

# OMEN Gaming Laptop 16-wd0500nz



Enjoy powerful fun anywhere.

The OMEN 16 inch gaming laptop is ready to go wherever you are. Enjoy desktop-level power with a 13th Gen Intel® Core™ processor<sup>1</sup> and a modern NVIDIA® graphics card, both regulated by enhanced internal cooling. The screen is equally impressive with high resolution, smooth framerates, and anti-glare features.



\*Product image may differ from actual product



### Desktop levels of power anywhere

The processor, graphics card, and memory to handle the neediest of games wherever you may be.



### Laptop cooling excellence

Performance doesn't matter if your laptop sounds like a jet engine, so choose OMEN's enhanced thermal design.



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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.<sup>2</sup>

### Extend beyond performance to let your PC do even more at once

Going beyond just raw processor speed. With 13th Gen Intel® Core™ Processors, Intel advanced its hybrid design and made it even better. A faster performance core means getting dedicated tasks done faster and easier. More efficiency cores mean better multi-tasking. The same great graphics and best in-class connectivity means a fully immersive display and ultra-responsive wired and wireless connections.<sup>3</sup>

### Beyond Fast

NVIDIA® GeForce RTX™ 40 Series GPUs are beyond fast. Powered by the NVIDIA Ada Lovelace architecture which delivers a leap in both performance and AI-powered graphics. Experience lifelike virtual worlds with ray tracing and ultra-high FPS gaming.<sup>4</sup>

### 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.

### FHD IPS display

Enjoy crystal-clear images from any angle. With 178° wide-viewing angles and a vibrant 1920 x 1080 resolution, you'll always have a great view of your favorite content.<sup>5</sup>

### 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.

### 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.<sup>6</sup>

### HP QuickDrop

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

### Enjoy 1-month of high-quality games

Use the Xbox App to play hundreds of high-quality PC games with friends including new day one titles and get an EA Play membership. With games added all the time, you always have something new to play. Xbox Game Pass Ultimate also enables you to play console games on your Windows PC with cloud gaming, and chat with friends across PC, mobile, and Xbox console.<sup>7</sup>

### 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.<sup>8</sup>

### 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.<sup>9</sup>

### Wi-Fi 6E

Enjoy faster speeds, improved performance, greater capacity and lower latencies than earlier iterations with Wi-Fi 6E technology.<sup>10</sup>

### HP True Vision FHD

Video chat in vibrant clarity with Full HD resolution, even in low light, and make every conversation a face-to-face experience for a better way to stay in touch.<sup>11</sup>

### USB Type-A 5Gbps signaling data rate

Plug in your external storage with this USB Type-A port, featuring 5Gbps signaling data rate.<sup>12</sup>

### ExpressVPN

Hide your IP address and encrypt your network data so no one can see what you're doing. Reduce the threat of hacking even when browsing on public Wi-Fi.<sup>13</sup>

### McAfee® LiveSafe™

Free 12-month subscription of McAfee® LiveSafe™ service included. McAfee® LiveSafe™ service enriches your digital life by protecting your data, identity and all your devices so you can connect with confidence.<sup>15</sup>

### 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.

### One Zone White Backlit Keyboard

Allows you to backlight 1 zone with white keyboard lighting.

### 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

Intel® Core™ i5-13420H (up to 4.6 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 8 cores, 12 threads)<sup>6,7</sup>

Processor family: 13th Generation Intel® Core™ i5 processor

#### Chipset

Intel® integrated SoC

#### Memory

16 GB DDR5-5200 MHz RAM (2 x 8 GB)

Transfer rates up to 5200 MT/s.

Number of User-accessible Memory Slots: 2

#### Storage

1 TB PCIe® Gen4 NVMe™ TLC M.2 SSD

25 GB Dropbox storage for 12 months<sup>1</sup>

#### Graphics

Discrete: NVIDIA® GeForce RTX™ 4050 Laptop GPU (6 GB GDDR6 dedicated) ;

Intel® Iris® X<sup>e</sup> Graphics capabilities require system to be configured with Intel® Core™ i5 or i7 processors and dual channel memory. Intel® Iris® Xe Graphics with Intel® Core™ i5 or i7 processors and single channel memory will only function as Intel® UHD Graphics.

#### Audio

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

#### Display

40.9 cm (16.1") diagonal, FHD (1920 x 1080), 165 Hz, 7 ms response time, IPS, micro-edge, anti-glare, Low Blue Light, 300 nits, 100% sRGB<sup>17,21,28</sup>

#### Screen-to-body ratio

83.17%<sup>18</sup>

#### Aspect ratio

16:9

#### Power

230 W AC power adapter;

#### Battery type

6-cell, 83 Wh Li-ion polymer<sup>23</sup>

#### Battery and Power

Up to 6 hours and 45 minutes<sup>3</sup>;

Supports battery fast charge: approximately 50% in 30 minutes<sup>5</sup>

#### Maximum battery life video playback

Up to 8 hours and 15 minutes<sup>10</sup>

### Connectivity

#### Network interface

Integrated 10/100/1000 GbE LAN

#### Wireless connectivity

Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card (supporting gigabit data rate)<sup>11,12</sup>

Modern Standby (Connected)

#### Ports

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

#### Webcam

HP True Vision 1080p FHD camera with temporal noise reduction and integrated dual array digital microphones

### Design

#### Product color

Shadow black, black chrome logo

Paint finish

### Software

#### HP apps

HP Support Assistant; HP Connection Optimizer; HP QuickDrop; MyHP; OMEN Gaming Hub

#### Software

ExpressVPN (30 day free trial); LastPass Premium (30 day free trial)<sup>22</sup>;

12-month McAfee LiveSafe™ offer with this product<sup>2</sup>;

1 month trial for new Microsoft 365 customers<sup>24</sup>

#### Service & support

Xbox Game Pass 1-month free trial<sup>43</sup>

12-month McAfee LiveSafe™ offer with this product<sup>2</sup>

### Additional information

#### Part Number

P/N: 7Z0T2EA #UUZ

UPC/EAN code: 197497073713

#### Ecolabels

EPEAT® Silver registered<sup>27</sup>

ENERGY STAR® certified

#### Sustainable impact specifications:

Ocean-bound plastic in speaker enclosure(s) and bezel; Keyboard mechanism made from agriculture waste; Keyboard keycaps and scissors contain post-consumer recycled plastic<sup>39,41</sup>

#### Weight

2.36 kg;

Packed: 4.28 kg

Weight Note: Weight varies by configuration

#### Dimensions

36.9 x 25.94 x 2.39 cm;

Packed: 6.9 x 55.2 x 34.5 cm

Dimension Note: Dimensions vary by configuration

#### Manufacturer Warranty

2 year (2/2/0) limited warranty includes 2 years of parts and labor. No on-site repair. Terms and conditions vary by country. Certain restrictions and exclusions apply.

#### Keyboard

Full-size, 1-zone white backlit, shadow black keyboard with numeric keypad and 26-Key

Rollover Anti-Ghosting Key technology

HP Imagepad

#### Features

NVIDIA® G-SYNC® support

#### Security management

Camera privacy shutter; Trusted Platform Module (Firmware TPM) support

#### Sensors

IR thermal sensor

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## Recommended accessories

\* Not included.



**HP Travel USB-C Multi Port Hub**  
1C1Y5AA



**HP 960 4K Streaming Webcam**  
695J6AA



**HP Creator 16.1-inch Laptop Backpack**  
6M5S3AA

## Warranty services\*



**3-year pickup and return**  
UM946E

## Key Selling Points Footnotes

<sup>1</sup> 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. Intel's numbering is not a measurement of higher performance.

## Feature Messaging Footnotes

<sup>2</sup> 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>.

<sup>3</sup> 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 is not a measurement of higher performance.

<sup>4</sup> ©2023 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.

<sup>5</sup> Full high-definition (FHD) content is required to view FHD images.

<sup>6</sup> The flicker-free capability eliminates screen flickering through integrating DC-dimming LED backlights.

<sup>7</sup> 1 month trial offer for \$1.00 - Promotional offers may be for new members only and/or not be valid for all members and are only available for a limited time. Offers not valid in Russia and Turkey; other geographic restrictions may apply. Credit card and Xbox account required. After promotional period, subscription automatically continues at the then-current regular price (subject to change), unless cancelled, plus applicable taxes. To stop being charged, cancel your subscription or turn off recurring billing in your Microsoft account ([account.microsoft.com/services](https://account.microsoft.com/services)) or on your Xbox console, before the next billing date. For more details, see <https://support.xbox.com/help/subscriptions-billing/manage-subscriptions/cancel-recurring-billing-or-subscription>. Purchase of Xbox Game Pass Ultimate automatically upgrades your existing Xbox Live Gold, Xbox Game Pass (PC or Console), and/or EA Play membership(s) to Xbox Game Pass Ultimate at a conversion ratio each based on days remaining. Learn how this works at [www.xbox.com/gamepass](https://www.xbox.com/gamepass). See Microsoft <https://www.xbox.com/en-US/legal/subscription-terms> for more details.

<sup>8</sup> 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.

<sup>9</sup> 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.

<sup>10</sup> Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6E (802.11ax) is backwards compatible with prior 802.11 specs. Wi-Fi 6E is part of Wi-Fi Certified. Only available in countries where Wi-Fi 6E (Tri-band - 2.4Ghz/5Ghz/6Ghz) is supported. Wi-Fi 6E is designed to support gigabit data rate when transferring files between two devices connected to the same router. Requires a wireless router, sold separately. The specifications for Wi-Fi 6E 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 6E devices.

<sup>11</sup> Features may require software or other 3rd party applications to provide the described functionality.

<sup>12</sup> Actual throughput may vary.

<sup>13</sup> Free 30-day trial, switch to a paid service at the end of the trial period. Each paid subscription grants you one (1) license to use on three (3) different devices at any given time. See [www.expressvpn.com](https://www.expressvpn.com) for more details.

<sup>15</sup> Internet service required and not included. Subscription required after the 12 month.

## Technical Specifications Footnotes

<sup>1</sup> 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.

<sup>2</sup> Free 1-year subscription of McAfee LiveSafe service included. Internet access required and not included. Subscription required after expiration.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>6</sup> 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.

<sup>7</sup> Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See <http://www.intel.com/technology/turboboost/> for more information.

<sup>10</sup> Battery life tested by HP using continuous FHD video playback, 1080p (1920x1080) resolution, 150 nits brightness, system audio level at 17% as image default, player audio level at 100%, played full-screen from local storage, headphone attached or through speaker (if no audio jack port), wireless on but not connected. Actual battery life will vary depending on configuration and maximum capacity will naturally decrease with time and usage.

<sup>11</sup> Wi-Fi 6E is designed to support gigabit data rate when transferring files between two devices connected to the same router. Requires a wireless router, sold separately.

<sup>12</sup> Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. And available in countries where Wi-Fi 6E is supported.

<sup>17</sup> All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.

<sup>18</sup> Percent of active plus nonactive viewing area to active viewing area plus border. Measure with lid vertical to the desk.

<sup>19</sup> For best results with HP Sleep and Charge, use a USB charging protocol standard cable or cable adapter with an external device.

<sup>21</sup> TÜV Low Blue Light is the Display Compliance Test Specification quality. See <https://www.certipedia.com/?locale=en#search> for more details.

<sup>22</sup> Reverting to LastPass basic after 30 days.

<sup>23</sup> 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.

<sup>24</sup> Must activate within 180 days of Windows activation.

<sup>27</sup> Based on U.S. EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. EPEAT® status varies by country. Visit [www.epeat.net](http://www.epeat.net) for more information.

<sup>28</sup> Eyesafe® Display for Low Blue Light is the Display Compliance Test Specification quality. See <https://eyesafe.com> for more details.

<sup>39</sup> Percentage of ocean-bound plastic contained in each component varies by product.

<sup>41</sup> Keyboard scissors contain natural, renewable feedstock based on mass balance approach; Keyboard keycaps contain post-consumer recycled plastic. Percentage of post consumer recycled contained in each component varies by product.

<sup>42</sup> 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.

<sup>43</sup> 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 [www.xbox.com/gamepass](https://www.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.

<sup>45</sup> 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.

