

Brochure

Inspiration without limits



HP Z Workstations solutions

Spend more time creating and less time waiting. HP Z Workstations help you handle more, do more, and give you limitless creative possibilities. Packed with the newest industry-leading processing, graphics, and innovative technologies, HP Z Workstations provide the tools you need to handle the toughest workstreams.



Think HP Z



HP Z Workstations have been on the market for over 30 years. Designed from the inside out, HP Z Workstations deliver high performance and reliability with the latest innovations and industry-leading technologies. When you need to focus on your work, not your workstation—think HP Z.

Breakthrough industrial design

From the striking design of the HP Z1 to the sleek industrial styling of the desktop models, to the thinner, lighter, business-rugged chassis of the HP ZBook Mobile Workstations, every HP Z Workstation combines stunning aesthetics with everyday practicality.



Tool-free customization

Work isn't static. Expand your system capabilities with ease as your workflow demands grow over time. HP Z Workstations feature a smart tool-less chassis, easy open access doors, and easy rack accessibility to make installing more memory, storage, and I/O options a breeze. Multiple slots and flexible storage bays allow you to install hard drives, SSDs, optical drives, RAID configurations, and more.

The quiet of HP Z Workstations

Great work requires inspiration and inspiration requires focus. HP Z Workstations' clean, modular interior layout maximizes airflow to keep processors and graphics cards running at optimum performance. HP Z Workstations also feature industry-leading acoustics technology, such as high-performance air cooling, so your concentration is never interrupted.

All day, all night reliability

Testing beyond industry standards

You put your workstations through the toughest trials—we do, too. HP Z Workstations, and the components that go into them, undergo rigorous 115,000 hours of testing in the **HP Total Test Process** and HP ZBooks are tested to MIL-STD-810G² standards. Extreme stress tests such as drop, vibration, temperature, shock, dust, and more ensure optimized performance.

HP relationships

Your work requires the best in processing and graphics performance, so HP works closely with vendors to ensure it. High-performance, multi-core Intel® Xeon® and Core™ processors³ are tested and validated by Intel and HP for your workstation-class applications to provide breakthrough performance in processing.

HP works with NVIDIA® and AMD to offer ISV-certified 2D through extreme 3D workstation graphics, including NVIDIA® Quadro® and AMD FirePro™.

Certification for every industry

HP works closely with Independent Software Vendor (ISV) developers to help ensure the most popular applications are thoroughly tested and certified to work on your HP Z Workstation. Whether you're working in media and entertainment or product development, finance or design, oil and gas, or geographic information systems, you can rely on these applications—known and trusted throughout your industry—to deliver rock solid reliability, every minute of every working day.

A long-term investment

Simplify your certification and support burdens and streamline large deployments with **HP Stable and Consistent Offerings**. Simply select your hardware and software components when you customize your HP Z Workstation and be assured that you'll be able to buy that same configuration throughout the lifecycle of the workstation, from product launch through retirement.



A leader in eco-labels

- HP is an industry leader in ENERGY STAR® certified products.
- EPEAT®¹ is a comprehensive environmental rating that helps identify greener computers and other electronic equipment. HP Z Workstations exceed industry requirements and were the first to achieve EPEAT Gold certification.



HP Innovations

Your job made easier

HP Z Workstations offer HP's maximum performance through unique HP technologies. Go beyond the basics to maximize your productivity, make IT management easy, and deliver a complete workstation experience.



HP Performance Advisor

Your trusted advisor

HP Performance Advisor⁴ delivers a simple, effective way to keep your workstation operating at its peak potential. Like having an IT pro always on hand, this pre-installed software can take you from initial configuration and customization through the optimization of your system for each new application and driver you install.

For more information, visit hp.com/go/performanceadvisor



HP Remote Graphics Software

Go out and get inspired

From the factory floor to the boardroom, HP Remote Graphics Software (RGS)⁵ delivers seamless remote access to workstation graphics. Preloaded on every HP Z Workstation, RGS automatically adjusts to network conditions while cutting required bandwidth. Collaborate on graphics projects in real time with multiple users simultaneously and from remote computers in almost any location. With advanced touch recognition features on HP RGS 7, you can easily do real work with workstation-class applications on your HP ZBook 14 or tablet.

For more information, visit hp.com/go/RGS



HP Z Turbo Drive

Shift into a higher gear

Experience ultra-fast storage speeds with the revolutionary HP Z Turbo Drive, an innovative PCIe-based SSD storage solution that reduces system bottlenecks, boot up, calculation, and graphics response times—even with 4K video.

For more information, visit hp.com/go/zturbo



HP DreamColor Technology

Dream in color

Leave no detail uncovered with the brilliance of HP DreamColor technology.⁶ Featuring a palette of over one billion colors, you'll get precise color accuracy and consistent color across your entire digital workflow.⁷

For more information, visit hp.com/go/dreamcolor



HP Z Workstation BIOS

Power up, bring costs down

Reduce power consumption and increase workstation reliability through the innovative HP Z Workstation BIOS featuring preset sleep states, adjustable fan speeds to maximize operating efficiency, and power management features.

For more information, visit hp.com/go/zworkstations



HP Client Management

Take control

Manage your workstation fleet with ease and lower your IT cost. HP Client Management portfolio lets you activate, configure, patch, and update your fleet from a single console.

For more information, visit hp.com/go/zworkstations



Get the best HP Z Workstation for your application

So which is the right HP Z Workstation for your applications? Try our online workstations selection wizard to find out: hp.com/workstationfinder



HP Z Desktops



HP Z All-in-One



HP ZBooks



[HP Z1 G2 Workstation interactive tour](#)

Get the right HP Z Workstation for you

“HP Z Workstations allow us to move in and out of all the different models, platforms, and engines we use to optimize built environments—and to communicate in real time. We can now speed innovation to market in ways our competition hasn’t been able to do yet.”

- Kurt Karnatz, President, Environmental Systems Design

Create your perfect match of flexibility, functionality, computational power and visualization with HP’s broad range of HP Z Workstations.

HP Z Desktops

Fuel your creative vision with a workstation tailored to your demands. HP knows different tasks require different tools and that’s why we offer a complete family of HP Z Desktop Workstations with scalability and performance to tackle your most complex tasks.

HP Z All-in-One

Bring your ideas to life quickly with the elegant and innovative all-in-one HP Z1 Workstation. Loaded with the technologies you need to set your creativity loose.

HP ZBooks

When inspiration strikes, the HP ZBook is there. These superb mobile workstations offer a choice of screen size and are packed with incredible power to take on intensive projects.

Work elegantly

Create brilliant projects with plenty of room to work on the elegant and innovative HP Z1 G2 All-in-One Workstation featuring a stunning touch optional 27-inch diagonal display.⁶ The intuitive design of the HP Z1 allows for simple expansion, customization and connectivity. The HP Z1 G2 is ideal for architects, engineers, M&E professionals and more.

HP Z1 Workstation

Spark creativity

Take computing performance to another level with the HP Z1 G2 featuring the latest Intel processors and a wide range of professional 3D graphics from NVIDIA. Connect in a flash and increase productivity with optional, easily accessible Thunderbolt™ 2 ports.⁸ And see your ideas shine on the brilliant next generation IPS display or the optional 10-point touchscreen.

- Windows 8.1 Pro 64-bit and other editions available⁹
Windows 7 Professional⁹
Linux® Operating Systems
- Intel® Xeon® processor E3-1200 v3 series or 4th Generation Intel® Core™ i3/i5 processor³ options
- 27-inch diagonal IPS display with 2560 x 1440 resolution; optional 10-point touchscreen⁶
- Optional Thunderbolt™ 2 ports⁸ for up to 4x the bandwidth of USB 3.0
- Professional 3D NVIDIA® Quadro® graphics
- Dual cone, front-facing speakers with DTS Studio Sound™

Fuel your creative vision

HP knows different tasks require different tools and that's why we offer a complete family of HP Z Desktop Workstations with scalability and performance to tackle your most complex tasks.

HP Z230 Workstations

Get more power than a PC can deliver

The HP Z230 Workstation delivers reliable performance and scalability for your growing business needs—at PC-like prices. Designed for the demanding workloads of always on workstation applications, the Z230 Workstation is available in the impressively expandable compact Tower or the surprisingly capable Small Form Factor (SFF).



[HP Z230 SFF Workstation interactive tour](#)

[HP Z230 Tower Workstation interactive tour](#)

- Windows 8.1 Pro 64-bit and other editions available⁹
Windows 7 Professional⁹
Linux® Operating Systems
- Powered by the Intel® Xeon® processor E3-1200 series or Intel® Core™ i3/i5/i7 processor family³
- Optional Thunderbolt™ 2⁸ technology for up to 4x the bandwidth of USB 3.0
- HP Z Turbo Drive (PCIe SSD) for double the performance of SATA SSDs
- Wide selection of professional graphics from NVIDIA, AMD, and Intel
- Wide array of USB ports and storage options let you expand
- 92% efficient power supplies standard and available ENERGY STAR® 6.0 configurations

HP Z440 Workstation

Expand your power

Take your business to the next level of performance, expandability, and no compromise reliability in one complete package. The HP Z440 Workstation, with its sleek 4U form factor, tool-less design, and built-in handles makes it simple to expand even in a racked data center environment. The HP Z440 Workstation is well suited for engineers, architects and creative professionals who use graphics intensive applications.



[HP Z440 Workstation interactive tour](#)

- Windows 8.1 Pro 64-bit and other editions available⁹
Windows 7 Professional⁹
Linux® Operating Systems
- Choice of Intel® Xeon® processor E5-1600 v3 and E5-2600 v3 families³ supporting up to 8 cores of processing power
- Up to 128 GB DDR4-2133 MHz Registered ECC memory^{10,11} (with 16 GB DIMMs)
- Optional Thunderbolt™ 2⁸ technology for up to 4x the bandwidth of USB 3.0
- HP Z Turbo Drive G2 (PCIe SSD) for 4x the performance of SATA SSDs
- Support for up to eight displays at peak HD resolutions¹² for maximum viewing area



[HP Z640 Workstation interactive tour](#)

HP Z640 Workstation

Expand your capabilities

Build the perfect workstation for your needs. Configure and reconfigure with ease on the HP Z640 Workstation. With up to 36 discrete processing cores, the dual-socket system packs massive computing power into a whisper-quiet compact design. The HP Z640 Workstation is the ideal solution for environments where space is at a premium including financial services, engineering and construction.

- Windows 8.1 Pro 64-bit and other editions available⁹
Windows 7 Professional⁹
Linux® Operating Systems
- Choice of Intel® Xeon® processor E5-2600 v3 and E5-1600 v3 families³
- Support for 145 W processors powering up to 36 cores in a dual processor configuration³
- Optional Thunderbolt™ 2⁸ technology for up to 4x the bandwidth of USB 3.0
- Up to 256 GB DDR4-2133 MHz Registered ECC memory^{10,11}
- Five high-speed PCIe slots enable greater data throughput to multiple I/O devices
- HP Z Turbo Drive G2 (PCIe SSD) for 4x the performance of SATA SSDs
- Up to 2x high-end 3D graphics cards supported, driving up to four displays for advanced 3D applications
- Up to 4x 2D graphics cards supported, driving up to 8 displays¹² for user environments with stacked displays

HP Z840 Workstation

Take on the hardest projects

Push your computing boundaries with the HP Z840 Workstation that helps you keep up with your biggest projects. Built for high-end computing and visualization, it delivers outstanding performance in one of the industry's most expandable chassis. For workstation tasks requiring maximum computing, graphics, memory, storage and I/O such as simulation, computer-aided engineering, entertainment, and financial services, the HP Z840 Workstation is the perfect choice.



[HP Z840 Workstation interactive tour](#)

- Windows 8.1 Pro 64-bit and other editions available⁹
Windows 7 Professional⁹
Linux® Operating Systems
- Powered by Intel® Xeon® processor E5-2600 v3 family³
- Up to 512 GB DDR4-2133 MHz Registered ECC memory^{10,11}
- High density storage: configure up to 10 internal SFF drives for performance, capacity, and security
- Optional Thunderbolt™ 2⁸ technology for up to 4x the bandwidth of USB 3.0
- Seven high-speed PCIe slots enable greater data throughput to multiple I/O devices
- HP Z Turbo Drive G2 (PCIe SSD) for 4x the performance of SATA SSDs
- Highest-performing GPU computing solutions available in the HP Z family
- Easy access to customize and maintain system components with a tool-less and visually cable-free chassis

Create anywhere

When inspiration strikes, the HP ZBook is there. These superb mobile workstations offer a choice of screen size and are packed with incredible power to take on intensive projects.

HP ZBook 14 Mobile Workstation

Capture your inspiration wherever you go

Create anywhere using HP's thinnest and lightest ZBook workstation Ultrabook™¹³ in a 14-inch diagonal screen size. The HP ZBook 14 G2 delivers impressive professional 3D graphics and outstanding performance even from the most demanding applications. All in all, an unprecedented sleek and reliable design.



[HP ZBook 14 G2 Mobile Workstation interactive tour](#)

- Windows 8.1 Pro 64-bit and other editions available⁹
Windows 7 Professional⁹
Ubuntu Linux®¹⁴
FreeDOS
- Choice of 5th generation Intel® Core™ i5 and i7 processors³
- 14.0-inch (35.6 cm) diagonal display and 3.77 lbs (1.71 kg) for easy mobility
- Workstation-caliber AMD FirePro™ discrete graphics and AMD Enduro™ Technology
- Up to 1.25 TB of max storage¹⁰
- Up to two DDR3L SODIMMs supporting up to 16 GB¹¹ of memory
- HP Z Turbo Drive (PCIe SSD) for incredibly fast storage speeds
- Intuitive 10-point multi-touch screen⁶ option
- Optional secondary battery support⁶

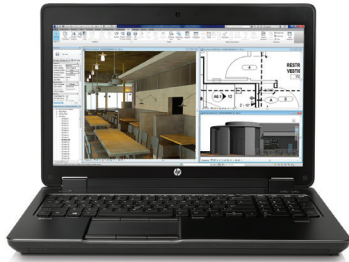
HP ZBook 15u Mobile Workstation

Create anywhere and deliver your best work, using the thin and light 15 inch-diagonal workstation Ultrabook™¹³ with impressive 3D graphics on a 15.6-inch diagonal screen designed to handle intense workloads. Take powerful computing where you need to work. The HP ZBook 15u G2 Mobile Workstation's innovative sleek design is impressive on the road, at client sites, and satellite offices. This workstation Ultrabook™¹³ has redefined mobile computing.



[HP ZBook 15u G2 Mobile Workstation interactive tour](#)

- Windows 8.1 Pro 64-bit and other editions available⁹
Windows 7 Professional⁹
Ubuntu Linux®¹⁴
FreeDOS
- Choice of 5th generation Intel® Core™ i5 and i7 processors³
- 15.6-inch (39.62 cm) diagonal display and 4.23 lbs (1.92 kg) for easy mobility
- Workstation-caliber AMD FirePro™ discrete graphics and AMD Enduro™ Technology
- Up to 1.25 TB of max storage¹⁰
- Up to two DDR3L SODIMMs supporting up to 16 GB¹¹ of memory
- HP Z Turbo Drive (PCIe SSD) for incredibly fast storage speeds
- Optional secondary battery support⁶



[HP ZBook 15 G2 Mobile Workstation
interactive tour](#)

HP ZBook 15 Mobile Workstation

Perform on the go

Work anywhere and be confident the power you need is at your fingertips. Take advantage of the HP ZBook 15 G2's powerful processing and graphics, simple scalability, and blazing-fast connectivity to perform and collaborate at the speed of creativity.

- Windows 8.1 Pro 64-bit and other editions available⁹
Windows 7 Professional⁹
Ubuntu Linux^{®14}
- Dual- and quad-core 4th generation refresh Intel[®] Core[™] i5 and i7 processors³
- 15.6-inch (39.6 cm) diagonal display in your choice of FHD or QHD+ resolutions¹⁵
- Drive up to five displays with NVIDIA graphics¹⁶
- Support for NVIDIA[®] Optimus[®] and AMD Enduro[™] Technology
- Up to 2.25 TB of max storage¹⁰
- Up to four SODIMMS supporting up to 32 GB¹¹ of memory
- Thunderbolt[™] 2[®] technology for up to 4x the bandwidth of USB 3.0
- HP Z Turbo Drive (PCIe SSD) for incredibly fast storage speeds
- Tool-less hard drive release via green touch point
- Two secondary external battery options⁶
- Common docking station options

HP ZBook 17 Mobile Workstation

Expand your creative capabilities

On the go creativity knows no limits with a vivid 17.3-inch diagonal HP ZBook 17 G2. Showcase your best work in the office or on the go and take advantage of HP's most powerful processing, graphics, simple scalability, and blazing-fast connectivity to perform and collaborate at the speed of creativity.

- Windows 8.1 Pro 64-bit and other editions available⁹
Windows 7 Professional⁹
Ubuntu Linux^{®14}
- Dual- and quad-core 4th generation refresh Intel[®] Core[™] i5 and i7 processors³
- 17.3-inch (43.9 cm) diagonal display in your choice of HD+, FHD resolutions¹⁵ or HP DreamColor panel⁶
- Drive up to five displays with NVIDIA graphics¹⁶
- Up to 3.25 TB of max storage¹⁰
- Up to 32 GB¹¹ of memory
- HP Z Turbo Drive (PCIe SSD) for incredibly fast storage speeds
- Support for NVIDIA[®] Optimus^{®17} and AMD Enduro[™] Technology
- Thunderbolt[™] 2[®] technology for up to 4x the bandwidth of USB 3.0
- Tool-less hard drive release via green touch point
- Two secondary external battery options⁶
- Common docking station options



[HP ZBook 17 G2 Mobile Workstation
interactive tour](#)



Extended Services

Your HP Z Workstation experience doesn't end at the time of purchase, so why should our support? HP's Warranty, along with a range of optional services, ensures you have the right support at the right time.

HP Warranty

Every HP Z Workstation comes with a standard 3-3-3 limited warranty (three years parts, three years labor and three years next business day²⁰ onsite support). You may also benefit from account management and premium call center support.

HP Total Care

Behind every HP Z Workstation there's a whole infrastructure of service and support packages designed to ensure that you get maximum value and benefit over the full life of your product.

For more information, please visit: hp.com/go/totalcare

HP Care Pack Services²⁰

Choose to expand upon your standard, limited warranty by taking advantage of our optional HP Care Pack Services, and you have the reassurance of knowing that whatever's around the next corner, you're covered.

For more information, please visit: hp.com/go/cpc

Expand your horizons

Design your workspace with HP DreamColor and HP Z Displays to create a whole world view. Choose to connect multiple displays¹² and you're on your way to expanded productivity.

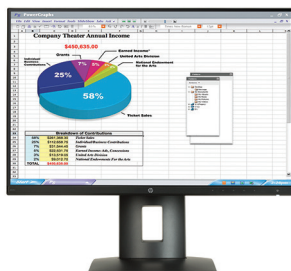
HP High Definition Narrow Bezel Z Displays

HP Z24n Narrow Bezel IPS Display

Take it to the edge

Create a seamless 16:10 multi-display³⁰ setup with the HP Z24n Narrow Bezel IPS Display, which has a virtually borderless screen for maximum impact imagery, factory color calibration to ensure optimal color accuracy, and flexible connectivity for all of your devices.

- Enjoy a stunning 1920 x 1200 resolution³¹ experience with more than two million pixels and a three-sided borderless design that maximizes the 24-inch diagonal screen and enables seamless tiling of multiple displays.³⁰
- Extend your visual workspace and instantly mirror your smart phone or tablet content and charge your devices through MHL.²⁹ Use picture-in-picture or picture-by-picture to get views from your connected devices and boost your multi-tasking productivity.





HP Z24nq and 24nf Narrow Bezel IPS Displays

Borderless Full and Quad HD

Deploy a seamless multi-display³⁰ setup with a 24-inch diagonal screen in either Full HD on the HP Z24nf or Quad HD on the HP Z24nq with factory color calibration and flexible connectivity for all of your devices.

- Experience Full and Quad HD views of your content on a 24-inch diagonal screen with a three-sided borderless design that enables seamless tiling of multiple displays.³⁰
- Extend your visual workspace and instantly mirror your smart phone or tablet content and charge your devices through MHL.²⁹ Use picture-in-picture or picture-by-picture to get views from your connected devices and boost your multi-tasking productivity.

HP Z25n and Z27n Narrow Bezel IPS Displays

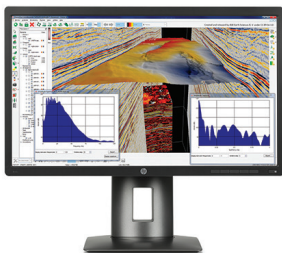
Edge-to-edge Quad HD

Enable a virtually borderless panorama of multiple displays¹⁰ with the HP Z25n and HP Z27n Narrow Bezel IPS Displays, which have edge-to-edge screens for maximum Quad HD impact, out-of-the-box factory color calibration, up to 99% sRGB color gamut, and flexible connectivity for all of your devices.

- Experience Quad HD views of your content on a 25-inch or 27-inch diagonal, 2560 x 1440 resolution³¹ screen with a three-sided borderless design that enables seamless tiling of multiple displays.³⁰
- Extend your visual workspace and instantly mirror your smart phone or tablet content and charge your devices through MHL.²⁹ Use picture-in-picture or picture-by-picture to get views from your connected devices and boost your multi-tasking productivity.



HP UHD 4K, 5K Z Displays



HP Ultra High Definition 4K/5K Z Displays

HP Z24s and Z27s IPS UHD 4K Displays

Join the Ultra High Definition movement

Expand your visual workspace with the 24-inch diagonal HP Z24s IPS UHD Display or the 27-inch diagonal Z27s IPS UHD Display, which deliver UHD 4K¹⁹ presentation with out-of-the-box color calibration.

- Enjoy massive 3840 x 2160 resolution,²⁷ sRGB color gamut, and 1.07 billion colors⁷ for incredible color presentation of highly-detailed digital workflows. Wide viewing angles keep the line of sight open for one or many viewers.
- Extend your visual workspace and instantly mirror your smart phone or tablet content and charge your devices through MHL.²⁹ Use picture-in-picture or picture-by-picture to get views from your connected devices and boost your multi-tasking productivity.

HP Z27q IPS 5K Display

Get real

Redefine lifelike image presentation with the HP Z27q 27-inch IPS 5K Display, which delivers more screen real estate and color clarity with an astounding 5K resolution.¹⁹

- Experience amazingly sharp details on a 27-inch diagonal 5120 x 2880 resolution¹⁹ screen with 14.7 MP, a 16:9 aspect ratio, and high brightness. Wide viewing angles make every seat a great seat.
- Extend your visual workspace and instantly mirror your smart phone or tablet content and charge your devices through MHL.²⁹



HP Specialty Z Displays

HP Z34c Curved Display



Immerse yourself in the curve

Raise the bar with the HP Z34c Curved Display—34 diagonal inches of an elegant, immersive, curved visual and audio experience with enhanced peripheral readability for your workstation, PC, and mobile device content.

- Enhance your visual perception with a thin, curved display, ultra-high resolution, and 21:9 aspect ratio that increases your field of vision.

HP Zvr Virtual Reality Display



Get up close and personal with every project

Change the way you think, work, and create with the HP Zvr 23.6-inch Virtual Reality Display, the first commercial 3D display from HP that delivers a virtual-holographic 3D³² image so you can see every angle and curve in lifelike detail.

- Get an immersive 3D³² experience with glasses that have five tracking markers recognized by the display's sensors and algorithms. Pull up the holographic image to rotate, manipulate, navigate, and zoom in and out of every detail with the stylus pen.³³

Gold-standard color-critical displays

HP DreamColor Z24x Professional Display



Turn on your creativity with a premium display

Enjoy pure, consistent color accuracy from design to production with push-button color space selection and easy color calibration. The 24-inch diagonal DreamColor panel produces up to 1.07 billion colors from a massive color gamut covering 99% of Adobe® RGB.

- Pro-class color quality with 100% coverage of sRGB, BT.709 and 99% of Adobe RGB. Crisp and clear from 1000:1 contrast ratio⁷ and high brightness on a 1920 x 1200 resolution wide-angle IPS panel.
- Create your own custom color space and calibrate any of the five color space presets—sRGB, Adobe RGB, BT.709, User and Native—with the optional HP DreamColor Calibration Solution.⁶

HP DreamColor Z27x Professional Display



Astonishing performance for the color professional

Work in brilliant, trusted color and bring your ideas to life with the HP DreamColor Z27x Professional Display, featuring HP's unrivaled integrated calibration engine, 4K¹⁹ input support, and consistent color that drives up to 1.07 billion onscreen colors.

- Consistently deliver rich, accurate colors and ultra-deep blacks with HP's custom-engineered 27-inch diagonal DreamColor panel. Get massive 2560 x 1440 resolution and crisp, clear presentation from 1000:1 typical, 800:1 minimum contrast ratio and high brightness.⁷
- Experience up to 1.07 billion colors with 1,024 tones per channel as the HP DreamColor Engine⁷ powers through your 4K content¹⁹ with consistent color accuracy and easily handles today's most demanding professional workflows.

HP Z Workstations quick reference guide

	HP Z1 G2	HP Z230 SFF	HP Z230 Tower
Operating systems	Windows 8.1 Pro 64-bit ⁹ Windows 7 Professional 64-bit (available through downgrade rights from Windows 8.1 Pro 64-bit) ⁹ Windows 7 Professional (MSNA) 64-bit ⁹ HP Installer Kit for Linux [®] (includes drivers for 64-bit OS versions of RHEL 5 & 6 and SUSE Linux [®] Enterprise Desktop 11) Red Hat [®] Enterprise Linux [®] Desktop (Paper license with 1 year support; no preinstalled OS)	Windows 8.1 Pro 64-bit ⁹ Windows 7 Professional 64-bit (available through downgrade rights from Windows 8.1 Pro 64-bit) ⁹ Windows 7 Professional (MSNA) 64-bit ⁹ HP Installer Kit for Linux [®] (includes drivers for 64-bit OS versions of RHEL 5 & 6 and SUSE Linux [®] Enterprise Desktop 11) Red Hat [®] Enterprise Linux [®] Desktop (Paper license with 1 year support; no preinstalled OS)	Windows 8.1 Pro 64-bit ⁹ Windows 7 Professional 64-bit (available through downgrade rights from Windows 8.1 Pro 64-bit) ⁹ Windows 7 Professional (MSNA) 64-bit ⁹ HP Installer Kit for Linux [®] (includes drivers for 64-bit OS versions of RHEL 5 & 6 and SUSE Linux [®] Enterprise Desktop 11) Red Hat [®] Enterprise Linux [®] Desktop (Paper license with 1 year support; no preinstalled OS)
Processor/chipset	Intel [®] Xeon [®] Processor E3-1200 v3 series ³ 4th Generation Intel [®] Core [™] i3, i5 Processors ³ Intel [®] C226 Chipset	Intel [®] Xeon [®] Processor E3-1200v3 series ³ Intel [®] Core [™] i3/i5/i7 processor family ³ Intel [®] C226 Chipset Intel [®] Pentium [®] G3220 processor ³	Intel [®] Xeon [®] Processor E3-1200v3 series ³ Intel [®] Core [™] i3/i5/i7 processor family ³ Intel [®] C226 Chipset
Slots available/maximum memory/ number of memory channels²¹	4 DIMM slots, up to 32 GB DDR3 ECC 1866 MHz/16 GB DDR3 nECC 1866 MHz 2 channels per CPU	4 DIMM slots, up to 32 GB ECC/non-ECC, DDR3 1600 MHz (ECC/non-ECC choice and actual memory speed dependent on processor capability)	4 DIMM slots, up to 32 GB ECC/non-ECC, DDR3 1600 MHz (ECC/non-ECC choice and actual memory speed dependent on processor capability)
Expansion slots	1 MXM 3.1 (dedicated for graphics) 2 miniPCIe/mSATA (full-length) Optional Thunderbolt [™] 2 ⁸ via PCIe Card	1 PCIe Gen3 x16 1 PCIe Gen2 x4 slot/x16 connector 1 PCIe Gen2 x1 slot/x4 connector 1 PCIe Gen2 x1 slot All slots are Low Profile Optional Thunderbolt [™] 2 ⁸ via PCIe Card	1 PCIe Gen3 x16 1 PCIe Gen2 x4 slot/x16 connector 1 PCIe Gen2 x1 slot/x4 connector 1 PCIe Gen2 x1 slot 1 PCI 32-bit Optional Thunderbolt [™] 2 ⁸ via PCIe Card
Graphics	Intel [®] HD Graphics 4400 and 4600 (Intel [®] Core [™] i3 and i5 Processors) Intel [®] HD Graphics P4600 (Intel [®] Xeon [®] E3-12x5v3 Processors) NVIDIA [®] Quadro [®] K2100M NVIDIA [®] Quadro [®] K3100M NVIDIA [®] Quadro [®] K4100M	Intel [®] HD Graphics available on select processors NVIDIA [®] NVS [™] 310 NVIDIA [®] NVS [™] 315 NVIDIA [®] NVS [™] 510	AMD FirePro [™] V3900 NVIDIA [®] Quadro [®] 410 NVIDIA [®] Quadro [®] K600 Intel [®] HD Graphics available on select processors NVIDIA [®] NVS [™] 310 NVIDIA [®] NVS [™] 315 NVIDIA [®] NVS [™] 510 AMD FirePro [™] V3900 NVIDIA [®] Quadro [®] 410
Maximum supported displays²⁸	One external display via display port	6 displays	6 displays
Controllers and HDDs^{10,22}	Integrated SATA Controller, RAID 0,1 supported: 3 ports, 6 Gb/s Up to (1) 3.5-inch 7200 rpm SATA drives: 500 GB, 1, 2, 3 TB Up to (2) 2.5-inch 10K rpm SATA drives: 250, 500 GB, 1 TB (2 TB max) Up to (2) 2.5-inch SATA SSD drives: 128, 180, 240, 256, 480, 512 GB, 1 TB (2 TB max) Up to (1) mSATA SSD drives: 256 GB Up to (1) 2.5-inch SATA self-encrypting boot drive (SED): 180 GB Up to (1) 2.5-inch SATA self-encrypting solid state boot drive (SED SSD) drives, 256 GB	Integrated SATA Controller, RAID 0,1 supported: 5 ports, 6 Gb/s Up to (2) 3.5-inch 7200 rpm SATA drives: 500 GB, 1, 2 or 3 TB (6 TB max) Up to (2) 2.5-inch 10K rpm SATA drives: 250, 500 GB, 1 TB (2 TB max) Up to (2) 2.5-inch SATA SSD drives: 128, 180, 240, 256, 480, 512 GB (1 TB max) Up to (1) 2.5-inch SATA self-encrypting solid state boot drive (SED SSD): 256 GB, 256 GB max Up to (1) 2.5-inch SATA self-encrypting 7200 rpm boot drive (SED): 180, 500 GB, 500 GB max Optional (1) 64 GB SSD Disk Cache Module can be used in conjunction with up to (2) SATA HDDs in RAID 0/RAID 1 using Intel [®] Smart Response Technology. Up to (1) HP Z Turbo Drive PCIe SSD: 256, 512 GB Up to (1) mSATA SSD drives: 256 GB	Integrated SATA Controller, RAID 0,1 supported: 5 ports, 6 Gb/s Up to (3) 3.5-inch 7200 rpm SATA drives: 500 GB, 1, 2 or 3 TB (9 TB max) Up to (3) 2.5-inch 10K rpm SATA drives: 250, 500 GB, 1 TB (3 TB max) Up to (3) 2.5-inch SATA SSD drives: 128, 180, 240, 256, 480, 512 GB (1 TB max) Up to (1) 2.5-inch SATA self-encrypting solid state boot drive (SED SSD): 256 GB, 256 GB max Up to (1) 2.5-inch SATA self-encrypting 7200 rpm HDD (SED HDD): 180, 500 GB, 500 GB max Optional (1) 64 GB SSD Disk Cache Module can be used in conjunction with up to (2) SATA HDDs in RAID 0/RAID 1 using Intel [®] Smart Response Technology. Up to (1) HP Z Turbo Drive PCIe SSD: 256, 512 GB
Optical drives^{23,24}	DVD-ROM slim tray load DVD+/-RW DL Super Multi slim tray load HP Blu-ray Writer slim tray load 1 SD 4.0 Media Card Reader	DVD-ROM DVD+/-RW DL Super Multi HP Blu-ray Writer HP 15-in-1 Media Card Reader	DVD-ROM DVD+/-RW DL Super Multi HP Blu-ray Writer HP 15-in-1 Media Card Reader
Communications	Intel I217LM Network Connection (Intel [®] vPro [™] with Intel [®] AMT 9.0) Integrated Intel dual-band AC 7260 802.11ac Wireless LAN & Bluetooth 4 Combo Card	Intel I217LM Network Connection (Intel [®] vPro [™] with Intel [®] AMT 9.0) Optional Intel [®] GbE NIC WLAN Intel [®] 7260 802.11 a/b/g/n PCIe x 1 NIC	Intel [®] I217LM Network Connection (Intel [®] vPro [™] with Intel [®] AMT 9.0) Optional Intel [®] GbE NIC WLAN Intel [®] 7260 802.11 a/b/g/n PCIe x 1 NIC

	HP Z440	HP Z640	HP Z840
Operating systems	Windows 8.1 Pro 64-bit ⁹ Windows 7 Professional 64-bit (available through downgrade rights from Windows 8.1 Pro 64-bit) ⁹ Windows 7 Professional (MSNA) 64-bit ⁹ HP Installer Kit for Linux® (includes drivers for 64-bit OS versions of RHEL 5 & 6 and SUSE Linux® Enterprise Desktop 11) Red Hat® Enterprise Linux® Desktop (Paper license with 1 year support; no preinstalled OS)	Windows 8.1 Pro 64-bit ⁹ Windows 7 Professional 64-bit (available through downgrade rights from Windows 8.1 Pro 64-bit) ⁹ Windows 7 Professional (MSNA) 64-bit ⁹ HP Installer Kit for Linux® (includes drivers for 64-bit OS versions of RHEL 5 & 6 and SUSE Linux® Enterprise Desktop 11) Red Hat® Enterprise Linux® Desktop (Paper license with 1 year support; no preinstalled OS)	Windows 8.1 Pro 64-bit ⁹ Windows 7 Professional 64-bit (available through downgrade rights from Windows 8.1 Pro 64-bit) ⁹ Windows 7 Professional (MSNA) 64-bit ⁹ HP Installer Kit for Linux® (includes drivers for 64-bit OS versions of RHEL 5 & 6 and SUSE Linux® Enterprise Desktop 11) Red Hat® Enterprise Linux® Desktop (Paper license with 1 year support; no preinstalled OS)
Processor/chipset	Intel® Xeon® Processor E5-1600v3 series ³ Intel® Xeon® Processor E5-2600v3 series ³ Intel® C612 Chipset	Intel® Xeon® Processor E5-1600v3 series ³ Intel® Xeon® Processor E5-2600v3 series ³ Intel® C612 Chipset	Intel® Xeon® Processor E5-2600v3 series ³ Intel® C612 Chipset
Slots available/maximum memory/number of memory channels²¹	8 DIMM slots; Up to 128 GB DDR4-2133 MHz Registered ECC (w/16 GB DIMMs)	Up to 8 DIMM slots with 2 CPUs, up to 256 GB DDR4-2133 MHz Registered ECC (w/32 GB DIMMs)	16 DIMM slots, up to 512 GB DDR4-2133 MHz Registered ECC
Expansion slots	2 PCIe Gen3 x16 1 PCIe Gen3 x8 (open-ended connector) 1 PCIe Gen2 x4 (open-ended connector) 1 PCIe Gen2 x1 (open-ended connector) 1 PCI 32-bit/33 MHz (legacy) Optional Thunderbolt™ 2 ⁸ via PCIe Card	2 PCIe Gen3 x16 1 PCIe Gen3 x8 (open-ended connector) 1 PCIe Gen2 x8 (x4 elec.; open-ended connector) 1 PCIe Gen2 x4 (x1 elec.; open-ended connector) – not available with riser installed 1 Legacy PCI Optional Thunderbolt™ 2 ⁸ via PCIe Card	3 PCIe Gen3 x16 2 PCIe Gen3 x8 (x16 mechanically) 1 PCIe Gen3 x4 (x8 mechanically) 1 PCIe Gen2 x4 (x8 mechanically) Optional Thunderbolt™ 2 ⁸ via PCIe Card
Graphics	NVIDIA® NVS™ 310 NVIDIA® NVS™ 315 NVIDIA® NVS™ 510 NVIDIA® Quadro® K420 NVIDIA® Quadro® K620 AMD FirePro™ W2100 NVIDIA® Quadro® K2200 NVIDIA® Quadro® K4200	AMD FirePro™ W5100 AMD FirePro™ W7100 NVIDIA® Quadro® K5200 NVIDIA® Quadro® K6000 NVIDIA® Tesla® K40	NVIDIA® NVS™ 310 NVIDIA® NVS™ 315 NVIDIA® NVS™ 510 NVIDIA® Quadro® K420 NVIDIA® Quadro® K620 AMD FirePro™ W2100 NVIDIA® Quadro® K2200 NVIDIA® Quadro® K4200
Maximum supported displays²⁸	8 displays	8 displays	12 displays
Controllers and HDDs^{10,22}	Integrated SATA Controller, RAID 0,1,10 supported: 6 ports, 6 Gb/s Up to (4) 3.5-inch 15K rpm SAS drives: 300, 600 GB, 2.4 TB max Up to (4) 2.5-inch 10K rpm SAS drives: 300, 600 GB, 1.2 TB, 4.8 TB max Up to (4) 3.5-inch 7200 rpm SATA drives: 500 GB, 1, 2, 3, 4 TB, 16 TB max Up to (1) 2.5-inch SATA Self-Encrypting Drive (SED): 500 GB Opal 1 Up to (4) 2.5-inch 6 Gb/s SATA Solid State Drives: 128, 256, 512 GB, 1 TB, 4 TB max Up to (1) 2.5-inch 6 Gb/s SATA Self-Encrypting Solid State Drive (SED SSD): 256 GB Opal 2 Up to (4) 2.5-inch Intel® Pro 1500 6 Gb/s SATA Solid State Drive: 180 GB, 720 GB max Up to (4) 2.5-inch Samsung Enterprise 6 Gb/s SATA Solid State Drives: 240, 480 GB, 1.9 TB max Up to (2) PCIe SSD HP Z Turbo Drives: 256 GB, 512 GB, 1 TB max Note: Fourth 3.5-inch drive occupies one external 5.25-inch bay.	Integrated SATA Controller, RAID 0,1,10 supported: 6 ports, 6 Gb/s Up to (4) 3.5-inch 15K rpm SAS drives: 300, 600 GB, 2.4 TB max Up to (4) 2.5-inch 10K rpm SAS drives: 300, 600 GB, 1.2 TB, 4.8 TB max Up to (4) 3.5-inch 7200 rpm SATA drives: 500 GB, 1, 2, 3, 4 TB, 16 TB max Up to (1) 2.5-inch SATA Self-Encrypting Drive (SED): 500 GB Opal 1 Up to (4) 2.5-inch 6 Gb/s SATA Solid State Drives: 128, 256, 512 GB, 1 TB, 4 TB max Up to (1) 2.5-inch 6 Gb/s SATA Self-Encrypting Solid State Drive (SED SSD): 256 GB Opal 2 Up to (4) 2.5-inch Intel® Pro 1500 6 Gb/s SATA Solid State Drive: 180 GB, 720 GB max Up to (4) 2.5-inch Samsung Enterprise 6 Gb/s SATA Solid State Drives: 240, 480 GB, 1.9 TB max Up to (2) PCIe SSD HP Z Turbo Drives: 256 GB, 512 GB, 1 TB max Note: Fourth drive occupies one external 5.25-inch bay.	Integrated SATA Controller, RAID 0,1,10 supported: 6 ports, 6 Gb/s Integrated SAS controller, RAID 0,1,10 supported: 8 ports 6 Gb/s Up to (5) 3.5-inch 6 Gb/s 15k rpm SAS HDD: 300, 600 GB Up to (5) 3.5-inch 10k rpm SAS SFF HDD: 300, 600 GB, 1.2 TB max Up to (6) 3.5-inch 6 Gb/s 7200 rpm SATA HDD: 500 GB, 1, 2 TB, 3 TB max Up to (6) 2.5-inch 6 Gb/s SATA SSD: 128, 256, 512 GB, 1 TB max Up to (2) Samsung Enterprise SATA SSD: 240, 480 GB Up to (1) 1500 SATA SSD: 180 GB Up to (2) PCIe SSD HP Z Turbo Drives, 256 GB, 512 GB, 1 TB max
Optical drives^{23,24}	HP DX115 Removable HDD Frame/Carrier HP 9.5 mm Slim SuperMulti DVD Writer HP 9.5 mm Slim DVD-ROM Drive HP 9.5 mm Slim BDXL Blu-ray Writer HP 15-in-1 Media Card Reader	HP DX115 Removable HDD Frame/Carrier HP 9.5 mm Slim SuperMulti DVD Writer HP 9.5 mm Slim DVD-ROM Drive HP 9.5 mm Slim BDXL Blu-ray Writer HP 15-in-1 Media Card Reader	HP DX115 Removable HDD Frame/Carrier HP 9.5 mm Slim SuperMulti DVD Writer HP 9.5 mm Slim DVD-ROM Drive HP 9.5 mm Slim BDXL Blu-ray Writer HP 15-in-1 Media Card Reader
Communications	Integrated Intel® I218LM PCIe GbE Controller Intel® Ethernet I210-T1 PCIe NIC HP X520 10GbE Dual Port Adapter HP 10GbE SFP+ SR Transceiver HP 361T PCIe Dual Port Gigabit NIC Intel® 7260 802.11 a/b/g/n PCIe WLAN NIC	Integrated Intel® I218LM PCIe GbE Controller Intel® Ethernet I210-T1 PCIe NIC HP X520 10GbE Dual Port Adapter HP 10GbE SFP+ SR Transceiver HP 361T PCIe Dual Port Gigabit NIC Intel® 7260 802.11 a/b/g/n PCIe WLAN NIC	HP X520 10GbE Dual Port Adapter HP 10GbE SFP+ SR Transceiver Intel® Ethernet I210-T1 PCIe NIC Intel® 7260 802.11 a/b/g/n PCIe WLAN NIC Integrated Intel® I210AT PCIe GbE Controller Integrated Intel® I218LM PCIe GbE Controller HP 361T PCIe Dual Port Gigabit NIC

HP Z Workstations quick reference guide

	HP ZBook 14 G2	HP ZBook 15u G2
Operating systems	Windows 8.1 Pro 64-bit and other editions available ⁹ Windows 7 Professional ⁹ Ubuntu Linux ^{®14} FreeDOS	Windows 8.1 Pro 64-bit and other editions available ⁹ Windows 7 Professional ⁹ Ubuntu Linux ^{®14} FreeDOS
Processor/chipset	Dual-core 5th generation Intel® Core™ i5 and i7 processors ³ Chipset is integrated with processor	Dual-core 5th generation Intel® Core™ i5 and i7 processors ³ Chipset is integrated with processor
Slots available/maximum memory/number of memory channels²¹	DDR3L SDRAM, 1600 MHz, 2 SODIMMs, up to 16 GB	DDR3L SDRAM, 1600 MHz, 2 SODIMMs, up to 16 GB
Expansion slots	1 Secure Digital 1 Smart Card Reader	1 Secure Digital 1 Smart Card Reader
Graphics	AMD FirePro™ M4150 (1 GB dedicated GDDR5) AMD Enduro™ Technology	AMD FirePro™ M4170 (1 GB dedicated GDDR5) AMD Enduro™ Technology
Maximum supported displays²⁸	Up to 3 displays	Up to 3 displays
Controllers and HDDs¹⁰	500 GB up to 1 TB SATA (7200 rpm) 500 GB SATA SED (7200 rpm) 500 GB SATA FIPS 140-2 SED (5400 rpm) 128 GB up to 512 GB SATA SSD 180 GB up to 256 GB SATA SE SSD 256 GB HP Z Turbo Drive (PCIe SSD)	500 GB up to 1 TB SATA (7200 rpm) 500 GB SATA SED (7200 rpm) 500 GB SATA FIPS 140-2 SED (5400 rpm) 128 GB up to 512 GB SATA SSD 180 GB up to 256 GB SATA SE SSD 256 GB HP Z Turbo Drive (PCIe SSD)
Optical drives^{23,24}	N/A	N/A
Communications	Ethernet: Intel® (I218-LM) Gigabit Network WLAN: Intel® Dual Band Wireless-AC 7265 802.11a/b/g/n (2x2) and Bluetooth®; Intel® Dual Band Wireless-AN 7265 802.11a/b/g/n (2x2) and Bluetooth; Intel® Dual Band Wireless-NB 7265 802.11a/b/g/n (2x2) Wi-Fi only; Intel® Dual Band Wireless-AC 3160 802.11a/b/g/n (1x1) and Bluetooth NFC: Integrated NFC with Antenna option WWAN: HP lt4211 LTE/EV-DO/HSPA+ Gobi 4G Module; HP lt4112 LTE/HSPA+ Gobi 4G Module; HP hs3110 HSPA+ Mobile Broadband Module	Ethernet: Intel® (I218-LM) Gigabit Network WLAN: Intel® Dual Band Wireless-AC 7265 802.11a/b/g/n (2x2) and Bluetooth®; Intel® Dual Band Wireless-AN 7265 802.11a/b/g/n (2x2) and Bluetooth; Intel® Dual Band Wireless-NB 7265 802.11a/b/g/n (2x2) Wi-Fi only; Intel® Dual Band Wireless-AC 3160 802.11a/b/g/n (1x1) and Bluetooth NFC: Integrated NFC with Antenna option WWAN: HP lt4211 LTE/EV-DO/HSPA+ Gobi 4G Module; HP lt4112 LTE/HSPA+ Gobi 4G Module; HP hs3110 HSPA+ Mobile Broadband Module

	HP ZBook 15 G2	HP ZBook 17 G2
Operating systems	Windows 8.1 Pro 64-bit and other editions available ⁹ Windows 7 Professional ⁹ Ubuntu Linux ^{®14} FreeDOS	Windows 8.1 Pro 64-bit and other editions available ⁹ Windows 7 Professional ⁹ Ubuntu Linux ^{®14} FreeDOS
Processor/chipset	Dual- and quad-core 4th generation refresh Intel® Core™ i5 and i7 processors ³ Mobile Intel® QM87 chipset	Dual- and quad-core 4th generation refresh Intel® Core™ i5 and i7 processors ^{3,25} Mobile Intel® QM87 chipset
Slots available/maximum memory/number of memory channels²¹	DDR3L SDRAM, 1600 MHz, 2 or 4 SODIMMs, up to 32 GB Two SODIMM slots (dual-core processor) or four SODIMM slots (quad-core processor) supporting dual-channel memory	DDR3L SDRAM, 1600 MHz, 2 or 4 SODIMMs, up to 32 GB Two SODIMM slots (dual-core processor) or four SODIMM slots (quad-core processor) supporting dual-channel memory
Expansion slots	1 ExpressCard/54 1 Secure Digital 1 Smart Card Reader 1 Thunderbolt™ 2 ⁸	1 ExpressCard/54 1 Secure Digital 1 Smart Card Reader 1 Thunderbolt™ 2 ⁸
Graphics	NVIDIA® Quadro® (K610M, K1100M, K2100M) professional graphics AMD FirePro™ M5100 professional graphics OpenGL support/ISV certifications DisplayPort 1.2; NVIDIA® Mosaic Technology/AMD Eyefinity for Multi-monitor support NVIDIA® Optimus® Technology supported ¹⁷ AMD Enduro™ Technology supported	AMD FirePro™ M6100 NVIDIA® Quadro® K1100M NVIDIA® Quadro® K2200M NVIDIA® Quadro® K3100M NVIDIA® Quadro® K4100M NVIDIA® Quadro® K5100M NVIDIA® Optimus® Technology supported ¹⁷ AMD Enduro™ Technology supported
Maximum supported displays²⁸	Up to 5 displays	5 displays
Controllers and HDDs¹⁰	500/750 GB, 1 TB 7200 rpm SMART SATA II 500 GB 7200 rpm SMART SATA II Self Encrypting Drive 500 GB 5400 rpm SMART SATA II Self Encrypting Drive FIPS 140-2 compliant 256 GB Z Turbo Drive (PCIe Solid State Drive) 128/180/240/256/512 GB SATA 6 Gb/s	500/750 GB, 1 TB 7200 rpm SMART SATA II 500 GB 7200 rpm SMART SATA II Self Encrypting Drive 500 GB 5400 rpm SMART SATA II Self Encrypting Drive FIPS 140-2 compliant 128/180/240/256/512 GB SATA 6 Gb/s 256 GB Z Turbo Drive (PCIe Solid State Drive)
Optical drives^{23,24}	Fixed 9.5 mm SATA optical drive Blu-ray R/RE DVD+/-RW SuperMulti DL Drive, Blu-ray ROM DVD+/-RW SuperMulti DL Drive, DVD+/-RW SuperMulti DL Drive	Blu-ray R/RE DVD+/-RW SuperMulti DL Blu-ray ROM DVD+/-RW SuperMulti DL DVD+/-RW SuperMulti DL DVD-ROM
Communications	PCI Express 10/100/1000 Intel® NIC WLAN: Intel® Dual Band Wireless-NB 7260 802.11 a/b/g/n (2x2) Wi-Fi; Intel® Dual Band Wireless-AC 7260 802.11 a/b/g/n/ac (2x2) Wi-Fi and Bluetooth® 4.0 combo; Intel® Dual Band Wireless-AN 7260 802.11 a/b/g/n (2x2) Wi-Fi and Bluetooth 4.0 combo WWAN: HP hs3110 HSPA+ Mobile Module; HP lt4211 LTE/EV-DO/HSPA+ Gobi4G Module; HP lt4112 LTE/HSPA+ Mobile Broadband Module 2x2 antennas in LCD enclosure User upgradeable wireless WWAN (HSPA+ NGFF) 4 G LTE WWAN NGFF – select countries	PCI Express 10/100/1000 Intel® NIC WLAN: Intel® Dual Band Wireless-NB 7260 802.11 a/b/g/n (2x2) Wi-Fi; Intel® Dual Band Wireless-AC 7260 802.11 a/b/g/n/ac (2x2) Wi-Fi and Bluetooth® 4.0 combo; Intel® Dual Band Wireless-AN 7260 802.11 a/b/g/n (2x2) Wi-Fi and Bluetooth 4.0 combo WWAN: HP hs3110 HSPA+ Mobile Module; HP lt4211 LTE/EV-DO/HSPA+ Gobi4G Module; HP lt4112 LTE/HSPA+ Mobile Broadband Module 2x2 antennas in LCD enclosure User upgradeable wireless WWAN (HSPA+ NGFF) 4 G LTE WWAN NGFF – select countries

Notes

1. EPEAT® registered where applicable. EPEAT registration varies by country. See epeat.net for registration status by country.
2. Testing was not intended to demonstrate fitness for Department of Defense contracts requirements or for military use. Test results are not a guarantee of future performance under these test conditions.
3. 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.
4. HP Performance Advisor requires Windows and an internet connection.
5. Remote Graphics Software requires Windows and internet access.
6. Sold as an optional or add on feature.
7. All specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.
8. Thunderbolt™ 2 is available via an optional add-in card on Z1, Z230 SFF, Z230 Tower, Z440, Z640 and Z840 Workstations. It is standard on ZBook 15 and 17 Mobile Workstations. Thunderbolt cable and Thunderbolt device (sold separately) must be compatible with Windows. To determine whether your device is Thunderbolt Certified for Windows, see thunderbolttechnology.net/products.
9. 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.
10. For hard drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 16 GB of system disk is reserved for system recovery software (for Windows 7) and up to 30 GB is reserved for Windows 8.
11. 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.
12. Support for external displays as a standard feature through integrated processor-based graphics is dependent upon the particular workstation configuration; the actual number of displays supported will vary. An optional graphics solution will be required for the support of additional displays. Additional cables required. HD (high-definition) content required to view HD images.
13. Not all configurations qualify as an Ultrabook™.
14. Not available with WWAN.
15. High-definition content is required to view high-definition images.
16. Requires optional docking and hybrid graphics enabled.
17. If configured with the HP DreamColor display, NVIDIA® Optimus® graphics will not be enabled.
18. PCIe Gen3 is new technology and it is expected that there will be limited cards available supporting this technology for a period of time.
19. 4K content required to view 4K resolution.
20. HP Care Packs are optional. Service levels and response times for HP Care Packs may vary depending on your geographic location. Restrictions and limitations apply. Service starts at date of hardware purchase. For details, visit hp.com/go/cpc.
21. Each processor supports up to 2 channels (HP Z230 Tower/HP Z230 SFF) of DDR3 memory or 4 channels (HP Z440/HP Z640/HP Z840) of DDR4 memory. To realize full performance at least 1 DIMM must be inserted into each channel. To get full 8 channel support, 2 processors MUST be installed. Actual memory speeds dependent on processor capability.
22. SATA hardware RAID is not supported on Linux® systems. The Linux® kernel, with built-in software RAID, provides excellent functionality and performance. It is a good alternative to hardware based RAID. Please visit h20000.www2.hp.com/bc/docs/support/SupportManual/c00060684/c00060684.pdf for RAID capabilities with Linux®.
23. Double Layer discs can store more data than single layer discs. However, double-layer discs burned with this drive may not be compatible with many existing single-layer DVD drives and players. The DVD-RAM cannot read or write to 2.6 GB Single Sided/5.2 GB Double Sided – Version 1.0 media.
24. With Blu-Ray, certain disc, digital connection, compatibility and/or performance issues may arise, and do not constitute defects in the product. Flawless playback on all systems is not guaranteed. In order for some Blu-ray titles to play, they may require a DVI or HDMI digital connection and your display may require HDCP support. HD-DVD movies cannot be played.
25. Intel® Turbo Boost technology requires a PC with a processor with Intel Turbo Boost capability. Intel Turbo Boost performance varies depending on hardware, software, and overall system configuration.
26. The term "10/100/1000" or "Gigabit" Ethernet indicates compatibility with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/s. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.
27. The video card must be capable of supporting 3840 x 2160 at 60 Hz to drive the monitor at the Preferred Mode.
28. Number of supported displays varies by configuration.
29. Requires the smart phone or tablet to be enabled for MHL or have an HDMI dongle to connect to the monitor. See your mobile device specifications.
30. Each display sold separately.
31. All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.
32. 3D content is required for 3D performance.
33. 3D glasses, 3D glass clip-on, and stylus pen are included.

For more information visit hp.com/zworkstations

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