Datasheet

OMEN 16L Gaming Desktop PC TG03-0005na PC

Your new era of gaming

Step into the world of gaming with the OMEN 16L. Powered by an AMD Ryzen™ Processor[12] and high-performance graphics, it delivers elevated performance in a compact form. Great for unwinding after a busy day or gaming during your downtime.

*Product image may differ from actual product

Get set for gaming greatness

Enjoy smoother gameplay and enhanced cooling with CPU fans, boosting airflow and featuring customizable lighting.

Compact size, big plays

Refresh your space with a stylish, compact design that's perfect for relaxing and gaming.

Customize your gaming experience

Personalize setup with customizable RGB lighting and personalized setting recommendations for your game in OGH.

Sustainability in action

Designed with purpose

This OMEN 16L desktop is thoughtfully designed with at least 55% recycled plastic content[4], at least 10% recycled metal[5], and packaging with certified or recycled sources of paper[4,3].

with

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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.[6]

Everything You Need to Game, Work, and Create
AMD Ryzen 8000G Series processors; high-performance processing power, intense graphics capabilities, and the first neural processing unit (NPU) on an AMD desktop PC processor.[1]

Up your creative game
Take your creative projects to the next level with GeForce RTX 30 Series GPUs. AI-accelerated. Backed by the NVIDIA Studio platform. And built to perform—fast.[7]

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.[8]

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.[9]

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.[10]

Ethernet port
When you have a spotty wireless connection, you can quickly plug in your Ethernet cable to get a smooth, wired Internet experience that bypasses any wireless issue.

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.[11]

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.

Effortlessly connected
Enjoy faster speeds, improved performance and greater capacity with Wi-Fi 6 and Bluetooth® 5.4 wireless card.[12]

OMEN Gaming Hub
OMEN Gaming Hub is 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 easy and simple way.

Recommended accessories and services (not included)

HyperX Cloud III Wireless - Gaming Headset
77Z46AA

HyperX Alloy Rise 75 - Gaming Keyboards
7G7A4AA

3-year pickup and return
UC994E

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

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Specifications

Performance

Operating system
Windows 11 Home
Processor
AMD Ryzen™ 5 8400F (up to 4.7 GHz max boost clock, 16 MB L3 cache, 6 cores, 12 threads)[6,7]
Processor family: AMD Ryzen™ 5 processor
Chipset
AMD B650
Memory
16 GB DDR5-5200 MT/s (2 x 8 GB)
Transfer rates up to 5200 MT/s.
Memory slots: 2 DIMM
Maximum memory: Supports up to 32 GB max system memory
Storage
1 TB PCIe® Gen4 NVMe™ M.2 SSD
100 GB Dropbox storage for 3 months[1]
Graphics
Integrated: AMD Radeon™ Graphics;
Discrete: NVIDIA® GeForce RTX™ 3050 (8 GB GDDR6 dedicated) ;
Audio
Omen Audio Control Support DTS:X Ultra
Power
400 W 80 Plus Platinum certified power supply;

Connectivity

Network interface
Realtek RTL8125BGH-CG 10/100/1000/2500 GbE NIC
Wireless connectivity
Realtek Wi-Fi 6 (2x2) and Bluetooth® 5.4 wireless card [11,12,13,46]
Ports
Front:
1 USB Type-C® 10Gbps signaling rate; 1 USB Type-C® 5Gbps signaling rate; 2 USB Type-A 10Gbps signaling rate; 2 USB Type-A 5Gbps signaling rate; 1 headphone/microphone combo[19]
Rear:
4 USB 2.0 Type-A; 1 RJ-45; 3 3.5 mm audio jack combo
Video connectors
1 HDMI 2.1
Expansion slots
3 M.2 (2 for SSD, 1 for WLAN)

Sustainability

Sustainable impact specifications
At least 55% post-consumer recycled plastic; At least 20% recycled metal[40,41]

Design

Product color
Shadow black
Textured finish

Software

HP apps
HP Connection Optimizer; HP Support Assistant; OMEN Gaming Hub; HP Enhanced Lighting
Software
Otter.ai;
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: BT7X5EA #ABU
UPC/EAN code: 199251569043
Weight
5.61 kg;
Packed: 8.81 kg
Dimensions
15.5 x 33.7 x 30.8 cm;
Packed: 40 x 49.9 x 28.7 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.
Security management
Kensington Security lock slot; Padlock

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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.
[2] 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, and other factors.
[3] Recycling facilities not available in all locations.
[4] Recycled plastic is expressed as a percentage of the total weight plastic. Post-consumer recycled is based on the definition set in the EPEAT standard for computers, IEEE 1680.1-2018 standard.
[5] Recycled metal is expressed as a percentage of the total weight of the metal according to ISO 14021 definitions for metal parts over 25 grams.
[6] Based on speedometer benchmark. Performance will vary significantly by device. See aka.ms/w11claims
[7] © 2025 NVIDIA Corporation. All rights reserved. NVIDIA, the NVIDIA logo, GeForce, GeForce RTX, Quadro, Quadro RTX, and NVIDIA Turing 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] 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.
[9] 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.
[10] Actual throughput may vary. USB Type-C® and USB-C® are trademarks of USB Implementers Forum.
[11] 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.
[12] 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. Wi-Fi 6 is designed to support gigabit data rate when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 80MHz and higher channels. Wi-Fi 6 (802.11ax) is not supported in Belarus where Wi-Fi settings will be optimized to local regulatory requirements (802.11ac). 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. Bluetooth® is a trademark owned by its proprietor and used by HP Inc. under license.

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.
[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.
[11] Wi-Fi 6 is designed to support gigabit data rate when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 80MHz and higher channels.
[12] 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.
[13] Wi-Fi 6 (802.11ax) is not supported in Belarus where Wi-Fi settings will be optimized to local regulatory requirements (802.11ac).
[19] For best results with HP Sleep and Charge, use a USB charging protocol standard cable or cable adapter with an external device.
[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.
[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.
[40] Recycled plastic is expressed as a percentage of the total weight plastic. Post-consumer recycled is based on the definition set in the EPEAT criteria.
[41] Recycled metal is expressed as a percentage of the total weight metal as per defined in the EPEAT criteria.
[46] 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.
[51] Weight and system dimensions may fluctuate due to configuration and manufacturing variances.

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