HyperX OMEN 16 inch Gaming Laptop PC 16-ap1602na

Quickness beyond power, victory beyond doubt

The new HyperX OMEN 16 not only has the power of the latest next-gen AMD[1] and NVIDIA® components, but it also has the proper thermal innovations to keep them from burning out. Pair that with OMEN AI for maximum possible FPS at the click of a button and Unleashed Mode for that extra boost in performance, and you have our most reliably powerful laptop yet.



*Product image may differ from actual product

Unleash your performance

Get the best possible performance with the latest next-gen NVIDIA® GPUs and AMD Processors[1].

Maximized airflow, maximized wins

Handle the heat with high efficiency fans that reduce noise and keeps your laptop cool while you game on.

Claim the competitive advantage

New faster and sharper display options, so your game looks and plays exactly like it was meant to.

Sustainability in action

We're in this together

Build the future you play in.

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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]

Top Tier Performance for Serious Workloads
The AMD Ryzen 8000 HX series is built off AMD's "Zen 4" processor architecture to deliver the ultimate in performance and power efficiency for notebook users[3]

Game Changer
Powered by NVIDIA Blackwell, GeForce RTX™ 50 Series Laptop GPUs bring game-changing AI capabilities to gamers and creators.[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
From creation to entertainment, 100% sRGB color coverage brings vivid colors and lifelike detail to everything you see.[8]

Keyboard contains post-consumer recycled materials
We're bringing a more thoughtful design to our keyboards by using post-consumer recycled materials in the design.[9]

Effortlessly connected
Enjoy a smoother wireless experience with a Wi-Fi 7 and Bluetooth® 6.0 combo.[10]

USB Type-A 5Gbps signaling data rate
Plug in your external storage with this USB Type-A port, featuring 5Gbps signaling data rate.[11]

DDR5 RAM
Designed to run efficiently and reliably at faster speeds, DDR5 is the latest RAM standard. With higher bandwidth, you get more of a boost in performance.

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.[12]

DTS: X® Ultra Technology
By producing authentic, spatially accurate 3D sound through any headset, this technology offers specially tuned audio modes for different game types to provide immersion for the best entertainment experience possible.[13]

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

Recommended accessories and services (not included)



HyperX QuadCast 2 S - USB Microphone (Black)
9A273AA



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



3-year pickup and return
UM963E



HyperX Cloud Alpha 2 - Wireless Gaming Headset
AJ5C7AA

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Specifications







Performance

Operating system
Windows 11 Home
Processor
AMD Ryzen™ 9 8945HX (up to 5.4 GHz max boost clock, 64 MB L3 cache, 16 cores, 32 threads)[6,7]
Processor family: AMD Ryzen™ 9 processor
Chipset
AMD integrated SoC
Memory
16 GB DDR5-5200 MT/s (1 x 16 GB)
Transfer rates up to 5200 MT/s.
Number of User-accessible Memory Slots: 2
Storage
1 TB PCIe® Gen4 NVMe™ M.2 SSD
100 GB Dropbox storage for 3 months[1]
Graphics
Discrete: NVIDIA® GeForce RTX™ 5070 Laptop GPU (8 GB GDDR7 dedicated) ;
Audio
DTS:X® Ultra; Dual speakers; HP Audio Boost; HyperX
Display
40.6 cm (16") diagonal, 2.5K (2560 x 1600), up to 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
87%[18]
Power
280 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
MediaTek Wi-Fi 7 MT7925 (2x2) and Bluetooth® 6.0 wireless card [12,46]
Ports
1 USB Type-A 10Gbps signaling rate; 2 USB Type-A 5Gbps signaling rate; 1 AC smart pin; 1 HDMI 2.1; 1 headphone/microphone combo; 1 RJ-45; 1 USB Type-C® 10Gbps signaling rate (USB Power Delivery 3.0, DisplayPort™ 1.4, HP Sleep and Charge)[19,42]
Webcam
1080p FHD camera with HDR auto switch, temporal noise reduction and integrated dual array digital microphones

Sustainability

Sustainable impact specifications
Ocean-bound plastic in bezel; Keyboard keycaps, scissors and keyboard plate contain post-consumer recycled materials[39,41]

Design

Product color
RIOT blue (VALORANT Limited Edition) with warm red logo on cover
RIOT Valorant paint finish with warm red

Software

HP apps
HP Connection Optimizer; OMEN Gaming Hub
Software
Otter.ai;
1 month trial for new Microsoft 365 customers[24,50]
Service & support
McAfee Online Protection 30-day trial; Xbox Game Pass Premium 2-month trial [2]

Additional information

Part Number
P/N: E0VU6EA #ABU
UPC/EAN code: 881767193293
Weight
2.47 kg;
Packed: 3.82 kg
Dimensions
35.75 x 26.9 x 2.7 cm (front); 35.75 x 26.9 x 3 cm (rear);
Packed: 6.3 x 50.4 x 30.5 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, 4-zone RGB backlit, Pantone Black C, VALORANT Limited Edition keyboard with numeric keypad and 26-Key Rollover Anti-Ghosting Key technology
HP Imagepad
Features
AMD FreeSync™ Replay[29]
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. AMD's numbering is not a measurement of clock speed. Max Boost clock frequency performance varies depending on hardware, software and overall system configuration. 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.
[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. AMD's numbering is not a measurement of clock speed. Max Boost clock frequency performance varies depending on hardware, software and overall system configuration.
[4] ©2025 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.
[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] All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.
[9] Keyboard components contain post-consumer recycled materials. Percentage of post consumer recycled contained in each component varies by product.
[10] 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. 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.
[11] Actual throughput may vary.
[12] 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.
[13] 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.

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. AMD's numbering is not a measurement of clock speed.
[7] Max Boost clock frequency performance varies depending on hardware, software and overall system configuration.
[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.
[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.
[29] AMD FreeSync™ /FreeSync™ Premium/FreeSync™/FreeSync™ Replay Premium Pro is enabled on FHD or higher resolution displays, with the additional requirements, such as at least 120Hz refresh rate, low framerate compensation, and HDR to support AMD FreeSync™ Premium/ FreeSync™ Premium Pro/FreeSync™ Replay. AMD Radeon Graphics and/or AMD A-Series APU-compliant monitors with DisplayPort/HDMI Adaptive-Sync required. AMD 15.11 Crimson driver (or newer) required to support FreeSync over HDMI. Adaptive refresh rates vary by monitor. AMD FreeSync™ /FreeSync™ Premium/FreeSync™/FreeSync™ Replay Premium Pro technology requires AMD Radeon graphics and a display certified by AMD. See www.amd.com/freesync for complete details. GD-127 © 2023 Advanced Micro Devices, Inc. All rights reserved. AMD, the AMD Arrow logo, Radeon, FreeSync, and combinations thereof are trademarks of Advanced Micro Devices, Inc.
[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.
[41] Keyboard components contain post-consumer recycled materials. 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.
[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.
[53] 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.

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