

# HP ZBook 15v G5 Mobile Workstation



## HP's most affordable workstation

Supercharge your projects on a high performance laptop that packs a punch at a low cost, with high speed processors and graphics certified for peak performance.



HP recommends Windows 10 Pro.

### Pro-grade performance

- Get lightening fast response times with 6-core Intel® Xeon® processors and 32GB memory, even when running multiple apps at once. Access large 4K files quickly with 4TB high-speed storage and speed up rendering time with NVIDIA® Quadro® graphics.

### Software certified

- Work with confidence knowing your laptop is certified to tackle your most important applications. We've partnered with leading software providers like Autodesk and SolidWorks to ensure the HP ZBook 15v is optimized for peak performance.

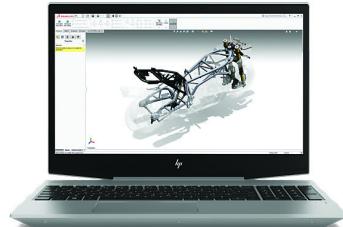
### Built to last

- The HP ZBook 15v undergoes rigorous military standard testing including drop, shock and harsh environments<sup>1</sup>. Now you can take your work on the road with confidence knowing your laptop was built for durability.

### Featuring

- Be productive in any situation. Windows 10 Pro and powerful security, collaboration, and connectivity features from HP help you power through your day on the HP ZBook 15v.
- Tackle complex 2D and 3D models with certified NVIDIA® Quadro® graphics - optimized for stability and peak performance with professional software apps.
- Do more at once with 6-core Intel® Xeon® processors designed to handle complex, multi-threaded applications like Autodesk Revit®.
- Increase productivity with up to 1 TB local PCIe NVMe storage - up to 21x faster than standard HDD and 6x faster than SATA SSD.
- Stay connected for longer with up to 10 hours of battery life and super-fast recharge, powering up by 50% in just 30 minutes.
- Collaborate and connect remotely through a 720-pixel webcam for sharp picture quality. Log in quickly and securely with facial recognition and a webcam shutter.
- Experience premium audio with custom tuned Bang & Olufsen speakers.
- Unclutter your work environment with HP's most powerful docking solution. Experience lightning fast Thunderbolt™ connectivity with remarkable performance.

## HP ZBook 15v G5 Mobile Workstation Specifications Table



<b>Available Operating Systems</b>	Windows 10 Pro 64 – HP recommends Windows 10 Pro. <sup>1</sup> Windows 10 Home 64 <sup>1</sup> Windows 10 Pro for Workstations 64 <sup>1</sup> FreeDOS 2.0
<b>Processor family<sup>2,3</sup></b>	8th Generation Intel® Core™ i7 processor (i7-8750H, i7-8850H); 8th Generation Intel® Core™ i5 processor (i5-8300H, i5-8400H); Intel® Xeon® E3 processor (E3-2176M); 9th Generation Intel® Core™ i5 processors (i5 9300H, i5 9400H); 9th Generation Intel® Core™ i7 processors (i7 9750H, i7 9850H); 9th Generation Intel® Core™ i9 processor (i9 9880H)
<b>Available Processors<sup>2,3,4</sup></b>	Intel® Xeon® E 2176M vPro™ with Intel® UHD Graphics P630 (2.7 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores) Intel® Core™ i5 8400H vPro™ with Intel® UHD Graphics 630 (2.5 GHz base frequency, up to 4.2 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores) Intel® Core™ i5 9300H with Intel® UHD Graphics 630 (2.4 GHz base frequency, up to 4.1 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores) Intel® Core™ i7 9750H with Intel® UHD Graphics 630 (2.6 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores) Intel® Core™ i7 9850H with Intel® UHD Graphics 630 (2.6 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores) Intel® Core™ i9 9880H with Intel® UHD Graphics 630 (2.3 GHz base frequency, up to 4.8 GHz with Intel® Turbo Boost Technology, 16 MB cache, 8 cores) Intel® Core™ i9-9980H with Intel® UHD Graphics 630 (2.3 GHz base frequency, up to 4.8 GHz with Intel® Turbo Boost Technology, 16 MB cache, 8 cores) Intel® Core™ i9-9980HK with Intel® UHD Graphics 630 (2.4 GHz base frequency, up to 5.0 GHz with Intel® Turbo Boost Technology, 16 MB cache, 8 cores)
<b>Maximum memory</b>	32 GB DDR4-2667 ECC SDRAM; 32 GB DDR4-2667 non-ECC SDRAM <sup>5</sup> Transfer rates up to 2667 MT/s.
<b>Memory slots</b>	2 SODIMM
<b>Internal storage</b>	up to 2 TB 5400 rpm SATA <sup>6</sup> 500 GB up to 1 TB 7200 rpm SATA <sup>6</sup> 500 GB 7200 rpm SATA SED <sup>6</sup> 500 GB up to 2 TB SATA SSHD <sup>6</sup> 256 GB up to 1 TB SATA SSD <sup>6</sup> 256 GB up to M.2 SATA SED SSD <sup>6</sup> 256 GB up to 2 TB PCIe® NVMe™ M.2 SSD <sup>6</sup> 256 GB up to 512 GB PCIe® NVMe™ M.2 SED SSD <sup>6</sup>
<b>Display<sup>8</sup></b>	Integrated: Intel® UHD Graphics 630; Intel® UHD Graphics P630 <sup>8,9</sup> Discrete: NVIDIA® Quadro® P600 (4 GB GDDR5 dedicated) <sup>10</sup> (Intel® UHD Graphics 630 integrated on Core™ i7 and Core™ i5 processors. Intel® UHD Graphics P630 integrated on Xeon® processors.)
<b>Audio<sup>13</sup></b>	HP tuned Bang & Olufsen, dual stereo speakers, dual array digital microphone supporting HP Noise Cancelling Software, keyboard functions keys for volume up and down, combo microphone/headphone jack, HD audio
<b>Expansion slots</b>	1 UHS-II SD card reader (SD supports next generation secure digital and is backward compatible to SDHC, SDXC)
<b>Ports and Connectors</b>	Left side: 1 AC power; 1 USB 3.0; 1 USB 3.0 (charging) Right side: 1 HDMI 2.0; 1 headphone/microphone combo; 1 power connector; 1 RJ-45; 1 USB 3.0; 1 USB 3.1 Gen 2 Type-C™ with Thunderbolt™ 3 (DisplayPort™ 1.2)
<b>Input devices</b>	HP full-size, spill-resistant, backlit; Clickpad with multi-touch gesture support;
<b>LAN</b>	Integrated Intel® I219-LM GbE
<b>WLAN<sup>7</sup></b>	Intel® Dual Band Wireless-AC 9560 802.11ac (2x2) Wi-Fi® and Bluetooth® 5.0 Combo Intel® Dual Band Wireless-AC 9560 802.11ac (2x2) Wi-Fi® and Bluetooth® 5.0 Combo, non-vPro™
<b>Camera<sup>8,11,13,29</sup></b>	HP HD Camera 720p; HP FHD IR Camera 1080p, face authentication with Windows Hello
<b>Available Software<sup>14,15,16,17</sup></b>	Bing search for IE11; Buy Office; HP ePrint Driver + JetAdvantage; HP Hotkey Support; HP Noise Cancellation Software; HP Performance Advisor; HP Recovery Manager; HP Remote Graphics Software; HP Support Assistant; HP Velocity; Skype for Business Certified; HP LAN-WLAN Protection; HP JumpStart
<b>Power</b>	120 W Slim external AC power adapter; 150 W Slim Smart external AC power adapter
<b>Battery type<sup>25,30</sup></b>	HP Long Life 3-cell, 52 Wh Li-ion polymer; HP Long Life 4-cell, 70 Wh Li-ion polymer
<b>Dimensions</b>	14.37 x 10.1 x 1 in; 36.5 x 25.65 x 2.54 cm
<b>Weight</b>	Starting at 4.72 lb; Starting at 2.14 kg
<b>Energy efficiency compliance<sup>23</sup></b>	ENERGY STAR® certified and EPEAT® registered configurations available
<b>Environmental specifications<sup>24</sup></b>	Low halogen
<b>Warranty</b>	1 year limited warranty options available, depending on country. Batteries have the same 1 year limited warranty as the platform. 24/7 operation will not void the HP warranty. Optional HP Care Pack Services are extended service contracts which go beyond your standard limited warranties.

## HP ZBook 15v G5 Mobile Workstation

### Accessories and services (not included)

#### HP Z24n G2 24-inch Display



Be a productive powerhouse with the sleek WUXGA HP Z24n G2 24-inch Display. This virtually seamless display is factory-tested for reliability and longevity with integrated color calibration, uninterrupted multi-screen<sup>1</sup> tiling, and expansive device connections, including USB-C™.

**Product number:** 1JS09AB

#### HP Comfort Grip Wireless Mouse



The HP Comfort Grip Wireless Mouse features a 30-month battery life<sup>1</sup> and a bold, modern design that integrates seamlessly with HP Business Notebooks.

**Product number:** H2L63AA

#### HP 3 year Next Business Day Onsite HW Support w/Accidental Damage Protection-G2 for Notebooks



When hardware issues come up, the sooner you can get running again, the better. Have expertise at the ready with HP Hardware Next Business Day Onsite Service with Accidental Damage Protection, and vastly improve your product uptime. With high-quality remote assistance or convenient onsite support available the next business day, help is there when you need it—so you can get back to work.

**Product number:** UA6Z7E

## HP ZBook 15v G5 Mobile Workstation

### Messaging Footnotes

<sup>1</sup> MIL-STD-810G testing is pending. 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>2</sup> Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows functionality. Windows 10 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>3</sup> 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.

<sup>4</sup> Windows 10 MM14 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 [www.bapco.com](http://www.bapco.com) External link icon for additional details.

<sup>5</sup> Recharges the 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>6</sup> Facial recognition and webcam shutter are optional features that must be configured at purchase.

<sup>7</sup> HP Sure Start Gen4 is available on HP Z Workstations equipped with 8th generation Intel® or AMD processors.

<sup>8</sup> ZBook dock with Thunderbolt™ sold separately.

Screen images courtesy of Motus Motorcycles.

### 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 10 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> 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 <http://www.support.hp.com>

<sup>4</sup> vPro. Some functionality of this technology, such as Intel Active management technology and Intel® Virtualization technology, requires additional 3rd party software in order to run. Availability of future "virtual appliances" applications for Intel vPro technology is dependent on 3rd party software providers. Compatibility future "virtual appliances" is yet to be determined.

<sup>5</sup> Only 2 DIMM configurations run at 2400 MHz and 4 DIMM configurations run at 2133 MHz.

<sup>6</sup> For storage drives GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10) is reserved for system recovery software.

<sup>7</sup> Wireless cards are optional or add-on features and requires separately purchased wireless access point and internet service. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices.

<sup>8</sup> HD content required to view HD images.

<sup>9</sup> Intel® HD graphics 630 is configurable as a standalone graphics option; Intel® HD graphics P630 only used when NVIDIA® Optimus™ Technology is enabled.

<sup>10</sup> NVIDIA® Quadro® mobile professional graphics support up to four independent displays when using a HP ZBook Dock with Thunderbolt 3 (sold separately) or DP 1.2 hubs with MST. AMD Radeon™ Pro professional graphics support up to six independent displays when using an HP ZBook Dock with Thunderbolt 3 (sold separately) or DP 1.2 hubs with MST.

<sup>11</sup> Privacy camera is not available on touchscreen.

<sup>12</sup> Dual-microphone array when equipped with optional webcam and optional world facing microphone.

<sup>13</sup> Optional or add-on feature.

<sup>14</sup> HP ePrint Driver requires an internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see [www.hp.com/go/businessmobileprinting](http://www.hp.com/go/businessmobileprinting)).

<sup>15</sup> HP Remote Graphics Software requires a Windows, Linux®, or Mac® OS X 10.10 and newer operating system and network access.

<sup>18</sup> BIOS Absolute Persistence module is shipped turned off, and will be activated when customers purchase and activate a subscription. Service may be limited. Check with Absolute for availability outside the U.S. The optional subscription service of Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit: <http://www.absolute.com/company/legal/agreements/computrace-agreement>.

<sup>19</sup> Finger Sensor is optional.

<sup>20</sup> HP Manageability Integration Kit can be downloaded from <http://www.hp.com/go/clientmanagement>.

<sup>21</sup> HP BioSphere Gen4 requires Intel® or AMD 8th generation processor. HP Sure Start Gen4 is available on HP Z Workstations products equipped with 8th and 9th generation Intel® or AMD processors.

<sup>22</sup> HP Password manager requires Windows.

<sup>23</sup> EPEAT® registered where applicable. EPEAT registration varies by country. See [www.epeat.net](http://www.epeat.net) for registration status by country.

<sup>24</sup> External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen.

<sup>25</sup> Battery is internal and not replaceable by customer. Serviceable by warranty. Batteries have a default one year limited warranty.

<sup>26</sup> HP Secure Disk Erase is for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88.

<sup>27</sup> HP Sure Click is available on select HP platforms and supports Microsoft® Internet Explorer, Google Chrome, and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode. Check <http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-0922ENW> for all compatible platforms as they become available.

<sup>28</sup> Windows Hello optional

<sup>30</sup> 4 cell now only w/ UMA, and not possible with DSC.

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