



OMEN Gaming Laptop 16-k0001sa (734G1EA)



Overview

Maximum power meets maximum cool.

The OMEN Laptop is ready to go wherever you are. Enjoy desktop-level power with a 12th Gen Intel® Core™ processor[1] and a modern graphics card, both regulated by OMEN Tempest Cooling. The screen is equally impressive with high resolution and TUV Eyesafe Low Blue Light [2]. This gaming laptop even lets you expand with plenty of USB ports[3,4].



Desktop levels of power

Your processor[1] and graphics stay cool even when your gameplay heats up with OMEN Tempest Cooling.



Room for peripherals

Hook up an external drive, additional GPUs, or your smartphone with plenty of USB ports[4].



Immersive 16.1" screen

Escape into a massive screen with 3-sided bezel edges, high resolution, and TUV Eyesafe Low Blue Light[2].

Features



Get a fresh perspective

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.^[5]



NVIDIA® GeForce RTX™ 3060

Get incredible performance with enhanced Ray Tracing Cores and Tensor Cores, new streaming multiprocessors, and high-speed G6 memory.^[7]



A dynamic processor that adapts to you for superior multi-tasking performance

12th Gen Intel® Core™ processors distributes performance where you need it the most — saving you time and increasing your ability to do the things you actually want.^[6]



144 Hz FHD anti-glare display

Reduce frustrating lag and image ghosting with a display that combines a 144 Hz refresh rate and a 1080p resolution for smooth, crisp gameplay.^[8]

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 to reduce eyestrain 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.^[9]

[1] 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.

[2] Eyesafe certified. See <https://www.tuv.com/world/en/eye-comfort.html> for more details.

[3] USB Type-C® and USB-C® are trademarks of USB Implementers Forum.

[4] 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.

[5] 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>.

[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. Intel's numbering is not a measurement of higher performance.

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other trademarks and copyrights are the property of their respective owners.

[8] All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.

[9] The flicker-free capability eliminates screen flickering through integrating DC-dimming LED backlights.

Specifications

| | |
|--------------------------------|--|
| Operating system | Windows 11 Home |
| Product color | Shadow black cover and base, shadow black aluminum keyboard frame |
| Processor family | 12th Generation Intel® Core™ i7 processor |
| Processor | Intel® Core™ i7-12700H (up to 4.7 GHz with Intel® Turbo Boost Technology, 24 MB L3 cache, 14 cores, 20 threads) ^[6,7] |
| Chipset | Intel® Integrated SoC |
| Memory | 16 GB DDR5-4800 MHz RAM (2 x 8 GB) |
| Internal Storage | 1 TB PCIe® Gen4 NVMe™ TLC M.2 SSD |
| Product design | Paint finish cover and base, anodized keyboard frame |
| Graphics | Integrated |
| Graphics (integrated) | Intel® Iris® X ^e Graphics |
| Display | 40.9 cm (16.1") diagonal, FHD (1920 x 1080), 144 Hz, 7 ms response time, IPS, micro-edge, anti-glare, Low Blue Light, 300 nits, 100% sRGB |
| Display | 16.1" diagonal, FHD (1920 x 1080), 144 Hz, 7 ms response time, IPS, micro-edge, anti-glare, Low Blue Light, 300 nits, 100% sRGB |
| Display size (diagonal) | 40.9 cm (16.1") |
| Display size (diagonal) | 16.1" |
| Audio | Audio by Bang & Olufsen; DTS:X® Ultra; Dual speakers; HP Audio Boost |
| Minimum dimensions (W x D x H) | 36.9 x 24.8 x 2.3 cm |
| Minimum dimensions (W x D x H) | 14.53 x 9.76 x 0.89 in |
| Weight | Starting at 2.35 kg |
| Weight | Starting at 5.19 lb |
| Keyboard | Full-size, 4-zone RGB backlit, shadow black keyboard and 26-Key Rollover Anti-Ghosting Key technology |
| Pointing device | HP Imagepad with multi-touch gesture support |
| Input devices | IR Thermal sensor; Ambient light sensor |
| Camera | HP Wide Vision 720p HD camera with temporal noise reduction and integrated dual array digital microphones |
| Ports | 2 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4, HP Sleep and Charge); 1 USB Type-A 5Gbps signaling rate (HP Sleep and Charge); 2 USB Type-A 5Gbps signaling rate; 1 AC smart pin; 1 HDMI 2.1; 1 headphone/microphone combo; 1 RJ-45 ^[19,20,42] |
| Expansion slots | 1 multi-format SD media card reader |
| Package dimensions (W x D x H) | 6.9 x 55.2 x 34.5 cm |
| Package weight | 3.9 kg |
| Network interface | Integrated 10/100/1000 GbE LAN |

| | |
|--|---|
| Wireless | Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card (supporting gigabit data rate) |
| Power supply type | 280 W Smart AC power adapter |
| Battery type | 6-cell, 83 Wh Li-ion polymer |
| Battery life | Up to 7 hours ^[3] |
| Battery recharge time | Supports battery fast charge: approximately 50% in 30 minutes ^[5] |
| Battery weight | 0.63 lb |
| Battery weight | 290 g |
| Ecolabels | EPEAT® Gold registered |
| Energy star certified | ENERGY STAR® certified |
| Sustainable impact specifications | Ocean-bound plastic in speaker enclosure(s) and bezel; Recycled metal in keyboard frame; Keyboard keycaps and scissors contain post-consumer recycled plastic |
| Security management | Trusted Platform Module (Firmware TPM) support |
| Software included | McAfee Online Protection 30-day trial |
| Software - Productivity & finance | 1 month trial for new Microsoft 365 customers ^[24] |
| Cloud service | 25 GB Dropbox storage for 12 months ^[1] |
| UPC number | 197029077332 |

Additional specifications

| | |
|-------------------------------------|---|
| Aspect ratio | 16:9 |
| Battery capacity | 83 |
| Battery capacity uom | Wh |
| Battery cells number | 6 |
| Battery life video playback | Up to 9 hours and 15 minutes |
| Battery type | Li-ion polymer |
| Bluetooth version | Bluetooth® 5.3 |
| Brightness | 300 nits |
| Camera brand | HP Wide Vision |
| Camera microphone | integrated dual array digital microphones |
| Camera resolution (vertical) | 720p |
| Camera resolution standard | HD |
| Color | Shadow black |
| Color gamut | 100% sRGB |
| Display | 40.9 cm (16.1") diagonal FHD display |
| Display | 16.1" diagonal FHD display |
| Display bezel | micro-edge |
| Display brightness | 300 |
| Display brightness uom | nits |
| Display panel technology | IPS |
| Display refresh rate | 144 |
| Display refresh rate uom | Hz |
| Display resolution (pixels) | 1920 x 1080 |
| Display resolution standard | FHD |
| Display response time | 7 |
| Display response time uom | ms |
| Display size (diagonal) uom | " |
| Display size (diagonal, imperial) | 16.1 |
| Display size (diagonal, metric) | 40.9 |
| Display size (diagonal, metric) uom | cm |
| Display surface treatment | anti-glare |
| ECC memory | non-ECC |
| Ethernet (RJ-45) | 1 |

| | |
|---|---|
| Flicker-free | Yes ^[45] |
| Graphics | Discrete |
| Graphics (discrete) | NVIDIA® GeForce RTX™ 3060 Laptop GPU (6 GB GDDR6 dedicated) |
| Graphics card brand | NVIDIA® |
| Graphics card family | GeForce |
| Graphics card memory size | 6 |
| Graphics card memory size uom | GB |
| Graphics card memory type | GDDR6 |
| HDMI out – version | 2.1 |
| HDMI –out | 1 |
| Headphone/microphone combo | 1 |
| Keyboard backlight | RGB backlit |
| Keyboard backlit zone | 4-zone |
| Keyboard color | shadow black |
| Keyboard size | Full-size |
| Keyboard technology | 26-Key Rollover Anti-Ghosting Key technology |
| Memory and storage | 16 GB memory; 1 TB SSD storage |
| Memory layout (slots & size) | 2 x 8 GB |
| Memory module type | DIMM |
| Memory size | 16 |
| Memory size uom | GB |
| Memory speed | 4800 |
| Memory speed uom | MHz |
| Memory type | DDR5 |
| Model Number | RTX™ 3060 |
| Number of User-accessible Memory Slots | 2 |
| Number of memory slots | 2 |
| Package depth, imperial (most common size) | 21.73 |
| Package depth, metric (most common size) | 55.2 |
| Package dimensions (W x D x H) | 2.71 x 21.73 x 13.58 in |
| Package height, imperial (most common size) | 13.58 |
| Package height, metric (most common size) | 34.5 |
| Package weight | 8.62 lb |

| | |
|--|---|
| Package width, imperial (most common size) | 2.71 |
| Package width, metric (most common size) | 6.9 |
| Packaging unit of measure (imperial) | in |
| Packaging unit of measure (metric) | cm |
| Playbook TS icon OS | http://h10003.www1.hp.com/digmedialib/prodimg/lowres/c03905482.png |
| Playbook TS icon battery life | http://h10003.www1.hp.com/digmedialib/prodimg/lowres/c03905264.png |
| Playbook TS icon connectivity | http://h10003.www1.hp.com/digmedialib/prodimg/lowres/c08201987.png |
| Playbook TS icon dimensions NB | https://h10003.www1.hp.com/digmedialib/prodimg/lowres/c08250394.png |
| Playbook TS icon display NB | http://h10003.www1.hp.com/digmedialib/prodimg/lowres/c08205649.png |
| Playbook TS icon graphics | https://h10003.www1.hp.com/digmedialib/prodimg/lowres/c08169202.png |
| Playbook TS icon memory | https://h10003.www1.hp.com/digmedialib/prodimg/lowres/c08267700.png |
| Playbook TS icon processor | https://h10003.www1.hp.com/digmedialib/prodimg/lowres/c08201972.png |
| Playbook TS icon storage | http://h10003.www1.hp.com/digmedialib/prodimg/lowres/c08192819.png |
| Playbook TS icon weight imperial | http://h10003.www1.hp.com/digmedialib/prodimg/lowres/c05790117.png |
| Playbook TS icon weight metric | https://h10003.www1.hp.com/digmedialib/prodimg/lowres/c08267650.png |
| Processor Brand | Intel® |
| Processor cache | 24 MB L3 |
| Processor core | 14 |
| Processor family | Core™ i7 |
| Processor frequency technology | Intel® Turbo Boost Technology |
| Processor generation | 12th Generation |
| Processor maximum frequency | 4.7 |
| Processor maximum frequency uom | GHz |
| Processor model | 12700H |
| Processor threads | 20 |
| Product brand name | HP |
| Product long name specifications | OMEN Gaming Laptop 16-k0001sa, Windows 11 Home, 16.1", Intel® Core™ i7, 16GB RAM, 1TB SSD, NVIDIA® GeForce RTX™ 3060, FHD, Shadow black |
| Product long name specifications V2 | OMEN Gaming Laptop 16, Windows 11 Home, 16.1", Intel® Core™ i7, 16GB RAM, 1TB SSD, NVIDIA® GeForce RTX™ 3060, FHD, Shadow black |
| Product short name specifications | OMEN Gaming Laptop 16-k0001sa, 16.1", Intel® Core™ i7, 16GB RAM, 1TB SSD |
| Screen-to-body ratio (without speakers) | 82.12% ^[18] |

| | |
|--------------------------------------|------------------------------|
| Storage capacity | 1 |
| Storage capacity uom 01 | TB |
| Storage form factor 01 | M.2 |
| Storage interface 01 | PCIe® |
| Storage interface protocol 01 | NVMe™ |
| Storage memory technology 01 | TLC |
| Storage type | SSD |
| Storage type 01 | SSD |
| Thunderbolt™ 4 ports | 2 |
| Touchscreen | No |
| UNSPSC code | 43211503 |
| USB Type-A | 3 |
| Wireless Model | Wi-Fi 6E AX211 |
| Wireless antenna | 2x2 |
| Wireless standard | Wi-Fi 6E |
| Wireless supplier | Intel® |
| Wireless transfer speeds | Supporting Gigabit data rate |

[1] 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.

[3] 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.

[5] 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.

[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. Intel’s numbering, branding and/or naming is not a measurement of higher performance.

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

[18] Percent of active plus nonactive viewing area to active viewing area plus border. Measure with lid vertical to the desk.

[19] For best results with HP Sleep and Charge, use a USB charging protocol standard cable or cable adapter with an external device.

[20] USB 20Gbps is not available.

[24] Must activate within 180 days of Windows activation.

[42] 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.

[45] Coverage and Throughput improvements with Dynamic Antenna Gain feature enabled based on outdoor free space environment using Friis formula. Dynamic Antenna Gain is a feature under HP Extended Range Wireless Lan. Dynamic Antenna Gain feature is available in EU Red Countries covered by EU and China approval.

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