## Datasheet

# HP ZBook Studio x360 G5 Convertible Workstation



### HP's most powerful convertible PC

Reimagine your creative process with a versatile laptop that gives you the latest convertible design you'll want with the pro-grade performance you need.



## HP recommends Windows 10 Pro.

#### 360-degree pro performance

Finally, a convertible laptop designed to tackle large files and run multiple apps with speed and responsiveness. Seamlessly edit
or render high-res images without lag or delay, with NVIDIA® Quadro® graphics and 6-core Intel® Xeon® processors.

#### Precision-crafted versatility

 With our innovative 360-degree hinge, you'll get the comfort of a laptop, the convenience of a tablet and the luxury of additional modes to help you showcase your work.

#### Pixel-perfect tools

 Achieve remarkable inking precision with 4000 levels of pressure sensitivity and tilt with the Wacom AES pen. And with the HP DreamColor display, you'll experience one billion vibrant colors' on HP's brightest 4K laptop.

#### 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 Studio x360.<sup>2</sup>
- Create on the go with the professional Wacom AES pen featuring 4K pressure sensitive levels, tilt and two customizable buttons.<sup>3</sup>
- Maintain color accuracy with 100% Adobe RGB & a built-in color calibration system. Work anywhere with an ambient light sensor that dims or brightens based on your surroundings.<sup>4</sup>
- Take your work on the road with up to 16 hours of battery life for maximum productivity. When you need it, recharge ultra-fast (50% in just 30 minutes).<sup>5,6</sup>
- Accelerate your productivity and save files locally with up to 4TB local PCIe NVMe storage that's up to 21 times faster than standard HDD storage and six times faster than SATA SSD.<sup>7</sup>
- Get remarkable performance with heavy workloads with six-core Intel<sup>®</sup> Xeon<sup>®</sup> processors. Experience stability, data integrity and
  protection against potential crashes with ECC memory.
- Seamlessly edit your designs and render multi-layered files with certified NVIDIA<sup>®</sup> Quadro<sup>®</sup> P1000 graphics, optimized for stability and performance with professional software apps.
- Protect your work with industry-leading security features like fingerprint reader, facial recognition and HP Sure View G2 that
  activates a privacy screen at the touch of a button.
- Experience fast file upload and transfer speeds with Thunderbolt™ 3.
- Host virtual meetings with the HP Collaboration Keyboard, world-facing 3rd mic & optional web cam. Get premium audio with 4 speakers custom tuned by Bang & Olufsen & a discrete amp.
- Confidently take your work anywhere knowing your HP ZBook Studio x360 was built for 24x7x365 workloads and designed to
  pass rigorous military standard tests.
- Work confidently with our minor spill-resistant full-sized chiclet keyboard with a chemically strengthened glass cover to help prevent wear and tear.

# HP ZBook Studio x360 G5 Convertible Workstation Specifications Table



Operating System	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 Red Hat <sup>®</sup> Enterprise Linux <sup>®</sup> 7 Ubuntu 16.04.3 LTS
Processor Family	8th Generation Intel® Core™ i7 processor (i7-8750H, i7-8850H); 8th Generation Intel® Core™ i5 processor (i5-8300H, i5-8400H); 8th Generation Intel® Xeon® E3 processor (E3-2176M, E3-2186M) <sup>2,3</sup>
Processors <sup>2,3,4</sup>	Intel® Core™ 17-8750H with Intel® UHD Graphics 630 (2.2 GHz base frequency, up to 4.1 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores); Intel® Core™ i5-8300H with Intel® UHD Graphics 630 (2.6 GHz base frequency, up to 4.0 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores); Intel® Core™ i5-8300H with Intel® UHD Graphics 630 (2.6 GHz base frequency, up to 4.0 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 4.6 GHz 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™ i7 8850H 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™ i7 8850H 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™ i7 8850H vPro™ with Intel® UHD Graphics 630 (2.5 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores); Intel® Second Secon
Maximum Memory	Up to 32 GB DDR4-2667 ECC SDRAM; 32 GB DDR4-2667 non-ECC SDRAM <sup>5</sup> Standard memory note: Transfer rates up to 2667 MT/s.
Memory Slots	2 SODIMM
Internal Storage	up to 256 GB SATA SSD <sup>6</sup> up to 1 TB M.2 SATA SED SSD <sup>6</sup>
Display	39.62 cm (15.6°) diagonal 4K IPS eDP LED-backlit touch screen with Corning® Gorilla® Glass 4 and ambient light sensor, 400 cd/m² (3840 x 2160); 39.62 cm (15.6°) diagonal FHD IPS eDP LED-backlit touch screen with Corning® Gorilla® Glass 4 and ambient light sensor, 400 cd/m² (1920 x 1080); HP Sure View 39.62 cm (15.6°) diagonal FHD IPS LED-backlit touch screen with Corning® Gorilla® Glass 4, 650 cd/m² (1920 x 1080); HP DreamColor 39.62 cm (15.6°) diagonal FHD IPS LED-backlit touch screen with Corning® Gorilla® Glass 4, 650 cd/m² (1920 x 1080); HP DreamColor 39.62 cm (15.6°) diagonal 4K IPS LED-backlit touch screen with Corning® Gorilla® Glass 4, 600 cd/m², 100% sRGB (3840 x 2160); HP DreamColor 43.9 cm (17.3°) diagonal 4K IPS anti-glare LED-backlit, 400 cd/m², 100% AdobeRGB (3840 x 2160); 9
Available Graphics	Integrated: Intel® UHD Graphics 630; Intel® UHD Graphics P630 <sup>9,10</sup> Discrete: NVIDIA® Quadro® P1000 (4 GB GDDR5 dedicated) <sup>11</sup> Intel® UHD Graphics 630 integrated on Core™ i7 and Core™ i5 processors. Intel® UHD Graphics P630 integrated on Xeon® processors.
Expansion Slots	1 UHS-II SD card reader SD supports next generation secure digital and is backward compatible to SDHC, SDXC
Ports and Connectors	Left side: 1 USB 3.0; 1 USB 3.0 (charging) Right side: 1 HDM12.0; 1 headphone/microphone combo; 1 power connector; 2 USB 3.1 Type-C™ Thunderbolt™ 3 (DisplayPort™ 1.3)
Communications	: WLAN: 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 <sup>m7</sup> WWAN: HP It4132 LTE/HSPA+ 4G Mobile Broadband Module; Intel® XMM™ 7360 LTE Advanced <sup>8.14</sup> Optional Near Field Communication (NFC) module
Audio	Bang & Olufsen, custom tuning, dual stereo speakers, dual array digital microphone, functions keys for volume up and down, combo microphone/headphone jack, world facing microphone, HD audio, HP Clear Sound Amp <sup>13</sup>
Camera	HP Privacy HD IR Camera 720p, face authentication with Windows Hello <sup>9,12,14,30</sup>
Power	150 W Slim Smart external AC power adapter
Input Device	HP Collaboration Keyboard, full-size, spill-resistant, backlit, with drain and DuraKeys, clickpad with image sensor and glass surface, multi-touch gestures and taps enabled Image sensor touchpad with on/off button, two-way scroll, gestures, three buttons
Security	Absolute persistence module; Common Criteria EAL4+ Augmented Certified Discrete TPM 2.0 Embedded Security Chip; DriveLock and Automatic DriveLock; HP Device Access Manager; HP FingerPrint Sensor; HP Password Manager; HP Power On Authentication; HP Security Manager; Pre-boot authentication; Microsoft Security Defender; HP Sure Click; Measured Boot; HP BIOS Config Utility (BCU); HP Client Catalog; HP Driver Packs; HP System Software Manager (SSM); HP Manageability Integration Kit Gen2; HP BIOSphere with Sure Start Gen4; HP Secure Disk Erase; HP Host Based Mac Address <sup>19,20,21,22,23,26,27,28,29</sup>
Software	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; HP WorkWise (requires Bluetooth); Skype for Business Certified; HP LAN-WLAN Protection; HP JumpStart; HP Client Security Suite Gen4 <sup>15,16,17,18</sup>
Dimensions	36 x 25.4 x 2.04 cm
Weight	Starting at 2.26 kg Weight varies by configuration and components.
Energy Efficiency Compliance	ENERGY STAR® certified and EPEAT® registered configurations available <sup>24</sup>
Environmental Certification	Low halogen <sup>25</sup>
Warranty	1 year (1-1-0) limited warranty and service offering includes 1 year of parts and labor. Terms and conditions vary by country.

# HP ZBook Studio x360 G5 Convertible

# Workstation

Accessories and services (not included)

HP lt4132 LTE/HSPA+ 4G Check e-mail, browse the Internet, and connect to your corporate network with dedicated broadband from the HP lt4132 WWAN LTE/HSPA+ 4G WWAN<sup>1</sup> for select HP Business Notebooks. Product number: 1HC91AA HP External USB DVDRW Connect the HP External USB DVD/RW to any available USB port on your PC<sup>1</sup> to get immediate read/write access to your optical media. Drive Product number: F2B56AA HP 500GB 7200rpm SATA The HP 500 GB<sup>1</sup> 7200 rpm Primary SATA Hard Drive is a convenient and affordable high-capacity storage solution for Hard Drive users who require additional storage or a faster dedicated second hard drive. Product number: F3B97AA 3Dconnexion CadMouse Simplify scroll, click, and zoom functions and comfortably drive your CAD projects with the 3D connexion CAD Mouse. Product number: M5C35AA HP 3 year Next Business Day Receive 3 years of next business day onsite HW support from an HP-gualified technician for your computing device, if the Onsite Hardware Support for issue cannot be solved remotely. Notebooks Product number: U4414E Care Pack

# HP ZBook Studio x360 G5 Convertible Workstation

# Messaging Footnotes:

<sup>1</sup> DreamColor display and Wacom AES pen optional and only available with certain configurations. DreamColor display required for one billion colors

<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> Wacom AES pen optional and only available with certain configurations.

 <sup>4</sup> Ambient light sensor only available on select models with standard and full UHD (not available with HP DreamColor or privacy display models).
 <sup>5</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 harvally decrease with time and usage. See www.bapco.com for additional details. <sup>6</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>8</sup> HP Sure View integrated privacy screen is an optional feature that must be configured at purchase.

<sup>9</sup> ML-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>10</sup> ZBook dock with Thunderbolt<sup>™</sup> sold separately

Screen images courtesy of Ryan Church and Justin Carlo Punay.

#### **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® 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 <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> WWAN is an optional feature. WWAN use requires 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.

<sup>10</sup> Intel® HD graphics 630 is configurable as a standalone graphics option; Intel® HD graphics 630 only used when NVIDIA® Optimus™ Technology is enabled.
 <sup>11</sup> INVIDIA® 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.

12 Privacy camera not available on touchscreen.

<sup>13</sup> Dual-microphone array when equipped with optional webcam and optional world facing microphone.

<sup>14</sup> Optional or add-on feature <sup>15</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.
<sup>16</sup> HP Remote Graphics Software requires a Windows, Linux<sup>®</sup>, or Mac<sup>®</sup>OS X 10.10 and newer operating system and network access.

<sup>17</sup> HP Workwise smartphiles betweet requires available as a free download on the App Store and Google Play. See requirements at www.hp.com/go/workwise
<sup>18</sup> HP Client Security Suite Gen 4 requires Windows and Intel® or AMD 8th generation processors.

<sup>19</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

Finger Sensor is optional

<sup>21</sup> HP Manageability Integration Kit can be downloaded from http://www.hp.com/go/clientmanagement.
<sup>22</sup> HP Password manager requires Windows.

23 HP BIOSphere Gen4 requires Intel® or AMD 8th generation processors. HP Sure Start Gen4 is available on HP Z Workstations products equipped with 8th generation Intel® or AMD processors.

<sup>24</sup> EPEAT® registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status by country.
<sup>25</sup> External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen. <sup>22</sup> Battery is internal and not replaceable by customer. Service bit windsgen by the business and perplace by warranty except for Long Life batteries which will have same 1-year or 3-year. <sup>23</sup> HP Secure Disk Erase is for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88.

<sup>28</sup> HP Sure Click is available on select HP platforms and supports Microsoft® Internet Explorer, Google Chrome, and Chromium<sup>™</sup>. 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>29</sup> Microsoft Security Defender requires Windows 10 <sup>30</sup> Windows Hello optional

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