered trademarks of the U.S. Environmental Protection Agency.
[15] 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.
[16] Wi-Fi 7: Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 7 (802.11BE) functionality requires compatible Windows 11 OS, compatible processor, and separately purchased Wi-Fi 7 router to support backwards compatibility 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] For storage drives, GB = 1 billion bytes, TB = 1 trillion bytes. Actual formatted capacity is less. Portion of internal storage is reserved for preloaded content.

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 CPU and GPU technologies are designed to improve performance of certain software applications. Not all customers or applications will necessarily benefit from use of these technologies. Performance will vary based on application workload and hardware and software configurations. Product specifications, core counts, product names, and branding are not measurements of performance. Actual performance and results may vary.
[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.
[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 materials. Percentage of post consumer recycled contained in each component varies by product.
[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.
[52] 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 and hinge cap.
[55] Based on U.S. EPEAT registration according to the EPEAT criteria. EPEAT registered where applicable, tier levels may vary by country. See www.epeat.net for registration status and tier levels by country.

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