

OMEN Laptop 15-ek1020nr



Turn heads wherever you game

A thin and light premium gaming experience in an elevated design so you can play everyday.

Product overview

- **Big things come in small packages:** The OMEN 15 is a perfect example of how there can never be too much of a good thing. With a powerful Intel processor and NVIDIA® graphics cooled by OMEN Tempest Cooling, it makes you think how it all fits into such a tiny little package.
- **Looks do matter:** We don't need to tell you how good it looks and feels to play on, but we're going to do it anyways. It's easy on the eyes with a luscious design and fast display. Crafted with Bang & Olufsen and super long battery life, so that means you won't stop farming those wins or those admiring looks.
- **Customized to your settings:** The OMEN 15 doesn't just stop at having powerful specs and an amazing look. With OMEN Gaming Hub, you can customize and optimize everything from performance controls to the RGB keyboard. It's easy to upgrade and has all the ports you need, so you can take it even further beyond other mere gaming laptops.

Key specifications

- **Operating system:** Windows 11 Home⁽¹⁾
- **Processor:** 11th Generation Intel® Core™ i7-11800H^(2b)
- **Display:** 15.6-inch diagonal, QHD (2560x1440), 165 Hz, 3 ms response time, IPS, micro-edge, anti-glare^(3a)
- **Memory:** 16 GB DDR4-3200 MHz RAM (2 x 8 GB)
- **Internal storage:** 512 GB PCIe® NVMe™ M.2 SSD^{(15)(58a)}
- **Graphics:** NVIDIA® GeForce RTX™ 3070 Laptop GPU (8 GB GDDR6 dedicated)⁽¹³⁾
- **Sound:** Audio by Bang & Olufsen with dual speakers
- **Battery life:**
 - Up to 5 hours and 15 minutes (mixed usage)⁽⁸⁵⁾
 - Up to 6 hours and 45 minutes (video playback)⁽⁷⁵⁾
 - Up to 5 hours and 15 minutes (wireless streaming)⁽⁸⁰⁾
- **Wireless:** Intel® Wi-Fi CERTIFIED 6™ AX201 (2x2)^(19e) and Bluetooth® 5 combo⁽²⁶⁾ (Supporting Gigabit data rate)⁽⁷⁾
- **Camera:** HP Wide Vision 720p HD camera with integrated dual array digital microphones⁽⁸⁹⁾
- **Product weight:** 5.40 lb⁽⁷⁶⁾
- **Keyboard:** Full-size, 1-zone dragon red backlit, shadow black 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.⁽¹⁾
- **Elevated aesthetic:** Designed with an aluminum-finished palm rest for a premium look.
- **Thin and light gaming:** A small footprint and thin and light design lets you easily take this PC with you for ultraportable gaming.
- **165Hz QHD anti-glare display:** Reduce frustrating lag and image ghosting with a display that combines a 165Hz refresh rate, G-Sync support, and 2560 x 1440 resolution for smooth, crisp gameplay.⁽²⁰⁾⁽³⁹⁾
- **Three-sided borderless display:** Maximize your screen real estate with a three-sided micro-edge display.
- **HP Fast Charge:** Go from 0 to 50% charge in approximately 45 minutes.⁽⁷⁸⁾
- **The Ultimate Play:** The GeForce RTX™ 3070 is powered by Ampere—NVIDIA's 2nd gen RTX architecture. Built with enhanced RT Cores and Tensor Cores, new streaming multiprocessors, and high-speed G6 memory, it gives you the power you need to rip through the most demanding games.
- **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.

Additional product features

- **11th Generation Intel® Core™ processor:** Brings the perfect combination of features to make you unstoppable. Get things done fast with high performance, instant responsiveness and best-in-class connectivity.
- **OMEN Tempest Cooling Technology:** Stay cool under pressure with the advanced laptop thermal solution. 3-sided venting and 5-way airflow ensure optimal system stability and performance when gameplay heats up.
- **Dragon Red backlit keyboard:** Dragon Red backlighting, full-size directional arrow keys, and illuminated WASD keys for instant recognition.
- **Single access panel:** Easy access to your PC's internals make upgrades and maintenance simple.
- **Effortlessly connected:** Enjoy a smoother wireless experience with Wi-Fi CERTIFIED 6™ (2x2) and Bluetooth® 5.0 combo, all your connections are solid and up to 3x faster file transfer speeds than Wi-Fi 5.^{(19a)(19)(26)}
- **DTS: X® Ultra Technology:** Authentic, spatially accurate 3D sound to provide the best entertainment experience.⁽⁴⁷⁾
- **An exceptionally rich audio experience:** HP Dual Speakers, HP Audio Boost, and expert tuning by Bang & Olufsen bring audio perfection to your PC.
- **PCIe® NVMe™ SSD storage:** Get up to 30x faster performance than a traditional hard drive.^(58a)
- **Enlarged imagepad:** More room on your imagepad makes controlling your PC effortless and intuitive.

Energy efficiency your way

HP is committed to global citizenship and environmental responsibility. Do the environment—and your wallet—a favor when you use the OMEN Laptop that meets strict energy-efficiency and helps reduce your carbon footprint.

- ENERGY STAR® certified⁽⁶²⁾
- EPEAT® Silver registered⁽²⁷⁾

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>.⁽⁹⁾
- **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.⁽⁹⁾

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/smartfriend 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	• 11th Generation Intel® Core™ i7-11800H ^(2a) • 8-Core
Processor speed	• Up to 4.6 GHz with Intel® Turbo Boost Technology ^(2g)
Processor cache	• 24 MB L3 cache
Memory	• 16 GB DDR4-3200 MHz RAM (2 x 8 GB)
Accessible memory slots	• 2
Video graphics	• NVIDIA® GeForce RTX™ 3070 Laptop GPU (8 GB GDDR6 dedicated) ⁽¹³⁾ • NVIDIA® Max-Q technology ⁽⁶⁸⁾
Internal storage	• 512 GB PCIe® NVMe™ M.2 SSD ^{(15)(58a)}
Finish and features	• Top cover: Shadow black with a metallic matte finish • Keyboard deck: Shadow black aluminum with an anodized finish
Camera	• HP Wide Vision 720p HD camera with integrated dual array digital microphones ⁽⁶⁹⁾
Display	• 15.6-inch diagonal, QHD (2560x1440), 165 Hz, 3 ms response time, IPS, micro-edge, anti-glare, 300 nits, 100% DCI-P3 ⁽²⁰⁾⁽³⁸⁾ • NVIDIA® G-SYNC® support
Screen to body ratio	• 80.9% ⁽⁶⁰⁾
Network card	• Integrated 10/100/1000 GbE LAN ⁽²⁹⁾
Wireless connectivity	• Intel® Wi-Fi CERTIFIED 6™ AX201 (2x2) ^(19a) and Bluetooth® 5 combo ⁽²⁶⁾ (Supporting Gigabit data rate) ⁽⁷⁾ • MU-MIMO supported
Digital media	• 1 Multi-format SD media card reader
Sound	• Audio by Bang & Olufsen with dual speakers
Integrated keyboard	• Full-size, 1-zone dragon red backlit, shadow black keyboard and 26-Key Rollover Anti-Ghosting Key technology • HP Imagepad with multi-touch gesture support
External notebook ports	• 1 Thunderbolt™ 3 (40Gbps signaling rate) with SuperSpeed USB Type-C® 10 Gbps signaling rate (DisplayPort™ 1.4, HP Sleep and Charge) ⁽⁴²⁾⁽⁵⁰⁾⁽⁵¹⁾⁽⁵⁶⁾ • 1 SuperSpeed USB Type-A 5Gbps signaling rate (HP Sleep and Charge) ⁽⁶⁴⁾ • 2 SuperSpeed USB Type-A 5Gbps signaling rate • 1 RJ-45 • 1 Headphone/microphone combo (DTS: X® Ultra) ⁽⁴⁷⁾ • 1 AC Smart pin • 1 Mini DisplayPort™ • 1 HDMI 2.1
Dimensions	• Unpackaged: 14.09 in (W) x 9.44 in (D) x 0.90 in (H) • Packaged: 20.47 in (L) x 2.72 in (W) x 12.01 in (H)
Weight	• Unpackaged: 5.40 lb ⁽⁷⁶⁾ • Packaged: 8.05 lb
Power	• 6-cell, 70.9 Wh Li-ion polymer ⁽²¹⁾ • 230 W Smart AC power adapter
Battery life	• Up to 5 hours and 15 minutes (mixed usage) ⁽⁸⁵⁾ • Up to 6 hours and 45 minutes (video playback) ⁽⁷⁵⁾ • Up to 5 hours and 15 minutes (wireless streaming) ⁽⁸⁰⁾

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>. ^(2a) 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 www.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. ⁽⁷⁾ Wi-Fi 5 or 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. ⁽⁸⁾ 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. ⁽⁹⁾ Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. ⁽¹³⁾ ©2021 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. ^(19a) Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi CERTIFIED 6™ (802.11ax) is backwards compatible with prior 802.11 specs. Wi-Fi CERTIFIED 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. Only available in countries where 802.11ax is supported. ^(19b) Based on Wi-Fi 5 80MHz and Wi-Fi 6 160MHz minimum requirements when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 802.11ax is supported. ⁽²⁰⁾ All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower. ⁽²¹⁾ 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. ⁽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 10 or 11 that ships with your PC. ⁽²⁶⁾ Bluetooth® is a trademark owned by its proprietor and used by HP Inc. under license. ⁽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. ⁽²⁹⁾ Actual speeds may vary. ⁽³⁸⁾ Quad High-definition (QHD) content required to view QHD images. ⁽³⁹⁾ Full High Definition (FHD) content is required to view FHD images. ⁽⁴⁰⁾ Percent of active plus nonactive viewing area to active viewing area plus border. Measure with lid vertical to the desk. ⁽⁴²⁾ USB Type-C® and USB-C® are trademarks of USB Implementers Forum. ⁽⁴⁷⁾ 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. ⁽⁵⁰⁾ DisplayPort™ and the DisplayPort™ logo are trademarks owned by the Video Electronics Standards Association (VESA®) in the United States and other countries. ⁽⁵¹⁾ Thunderbolt is a trademark of Intel Corporation or its subsidiaries in the U.S. and/or other countries. ⁽⁵⁶⁾ 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. ^(58a) 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. ^(58b) Based on HP internal testing using CrystalDiskMark benchmarking software. Performance is sequentially faster (read only) compared to traditional 5,400 rpm HDD. ⁽⁶²⁾ ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency. ⁽⁶⁴⁾ For best results with HP Sleep and Charge, use a USB charging protocol standard cable or cable adapter with an external device. ⁽⁶⁸⁾ NVIDIA® Max-Q Design can help reduce system heat and noise in thinner form factor PCs. Overall graphics performance may be lower than thicker graphics card alternatives that do not utilize Max-Q design. ⁽⁷⁵⁾ 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. ⁽⁷⁶⁾ Weight and system dimensions may fluctuate due to configuration and manufacturing variances. ⁽⁷⁸⁾ Recharges your battery up to 50% within 45 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. ⁽⁸⁰⁾ Battery life tested by HP using continuous Netflix video playback, Microsoft Edge Browser, 150 nits brightness, system audio level 17%, headphone attached, played full-screen, wireless on. Actual battery life will vary depending on configuration and maximum capacity will naturally decrease with time and usage. ⁽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. ⁽⁸⁵⁾ 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 [bapco.com/products/mobilemark-2018/](https://www.bapco.com/products/mobilemark-2018/) for additional details. ⁽⁸⁹⁾ Features may require software or other 3rd party applications to provide the described functionality. Internet service required and not included. ⁽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 2021 HP Development Company, LP. 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. 09/16/2021_r2 kc

Warranty and support	• 1-year limited hardware warranty. Additional information available at www.support.hp.com ⁽⁹⁾ • 1-year limited technical support for software and initial setup (from date of purchase) ⁽⁵³⁾
-----------------------------	---

Software

HP Help and support	• myHP: 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. • HP BIOS Protection: Get peace of mind knowing your PC BIOS is protected. HP BIOS Protection automatically checks its health and recovers itself. ⁽²³⁾ • HP Support Assistant: Included with your computer, this free self-help tool makes it easier than ever to get help with your HP PC and printers. ⁽⁵⁴⁾
----------------------------	---

Books, music, photos and videos	• 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. ⁽⁴⁷⁾
--	--

Productivity and tools	• HP QuickDrop: 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. ⁽⁹⁾ • Adaptive Battery Optimizer: Protect battery health and bring peace of mind for uninterrupted productivity and entertainment with automatic checks on battery temperature, charging status, and usage time. • HP Audio Switch: Easily switch between speaker and microphone sources with intuitive controls and a consistent app experience. • HP Connection Optimizer: Get consistent and reliable Wi-Fi performance with software that automatically switches between the most efficient wireless access points. ⁽⁹⁾ • 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. • 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. ⁽⁹⁾⁽²²⁾
-------------------------------	---

Security and protection	• McAfee LiveSafe™: Protect your operating system with a free 30-day McAfee LiveSafe™ trial. ⁽⁸⁾
--------------------------------	--

Additional Information

Product number	• 3S951UA#ABA
Ad embargo date	• 01/16/2022
UPC Code	• 195908463153
Country of origin	• China
Pallet information	• Dimensions: 41.13 in (H) x 36.77 in (W) x 46.18 in (L) • Total weight: 734.30 lb • Layers: 3 • Products per layer: 29
Battery regulatory data	• Transportation or storage regulations: Y • UN# and proper shipping name: UN3481 - Lithium ion batteries packed with equipment • Number of batteries: 1 • Primary battery regulated material: 270g • Primary battery watt hours: 70.9 • Applicable CPSC regulations: N

