

# HP ZBook Power 15.6 inch G10 Mobile Workstation PC

**Pro-certified power within reach**



**Upgrade to professional ZBook performance and security at an unbelievably affordable price. Power up your productivity on this durable yet premium device—delivering enhanced collaboration features and pro-grade components to run pro software apps for CAD, 3D concepting, modeling, rendering and more.**

## **Power through professional workflows**

Tackle your biggest projects and blaze through 3D modeling workloads with up to an NVIDIA RTX™ 3000 Ada Laptop GPU.<sup>1</sup> Eliminate slowdowns and take-on serious multitasking with up to an Intel® Core™ i9 vPro® CPU,<sup>2,3</sup> 64GB memory,<sup>4</sup> and 8TB storage.<sup>5</sup>

## **Durable with a premium touch**

With an all-aluminum chassis and MIL-STD 810 durability,<sup>6</sup> this laptop is tough enough to last with a distinctly premium touch. See more screen with a narrow bezel and get smooth motion with a 120Hz refresh rate on the 2K QHD display.<sup>1</sup>

## **Connect. Communicate. Collaborate**

Collaborate effectively on ZBook Power with an auto-framing 5MP camera<sup>7</sup> so you can move around without losing viewers' attention during a call, AI Noise Suppression software<sup>8</sup> to block background noises, and a long-lasting battery.<sup>10</sup>

## **Certified, secured and supported**

Get peace of mind with a serviceable, high-performance PC that's certified to work with professional apps and comes with HP Wolf Security for Business—protecting below, in and above the OS.<sup>11</sup> Simplify fleet-wide rollouts with optional management tools.<sup>12</sup>



# HP ZBook Power 15.6 inch G10 Mobile Workstation PC



## Windows 11

Work without compromising on performance with Windows 11<sup>13</sup> combined with HP's collaboration and security technology.

## Intel® Core™ Processor

Take multitasking to the next level with up to Intel vPro® with 13th Gen Intel® Core™ i9 processor,<sup>1,2,14</sup> designed to handle complex, multithreaded apps.

## NVIDIA® Graphics

Power through projects with up to NVIDIA RTX™ 3000 Ada Generation Laptop GPU,<sup>1</sup> certified for pro-apps.

## Lightning-Fast Storage

Blitz through multiple tasks and ditch external drives with up to 8 TB local NVMe storage.<sup>15</sup>

## Large Memory Configurations

Power through projects with up to 64 GB RAM<sup>1</sup> for fast editing and design.

## 2K QHD 120Hz Display

Get lost in the captivating definition and ultra-sharp details. The 2560 x 1440 resolution transforms your content for a remarkable viewing experience and with a 120Hz refresh rate get smooth motion for high-speed videos.<sup>1,16,17</sup>

## HP Auto Frame

Move around a little without losing viewers' attention during video calls with HP Auto Frame.<sup>7</sup> With an 88-degree field of view, the camera and audio follow you or multiple presenters as they move within the camera's frame.

## HP Fast Charge

Long battery life gets you through a day of meetings without plugging in. Quickly recharge your PC with HP Fast Charge. You'll get up to 50% battery life in just 30 minutes of charging.<sup>18</sup>

## AI Noise Suppression

Collaborate with confidence with advanced features like AI Noise Suppression<sup>8</sup> to suppress background noise for crisp, clear calls.

## HP Wolf Security

HP Wolf Security for Business<sup>11</sup> creates a hardware-enforced, always-on, resilient defense. From the BIOS to the browser, above, in, and below the OS, these constantly evolving solutions help protect your PC from modern threats.

## Sustainability

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

## Wi-Fi 6E

Get a fast and reliable connection in dense wireless environments with Wi-Fi 6E.<sup>20</sup>



# HP ZBook Power 15.6 inch G10 Mobile Workstation PC

## Specifications Table

|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Available Operating Systems</b>                | Windows 11 Pro <sup>1</sup><br>Windows 11 Home <sup>1</sup><br>Windows 11 Pro Education <sup>1</sup><br>Windows 11 Home Single Language <sup>1</sup><br>Windows 11 Pro (preinstalled with Windows 10 Pro Downgrade) <sup>1,26</sup><br>Windows 11 Home Single Language – HP recommends Windows 11 Pro for business <sup>1</sup><br>FreeDOS 3.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Processor family</b> <sup>2,3,4,5,25</sup>     | 13th Generation Intel® Core™ i9 processor; 13th Generation Intel® Core™ i7 processor; 13th Generation Intel® Core™ i5 processor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Available Processors</b> <sup>2,3,4,5,25</sup> | Intel® Core™ i9-13900H (1.9 GHz E-core base frequency, 2.6 GHz P-core base frequency, up to 4.1 GHz E-core Max Turbo frequency, up to 5.4 GHz P-core Max Turbo frequency, 24 MB L3 cache, 6 P-cores and 8 E-cores, 20 threads), supports Intel® vPro® Technology<br>Intel® Core™ i9-13900HK (1.9 GHz E-core base frequency, 2.6 GHz P-core base frequency, up to 4.1 GHz E-core Max Turbo frequency, up to 5.4 GHz P-core Max Turbo frequency, 24 MB L3 cache, 6 P-cores and 8 E-cores, 20 threads)<br>Intel® Core™ i7-13800H (1.8 GHz E-core base frequency, 2.5 GHz P-core base frequency, up to 4.0 GHz E-core Max Turbo frequency, up to 5.2 GHz P-core Max Turbo frequency, 24 MB L3 cache, 6 P-cores and 8 E-cores, 20 threads), supports Intel® vPro® Technology<br>Intel® Core™ i7-13700H (1.8 GHz E-core base frequency, 2.4 GHz P-core base frequency, up to 3.7 GHz E-core Max Turbo frequency, up to 5.0 GHz P-core Max Turbo frequency, 24 MB L3 cache, 6 P-cores and 8 E-cores, 20 threads)<br>Intel® Core™ i5-13500H (3.5 GHz E-core Max Turbo frequency, up to 4.7 GHz P-core Max Turbo frequency, 18 MB L3 cache, 4 P-cores and 8 E-cores, 16 threads)<br>Intel® Core™ i5-13600H (3.6 GHz E-core Max Turbo frequency, up to 4.8 GHz P-core Max Turbo frequency, 18 MB L3 cache, 4 P-cores and 8 E-cores, 16 threads), supports Intel® vPro® Technology |
| <b>Maximum memory</b>                             | 64 GB DDR5-5200 non-ECC SDRAM <sup>7</sup><br>Transfer rates up to 5200 MT/s.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Memory slots</b>                               | 2 SODIMM; supports dual channel <sup>8,9,10,32</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Internal storage</b>                           | 512 GB up to 8 TB PCIe® Gen4 NVMe™ M.2 SSD <sup>11,52</sup><br>512 GB up to 1 TB PCIe® Gen4 NVMe™ M.2 SED SSD <sup>11</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Display size (diagonal, metric)</b>            | 39.6 cm (15.6")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Display</b>                                    | 15.6" diagonal, FHD (1920 x 1080), touch, narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6" diagonal, FHD (1920 x 1080), narrow bezel, anti-glare, 250 nits, 45% NTSC; 15.6" diagonal, FHD (1920 x 1080), narrow bezel, anti-glare, Low Blue Light, 400 nits, low power, 100% sRGB <sup>21,23,24</sup><br>15.6" diagonal, QHD (2560 x 1440), narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), touch, narrow bezel, anti-glare, 250 nits, 45% NTSC; 39.6 cm (15.6") diagonal, FHD (1920 x 1080), narrow bezel, anti-glare, Low Blue Light, 40 nits, low power, 100% sRGB; 39.6 cm (15.6") diagonal, QHD (2560 x 1440), narrow bezel, anti-glare, Low Blue Light, 300 nits, 100% sRGB <sup>21,23,24</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Available Graphics</b>                         | Integrated:<br>Intel® Iris® Xe Graphics <sup>16</sup><br>Discrete:<br>NVIDIA RTX™ 3000 Ada Generation Laptop GPU (8 GB GDDR6 dedicated)<br>NVIDIA RTX™ 2000 Ada Generation Laptop GPU (8 GB GDDR6 dedicated)<br>NVIDIA RTX™ A1000 Laptop GPU (6 GB GDDR6 dedicated)<br>NVIDIA® A500 (4 GB GDDR6 dedicated)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Audio</b>                                      | HP Audio, dual stereo speakers, dual array digital microphones, functions keys for volume up and down, combo microphone/headphone jack, HD audio <sup>45</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Memory card device</b>                         | 1 smart card reader (select models)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Ports and connectors</b>                       | Left side: 1 RJ-45; 1 SuperSpeed USB Type-A 5Gbps signaling rate; 1 HDMI 2.1; 1 nano security lock slot ;<br>Right side: 1 power connector; 1 headphone/microphone combo; 1 Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4); 2 SuperSpeed USB Type-A 5Gbps signaling rate (charging) <sup>6,55,56</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |



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## Specifications Table

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Keyboard</b>                          | HP Premium Quiet Keyboard, spill-resistant, full-size, backlit, keyboard with a Programmable Key and numeric keypad                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Mouse</b>                             | ClickPad Mylar with multi-touch gesture support, taps enabled as default; Microsoft Precision Touchpad with gesture support                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Communications</b>                    | LAN: Intel® I219-LM GbE; Intel® I219-LM GbE, vPro®; Intel® I219-V GbE, non-vPro® <sup>12</sup> ;<br>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® <sup>13</sup> ;<br>NFC Mirage module (NXP NPC300 I2C 10 x 17 mm)                                                                                                                                                                                                                                                                                                              |
| <b>Camera</b>                            | 5MP IR Camera; 720p HD camera <sup>17,18</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Software</b>                          | Bing search for IE11<br>HP Hotkey Support<br>HP Performance Advisor<br>HP Recovery Manager<br>HP Remote Graphics Software<br>HP Support Assistant<br>HP JumpStart<br>Native Miracast support<br>HP Connection Optimizer<br>HP Cloud Recovery<br>HP Admin<br>HP Privacy Settings<br>HP PC Hardware Diagnostics<br>HP Services Scan<br>Microsoft 365 and Office (sold separately and Internet access required for activation)<br>HP Presence <sup>15,28,29,33,35,36,39</sup>                                                                                                                                                           |
| <b>Security management</b>               | Absolute persistence module<br>HP Device Access Manager<br>HP Power On Authentication<br>HP Security Manager<br>Integrated smart card reader<br>Master Boot Record security<br>Pre-boot authentication<br>HP Sure Click<br>Windows Defender<br>HP Secure Erase<br>HP Manageability Integration Kit<br>HP Sure Sense<br>HP Secure Platform<br>HP Sure Recover Gen3<br>HP BIOSphere Gen6<br>HP Client Security Suite Gen6<br>HP Sure Start Gen6<br>HP Tamper Lock<br>Nano Security Lock Slot<br>HP Client Security Manager Gen7<br>Trusted Platform Module TPM 2.0<br>Windows Secured Core <sup>19,22,27,30,31,34,38,47,49,50,53</sup> |
| <b>Fingerprint reader</b>                | Fingerprint reader (select models)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Power</b>                             | 150 W Slim Smart external AC power adapter <sup>20</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Battery type</b>                      | HP Long Life 6-cell, 83 Wh Li-ion polymer <sup>37,40</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Battery life</b>                      | Up to 13 hours and 30 minutes <sup>54</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Dimensions</b>                        | 14.15 x 9.21 x 0.9 in; 35.94 x 23.39 x 2.28 cm;<br>21.73 x 2.71 x 13.58 in 552 x 69 x 345 mm (Package)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Weight</b>                            | Starting at 4.43 lb; Starting at 2 kg;<br>(Weight varies by configuration and components.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Ecolabels</b>                         | EPEAT® registered <sup>41</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Energy star certified</b>             | ENERGY STAR® certified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Sustainable impact specifications</b> | Low Halogen <sup>42</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |



# HP ZBook Power 15.6 inch G10 Mobile Workstation PC

## Messaging Footnotes

<sup>1</sup> Optional feature that must be configured at purchase.

<sup>2</sup> 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.

<sup>3</sup> For full Intel® vPro® functionality, Windows 10 Pro 64 bit, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or WLAN card and TPM 2.0 are required. Some functionality requires additional 3rd party software in order to run. See <http://intel.com/vpro>

<sup>4</sup> Up to 64GB memory is an optional, configurable feature.

<sup>5</sup> For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35GB of system disk (for Windows) is reserved for system recovery software. Optional feature that must be configured at purchase.

<sup>6</sup> 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.

<sup>7</sup> Auto-framing available only with optional SMP camera that must be configured at purchase. Requires the myHP application and Windows OS.

<sup>8</sup> AI Noise Suppression is delivered automatically through Windows update or can be downloaded from <https://support.hp.com/us-en/drivers>. Requires Windows 10 or higher, compatible with internal PC speakers, microphone and analog headsets. The AI Noise Suppression setting can be configured through the Application HP Audio Control.

<sup>9</sup> Wi-Fi 6E is an optional feature that must be configured at purchase. 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. Available in countries where Wi-Fi 6E is supported.

<sup>10</sup> Battery life will vary depending on the 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 MobileMark18 battery benchmark <https://bapco.com/products/mobilemark-2018/> for additional details.

<sup>11</sup> HP Wolf Security for Business requires Windows 10 or higher, includes various HP security features and is available on HP Pro, Elite and Workstation products. See product details for included security features.

<sup>12</sup> HP Manageability Integration Kit can be downloaded from <http://www.hp.com/go/clientmanagement> .

<sup>13</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>14</sup> 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> .

<sup>15</sup> Optional feature that must be configured at purchase. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35GB of system disk (for Windows) is reserved for system recovery software. Optional feature that must be configured at purchase.

<sup>16</sup> Quad high-definition (QHD) content is required to view QHD images.

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

<sup>18</sup> Recharges your battery up to 50% within 30 minutes when the system is off or in standby mode. Power adapter with a minimum capacity of 65 watts is required. After charging has reached 50% capacity, charging will return to normal. Charging time may vary +/-10% due to System tolerance.

<sup>19</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. Available in countries where Wi-Fi 6E is supported.

<sup>13</sup> Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, and Windows 10 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>15</sup> HP Cloud Recovery is available for HP Elite and Pro desktops and laptops PCs with Intel® or AMD processors and requires an open, wired 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> .

<sup>16</sup> Intel® Iris® X\* Graphics capabilities require system to be configured with Intel® Core™ i5 or i7 processors and dual channel memory. Intel® Iris® X\* Graphics with Intel® Core™ i5 or 7 processors and single channel memory will only function as UHD graphics.

<sup>17</sup> FHD and HD content required to view HD images respectively.

<sup>18</sup> 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.

<sup>19</sup> HP Sure Click requires Windows 10. See <https://bit.ly/2PrlT6A>. SureClick for complete details.

<sup>20</sup> 150 W power adapter is only available with discrete graphic options.

<sup>21</sup> QHD content required to view QHD images.

<sup>22</sup> HP BIOSphere Gen6 requires Windows 10 and is available on select HP Pro and Elite PCs. Features may vary depending on the platform and configurations.

<sup>23</sup> Resolutions are dependent upon monitor capability, and resolution and color depth settings.

<sup>24</sup> Actual brightness will be lower with HP Sure View or touch-screen.

<sup>25</sup> 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> .

<sup>26</sup> This system is preinstalled with Windows 10 Pro software and also comes with a license for Windows 11 Pro software and provision for recovery software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.

<sup>28</sup> Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming media players that also support Miracast. You can use Miracast to share what you're doing on your PC and present a slide show. For more information: <http://windows.microsoft.com/en-us/windows-8/project-wireless-screen-miracast> .

<sup>29</sup> HP Performance Advisor is ready and waiting to help you get the most out of your HP Workstation from day one—and every day after. Learn more or download at: <https://www8.hp.com/us/en/workstations/performance-advisor.html> .

<sup>30</sup> HP Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html> .

<sup>31</sup> Absolute Persistence Module: Absolute agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. The Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit: <http://www.absolute.com/company/legal/agreements/computrace-agreement> . Data Delete is an optional service provided by Absolute Software. If utilized, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.

<sup>32</sup> 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.

<sup>33</sup> Select HP Products are enhanced with HP Presence. Features vary by platform. HP conferencing features require Windows and the latest myHP app, available over the air or for download via sofpaq on the HP Support website. Planned availability in spring 2023.

<sup>34</sup> Security lock for security slot is sold separately.

<sup>35</sup> HP Support Assistant Internet access required.

<sup>36</sup> HP Connection Optimizer requires Windows 10.

<sup>37</sup> Battery is internal and not replaceable by customer. Serviceable by warranty. Batteries have a default one year limited warranty except for Long Life batteries which will have same 1-year or 3-year warranty as the platform.

<sup>38</sup> HP Sure Start Gen6 is available on select HP PCs and requires Windows 10.

<sup>39</sup> HP Services Scan is provided with Windows Update on select products and will check entitlement on each hardware device to determine if an HP TechPulse-enabled service has been purchased, and will download applicable software automatically. HP TechPulse is a telemetry and analytics platform that provides critical data around devices and applications. For full system requirements or to disable this feature, please visit <http://www.hpdaas.com/requirements> . Not applicable in China.

<sup>40</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>41</sup> Based on US EPEAT® registration according to IEEE 1690.1-2018 EPEAT®. EPEAT® status varies by country. Visit [www.epeat.net](http://www.epeat.net) for more information.

<sup>42</sup> External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen.

<sup>43</sup> Dual-microphone array when equipped with optional webcam and optional world facing microphone.

<sup>47</sup> Secure Erase - For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.

<sup>48</sup> HP Sure Recover Gen3 is available on select HP PCs and requires an open network connection. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data. Network based recovery using Wi-Fi is only available on PCs with Intel Wi-Fi Module.

<sup>50</sup> HP Sure Sense is available on select HP PCs and is not available with Windows10 Home.

<sup>52</sup> Storage Slot 1 can support both PCIe Gen3 and Gen4 drives.

<sup>53</sup> Requires an Intel® vPro®, AMD Ryzen™ Pro processor or Qualcomm® processor with SD850 or higher and requires 8 GB or more system memory. Secured Core PC functionality can be enabled from the factory.

<sup>54</sup> Battery life will vary depending on the 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 MobileMark18 battery benchmark <https://bapco.com/products/mobilemark-2018/> for additional details.

<sup>55</sup> Thunderbolt™ 4 and USB4™ maximum speed of 40Gbps will be divided between the different data workstreams.

<sup>56</sup> SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.

## Technical Specifications Footnotes

<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 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> .

<sup>2</sup> 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.

<sup>3</sup> Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.

<sup>4</sup> 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.

<sup>5</sup> In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on [www.support.hp.com](http://www.support.hp.com) .

<sup>6</sup> HDMI port-cable not included.

<sup>7</sup> 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.

<sup>8</sup> Maximized dual-channel performance requires SODIMMs of the same size and speed in both memory channels.

<sup>9</sup> Intel® allows architectures designed with four DIMM slots to run at 3200 MT/s.

<sup>10</sup> 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.

<sup>11</sup> 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.

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