OMEN Gaming Laptop 16-n0797nr
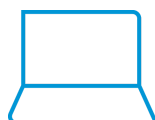
Maximum power meets maximum cool.

Huge processing power that stays cool.

Desktop levels of power
Your processor[1] and graphics stay cool even when your gameplay heats up with OMEN Tempest Cooling.

Immersive 16.1" screen
Escape into a massive screen with 3-sided bezel edges, high resolution, and TUV Eyesafe Low Blue Light[2].

Room for peripherals
Hook up an external drive, additional GPUs, or your smartphone with plenty of USB ports[4].

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Featuring

Get a fresh perspective
Windows 11 provides a calm and creative space where you can pursue your passions through a fresh experience. 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]

AMD Ryzen™ 6000 Series Processors
Speed meets endurance when you play with a gaming laptop powered by AMD Ryzen™ processors. Seize the pure performance you need to win, without compromising battery life.[6]

NVIDIA® GeForce RTX™ 3060
The GeForce RTX™ 3060 lets you take on the latest games using the power of Ampere—NVIDIA's 2nd generation RTX architecture. Get incredible performance with enhanced Ray Tracing Cores and Tensor Cores, new streaming multiprocessors, and high-speed G6 memory.[7]

AMD FreeSync™ technology
See and feel the difference of fluid, responsive gameplay. By synchronizing the refresh rate with your GPU, AMD FreeSync™ makes display stutter, input lag, and screen tears ancient history.[8]

144 Hz FHD anti-glare display
Reduce frustrating lag and image ghosting with a display that combines a 144 Hz refresh rate and a 1080p resolution for smooth, crisp gameplay.[9]

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. Laptops with integrated Eyesafe® displays help reduce eyestrain and improve eye comfort when working for long periods of time.

HP QuickDrop
Wirelessly transfer photos, videos, documents and more between your PC and mobile device.

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.[10]

An exceptionally rich audio experience
With HP Dual Speakers, HP Audio Boost, and custom tuning by the experts at Bang & Olufsen, entertainment comes to life with sound you can feel. Awaken your senses with PC audio perfection.

Ocean-bound plastic
Built with the environment in mind, our laptop design includes sustainable materials like ocean-bound plastic in the speaker enclosure and recycled aluminum.[11]

Keyboard keycaps contain post-consumer recycled plastic
We're bringing a more sustainable design to our keyboards by using keycaps made with post-consumer recycled plastic.[12]

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.[13]

Effortlessly connected
Enjoy a smoother wireless experience with Wi-Fi 6 (2x2) and Bluetooth® 5.0 combo, all your connections are solid and up to 3x faster file transfer speeds than Wi-Fi 5.[14]

MU-MIMO supported
If you have several MU-MIMO devices in your home, MU-MIMO support works in combination with a MU-MIMO router to maximize network traffic for a smoother online experience.

HP Wide Vision HD Camera
The 88-degree, wide-angle field of view lets you video chat with the entire family or group of friends in crystal clear detail.[15]

SuperSpeed USB Type-A 5Gbps signaling data rate
Plug in your external storage with this SuperSpeed USB Type-A port, featuring 5Gbps signaling data rate.[16]

McAfee® LiveSafe™
Protect your operating system with a free 30-day McAfee® LiveSafe™ subscription.[17]

PCIe NVMe™ M.2 SSD storage
Boot up in seconds with lightning fast speed with up to 1 TB PCIe NVMe™ M.2 SSD storage.

Dual channel memory
With dual channel technology, two channels work simultaneously to double the communication speed between the memory controller and the RAM increasing system performance.

Four Zone RGB keyboard
Allows you to backlight 4 independent zones with different RGB lighting. WASD keys are outlined to highlight key controls. It's all easily controlled through the OMEN Gaming Hub.

HP Imagepad with multi-touch gesture
This true multi-touch touchpad supports four finger gestures and lets you scroll, zoom, and navigate with a simple touch.

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Specifications

Performance

Operating system
Windows 11 Home

Processor family
AMD Ryzen™ 7 processor

Processor
AMD Ryzen™ 7 6800H (up to 4.7 GHz max boost clock, 16 MB L3 cache, 8 cores, 16 threads)[6,7]

Chipset
AMD Integrated SoC

Memory
16 GB DDR5-4800 MHz RAM (2 x 8 GB)

Number of user-accessible
2

Storage
1 TB PCIe® NVMe™ TLC M.2 SSD
Optical drive not included

Graphics
Integrated: AMD Radeon™ 680M Graphics
Discrete: NVIDIA® GeForce RTX™ 3060 Laptop GPU (6 GB GDDR6 dedicated)

Audio
Audio by Bang & Olufsen; DTS:X® Ultra; Dual speakers; HP Audio Boost

Display
40.9 cm (16.1") diagonal, FHD (1920 x 1080), 144 Hz, 7 ms response time, IPS, micro-edge, anti-glare, Low Blue Light, 300 nits, 100% sRGB

Screen-to-body ratio
82.12%[18]

Power supply
280 W Smart AC power adapter

Battery type
6-cell, 83 Wh Li-ion polymer [23]

Battery and Power
Up to 9 hours[3]

Maximum battery life video playback
Up to 11 hours and 45 minutes[10]

Battery recharge time
Supports battery fast charge: approximately 50% in 30 minutes[5]

Connectivity

Network interface
Integrated 10/100/1000 GbE LAN

Wireless connectivity
MediaTek Wi-Fi 6 MT7921 (2x2) and Bluetooth® 5.2 combo (Supporting Gigabit data rate) MU-MIMO supported

Ports
2 SuperSpeed USB Type-C® 10Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4, HP Sleep and Charge); 1 SuperSpeed USB Type-A 5Gbps signaling rate (HP Sleep and Charge); 2 SuperSpeed USB Type-A 5Gbps signaling rate; 1 HDMI 2.1; 1 RJ-45; 1 AC smart pin; 1 headphone/microphone combo [19,42]

Expansion slots:
1 multi-format SD media card reader

Webcam
HP Wide Vision 720p HD camera with temporal noise reduction and integrated dual array digital microphones

Design

Product color
Mica silver cover and base, mica silver aluminum keyboard frame
Paint finish cover and base, anodized keyboard frame

Software

HP apps
HP Support Assistant; HP Connection Optimizer; HP BIOS Protection; HP QuickDrop; MyHP; OMEN Gaming Hub [32]

Software
25 GB Dropbox storage for 12 months[1]; 1 month trial for new Microsoft 365 customers[24]

Service & support
McAfee LiveSafe™[2]

Additional information

Part Number
P/N: 6K7W9UA#ABA
UPC/EAN code: 196786141102

Energy efficiency compliance
ENERGY STAR® certified; EPEAT® Silver registered [27]

Sustainable impact specifications
Ocean-bound plastic in bezel and speaker enclosure(s); Recycled metal in keyboard frame; Keyboard keycaps and scissors contain post-consumer recycled plastic[39,40,41]

Weight
Unpackaged: Starting at 2.35 kg
Packaged: 3.86 kg

Dimensions (Width x Depth x Height)
Unpackaged: 36.9 x 24.8 x 2.3 cm
Packaged: 6.9 x 55.2 x 34.5 cm

Manufacturer Warranty
1-year limited hardware warranty. Additional information available at www.support.hp.com; 1-year limited technical support for software and initial setup (from date of purchase).[14]

Input devices
Full-size, 4-zone RGB backlit, mica silver keyboard and 26-Key Rollover Anti-Ghosting Key technology
HP Imagepad with multi-touch gesture support

Features
Support AMD Radeon FreeSync™ technology[29]

Security management
Trusted Platform Module (Firmware TPM) support
Fingerprint reader not available

Sensors
IR Thermal sensor; Ambient light sensor

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Key Selling Points Footnotes

[1] Multi-core is designed to improve the performance of certain software products. Not all customers or software applications will necessarily benefit from the 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.
[2] Eyesafe certified. See https://www.tuv.com/world/en/eye-comfort.html for more details.
[3] USB Type-C® and USB-C® are trademarks of USB Implementers Forum.
[4] 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.

Feature Messaging Footnotes

[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. AMD's numbering is not a measurement of clock speed.
[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] FreeSync™ is only available when it is connected on Display Port or HDMI port. FreeSync™ is an AMD technology enabled on FHD or QHD displays and is designed to eliminate stuttering and/or tearing in games and videos by locking a display's refresh rate to the frame rate of the graphics card. Monitor, AMD Radeon™ Graphics and/or AMD A-Series APU compliant with DisplayPort™ Adaptive-Sync required. AMD Catalyst™ 15.2 Beta (or newer) required. Adaptive refresh rates vary by display.
[9] All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.
[10] 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.
[11] Percentage of ocean-bound plastic contained in each component varies by product. Laptops manufactured with recycled aluminum material in product cover. Percent of recycled aluminum varies by product.
[12] Percentage of post-consumer recycled plastic contained in keycap varies by product.
[13] 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. Available on select HP products. See http://store.hp.com for a full list of product features.
[14] Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (802.11ax) is backwards compatible with prior 802.11 specs. The specifications for Wi-Fi 6 are draft and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other Wi-Fi 6 devices. Only available in countries where 802.11ax is supported. Wi-Fi 6 (802.11ax) is not supported in Ukraine, Russia, and Indonesia where the Wi-Fi 6 (802.11ax) will be disabled and downgraded to 802.11ac by the Intel's DRS solution.
[15] Features may require software or other 3rd party applications to provide the described functionality.
[16] Actual throughput may vary.
[17] Internet service required and not included. Subscription required after 30 days.

Technical Specifications Footnotes

[1] 25 GB of free Dropbox storage for 12 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] Free 30 day subscription of McAfee LiveSafe service included. Internet access required and not included. Subscription required after expiration.
[3] Windows MobileMark 18 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 https://bapco.com/products/mobilemark-2018/ for additional details.
[5] 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. Available on select HP products. See http://store.hp.com for a full list of product features.
[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.
[10] Battery life tested by HP using continuous FHD video playback, 1080p (1920x1080) resolution, 150 nits brightness, system audio level at 17%, player audio level at 100%, played full-screen from local storage, headphone attached, wireless on but not connected. Actual battery life will vary depending on configuration and maximum capacity will naturally decrease with time and usage.
[14] Wireless access point and internet service required and sold separately. Availability of public wireless access points limited; 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.
[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.
[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] ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency; 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.
[29] FreeSync™ is only available when it is connected on Display Port or HDMI port. FreeSync is an AMD technology is enabled on FHD or QHD displays and is designed to eliminate stuttering and/or tearing in games and videos by locking a display's refresh rate to the frame rate of the graphics card. Monitor, AMD Radeon™ Graphics and/or AMD A-Series APU compliant with DisplayPort™ Adaptive-Sync required. AMD Catalyst™ 15.2 Beta (or newer) required. Adaptive refresh rates vary by display.
[32] HP BIOS Protection works with Windows 10 or 11 that ships with your PC; 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.
[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.