

# OMEN by HP 16.1 inch Gaming Laptop PC 16-n0023dx



## You can play the best and still be cool about it

Your laptop game is ready to go. Power your play with a AMD Ryzen™ 7 6800H processor & NVIDIA GeForce® RTX™ graphics. The 16.1 inch auto brightness display comes with FHD 144Hz with Eyesafe® and flicker-free tech to keep your eyes feeling great. And OMEN Tempest Cooling Technology keeps you cool in the mix.

### Product overview

- **Maximized for gaming, minimized for chill:** Gaming laptops don't have to run hot. This next level engineering maximizes desktop-level power while minimizing temperatures with groundbreaking new OMEN Tempest Cooling Technology.
- **16.1 inches of pure game immersion therapy:** The futuristic lines of its 3-sided bezel minimalist design make this machine a piece of art in mica silver. Get lost in the massive screen with narrow bezel edges that seem to seamlessly bleed into infinity. The FHD 144Hz will make any game look better.
- **Expand your mind, body, and ports:** There's room for tons of peripherals, from external drives, GPUs, or just your phone. The entire machine is powered by OMEN hardware and OMEN Gaming Hub. This beast is a gaming HQ.

### Key specifications

- **Operating system:** Windows 11 Home<sup>(1)</sup>
- **Processor:** AMD Ryzen™ 7 6800H<sup>(2a)</sup>
- **Display:** 16.1-inch diagonal, FHD (1920 x 1080), 144 Hz, 7 ms response time, IPS, micro-edge, anti-glare, Low Blue Light<sup>(39)</sup>  
AMD Radeon FreeSync™ support
- **Memory:** 16 GB DDR5-4800 MHz RAM (2 x 8 GB)
- **Internal storage:** 512 GB PCIe® NVMe™ M.2 SSD<sup>(15)(58a)</sup>
- **Graphics:** NVIDIA® GeForce RTX™ 3060 Laptop GPU (6 GB GDDR6 dedicated)<sup>(13)</sup>
- **Sound:** Audio by Bang & Olufsen with dual speakers
- **Wireless:** Wi-Fi 6E (2x2)<sup>(19c)</sup> and Bluetooth® Combo<sup>(26)</sup> (Supporting Gigabit data rate)<sup>(76)</sup>
- **Camera:** HP Wide Vision 720p HD camera with temporal noise reduction and integrated dual array digital microphones<sup>(89)</sup>
- **Product weight:** 5.33 lb<sup>(76)</sup>
- **Keyboard:** Full-size, 4-zone RGB backlit, mica silver keyboard and 26-Key Rollover Anti-Ghosting Key technology

### 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.<sup>(1)</sup>
- **AMD Ryzen™ 7 6800H Processor:** Awaken your senses to refreshing speed, with the confidence to unplug and go further. The new AMD Ryzen™ 6800H processor brings new experiences to life - delivering everything you need, and so much more.
- **NVIDIA® GeForce RTX™ 3060 graphics:** Get incredible performance with enhanced Ray Tracing Cores and Tensor Cores, new streaming multiprocessors, and high-speed G6 memory.
- **144Hz FHD anti-glare display:** Reduce frustrating lag and image ghosting with a display that combines a 144Hz refresh rate and 1080p FHD resolution for smooth, crisp gameplay.<sup>(20)(39)</sup>
- **AMD FreeSync™ Technology:** Gaming shouldn't be a choice between choppy gameplay or broken frames. Get fluid, artifact-free performance at virtually any framerate with AMD FreeSync™ technology.<sup>(45)</sup>
- **HP Fast Charge:** Go from 0 to 50% charge in approximately 30 minutes.<sup>(72)</sup>
- **Wi-Fi 6E:** Enjoy faster speeds, improved performance, greater capacity and lower latencies than earlier iterations with Wi-Fi 6E technology.<sup>(19c)</sup>
- **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.<sup>(89)</sup>
- **PCIe® NVMe™ SSD storage:** Get up to 30x faster performance than a traditional hard drive.<sup>(58a)</sup>
- **An exceptionally rich audio experience:** HP Dual Speakers, HP Audio Boost, and expert tuning by Bang & Olufsen bring audio perfection to your PC.
- **Four Zone RGB keyboard:** Allows you to backlight 4 independent zones with different RGB keyboard lighting. WASD keys are outlined to highlight key controls. It's all easily controlled through the OMEN Gaming Hub.

### Product design

- **OMEN Tempest Cooling Technology:** Stay cool under pressure with the advanced laptop thermal solution, OMEN Tempest Cooling Technology. 3-sided venting and 5-way airflow ensure optimal system stability and performance when gameplay heats up.<sup>(46)</sup>
- **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.
- **Micro-edge display:** The barely visible bezel revolutionizes your display by letting a larger screen fit into a smaller frame.

### 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.

- Built with the environment in mind, this laptop is designed using sustainable materials like:
  - Ocean-bound plastic in the bezel and speaker enclosure<sup>(63d)</sup>
  - Keycaps made from post-consumer recycled plastic<sup>(63b)</sup>
  - Keyboard deck made from recycled metal<sup>(63d)</sup>
- HP's outer boxes and fiber cushions used in packaging are 100% sustainably sourced and recyclable.<sup>(63e)</sup>
- ENERGY STAR® certified<sup>(62)</sup>
- EPEAT® Silver registered<sup>(27)</sup>

### 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.<sup>(56)</sup>
- **Online Support:** For technical support with this product, visit HP Customer Support <http://support.hp.com>.<sup>(9)</sup>
- **Social Media Support:** To find solutions, ask questions, and share tips, join us on the HP Support Community at [community.hp.com](http://community.hp.com), on Twitter at [twitter.com/HPsupport](https://twitter.com/HPsupport), and Facebook at [facebook.com/HPsupport](https://facebook.com/HPsupport).<sup>(9)</sup>



AUDIO BY  
BANG & OLUFSEN

AMD  
FreeSync

## Specifications

<b>Operating system</b>	• Windows 11 Home <sup>(1)</sup>
<b>Processor</b>	• AMD Ryzen™ 7 6800H <sup>(2a)</sup> • 8-Core
<b>Processor speed</b>	• Up to 4.7 GHz max boost clock <sup>(2d)</sup>
<b>Processor cache</b>	• 16 MB L3 cache
<b>Memory</b>	• 16 GB DDR5-4800 MHz RAM (2 x 8 GB)
<b>Accessible memory slots</b>	• 2
<b>Video graphics</b>	• NVIDIA® GeForce RTX™ 3060 Laptop GPU (6 GB GDDR6 dedicated) <sup>(13)</sup>
<b>Internal storage</b>	• 512 GB PCIe® NVMe™ M.2 SSD <sup>(15)(58a)</sup>
<b>Finish and features</b>	• Top cover: Mica silver • Keyboard deck: Mica silver aluminum with an anodized finish
<b>Camera</b>	• HP Wide Vision 720p HD camera with temporal noise reduction and integrated dual array digital microphones <sup>(69)</sup>
<b>Display</b>	• 16.1-inch diagonal, FHD (1920 x 1080), 144 Hz, 7 ms response time, IPS, micro-edge, anti-glare, Low Blue Light, 300 nits, 100% sRGB <sup>(2)(39)</sup> • AMD Radeon FreeSync™ support
<b>Screen to body ratio</b>	• 82.1% <sup>(40)</sup>
<b>Network card</b>	• Integrated 10/100/1000 GbE LAN <sup>(29)</sup>
<b>Wireless connectivity</b>	• Wi-Fi 6E (2x2) <sup>(1)(9d)</sup> and Bluetooth® combo <sup>(25)</sup> (Supporting Gigabit data rate) <sup>(7c)</sup> • MU-MIMO supported
<b>Digital media</b>	• 1 Multi-format SD media card reader
<b>Sound</b>	• Audio by Bang & Olufsen with dual speakers
<b>Integrated keyboard</b>	• Full-size, 4-zone RGB backlit, mica silver keyboard and 26-Key Rollover Anti-Ghosting Key technology • HP Imagepad with multi-touch gesture support
<b>External notebook ports</b>	• 2 SuperSpeed USB Type-C® 10Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4, HP Sleep and Charge) <sup>(42)(48)(50)(64)</sup> • 1 SuperSpeed USB Type-A 5Gbps signaling rate (HP Sleep and Charge) <sup>(64)</sup> • 2 SuperSpeed USB Type-A 5Gbps signaling rate • 1 RJ-45 • 1 Headphone/microphone combo (DTS: X® Ultra) <sup>(47)</sup> • 1 AC Smart pin • 1 HDMI 2.1
<b>Dimensions</b>	• <b>Unpackaged:</b> 14.53 in (W) x 9.76 in (D) x 0.91 in (H) • <b>Packaged:</b> 21.73 in (L) x 2.72 in (W) x 13.58 in (H)
<b>Weight</b>	• <b>Unpackaged:</b> 5.33 lb <sup>(76)</sup> • <b>Packaged:</b> 8.53 lb
<b>Power</b>	• 4-cell, 70 Wh Li-ion polymer battery <sup>(21)</sup> • 280 W Smart AC power adapter
<b>Warranty and support</b>	• 1-year limited hardware warranty. Additional information available at <a href="http://www.support.hp.com">www.support.hp.com</a> <sup>(9)</sup> • 1-year limited technical support for software and initial setup (from date of purchase) <sup>(53)</sup>

## Learn more at [hp.com](http://hp.com)

<sup>(1)</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>(2a)</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. AMD's numbering is not a measurement of clock speed. AMD and Radeon are trademarks of Advanced Micro Devices, Inc. <sup>(2b)</sup> Max Boost clock frequency performance varies depending on hardware, software and overall system configuration. GHz refers to internal clock speed of the processor. Other factors besides clock speed may impact system and application performance. <sup>(2c)</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>(2d)</sup> Internet access required and not included. Subscription required after 30 days trial period. McAfee, LiveSafe and the McAfee logo are trademarks or registered trademarks of McAfee, Inc. in the United States and other countries. <sup>(3)</sup> Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. <sup>(13)</sup> ©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. <sup>(15)</sup> Actual formatted capacity is less. Portion of internal storage is reserved for preloaded content. <sup>(19a)</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>(20)</sup> All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower. <sup>(21)</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>(22)</sup> 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](http://dropbox.com). Internet service required and not included. <sup>(23)</sup> HP BIOS Protection works with Windows 11 that ships with your PC. <sup>(25)</sup> Bluetooth® is a trademark owned by its proprietor and used by HP Inc. under license. <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>(29)</sup> Actual speeds may vary. <sup>(39)</sup> Full High Definition (FHD) content is required to view FHD images. <sup>(40)</sup> Percent of active plus nonactive viewing area to active viewing area plus border. Measure with lid vertical to the desk. <sup>(42)</sup> USB Type-C® and USB-C® are trademarks of USB Implementers Forum. <sup>(43)</sup> FreeSync™ technology requires a monitor and AMD Radeon™ graphics, both with FreeSync support. See [www.amd.com/freesync](http://www.amd.com/freesync) for complete details. Confirm capability with your system manufacturer before purchase. <sup>(44)</sup> Thermal solution varies by configuration. <sup>(47)</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>(48)</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>(50)</sup> DisplayPort™ and the DisplayPort™ logo are trademarks owned by the Video Electronics Standards Association (VESA®) in the United States and other countries. <sup>(53)</sup> Call 1.800.474.6836 or [support.hp.com](http://support.hp.com) for more information on Care Packs available after standard warranty expires. After standard warranty expires, an incident fee may apply. <sup>(56)</sup> For more information visit [hp.com/go/hpsupportassistant](http://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. <sup>(58a)</sup> Based on HP internal testing using CrystalDiskMark benchmarking software. Performance is sequentially faster (read only) compared to traditional 5,400 rpm HDD. <sup>(60)</sup> ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency. <sup>(63a)</sup> Keyboard keycaps contain post-consumer recycled plastic. Percentage contained in each component varies by product. <sup>(63b)</sup> Percentage of ocean-bound plastic contained in each component varies by product. <sup>(63c)</sup> Laptops manufactured with recycled metal material in product cover. Percent of recycled metal varies by product. <sup>(63d)</sup> 100% outer box/corrugate cushion packaging made from sustainably sourced certified and recycled fibers. Fiber cushions made from 100% recycled wood fiber and organic material. Excludes plastic bags and plastic foam sheeting. <sup>(64)</sup> For best results with HP Sleep and Charge, use a USB charging protocol standard cable or cable adapter with an external device. <sup>(72)</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. <sup>(76)</sup> Weight and system dimensions may fluctuate due to configuration and manufacturing variances. <sup>(89)</sup> Features may require software or other 3rd party applications to provide the described functionality. Internet service required and not included. Actual product may vary from image shown on datasheet. © Copyright 2022 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. 03/17/2022\_r1 kc

## Software

<b>Help and support</b>	• <b>myHP:</b> myHP provides a simple setup and registration experience that welcomes you to your new HP PC. 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. • <b>HP Support Assistant:</b> Included with your computer, this free self-help tool makes it easier than ever to get help with your HP PC and printers. <sup>(56)</sup>
<b>Security and protection</b>	• <b>HP BIOS Protection:</b> Get peace of mind knowing your PC BIOS is protected. HP BIOS Protection automatically checks its health and recovers itself. <sup>(23)</sup>
<b>Partner offers</b>	• <b>McAfee LiveSafe™:</b> Protect your operating system with a free 30-day McAfee LiveSafe™ trial. <sup>(8)</sup> • <b>Dropbox cloud storage:</b> 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. <sup>(9)(22)</sup>
<b>System performance</b>	• <b>HP Connection Optimizer:</b> Get consistent and reliable Wi-Fi performance with software that automatically switches between the most efficient wireless access points. <sup>(9)</sup>
<b>Work and lifestyle</b>	• <b>HP QuickDrop:</b> Wirelessly transfer photos, videos, documents and more between your PC and mobile device. Easily snap a photo to share, send addresses for directions on-the-go, and view texts on your PC's screen. With HP QuickDrop, file transfers are easy, fast and reliable. <sup>(9)</sup> • <b>AI Noise Removal:</b> Artificial intelligent technology automatically removes background noise for clearer than ever video chats, audio calls, and recordings.
<b>Gaming and entertainment</b>	• <b>OMEN Gaming Hub:</b> 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. • <b>DTS: X® Ultra Technology:</b> 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>(47)</sup>

## Additional Information

<b>Product number</b>	• 6A8H3UA#ABA
<b>Ad embargo date</b>	• 05/15/2022
<b>UPC Code</b>	• 196548597093
<b>Country of origin</b>	• China
<b>Pallet information</b>	• <b>Dimensions:</b> 47.24 in (L) x 39.37 in (W) x 45.84 in (H) • <b>Total weight:</b> 773.5 lb • <b>Layers:</b> 3 • <b>Products per layer:</b> 87

