

OMEN 16L Gaming Desktop PC

TG03-0110



Enter your new era of gaming

Unwind with the OMEN 16L. With an Intel® processor and high-performance graphics card, it delivers elevated performance in a compact size. Customize your PC with RGB effects through OMEN Light Studio and get personalized settings recommendations with OMEN AI. The 16L is the perfect companion for your next adventure.

Product overview

- Get set for gaming greatness:** Achieve performance with an Intel® processor and high-performance graphics card. Enjoy fluid gameplay with minimal stutter, faster speeds, and efficient cooling to support your PC's overall airflow.
- Compact size, Big plays:** From small spaces to massive quests, the OMEN 16L's compact design fits effortlessly into any room. Its sleek look keeps your setup tidy and minimal, creating the perfect atmosphere to relax and dive into your favorite games.
- Personalize your way:** Light up your setup with customizable RGB effects using OMEN Light Studio through OGH. Choose from different RGB styles that reflect your personality.
- We're In This Together:** Innovating with purpose and intention to go beyond short-term impact to drive positive, lasting change.

Key specifications

- Operating system:** Windows 11 Home⁽¹⁾
- Processor:** Intel® Core™ Ultra 5 225F processor^(2b)
- NPU:** Intel® AI Boost (13 NPU TOPS)^(6c)
- Memory:** 8 GB DDR5-5600 MT/s memory (1 x 8 GB)
- Internal Storage:** 512 GB PCIe® Gen4 NVMe™ M.2 Solid State Drive⁽¹⁵⁾
- Graphics:** NVIDIA® GeForce RTX™ 3050 graphics card with 8 GB GDDR6 dedicated memory⁽¹³⁾
- Mouse and keyboard:** HP USB white wired keyboard and mouse combo
- USB ports:** Front I/O: 2 USB Type-A 5Gbps signaling rate, 2 USB Type-A 10Gbps signaling rate, 1 USB Type-C® 5Gbps signaling rate, 1 USB Type-C® 10Gbps signaling rate⁽⁴²⁾; Rear: 4 USB 2.0 Type-A
- Wireless:** Wi-Fi 6 (2x2) and Bluetooth® 5.4 wireless card^{(19e)(25a)(26)}
- Warranty:** 1-year limited hardware warranty

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 Processors (Series 2):** Experience powerful and efficient AI performance with an Intel® Core Ultra processor. Unlock optimized gaming, creation and AI capabilities for desktops and workstations like never before.
- NVIDIA® GeForce RTX™ 3050 graphics:** Step up to the power of 2nd generation RTX powered by the award-winning NVIDIA Ampere architecture. AI and new system optimizations create more efficient gaming desktops in new and innovative form factors.
- PCIe® Gen4 NVMe™ M.2 SSD:** With high-speed data transfer, the PCIe® Gen4 NVMe™ M.2 SSD offers fast speed and efficient storage.
- 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.
- 1 input for your microphone and headphone:** One jack to plug in your headphones and microphone.
- USB Type-C® 5Gbps signaling data rate:** Plug in your external storage with this USB Type-C® port, featuring 5Gbps signaling data rate. And it's reversible, so you never have to worry about plugging in upside down.⁽⁴²⁾⁽⁴³⁾
- USB Type-C® 10Gbps signaling data rate:** Plug in your external storage with this USB Type-C® port, featuring 10Gbps signaling data rate. And it's reversible, so you never have to worry about plugging in upside down.⁽⁴²⁾⁽⁴³⁾
- USB Type-A 5Gbps signaling data rate:** Plug in your external storage with this USB Type-A port, featuring 5Gbps signaling data rate.⁽⁴³⁾

Additional product features

- USB Type-A 10Gbps signaling data rate:** Plug in your external storage with this USB Type-A port, featuring 10Gbps signaling data rate.⁽⁴³⁾
- DDR5 RAM:** With fast DDR5 RAM, everything from multitasking to playing games gets a performance boost.
- Dual channel memory:** Two channels work simultaneously to double the communication speed between the memory controller and the RAM increasing system performance.
- Effortlessly connected:** Enjoy faster speeds, improved performance and greater capacity with Wi-Fi 6 and Bluetooth® 5.4 wireless card.^{(19e)(25a)(26)}
- OMEN Gaming Hub:** From software enhancements to hardware control, and live services, OGH elevates play in easy and simple way.
- OMEN Light Studio:** Control RGB lighting effects for all your connected and supported devices through one app. OMEN Light Studio makes it easy to personalize lighting options using a variety of effects like ambient, wave, interactive and more.
- OMEN AI:** OMEN AI gets you the best possible FPS for your (supported) games with personalized settings recommendations. No troubleshooting or guesswork needed, just the click of a button.⁽⁷⁰⁾
- 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⁾

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.

The OMEN 16L Gaming Desktop PC is built with the future in mind, using environmentally conscious and recycled materials.

- Up to 20% recycled metal
- Up to 55% post-consumer recycled plastic

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>.⁽¹⁰⁾

- 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.⁽¹⁰⁾

Extend your coverage:

- SmartFriend, part of HP Care:** Experts are available 24/7 to handle any tech issue, on any device, from any brand. Visit www.hp.com/go/smarterfriend to learn more or call toll-free 1.844.814.1800 to get started.⁽⁹⁵⁾

- Care Packs, part of HP Care:** Extend protection beyond the standard limited warranty. For more info, visit www.hp.com/go/carepack-services or call toll-free at 1.877.232.8009.⁽⁸³⁾



Specifications

| | |
|------------------------------|--|
| Operating system | • Windows 11 Home⁽¹⁾ |
| Processor | • Intel® Core™ Ultra 5 225F processor ^(2b) • 10-core • Intel® AI Boost (13 NPU TOPS) ^(6c) |
| Cooling | • 1 x 120 mm RGB front fan • 1 x 90 mm rear fan • 92 mm 2-heatspipe RGB air cooler |
| Processor speed | • Up to 4.9 GHz with Intel® Turbo Boost Technology ^(2g) |
| Cache | • 20 MB L3 cache |
| Memory | • 8 GB DDR5-5600 MT/s memory (1 x 8 GB) (expandable to 32 GB unbuffered with 16 GB DIMMs) ^(3a) |
| Internal storage | • 512 GB PCIe® Gen4 NVMe™ M.2 Solid State Drive ⁽¹⁵⁾ |
| Finish | • HP finish in Panda Metal |
| Video graphics | • NVIDIA® GeForce RTX™ 3050 graphics card with 8 GB GDDR6 dedicated memory ⁽¹³⁾ |
| Network interface | • Realtek 10/100/1000/2500 GbE NIC ^(2g) |
| Wireless connectivity | • Wi-Fi 6 (2x2) and Bluetooth® 5.4 wireless card ^{(19e)(25a)(26)} |
| Sound | • 5.1 surround sound |
| Memory slots | • 2 DIMM (288-pin) (occupied) |
| Expansion slots | • 1 PCI-E Gen 4 x16 (occupied) • 1 PCI-E Gen 3 x1 (available) • 3 M.2 (2 for SSD, 1 for WLAN) (one available) |
| Expansion bays | • No expansion |
| External ports | • Headphone/Microphone Combo • Front I/O: 2 USB Type-A 5Gbps signaling rate, 2 USB Type-A 10Gbps signaling rate, 1 USB Type-C® 5Gbps signaling rate, 1 USB Type-C® 10Gbps signaling rate ⁽⁴²⁾ • Rear: 4 USB 2.0 Type-A, 1 RJ-45 • HDMI • 3 DisplayPort™ ⁽⁵⁰⁾ |
| Mouse and keyboard | • HP USB white wired keyboard and mouse combo |
| Security | • Kensington Security lock slot ⁽²⁸⁾ • Padlock |
| Power supply | • 400 W 80 Plus Platinum certified power supply |
| Dimensions | • Unpackaged: 6.10 in (W) x 13.26 in (D) x 12.12 in (H) approx. • Packaged: 15.75 in (W) x 19.65 in (D) x 11.30 in (H) approx. |
| Weight | • Unpackaged: 12.76 lb approx. ⁽⁷⁶⁾ • Packaged: 21.63 lb approx. |
| Warranty and support | • 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) ⁽⁵³⁾ |

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>. ^(2b) 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 XE, Intel logo and the Intel Inside logo are trademarks of Intel Corporation in the U.S. and other countries. ^(2g) 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. ^(3a) Based on system capability, actual spec offering may be different. Maximum upgradeability will vary by model. ^(6c) 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. ⁽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. ⁽¹⁰⁾ Internet service required and not included. ⁽¹³⁾ ©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. ⁽¹⁵⁾ Actual formatted capacity is less. Portion of internal storage is reserved for preloaded content. ^(19e) 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. ⁽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. ^(25a) Bluetooth® 5.4 operation requires Microsoft OS/Chrome OS support. Until Microsoft OS/Chrome OS support is available, Bluetooth® 5.4 will function as Bluetooth® 5.3 or lower. ⁽²⁶⁾ Bluetooth® is a trademark owned by its proprietor and used by HP Inc. under license. ⁽²⁸⁾ Lock sold separately. ⁽²⁹⁾ Actual speeds may vary. ⁽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. ⁽⁴³⁾ Actual throughput may vary. ⁽⁵⁰⁾ DisplayPort™ and the DisplayPort™ logo are trademarks owned by the Video Electronics Standards Association (VESA®) in the United States and 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. ⁽⁶⁰⁾ 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 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. ⁽⁷⁰⁾ See <https://www.omen.com/us/en/omen-ai.html> for more details. ⁽⁷⁶⁾ Weight and system dimensions may fluctuate due to configuration and manufacturing variances. ⁽⁸³⁾ Service levels and response times for Care Packs may vary depending on your geographic location. Restrictions and limitations apply. Service starts at date of hardware purchase. HP Care Packs are sold separately. For details, visit hp.com/go/carepack-services. ^(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 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. ⁽⁹⁵⁾ HP SmartFriend will support any major brand of computer and tablet running Microsoft Windows, OSX, iOS, Android, and Chrome OS. 24x7 support is available in English and in the US & Canada (excluding the Province of Quebec) only. Service availability varies by country/region. Internet connection required for remote support. Remote support not available for tablets. Not all service plans cover support for tablets. HP SmartFriend sold separately or as an add-on feature. 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. 03/13/2025_r1 ja

Software and technology

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| Help and support | • HP Support Assistant: Help with your HP PC and printers whenever you need it. ⁽⁵⁶⁾ • 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. |
| 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. ⁽²³⁾ |
| Partner offers | • 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. ⁽¹⁰⁾⁽²²⁾ • 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. ⁽⁶⁾⁽¹⁰⁾ • 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. ^(88a) • 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. ⁽⁵⁰⁾ |
| System performance | • HP Connection Optimizer: Get consistent and reliable Wi-Fi performance with software that automatically switches between the most efficient wireless access points. ⁽¹⁰⁾ |
| Work and lifestyle | • Otter.ai: With Otter.ai, an AI assistant can record audio, write notes, automatically capture slides, record, transcribe, and generate meeting summaries so that you can save time and stay organized. • Microsoft Copilot: Microsoft Copilot gives you intelligent answers. Access with just the touch of the Copilot key. ⁽⁴¹⁾ |
| Gaming and entertainment | • 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. • DTS: X® Ultra technology: Authentic, spatially accurate 3D sound to provide the best entertainment experience. • 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 | • BD7H3AA#ABA |
| Ad embargo date | • 06/14/2025 |
| UPC code | • 198990920467 |
| Country of origin | • Mexico |
| Pallet information | • Dimensions: 47.24 in (L/D) x 39.37 in (W) x 84.21 in (H) approx. • Total weight: 939.44 lb approx. • Layers: 7 • Products per layer: 6 • Total products per pallet: 42 |

