

# HP ZBook X G1i 16 inch Mobile Workstation PC

**Pro-certified power within reach.**



**Upgrade to professional ISV certified performance at an affordable price. Power up your productivity on this durable yet premium AI workstation. Pro-grade components deliver exceptional performance to work with generative AI to explore design concepts, or complete 3D modeling and conceptual design.**

## **Power through professional workflows.**

Tackle complex projects and blaze through 3D modeling with up to an Intel® Core™ Ultra 9 CPU,<sup>1</sup> with up to 13 NPU TOPS,<sup>1</sup> and a next-gen NVIDIA® laptop GPU.<sup>2</sup> With up to 80W max TDP, get the most performance for rendering and AI-accelerated workflows.

## **Advanced workflows. Anywhere.**

With an all-aluminum chassis and MIL-STD 810 durability,<sup>3</sup> this PC is built to last. Take complex projects on the go with a device that runs quiet and cool. The redesigned thermal solution supports even more power to ensure the device runs at its best.

## **Accelerate AI workflows**

Speed up AI inferencing on the HP ZBook X, with a next-gen NVIDIA® laptop GPU<sup>2</sup> delivering AI TOPS for advanced AI workflows. Focus on the work that matters and enable productivity without diverting resources from your most demanding work.

## **Help protect our shared future with PCs that drive towards increasing sustainability.**

At HP, we care about the impact our products have on our people, communities, and the planet. That's why this device is EPEAT® Gold registered<sup>4</sup> and the outer box packaging is 100% sustainably sourced.<sup>5</sup>



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## HP Recommends Windows 11 Pro for business with Microsoft Copilot

Work anywhere without compromising on performance with Windows 11 and HP collaboration, security, and connectivity technology. Summarize and rewrite content, get relevant content recommendations, and stay organized with Microsoft Copilot.<sup>6,7</sup>

## Intel® Core™ Ultra Processor

Unleash power-efficient performance with up to an Intel® Core™ Ultra 9 CPU. This CPU not only unlocks performance for the next era of AI-enhanced software, but the dedicated NPU greatly increases efficiency for productivity tasks.<sup>1</sup>

## NVIDIA® Graphics

Experience high-end visualization and seamlessly render, design and multi-task on your biggest projects with a next-gen NVIDIA® laptop GPU.<sup>8</sup>

## Large Memory Configurations

Power through projects with up to 64 GB RAM for fast editing and design.<sup>8</sup>

## Lightning-fast Storage

Blitz through multiple tasks and ditch external drives with up to 8 TB local NVMe storage.<sup>9</sup>

## HP Smart Sense

HP Smart Sense intelligently optimizes your PC's thermal and power management based on your usage. Select full performance mode when completing demanding tasks to maximize performance.<sup>10</sup>

## 4K HP DreamColor Display

Have confidence in what you see on screen with an optional HP DreamColor Display with 100% DCI-P3 color gamut and a 120Hz refresh rate you get smooth motion for high-speed videos.<sup>11,12</sup>

## Fast and efficient Wi-Fi 7

The portability of your PC and the reliability of a fast connection determines where you can work. Get a fast and reliable connection in dense wireless environments with gigabit data rate Wi-Fi 7.<sup>13,14</sup>

## Poly Camera Pro

Look your best on video calls and save some power too. Manage your video controls for internal and external cameras with Poly Camera Pro. Now Auto Frame, Spotlight, Background Blur, and virtual backgrounds save power running on the NPU.<sup>15</sup>

## HP Power Manager

Manage and monitor your battery's performance and condition and customize charging options with the easy-to-use Battery Manager in the myHP app.<sup>16,17</sup>



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## Specifications Table

<b>Available Operating Systems</b>	Windows 11 Pro <sup>1</sup> Windows 11 Home Single Language - HP recommends Windows 11 Pro for business <sup>1</sup> Windows 11 Pro Education <sup>1</sup> Windows 11 Home Single Language - HP recommends Windows 11 Pro for business <sup>1</sup> FreeDOS 3.0
<b>Processor family<sup>2,6</sup></b>	Intel® Core™ Ultra 9 processor; Intel® Core™ Ultra 7 processor; Intel® Core™ Ultra 5 processor
<b>Available Processors<sup>2,3,4,6,22</sup></b>	Intel® Core™ Ultra 9 285H (up to 5.4 GHz with Intel® Turbo Boost Technology, 24 MB L3 cache, 16 cores, 16 threads) with Intel® Arc™ Graphics and Intel® AI Boost (13 NPU TOPS), supports Intel® vPro® Technology Intel® Core™ Ultra 7 265H (up to 5.3 GHz with Intel® Turbo Boost Technology, 24 MB L3 cache, 16 cores, 16 threads) with Intel® Arc™ Graphics and Intel® AI Boost (13 NPU TOPS), supports Intel® vPro® Technology Intel® Core™ Ultra 7 255H (up to 5.1 GHz with Intel® Turbo Boost Technology, 24 MB L3 cache, 16 cores, 16 threads) with Intel® Arc™ Graphics and Intel® AI Boost (13 NPU TOPS) Intel® Core™ Ultra 5 225H (up to 4.9 GHz with Intel® Turbo Boost Technology, 18 MB L3 cache, 14 cores, 14 threads) with Intel® Arc™ Graphics and Intel® AI Boost (13 NPU TOPS) Intel® Core™ Ultra 5 235H (up to 5.0 GHz with Intel® Turbo Boost Technology, 18 MB L3 cache, 14 cores, 14 threads) with Intel® Arc™ Graphics and Intel® AI Boost (13 NPU TOPS), supports Intel® vPro® Technology
<b>Neural Processing Unit</b>	Intel® AI Boost
<b>Chipset</b>	Intel® integrated SoC
<b>Product colour</b>	Meteor silver
<b>Maximum memory</b>	64 GB DDR5-5600 MT/s non-ECC <sup>7</sup> Transfer rates up to 5600 MT/s.
<b>Memory slots</b>	2 SODIMM; supports dual channel <sup>8,9,10</sup>
<b>Internal storage</b>	512 GB up to 8 TB PCIe® Gen4 x4 NVMe™ M.2 2280 TLC SSD <sup>11</sup> 512 GB up to 4 TB PCIe® Gen4 x4 NVMe™ M.2 2280 TLC SED OPAL 2 SSD <sup>11</sup> 512 GB up to 1 TB PCIe® Gen4 x4 NVMe™ M.2 2280 SSD <sup>11</sup>
<b>Display size (diagonal, metric)</b>	40.6 cm (16")
<b>Available Displays (Imperial)<sup>24,35,37</sup></b>	16" diagonal, 2.5K (2560 x 1600), 120 Hz, UWVA, anti-glare, Low Blue Light, 400 nits, DCI-P3 100% 16" diagonal, WQUXGA (3840 x 2400), 120 Hz, UWVA, 500 nits, 100% DCI-P3, HP DreamColor 16" diagonal, WUXGA (1920 x 1200), touch, 60 Hz, UWVA, 300 nits, 62.5% sRGB 16" diagonal, WUXGA (1920 x 1200), 60 Hz, UWVA, 300 nits, 62.5% sRGB 16" diagonal, WUXGA (1920 x 1200), UWVA, Low Blue Light, 800 nits, 100% sRGB, HP Sure View Reflect 5 integrated privacy screen 16" diagonal, WUXGA (1920 x 1200), 60 Hz, UWVA, Low Blue Light, 400 nits, 100% sRGB
<b>Available Graphics</b>	Integrated: Intel® Arc™ Graphics <sup>20,21</sup> Discrete: NVIDIA RTX™ Pro 500 Blackwell Generation Laptop GPU (6 GB GDDR7 dedicated) NVIDIA RTX™ Pro 1000 Blackwell Generation Laptop GPU (8 GB GDDR7 dedicated) NVIDIA RTX™ Pro 2000 Blackwell Generation Laptop GPU (8 GB GDDR7 dedicated) <sup>22,23</sup> (Discrete graphics options planned to be available at a later date and require factory configuration at the time of hardware purchase.)
<b>Audio</b>	Audio by Poly Studio, dual stereo speakers, HP World Facing Microphone dual array digital microphones, functions keys for volume up and down, combo microphone/headphone jack, HD audio
<b>Ports and connectors</b>	Left side: 1 USB Type-A 5Gbps signaling rate (charging); 1 HDMI 2.1; 1 headphone/microphone combo; 1 power connector; 1 smart card reader; 2 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 2.1) <sup>12,13,14</sup> ; Right side: 1 USB Type-A 5Gbps signaling rate; 1 RJ-45; 1 SD card reader; 1 nano security lock slot; 1 SIM card slot



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## Specifications Table

<b>Keyboard</b>	HP Premium Quiet Keyboard – spill-resistant, full-size keyboard with drain and DuraKeys; HP Premium Quiet Keyboard – spill-resistant, full-size, backlit keyboard with drain and DuraKeys
<b>Communications</b>	LAN: Intel® I219-LM GbE; Intel® I219-LM GbE, vPro®; Intel® I219-V GbE, non-vPro®; WLAN: Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card, vPro®; Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card, non-vPro®; Intel® Wi-Fi 7 BE201 (2x2) and Bluetooth® 5.4 wireless card, vPro®; Intel® Wi-Fi 7 BE201 (2x2) and Bluetooth® 5.4 wireless card, non-vPro® <sup>16,17</sup> ; WWAN: HP Kavalan R15 5G Solution <sup>15,18</sup> ; LPWAN: Qualcomm® 9205 LTE Cat-M1 Modem <sup>19</sup>
<b>Camera</b>	FHD camera; 5 MP IR camera
<b>Software</b>	Buy Microsoft Office (sold separately) <sup>58</sup> ; Copilot in Windows with Copilot key <sup>57,61</sup> ; HP Connection Optimizer; HP Hotkey support; HP MAC Address Manager; HP Notifications; HP UEFI BIOS Certification level 2.7B; HP PC Hardware Diagnostics Windows; HP Privacy Settings; HP Services Scan <sup>38</sup> ; HP Smart Support <sup>40</sup> ; HP Support Assistant <sup>51</sup> ; myHP; HSA Fusion for Commercial; HSA Telemetry for Commercial; Poly Camera Pro; Poly Lens <sup>59</sup> ; Edge Customization
<b>Security management</b>	HP Tamper Lock (select models) <sup>39</sup> ; HP Sure View Reflect <sup>35</sup> ; HP Sure Admin <sup>29</sup> ; HP Sure Click <sup>34</sup> ; HP Sure Recover <sup>30</sup> ; HP Sure Run <sup>31</sup> ; HP Sure Sense <sup>37</sup> ; HP Sure Start <sup>32</sup> ; Secured-Core PC Enable <sup>33</sup> ; Windows Hello Enhanced Sign-in Security (ESS) Enable <sup>29</sup> ; Absolute Persistence Module <sup>44</sup> ; HP BIOS Recovery; BIOS Update via Network; HP BIOSphere; HP DriveLock and Automatic DriveLock; HP Secure Erase; HP Wake on WLAN; Audio Permanent Disable
<b>Security Software Licenses</b>	HP Wolf Pro Security Edition <sup>56</sup>
<b>Fingerprint reader</b>	Fingerprint reader (select models)
<b>Management features</b>	HP Client Catalog (download) <sup>52</sup> ; HP Client Management Script Library (download) <sup>53</sup> ; HP Cloud Recovery <sup>26</sup> ; HP Image Assistant (download) <sup>55</sup> ; HP Manageability Integration Kit (download) <sup>27</sup> ; HP Power Manager with Battery Health Manager (download) <sup>60</sup> ; HP Driver Packs (download) <sup>54</sup> ; HP Connect for Microsoft Endpoint Manager <sup>28</sup>
<b>Power</b>	150 W Slim Smart external AC power adapter <sup>42</sup>
<b>Battery type</b>	HP Long Life 6-cell, 83 Wh Li-ion polymer <sup>41</sup>
<b>Battery recharge time</b>	Supports battery fast charge: approximately 50% in 30 minutes <sup>43</sup>
<b>Dimensions</b>	35.9 x 25.1 x 2.3 cm; 552 x 69 x 345 mm (Package)
<b>Weight</b>	Starting at 2.04 kg; (Weight varies by configuration and components.)
<b>Ecolabels</b>	EPEAT® registered configurations available
<b>Energy star certified</b>	ENERGY STAR® certified
<b>Sustainable impact specifications</b>	Bulk packaging available; External power supply 90% efficiency; Molded paper pulp cushion inside box is 100% sustainably sourced and recyclable; 60% post-consumer recycled plastic; Low halogen PCAs; Outside box and corrugated cushions are 100% sustainably sourced or recyclable <sup>45,46,47,48,50</sup>



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## Messaging Footnotes

- Multicore 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. Optional feature that must be configured at purchase. 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. Performance varies by use, configuration, and other factors.
- Optional feature that must be configured at purchase.
- Testing is not intended to demonstrate fitness of U.S. Department of Defense (DoD) contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Pack.
- Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit [www.epeat.net](http://www.epeat.net) for more information.
- HP paper and fiber based packaging for PCs, displays, home and office print, and supplies is reported by suppliers as recycled or certified, with a minimum of 97% by volume verified by HP. Packaging is the box that comes with the product and all paper-based materials inside the box. Packaging for personal systems accessories and spare parts is not included.
- 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 11 is automatically updated, which is always 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>.
- Microsoft Copilot requires Windows 11. Some features require an NPU. Timing and availability will be dependent on Microsoft and varies by market and device. Requires Microsoft account to log in. Where Copilot is not available, the Copilot key will lead to the Bing search engine. See <http://aka.ms/WindowsAIfeatures>.
- Memory is an optional feature that must be configured at purchase.
- For hard drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30GB (for Windows 10) of system disk is reserved for system recovery software.
- HP Smart Sense requires Windows 10 or higher.
- Optional feature must be configured at time of purchase.
- All specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.
- Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 7 (802.11BE) functionality requires compatible Windows 11 OS, compatible processor, and separately purchased Wi-Fi 7 router to support backwards compatibility with prior 802.11 specs. Available in countries where Wi-Fi 7 is supported. The specification for 802.11BE is a draft specification and is not final. If the final specification differs from the draft specification, it may affect the ability of the device to communicate with other 802.11BE devices.
- Wi-Fi® supporting gigabit data rate is achievable with Wi-Fi 7 (802.11BE) when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 160MHz channels.
- Requires Windows OS.
- HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.
- Requires myHP application and Windows OS.

## Technical Specifications Footnotes

- 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 11 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.
- Multicore 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.
- Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
- Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See [www.intel.com/technology/turboboost](http://www.intel.com/technology/turboboost) for more information.
- 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 inferring performance varies by use, configuration, and other factors.
- Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed.
- Maximized dual-channel performance requires SODIMMs of the same size and speed in both memory channels.
- Intel® allows architectures designed with four DIMM slots to run at 3200 MT/s.
- Maximum memory capacities assume Windows 64-bit operating systems. With Windows 32-bit operating systems, memory above 3 GB may not all be available due to system resource requirements.
- For storage drives GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35 GB (for Windows 10) is reserved for system recovery software.
- Thunderbolt™ 4 and USB4™ maximum speed of 40Gbps will be divided between the different data workstreams.
- HDMI cable sold separately.
- SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.
- HP 5G module is optional and must be configured at the factory. Module designed for 5G NR NSA (non-standalone) networks as carriers deploy Evolved-Universal Terrestrial Radio Access New Radio Dual Connectivity (ENDC) with both 100MHz of 5G NR and LTE channel bandwidth, using 256QAM 4x4 as defined by 3GPP. Module requires activation and separately purchased service contract. Check with service provider for coverage and availability in your area. Data connection, upload and download speeds will vary due to network, location, environment, network conditions, and other factors. Backwards compatible to 4G LTE and 3G HSPA technologies. 5G module planned to be available in select platforms and select countries, where carrier supported.
- Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 7 (802.11BE) functionality requires compatible Windows 11 OS, compatible processor, and separately purchased Wi-Fi 7 router to support backwards compatibility with prior 802.11 specs. Available in countries where Wi-Fi 7 is supported. The specification for 802.11BE is a draft specification and is not final. If the final specification differs from the draft specification, it may affect the ability of the device to communicate with other 802.11BE devices.
- 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. 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, that supports 80MHz and higher channels.
- WWAN is an optional feature and requires factory configuration and separately purchased service contract. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products, and in all regions.
- Cat M1 LPWAN (Mobile Narrowband) cards support select platforms with the HP Protect & Trace with Wolf Connect service, but do not support mobile broadband/Internet use.
- Intel® Arc™ graphics only available on select Intel® Core™ Ultra H-series processor-powered systems with at least 16GB of system memory in dual channel configuration.
- Support HD decode, DX12, HDMI 1.4, HDCP 2.2 via DP up to 4K @ 60Hz and via HDMI up to 4K @ 30Hz.
- Intel vPro® requires Windows 10 Pro 64 bit or higher, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or Wi-Fi 6E WLAN and TPM 2.0. Some functionality requires additional 3rd party software in order to run. Features of vPro® Essentials and Enterprise vary. See <http://intel.com/vPro>.
- Both UMA & Discrete configurations support 3 independent displays when on the HP UltraSlim Dock (sold separately) - Max. resolution = 2.5K @60Hz (DP1) & 2.5K @60Hz (DP2) & FHD (VGA), and support 3 independent displays when on the HP Thunderbolt Dock G2 (sold separately) - Max. resolution = 2.5K @60Hz (DP1) & 2.5K @60Hz (DP2) & FHD (VGA) OR 4K @60Hz (one DP Port) & 4K @60Hz (Type-C output port using a Type C-to-DP adapter).
- HD content required to view HD images.
- Windows Hello face authentication utilizes a camera specially configured for near infrared (IR) imaging to authenticate and unlock Windows devices as well as unlock your Microsoft Passport.
- HP Cloud Recovery is available for Z by HP, HP Elite and Pro desktops and laptops PCs with Intel® or AMD processors and requires an open, network connection. Note: You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Detail please refer to: <https://support.hp.com/us-en/document/c05115630>
- HP Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.
- HP Connect for Microsoft Endpoint Manager is available from the Azure Market Place for HP Pro, Elite, Z and Point-of-Sale PCs managed with Microsoft Endpoint Manager. Subscription to Microsoft Endpoint Manager required and sold separately. Network connection required.
- HP Sure Admin requires HP G8 or newer platforms, Windows 10 or higher, HP BIOS, HP Manageability Kit or KMS Service from <http://www.hp.com/go/clientmanagement> and HP Sure Admin Local Access Authenticator smartphone app from the Android or Apple store.
- HP Sure Recover is available on select HP PCs and requires Windows 10 or 11 and an open network connection. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data. HP Sure Recover Gen6 with Embedded Reimaging is an optional feature on select HP PCs which requires Windows 10 or 11 must be configured at purchase. You must back up important files, data, photos, videos, etc. before use to avoid loss of data.
- HP Sure Run is available on select HP PCs and requires Windows 10 and higher.
- HP Sure Start is available on select HP PCs and requires Windows 10 and higher.
- Secured-Core PC Enable requires an Intel® vPro®, AMD Ryzen™ Pro processor or Qualcomm® processor with SDB50 or higher and requires 8 GB or more system memory. Secured-Core PC is enabled from the factory.
- HP Sure Click requires Windows 10 Pro or higher or Enterprise. See [https://bit.ly/2PrLT6A\\_SureClick](https://bit.ly/2PrLT6A_SureClick) for complete details.
- HP Sure View Reflect integrated privacy screen is an optional feature that must be configured at purchase and is designed to function in landscape orientation.
- myHP requires Windows OS.
- HP Sure Sense requires Windows 10 and higher. See product specifications for availability. On units with WWAN shipping to China, HP Sure Sense is only available via Softpaq download.
- HP Services Scan is preinstalled and/or provided thru Windows Update and checks for service entitlement on each hardware device and downloads the applicable software agent automatically. To disable this feature, please follow the instructions at <http://www.hpdaas.com/requirements>. The HP Insights agent is a telemetry and analytics platform that provides critical data around devices and applications and is not sold as a standalone service. HP follows stringent GDPR privacy regulations and is ISO27001, ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Internet access with connection to the HP Insights agent is required. For full system requirements, please visit <http://www.hpdaas.com/requirements>. Not available in China.
- HP Tamper Lock is an optional feature that must be configured at the factory and requires a supervisor password be established prior to use.
- HP Smart Support requires the HP Insights agent to be installed. For more information about how to enable or to download HP Smart Support, please visit <http://www.hp.com/smart-support>. HP Services Scan is preinstalled and/or provided thru Windows Update and will check entitlement on each hardware device to determine if an HP Insights agent-enabled service has been purchased, and will download applicable software automatically. HP Insights agent is a telemetry and analytics platform that provides critical data around devices and applications and is not sold as a standalone service. HP follows stringent GDPR privacy regulations and is ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Internet access is required. For full system requirements or to disable this feature, please visit <https://www.hpdaas.com/requirements>.
- For new batteries, actual battery Watt-hours (Wh) may differ from the design capacity and may have a full charge capacity that differs by up to 10, which is typical for lithium-ion batteries. Battery capacity naturally decreases over time and with use, depending on several factors such as battery health management settings, shelf life, temperature, environment, loaded apps, features, system configuration, and power settings.
- 150 W power adapter is only available with discrete graphic options.
- Recharges up to 50% within 30 minutes when the system is off or in standby mode when used with the power adapter provided with the notebook. Power adapter minimum of 65 watts required for battery capacities 56Whr or less. Power adapter minimum of 100 watts required for battery capacities greater than 56Whr and less than 83Whr. Power adapter minimum of 120 watts required for battery capacities greater than 83Whr and less than 100Whr. After charging has reached 90% capacity, charging speed will return to normal. Charging time may vary +/-10% due to System tolerance.
- HP BIOSphere Gen6 features may vary depending on the platform and configuration.
- 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.
- 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.
- HP paper and fiber based packaging for PCs, displays, home and office print, and supplies is reported by suppliers as recycled or certified, with a minimum of 97% by volume verified by HP. Packaging is the box that comes with the product and all paper-based materials inside the box. Packaging for commercial, personal systems accessories, and spare parts is not included.
- Percentage of ocean-bound plastic contained in each component varies by product. Ocean Bound plastic is expressed as a percentage of the total weight plastic. Ocean Bound plastic is based on the definition set by the UL2809 standard.
- Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit [www.epeat.net](http://www.epeat.net) for more information.
- External power supplies, WWAN modules, power cords, cables and peripherals excluded. Service parts obtained after purchase may not be Low Halogen.
- HP Support Assistant is available on Windows. For more information, please visit [www.hp.com/help/hp-support-assistant](http://www.hp.com/help/hp-support-assistant).
- HP Client Catalog not preinstalled, however available for download at <https://www.hp.com/us-en/solutions/client-management-solutions.html>.
- HP Client Management Script Library <https://www.hp.com/us-en/solutions/client-management-solutions.html#tab=manageability-tools>.
- HP Driver Packs not preinstalled, however available for download at <http://www.hp.com/go/clientmanagement>.
- HP Image Assistant not preinstalled, however available for download at <https://ftp.ext.hp.com/pub/caps-softpaq/cmi/HPIA.html>.
- HP Wolf Security for Business requires Windows 10 or 11 Pro or higher, includes various HP security features and is available on HP Pro, Elite, RPOS and Workstation products. See product details for included security features.
- Copilot+ in Windows requires Windows 11. Some features require an NPU. Timing of feature delivery and availability varies by market and device. Requires Microsoft account to log in. Where Copilot+ in Windows is not available, the Copilot key will lead to the Bing search engine. See [aka.ms/copilotplus](http://aka.ms/copilotplus).
- Microsoft Office sold separately and requires Internet access for activation.
- Poly Lens Desktop requires a Windows OS.

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