

HyperX OMEN MAX 16 inch Gaming Laptop PC 16-ah1023dx



Claim the poser. Own the speed.

The new HyperX OMEN MAX 16 has the latest and best components and we've also added a high polling rate keyboard, faster OLED display options, and one-click FPS maximization with OMEN AI to ensure you always feel overpowered.

Product overview

- **Max power, no time limit:** Ditch the temporary power boosts and choose max power that will last your whole gaming session with NVIDIA® RTX™ 50 series graphics, Intel® Core™ Ultra processor overclocked with Unleashed Mode, and high clock speed RAM, all powered by a 460W GaN power adapter.
- **The only welcome cooldown:** Typically, the last thing you want in a teamfight is a lengthy cooldown, but when the cooldown is in the form of our brand new three-fan design with Cryo Compound for improved heat dispersion and self-cleaning fans for improved performance longevity, you'll be glad it's there.
- **Claim the competitive advantage:** Raw power is great, but it doesn't matter if you don't have a device that moves at the speed of your reactions. That's why we've equipped the HyperX OMEN MAX 16 with our new HyperAction 1000Hz polling rate keyboard⁽⁴⁴⁾ and faster display panel options, reducing your latency to practically zero.
- **The HP promise:** With so many manufacturers out there, it's hard to trust whether you are getting the best product quality and protection for your dollar. As an HP brand, all HyperX devices are created with a quality and warranty guarantee you would expect from a company that's been reliably delivering premium products for over 80 years.
- **Elevated performance made simple:** OMEN Gaming Hub is a one-stop shop for gamers looking to get the absolute most from their setups. OMEN AI for easy one-click FPS improvement, Light Studio for full RGB customization, and Performance Control, which allows you to either fully unleash your device or undervolt it at will.

Key specifications

- **Operating system:** Windows 11 Home⁽¹⁾
- **Processor:** Intel® Core™ Ultra 9 290HX Plus^(2b)
- **NPU:** Intel® AI Boost (13 NPU TOPS)^(6c)
- **Display:** 16-inch diagonal, 2.5K (2560 x 1600), OLED, up to 240 Hz, 0.2 ms response time, UWVA, micro-edge, BrightView, Low Blue Light
- **Memory:** 32 GB DDR5-5600 MT/s
- **Internal storage:** 1 TB PCIe® Gen4 NVMe™ M.2 SSD⁽¹⁵⁾
- **Graphics:** NVIDIA® GeForce RTX™ 5070 Ti Laptop GPU (12 GB GDDR7 dedicated)⁽¹³⁾
- **Sound:** HyperX with dual speakers
- **Wireless:** Wi-Fi 7 (2x2)^(19a) and Bluetooth® 6.0 wireless card^{(25b)(26)}
- **Security:** Camera privacy shutter
- **Camera:** HP True Vision 1080p FHD IR camera with temporal noise reduction and integrated dual array digital microphones^{(89)(89b)}
- **Product weight:** 6.56 lb⁽⁷⁶⁾
- **Keyboard:** Full-size, per key RGB backlit, shadow black keyboard with numeric keypad, full-size arrow keys

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⁾
- **Desktop-level performance, anywhere:** Level up your PC with advanced performance, enhanced AI, and an Intel® Core™ Ultra 9 290HX processor designed to defy expectations.
- **Game changer:** Powered by NVIDIA® Blackwell, GeForce RTX™ 5070 Laptop GPU brings game-changing AI capabilities to gamers and creators.
- **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.
- **2.5K OLED display:** An OLED display brings deeper blacks for richer contrast, enhanced color depth, and more power efficiency than traditional LED screens. 2560 x 1600 resolution delivers stunning details and lifelike colors.
- **VESA Certified DisplayHDR™ True Black 1000:** Elevate your viewing and experience ultra-deep blacks, vibrant colors, and 1000 nits peak brightness delivering high contrast and immersive visuals for entertainment and content creation.⁽⁵⁵⁾
- **Eyesafe® Certified display:** Protects your eyes from harmful blue light without distorting colors to reduce eyestrain when working for long periods of time.

Additional product features

- **DCI-P3 color space:** Get deeper hues and more accurate colors with a wider color gamut than sRGB and that more closely represents colors as they are in the real world.
- **HP Fast Charge:** Go from 0 to 50% charge in approximately 30 minutes.⁽⁷²⁾
- **PCIe® Gen4 NVMe™ M.2 SSD:** With high-speed data transfer, the PCIe® Gen4 NVMe™ M.2 SSD offers fast speed and efficient storage.
- **Effortlessly connected:** Boost your connectivity and productivity with a 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.^{(1)(9a)(25a)(26)}
- **FHD IR camera with HDR auto-switch:** Deliver smooth and detailed FHD video calls with an HDR auto-switch^(89d) that balances contrast and color, even in challenging backlight conditions. While the infrared sensor supports facial recognition log-in with Windows Hello.
- **HyperX Audio with dual speakers:** HyperX Audio gives a pristine audio experience that accents the dynamic sounds of gaming and beyond.
- **Xbox Game Pass Premium 2-month trial:** Enjoy 2 months of Xbox Game Pass Premium. Free with your new HP Laptop. Access a library of legendary, high-quality games, get exclusive in-game perks, partner discounts, and earn points annually with Xbox Rewards.^(60a)

Product design

- **Cryo Compound:** Our upgraded hybrid material, which is applied to both the CPU and GPU, includes all the heat dissipation benefits of traditional liquid metal with increased viscosity for improved device longevity.
- **Per-key RGB keyboard:** RGB per-key LED backlighting customization and N-key rollover anti-ghosting technology to never miss a key.
- **HyperAction 1000Hz polling rate keyboard:** Whether it's a teamfight, gunfight, or the final boss, get the fastest reaction times with our new HyperAction 1000 Hz hyper polling rate keyboard, which gives you the competitive edge.⁽⁴⁴⁾
- **Camera shutter:** Stay secure with a physical camera shutter. Video chat with peace of mind with a privacy camera you can close when not in use.

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^(63d)
 - Top cover, base and hinge caps contain recycled metal^(63d)
 - Keyboard plate, keycaps and scissors contain post-consumer recycled material^(63b)
 - HP's outer boxes and fiber cushions used in packaging are 100% sustainably sourced and recyclable^(63a)

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>.⁽⁹⁾
- **Social Media Support:** To find solutions, ask questions, and share tips, join us on the HP Support Community at community.hp.com, on X at x.com/HPSupport, and Facebook at facebook.com/HPSupport.⁽⁹⁾



Specifications

Operating system	• Windows 11 Home ⁽¹⁾
Processor	• Intel® Core™ Ultra 9 290HX Plus (up to 5.5 GHz with Intel® Turbo Boost Technology, 36 MB L3 cache, 24 cores, 24 threads) ⁽²⁾⁽³⁾
NPU	• Intel® AI Boost (13 NPU TOPS) ⁽⁶⁾⁽⁵⁾
Memory	• 32 GB DDR5-5600 MT/s
Video graphics	• NVIDIA® GeForce RTX™ 5070 Ti Laptop GPU (12 GB GDDR7 dedicated) ⁽¹⁾⁽³⁾ • Advanced Optimus
Internal storage	• 1 TB PCIe® Gen4 NVMe™ M.2 SSD ⁽¹⁾⁽⁵⁾
Finish and features	• Top cover: shadow black aluminum with a sandblasted finish • Keyboard deck: shadow black • Logo: black chrome • Light Bar: RGB
Camera	• HP True Vision 1080p FHD IR camera with temporal noise reduction and integrated dual array digital microphones ⁽⁸⁾⁽⁹⁾⁽⁹⁾⁽⁹⁾
Display	• 16-inch diagonal, 2.5K (2560 x 1600), OLED, up to 240 Hz, 0.2 ms response time, UWVA, micro-edge, BrightView, Low Blue Light, SDR 500 nits, HDR 1100 nits, 100% DCI-P3, 1,000,000:1 ⁽²⁾⁽²⁾ • Variable Refresh Rate support • NVIDIA® G-SYNC® support
Screen to body ratio	• 89% ⁽⁴⁾⁽⁵⁾
Network card	• Integrated 10/100/1000/2500 GbE LAN ⁽²⁾⁽²⁾
Wireless	• Wi-Fi 7 (2x2) ⁽¹⁾⁽⁹⁾ and Bluetooth® 6.0 wireless card ⁽²⁾⁽⁵⁾⁽¹²⁾⁽²⁾
Sound	• HyperX with dual speakers • DTS: X® Ultra
Integrated keyboard	• Full-size, per key RGB backlit, shadow black keyboard with numeric keypad, full-size arrow keys and NKRO Anti-Ghosting Key technology • 1000 Hz polling rate ⁽⁴⁾⁽⁴⁾ • HP Imagepad
External notebook ports	• 2 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery 3.1, DisplayPort™ 2.1, HP Sleep and Charge) ⁽⁴⁾⁽⁴⁾⁽⁵⁾⁽⁵⁾⁽¹⁾⁽⁶⁾ • 2 USB Type-A 10Gbps signaling rate • 1 RJ-45 • 1 Headphone/microphone combo • 1 AC smart pin • 1 HDMI 2.1
Dimensions	• Unpackaged: 14.04 in (W) x 10.59 in (D) x 1.03 in (front) - 1.13 in (rear) (H) • Disclaimer: Rear height is measured without the bump out (0.11 in) • Packaged: 16.85 in (L) x 4.29 in (W) x 13.07 in (H)
Weight	• Unpackaged: 6.56 lb ⁽⁷⁾⁽⁷⁾ • Packaged: 12.94 lb
Security	• Camera privacy shutter
Power	• 6-cell, 83 Wh Li-ion polymer battery ⁽²⁾⁽¹⁾ • 46W AC GaN power adapter
Warranty and support	• 1-year limited hardware warranty. Additional information available at www.support.hp.com ⁽⁹⁾ • 1-year limited technical support for software and initial setup (from date of purchase) ⁽⁵⁾⁽³⁾

Learn more at hp.com

⁽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>. ⁽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, 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. ⁽³⁾ 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. ⁽⁴⁾ 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 inferring performance varies by use, configuration, software and other factors. ⁽⁵⁾ 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. ⁽⁶⁾ Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. ⁽⁷⁾ ©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. ⁽⁸⁾ Actual formatted capacity is less. Portion of internal storage is reserved for preloaded content. ⁽⁹⁾ 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. ⁽¹⁰⁾ 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. Only available in countries where Wi-Fi 6 is supported. ⁽¹¹⁾ All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower. ⁽¹²⁾ 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. ⁽¹³⁾ 100GB of free online storage for 90 days 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. ⁽¹⁴⁾ HP BIOS Protection works with Windows 11 that ships with your PC. ⁽¹⁵⁾ 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. ⁽¹⁶⁾ Bluetooth® is a trademark owned by its proprietor and used by HP Inc. under license. ⁽¹⁷⁾ Actual speeds may vary. ⁽¹⁸⁾ DisplayHDR™ is the high-performance Monitor and Display Compliance Test Specification from VESA specifying HDR (High Dynamic Range) quality. See displayhdr.org for more details. ⁽¹⁹⁾ 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%. ⁽²⁰⁾ 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. ⁽²¹⁾ USB Type-C® and USB-C® are trademarks of USB Implementers Forum. ⁽²²⁾ Stated polling rate represents the maximum supported polling frequency under optimal conditions. Its actual performance, including input latency may vary depending on system configuration, hardware, software, and usage scenarios. Stated rate refers exclusively to the USB polling rate. Other results such as key scan rate and overall input responsiveness may vary depending on keyboard design, system configuration, and operating conditions. ⁽²³⁾ Listening to personal stereo equipment at full volume for long periods can damage the user's hearing. To reduce the risk of hearing damage, lower the volume and amount of time listening at full volume. ⁽²⁴⁾ 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. ⁽²⁵⁾ DisplayPort™ and the DisplayPort™ logo are trademarks owned by the Video Electronics Standards Association (VESA®) in the United States and other countries. ⁽²⁶⁾ Thunderbolt is a trademark of Intel Corporation or its subsidiaries in the U.S. and/or other countries. ⁽²⁷⁾ 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. ⁽²⁸⁾ 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. ⁽²⁹⁾ Subscription continues automatically at regular monthly price unless cancelled. Subject to <https://www.xbox.com/legal/subscription-terms>. Benefits vary by Xbox Game Pass plan. Game library and in-game benefits vary over time, by region, device, and Xbox Game Pass plan. Game must be installed to access in-game benefits. For a list of cloud and non-cloud markets and supported regions, visit: xbox.com/regions. Terms apply, see xbox.com/gamepass for more. ⁽³⁰⁾ Percentage of ocean-bound plastic contained in each component varies by product. ⁽³¹⁾ Percentage of recycled metal varies by product. ⁽³²⁾ 100% outer box/corrugated 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. ⁽³³⁾ Keyboard components contain post-consumer recycled materials. Percentage in each component varies by product. ⁽³⁴⁾ For best results with HP Sleep and Charge, use a USB charging protocol standard cable or cable adapter with an external device. ⁽³⁵⁾ 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://support.hp.com>). After charging has reached 50% capacity, charging speed will return to normal speed. Charging time may vary +/-10% due to system tolerance. ⁽³⁶⁾ Weight and system dimensions may fluctuate due to configuration and manufacturing variances. ⁽³⁷⁾ 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. ⁽³⁸⁾ Features may require software or other 3rd party applications to provide the described functionality. Internet service required and not included. ⁽³⁹⁾ Camera resolution refers to the image sensor active pixels. The actual image capture pixels and aspect ratio depend on the app selected. ⁽⁴⁰⁾ 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. ⁽⁴¹⁾ Sold separately, not included. Actual product may vary from image shown on datasheet. © Copyright 2026 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. 04/03/2026_r1g

Software and technology

Help and support	• HP App: Provides a simple setup and registration experience that welcomes you to your new HP PC. 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. ⁽⁵⁾⁽⁶⁾
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. ⁽⁴⁾⁽³⁾
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⁾⁽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. ⁽⁸⁾⁽⁹⁾ • Dropbox cloud storage: Store and synchronize your content online with Dropbox. Get 100GB of storage for 90 days to access, manage, and share your photos, music, and files from anywhere with Internet access. ⁽⁹⁾⁽²⁾ • Xbox Game Pass Premium 2 month trial: Enjoy 2 months of Xbox Game Pass Premium. Free with your new HP Laptop. ⁽⁶⁾⁽⁶⁾
System performance	• Dynamic Wallpaper: Bring your PC to life with dynamic wallpapers that move with your mood and match your style. • HP Connection Optimizer: Get consistent and reliable Wi-Fi performance with software that automatically switches between the most efficient wireless access points. ⁽⁹⁾ • Fan Cleaner: Taking your laptop apart to clean your fans is a pain, but with our new self-cleaning fan technology, you can spend less time cleaning and more time playing. • OMEN Tempest Cooling: Get maximum possible airflow and cooling efficiency. • Unleashed Mode: Push your laptop further than it's out-of-the-box limits with Unleashed Mode, which allows you to manually overclock your CPU for maximum performance.
Work and lifestyle	• Microsoft Copilot: Microsoft Copilot gives you intelligent answers. Access with just the touch of the Copilot key. ⁽⁴⁾⁽¹⁾
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. ⁽⁴⁾⁽⁷⁾ • Instant Pair: Seamlessly pair compatible HyperX devices ⁽⁹⁾⁽⁹⁾ to your laptop, freeing up your ports while also getting you up and running the moment you power on. Enjoy smooth, instant connectivity with no hassle. • OMEN Light Studio: Personalize lighting options using a variety of effects like ambient, wave, interactive and more through one app. • OMEN AI: Provides personalized settings recommendations to achieve the best possible FPS with minimum hassle.
Additional information	
Product number	• D5FA9UA#ABA
Ad embargo date	• 07/01/2026
UPC Code	• 199896901697
Country of origin	• China
Pallet information	• Dimensions: 47.24 in (L) x 39.37 in (W) x 45.71 in (H) • Total weight: 888.04 lb • Layers: 3 • Products per layer: 22

