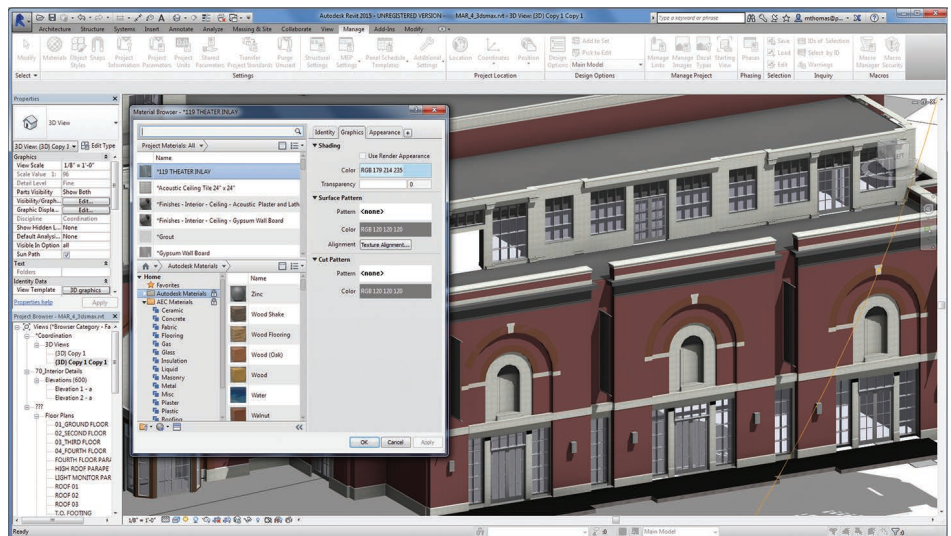


Brochure

HP ZBook 15u Mobile Workstation

The ultra portable 15-inch mobile workstation





“The stylish, slimline machine is lightweight, customizable for English version, customisable for A4 and well equipped to run a wide range of 3D CAD and BIM applications”

HP ZBook 15u Mobile Workstation

Professional 3D workstation for users of CAD software in a lightweight, Ultrabook™ form factor

The HP ZBook 15u is a new class of laptop, designed to deliver workstation-class performance and reliability in a highly portable 'Ultrabook' form factor.¹

The sleek and stylish mobile workstation is ideal for design and engineering executives, architects, road warriors and construction professionals who want to run 2D or 3D CAD or BIM software on optimized for English, optimized for A4 and certified hardware.

The workstation is light and durable. The magnesium and aluminium reinforced chassis has passed the US military standard MIL-STD-810G for drop, vibration and environmental conditions.²

The HP ZBook 15u is customizable (English), customisable (A4) and well equipped to run a wide range of 3D CAD and BIM applications from Dassault Systèmes, Autodesk®, PTC, Siemens PLM, and Bentley Systems.

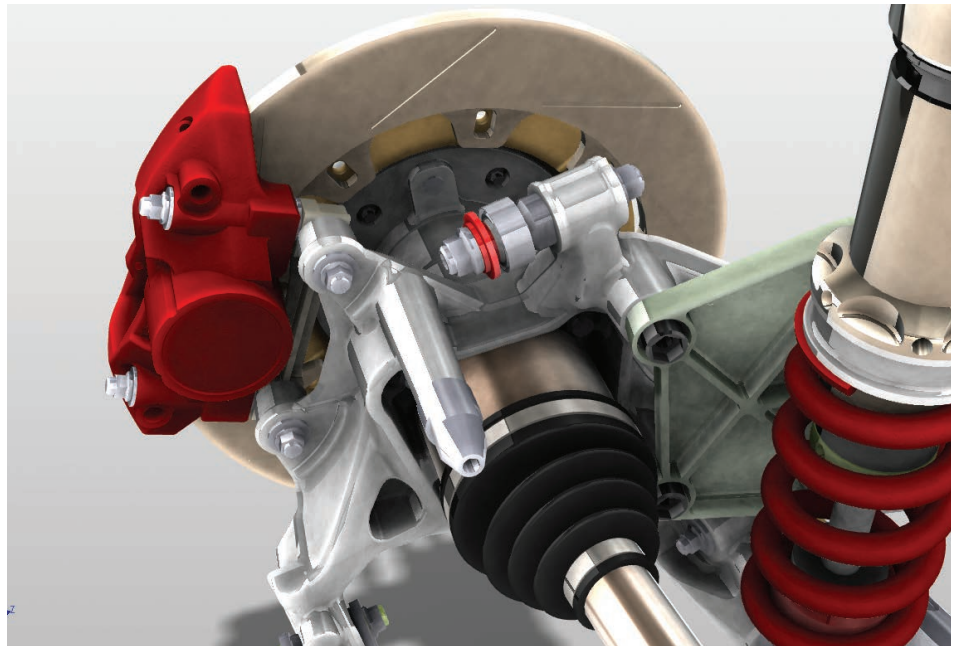
The dual-core Intel® Core™ i5 and Intel® Core™ i7 are ideal for mainstream CAD or BIM workflows where GHz is a top priority. 16 GB RAM³ enables multi-tasking and supports some fairly hefty datasets.

The AMD FirePro™ M4170 GPU provides professional 3D graphics, optimized for entry-level to mid-range performance, while delivering visual quality and stability.

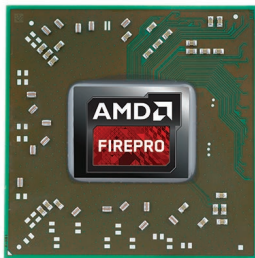
Despite being only 21.4 mm thick and with a starting weight of 4.23 lb (1.91 kg), the HP ZBook 15u features a stunning 15.6-inch diagonal HD display, which is great for detailed CAD work and client presentations.

While the HP ZBook 15u is not designed to be a desktop replacement, it does include some high-end technologies. The HP Z Turbo Drive, a PCIe-based solid state drive (SSD), delivers exceptional storage performance—close to 1.4 times the read/write performance of SATA 3.0.

For a true desktop replacement, where more demanding workflows dictate a quad-core CPU (for simulation or rendering), up to 32 GB RAM (for larger datasets) or higher-performance 3D graphics, consider the HP ZBook 15 or HP ZBook 17.



SOLIDWORKS is one of the key target applications for the HP ZBook 15u Mobile Workstation



What is a Workstation Ultrabook™?

Ultrabooks™ are a class of sleek, ultra portable laptops that don't compromise on performance. According to Intel®, who sets the qualifying criteria, Ultrabooks™ must feature Ultra-Low Voltage Intel CPUs, be 21mm thick or less and boast a battery life of up to five hours. They also require USB 3.0 for fast data transfer and an SSD for fast boot or waking from sleep.

While mainstream Ultrabooks™ are common, workstation Ultrabooks™ are rare. But this is changing. HP is leading the charge with the HP ZBook 15u and HP ZBook 14 G2, which both deliver the quality and performance expected of a CAD-capable mobile workstation but in an exceedingly portable, power efficient form factor.

AMD FirePro™ for HP Mobile Workstations: performance, quality and battery life

AMD FirePro™ workstation-class graphics processing units (GPUs) provide pro-grade 3D graphics to the HP ZBook 15u and other HP ZBook Mobile Workstations. Designed specifically for professional users of CAD/CAM/CAE and BIM software, AMD FirePro™ GPUs are tuned to deliver optimized 3D performance and offer levels of reliability and image quality that cannot be matched by consumer and mainstream business GPUs.

To help ensure professional engineers and designers are working inside a stable and high-performance workstation graphics environment, AMD works closely with all the major independent software vendors (ISVs).

The ISVs test and certify select AMD FirePro™ GPU models while AMD engineers carry out compliance, performance and functionality verification tests.

AMD FirePro™ GPUs feature AMD's Graphics Core Next (GCN) architecture, which is designed to ensure GPUs make optimal use of their resources for maximum performance. This is particularly important when using features that improve image quality such as Full Scene Anti Aliasing, even on 4K displays.

AMD FirePro™ is also highly tuned for energy efficiency. GPUs support unique power monitoring and management technologies such as AMD Enduro™, AMD PowerTune, and AMD ZeroCore Power technologies to help deliver great battery life to the HP ZBook 15u Mobile Workstation.

AMD Enduro™ technology seamlessly and automatically selects the best graphics processor for a given application. For 3D, for example, the AMD FirePro™ GPU is enabled, but for Office applications it switches over to lower-powered Intel integrated graphics.

Up close: inside the HP ZBook 15u G2 Mobile Workstation Ultrabook™

A detailed look at the features of the powerful, lightweight, CAD/BIM-optimized mobile workstation

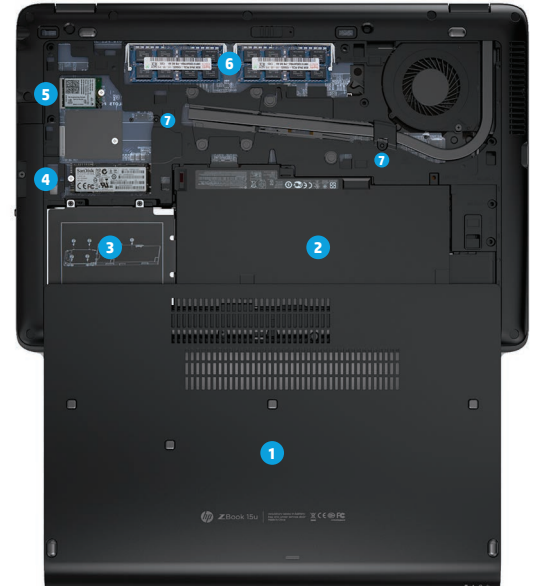


15.6-inch diagonal HD display	There's a choice of two 15.6-inch diagonal LED-backlit anti-glare FHD (1920 x 1080) displays for crisp CAD images: a TN panel with a standard viewing angle or an IPS panel with ultra-wide viewing angle. Additionally, connect to up to two external displays or projectors via VGA (up to 1920 x 1200 at 60Hz) or DisplayPort 1.2 (up to 3840 x 2160) or three external displays or projectors when docked.
Webcam	720p HD webcam
AMD Firepro™ GPU	The AMD FirePro™ M4170 GPU delivers professional-grade graphics for a whole range of professional 2D and 3D CAD and BIM applications including SOLIDWORKS, Autodesk® Revit®, Autodesk AutoCAD®, and Autodesk Inventor®. It supports the latest OpenGL 4.4, DirectX 12 and AMD Mantle APIs to help deliver full compatibility now and in the future. With 1 GB of GDDR5 memory and 384 Stream processors it is designed to handle small- to medium-sized CAD models. Support for OpenCL 1.2 means the AMD FirePro™ M4170 is also optimized for compute, and can be used to carry out single precision operations such as ray trace rendering. The AMD FirePro™ M4170 also enables the HP ZBook 15u to drive up to two additional displays.
Processor (CPU)⁵	<p>The CPU is one of the most important components in a mobile workstation. The HP ZBook 15u comes with a choice of four ultra-low voltage Intel® Core™ i5 and Intel® Core™ i7 processors, which deliver a good balance of performance and energy efficiency.</p> <ul style="list-style-type: none"> • Intel® Core™ i7-5600U (2.6 GHz, up to 3.2 GHz) (2 cores) • Intel® Core™ i7-5500U (2.4 GHz, up to 3.0 GHz) (2 cores) • Intel® Core™ i5-5300U (2.3 GHz, up to 2.9 GHz) (2 cores) • Intel® Core™ i5-5200U (2.2 GHz, up to 2.7 GHz) (2 cores) <p>For CAD and BIM software, the clock speed of the CPU (GHz) is a top priority as it impacts all core operations including 3D graphics performance. Two CPU cores will accelerate some multi-threaded processes, such as file open and save and ray trace rendering. There is also a multi-threaded component to the graphics layer. Disable Intel Hyper-Threading⁷ for most workflows, but turn it on to boost performance when rendering with CPU-based ray trace renderers.</p>
Memory (RAM)³	System memory goes up to 16 GB, which is a good amount for entry-level to mid-range CAD workflows. Configure with one or two 4 GB or 8 GB DDR3L SODIMMs.
Storage (drives)⁶	The laptop can be fitted with one or two internal drives: either a HP Z Turbo Drive, a 2.5-inch SATA 3.0 drive or both. The 256 GB HP Z Turbo Drive is a high-performance PCIe-based SSD, which delivers exceptional storage performance by offering close to 1.4 times the read/write performance of SATA 3.0. It is ideal for use as a system disk, for operating system and applications, as well as providing high-speed access to large current datasets. The SATA drive can be used on its own or as secondary storage to the HP Z Turbo Drive, where it offers additional space for complex 3D CAD datasets. There's a big choice of SSDs (up to 512 GB) and Hard Disk Drives (HDDs) (up to 1 TB). Meanwhile, to help safeguard the data on your HDD from bumps and minor drops, the HP 3D DriveGuard temporarily parks the hard drive if it senses sudden movement. Self Encrypting Drives (SEDs) are also available to keep sensitive data secure.
Battery	The HP ZBook 15u comes with a primary 3-cell (50 WHr) HP Long Life Battery. Low powered components, including the ultra-low voltage Intel CPUs and AMD FirePro™ M4170 GPU, help maximize battery life.
Wireless	Supports a broad range of wireless LAN and wireless WAN options, including 4G LTE, for connectivity on the go. 802.11a/b/g/n and Bluetooth 4.0
Advanced chassis	The thin, light, durable HP Duracase features a magnesium reinforced chassis, brushed aluminium top cover and smooth aluminium around top, right, and left sides. Weight starts at 4.23 lbs (1.91 kg) with dimensions of 21.42 x 375.5 x 253.6 mm (0.84 x 14.78 x 9.98 in) (h x w x d). The ZBook 15u has passed the US military standard MIL-STD-810G for drop, vibration, shock, and environmental conditions.
Docking port	HP ZBook 15u features a docking port for compatibility with the HP UltraSlim Docking Station, a simple one-click, slide-in side dock. It features two DisplayPort ports and one VGA port to allow up to a max of three external displays, an Ethernet/LAN port for high-speed access to centralized CAD data and four USB 3.0 ports. The HP UltraSlim Docking Station is also compatible with select HP EliteBook notebooks to give flexibility in enterprise environments.
Connectivity	The HP ZBook 15u is packed with ports including Gigabit Ethernet for fast access to CAD data over the network, and four USB 3.0. One USB port is always on so smart phones and other devices can be charged even when the ZBook 15u is powered down. Other ports include DisplayPort 1.2, VGA, media card slot and a memory card reader.
Input	The spill-resistant keyboard is available as standard or backlit, making it easier to type in low lighting conditions. There's also a multi-touch touchpad, which features two-way scroll, gestures, two pick buttons, and an image sensor for improved precision. Alternatively, use the pointstick which has two additional pointstick buttons. For precise CAD work, use a USB or Bluetooth mouse.

Impressive serviceability

Reliability is a key tenet of HP ZBook Mobile Workstations. But if a service or upgrade is required, you want to be able to get back up and running as quickly as possible. To help, the HP ZBook 15u features a number of customer self-repair parts, which are all easily accessible from the bottom of the machine, behind the HP Easy Access Door. Simply turn off the machine, remove the optional security screw and slide off the cover to get ready access to the key components (listed below). Repairs and upgrades can take a matter of minutes. They can even be carried out by relatively inexperienced users which could be critical when working on important projects away from the office. Of course, the HP ZBook 15u is also protected by HP Services, which includes a standard 3 years parts, 3 years labor, and 3 years onsite service (3/3/3) limited warranty, so expert help is at hand.

- 1 HP Easy Access Door
- 2 3-cell, 50-WHr, 4.5-AHr battery
- 3 2.5-inch drive (SSD or HDD)
- 4 HP Z Turbo Drive
- 5 WLAN module
- 6 Memory modules
- 7 Screws to release keyboard

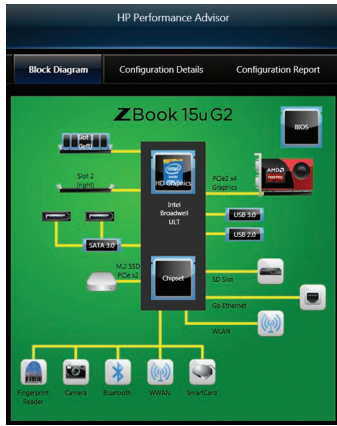


HP and AMD Firepro™ CAD certification

Like all HP Z Workstations, the HP ZBook 15u undergoes a rigorous testing process before it is proven and certified by HP and Independent Software Vendors (ISVs). Design, engineering, and architecture professionals demand performance and reliability from their workstation hardware. HP's application certification process is designed to ensure users receive the best possible experience when running CAD and BIM software on HP Z Workstations. A key part of this process is 3D graphics. HP performs in-depth graphics driver quality testing and performance measurement to ensure the quality of the 3D graphics. If graphics issues are identified, then HP works with AMD's FirePro team and the ISV to resolve them, helping protect users' investment in software and HP hardware.

Access high-end workstation power

The HP ZBook 15u may be equipped for entry-level to mid-range CAD and BIM workflows, but with [HP Remote Graphics Software \(RGS\)](#) it is possible to get complete access to the power of any high-end desktop HP Z Workstation wherever you have a network connection. Possible use cases include instances where complex models exceed 16 GB (the maximum system memory of the HP ZBook 15u), more CPU power is required, high-end graphics are needed for complex 3D models, or where moving large datasets across WAN is not practical. With HP RGS, no data ever leaves the host HP Desktop Workstation. Only pixel data is streamed to the HP ZBook 15u and mouse and keyboard input sent back. This can help project data remain secure inside a company's centralized storage facilities. It can also help reduce sync errors in data management systems. HP RGS is included as standard on HP Z Workstations. For set up, HP RGS sender and receiver software needs to be installed on the host workstation and client. HP RGS also promotes collaboration, and it is possible to share your workstation screen with multiple users simultaneously for 'view only' or full interactive access.



Tune the HP ZBook 15u for your CAD and BIM workflows

HP Performance Advisor features an interactive block diagram to give a crystal clear picture of all the components inside your HP Z Workstation.

HP Performance Advisor, an HP tool for performance optimization, delivers a simple, effective way to keep your HP Z Workstation operating at its peak potential. A software wizard can take you from initial configuration and customization through the optimization of your system for a wide variety of CAD and BIM applications. It can help ensure you are using the best certified graphics driver for your installed applications, optimized for performance and stability. It can offer advice and apply BIOS settings. For example, enabling Intel Hyper-Threading to get maximum performance when ray trace rendering scenes. It can also help you gain a quick and accurate understanding of your entire system in one simple interface, and then help identify bottlenecks by tracking use of memory, CPU and other resources. This can help ensure maximum performance throughout the entire life of your HP ZBook 15u.

An HP ZBook Mobile Workstation to match all needs



	HP ZBook 14 G2 The world's first workstation Ultrabook™ and HP's lightest mobile workstation. Thin and customizable with 14-inch diagonal display.	HP ZBook 15u G2 Slimline workstation Ultrabook™ with 15.6-inch diagonal FHD display. Designed for highly portable CAD.	HP ZBook 15 G2 Mobile workstation redesigned for productivity on the go. Features optional 15.6-inch diagonal QHD+ display (3200 x 1800).	HP ZBook 17 G2 HP's most powerful mobile workstation with incredible expandability and an optional 17.3-inch diagonal DreamColor display.
Operating System	Windows 8.1 Pro 64-bit Windows 7 Professional ⁴	Windows 8.1 Pro 64-bit Windows 7 Professional ⁴	Windows 8.1 Pro 64-bit Windows 7 Professional ⁴	Windows 8.1 Pro 64-bit Windows 7 Professional ⁴
Processor	Dual-core 5th generation Intel® Core™ i5 and i7 processors ⁵	Dual-core 5th generation Intel® Core™ i5 and i7 processors ⁵	Dual- and quad-core 4th generation refresh Intel® Core™ i5 and i7 processors ⁵	Dual- and quad-core 4th generation refresh Intel® Core™ i5 and i7 processors ⁵
Memory	DDR3L SDRAM, 1600 MT/s, 2 SODIMMs, up to 16 GB	DDR3L SDRAM, 1600 MT/s, 2 SODIMMs, up to 16 GB	DDR3L SDRAM, 1600 MT/s, 2 or 4 SODIMMs, up to 32 GB	DDR3L SDRAM, 1600 MT/s, 2 or 4 SODIMMs, up to 32 GB
AMD FirePro™ GPU	AMD FirePro™ M4150 (1 GB GDDR5)	AMD FirePro™ M4170 (1 GB GDDR5)	AMD FirePro™ M5100 (2 GB GDDR5)	AMD FirePro™ M6100 (2 GB GDDR5)
Display	14-inch diagonal LED-backlit (1366x768) or (1600x900) or IPS UWVA* (1920x1080) with/without touch	15.6-inch diagonal LED-backlit anti-glare FHD (1920x1080) (TN or IPS with UWVA*)	15.6-inch diagonal FHD (1920x1080, AG/SVA) FHD (1920x1080, AG/UWVA*) QHD+ (3200x1800, AG/UWVA*)	17.3" diagonal HD+ (1600x900, AG/SVA), FHD (1920x1080, AG/WVA), FHD DreamColor (1920x1080, AG/UWVA*)
Storage	Up to two drives: 256 GB HP Z Turbo Drive (PCIe SSD) and/or SATA HDD (up to 1 TB) or SSD (up to 512 GB) ⁶	Up to two drives: 256 GB HP Z Turbo Drive (PCIe SSD) and/or SATA HDD (up to 1 TB) or SSD (up to 512 GB) ⁶	Up to three drives: 256 GB HP Z Turbo Drive (PCIe SSD) and/or up to 2 SATA HDD (up to 1 TB) or SSD (up to 512 GB) ⁶	Up to four drives: 256 GB HP Z Turbo Drive (PCIe SSD) and/or up to 3 SATA HDD (up to 1 TB) or SSD (up to 512 GB) ⁶
Dimensions and weight	339 x 237 x 21 mm (13.35 x 9.33 x 0.83 in) From 3.77 lbs (1.71 kg)	375.5 x 253.6 x 21.42 mm (14.78 x 9.98 x 0.84 in) From 4.23 lbs (1.91 kg)	381.5 x 257 x 30.5 mm (15 x 10.1 x 1.2 in) From 6.20 lbs (2.82 kg)	416 x 272 x 34 mm (16.37 x 10.7 x 1.33 in) From 7.42 lbs (3.36 kg)

*Ultra Wide Viewing Angle



AEC Magazine focuses exclusively on Building Information Modeling (BIM) technology for architects, engineers and construction professionals, detailing how it can be used to support projects from concept through to operation.

Supporting technologies include design visualization, workstations, 3D laser scanning, 3D printing, project management and more.



DEVELOP3D Magazine gets hands on with the very latest in product development technology and details how it can help leading design and engineering firms take products from concept all the way to manufacture and operation.

Key topics range from 3D CAD/CAM/CAE software and workstation technology to 3D printing, reverse engineering and design visualization.

Screen images courtesy of Autodesk, Factory Five Racing, RAMSA, PTC and Local Motors.

- 1 Not all models qualify as an Ultrabook™
- 2 MIL-STD-810G testing is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions.
- 3 Maximum memory capacities assume Windows 64-bit operating systems or Linux. With Windows 32-bit operating systems, memory above 3 GB may not all be available due to system resource requirements.
- 4 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. See microsoft.com.
- 5 Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 64-bit computing on Intel architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers, and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel® 64 architecture enabled BIOS. Performance will vary depending on your hardware and software configurations. Intel's numbering is not a measurement of higher performance. See intel.com/info/em64t for more information.
- 6 For hard drives and solid state drives, 1 GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 10 GB of system disk (for Windows 7) is reserved for system recovery software.
- 7 Intel® Hyper-Threading - The hyper-threading feature is designed to improve performance of multi-threaded software products; please contact your software provider to determine software compatibility. Not all customers or software applications will benefit from the use of hyperthreading. Go to intel.com/info/hyperthreading for more information, including which processors support HT Technology.

For more information

hp.com/go/zbook15u

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