# **HP Z620 Workstation**



More versatile than ever before.

HP recommends Windows.



### More versatile than ever before.

With up to 24 discrete processor cores, the HP Z620 Workstation packs a ton of computing and visualization power into a quiet, compact footprint. This dual-socket system helps you boost productivity with next-generation Intel<sup>®</sup> Xeon processors and support for multiple displays.

# The performance you demand.

Get massive system performance in a small footprint with the next evolution in system architecture, setting the standard for versatility with support for both Intel<sup>®</sup> Xeon<sup>®</sup> processor E5-2600 v2 and E5-1600 v2 families.<sup>1</sup> Now with up to 24 cores, the HP Z620 powerhouse supports a full range of processors, to help you get more done every minute.

Support up to 192 GB of the latest generation of system memory with 12 DIMM slots and integrated DDR3-1866 (Transfer rates up to 1866 MT/s) memory subsystem.<sup>2</sup> Ideal for complex data sets and the demands of a 64-bit environment. Take advantage of an 800 W 90% efficient power supply perfect for high-end graphics. Connect in a flash with 4X USB 3.0 bandwidth on an optional high-performance Thunderbolt<sup>™</sup> 2.0 port<sup>3</sup> on the HP Z620.

# Bring your ideas to life, faster.

The HP Z620 offers a huge variety of professional graphics from NVIDIA® and AMD, including Pro 2D to Extreme 3D. Integrate PCI express Gen3 graphics technology and double the bandwidth in and out of your card.<sup>4</sup> Access high-performance applications, including 2D and 3D video, on-site or from a remote location with HP Remote Graphics software.<sup>5</sup> Increase productivity and spread out with the freedom of seeing and doing more all at once with support for multiple displays at peak HD resolutions.<sup>6</sup>

# Modify your machine.

Build the HP Z620 Workstation the way you want with multiple SATA and SAS RAID configuration options that support a wide range of high-performance, high capacity storage solutions.

## HP Z620 Workstation

- 1. 2 External 5.25" Bays (shown with optional slot-load optical drive)
- 2. Power Button
- 3. Front I/O: 1 USB 2.0, 2 USB 3.0,1 Headphone, 1 Microphone, 1 1394a

1

2

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#### **HP Z620 Workstation**

Form Factor	B 1 11 1 1							
	Rackable minitower							
Available Operating Systems	Windows 7 Professional 32-bit* Windows 7 Professional 64-bit*							
	Windows 8.1 64-bit**							
	Windows 8.1 Pro 64-bit**							
	Windows 8.1 Pro Downgrade to Windows 7 Professional 32-bit*** Windows 8.1 Pro Downgrade to Windows 7 Professional 64-bit*** HP Linux Installer Kit							
	HP LINUX INSTALLEF KIT							
Available Processors <sup>1,7,8,9</sup>	Processor	GHz	Cache	Memory	Cores	Hyper-Threading	Intel® vPro™ Technology	Intel® Turbo Boost Technology <sup>10</sup>
	Intel® Xeon® Processor E5-2643	3.3	10 MB	1600 MT/s	4	Y	Y	1, 2
	Intel Xeon Processor E5-2620	2.0	15 MB	1333 MT/s	6	Y	Y	3, 5
	Intel Xeon Processor E5-1620	3.6	10 MB	1600 MT/s	4	Y	Y	2,3
	Intel Xeon Processor E5-1603 Intel Xeon Processor E5-2697 v2	2.8 2.7	10 MB 30 MB	1066 MT/s 1866 MT/s	4 12	N Y	Y Y	N/A 3, 8
	Intel Xeon Processor E5-2695 v2	2.4	30 MB	1866 MT/s	12	Ý	Ý	4,8
	Intel Xeon Processor E5-2690 v2	3.0	25 MB	1866 MT/s	10	Y	Y	3, 6
	Intel Xeon Processor E5-2680 v2	2.8	25 MB	1866 MT/s	10	Y	Y	8, 8
	Intel Xeon Processor E5-2670 v2	2.5	25 MB	1866 MT/s	10	Y	Y	4, 8
	Intel Xeon Processor E5-2667 v2 Intel Xeon Processor E5-2660 v2	3.3 2.2	25 MB 25 MB	1866 MT/s 1866 MT/s	8 10	Y Y	Y Y	3, 7 4, 8
	Intel Xeon Processor E5-2660 V2	2.2	20 MB	1866 MT/s	8	Y	Ϋ́	4, 8
	Intel Xeon Processor E5-2643 v2	3.5	25 MB	1866 MT/s	6	Ŷ	Ŷ	1, 3
	Intel Xeon Processor E5-2640 v2	2.0	20 MB	1600 MT/s	8	Y	Y	3, 5
	Intel Xeon Processor E5-2637 v2	3.5	15 MB	1866 MT/s	4	Y	Y	1, 3
	Intel Xeon Processor E5-2630 v2	2.6	15 MB	1600 MT/s	6	Y	Y	3, 5
	Intel Xeon Processor E5-2620 v2	2.1 2.5	15 MB 10 MB	1600 MT/s	6 4	Y	Y Y	3, 5
	Intel Xeon Processor E5-2609 v2 Intel Xeon Processor E5-2603 v2	2.5 1.8	10 MB	1333 MT/s 1333 MT/s	4	N	Y Y	N/A N/A
	Intel Xeon Processor E5-2003 v2	3.0	25 MB	1866 MT/s	8	Y	Ý	4, 9
	Intel Xeon Processor E5-1660 v2	3.7	15 MB	1866 MT/s	6	Ŷ	Ŷ	2, 3
	Intel Xeon Processor E5-1650 v2	3.5	12 MB	1866 MT/s	6	Y	Y	1,4
	Intel Xeon Processor E5-1620 v2	3.7	10 MB	1866 MT/s	4	Y	Y	0, 2
	Intel Xeon Processor E5-1607 v2	3.0	10 MB	1600 MT/s	4	Ν	Y	N/A
Chipset	Intel® C602 Chipset							
Memory <sup>11</sup>	Up to 12 DIMM slots with 2 CPUs, up	o to 192 G	B, 8-channe	el ECC DDR3-186	56 (Transfer	rates up to 1866 MT/	s); 4 channels per CPU	
	Integrated 6-channel SATA controller: 2 ports 6 Gb/s + 4 ports 3 Gb/s, RAID 0, 1, 5, 10 capable; Optional SAS controllers: LSI 9217-4i4e 8-port SAS/SATA 6 Gb/s, RAID 0, 1, 10. LSI 9270-8i SAS/SATA, 8-port 6 Gb/s HW RAID 0, 1, 5, 10 capable							
prive Controllers					ID 0, 1, 5, 10	) capable; Optional SA	S controllers: LSI 9217-4i4e 8	B-port SAS/SATA 6 Gb/s, RAID 0, 1, 10
Drive Controllers	LSI 9270-8i SAS/SATA, 8-port 6 Gb/	s HW RAI	D 0, 1, 5, 10	capable				•
	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d	s HW RAI	D 0, 1, 5, 10 GB, 1, 2, 3	capable TB, 12 TB max; L	Jp to (4) 2.5	-inch 10K rpm SAS dri	ives: 300, 600, 900 GB, 1.2 TE	3, 4.8 TB max; Up to (4) 3.5-inch 15K
	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, i	rives: 500 2.4 TB ma	D 0, 1, 5, 10 GB, 1, 2, 3 ax; Up to (4)	capable TB, 12 TB max; L 2.5-inch SATA sc	Jp to (4) 2.5 Ilid state dri	-inch 10K rpm SAS dri ves: 128, 180, 240, 2	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m	3, 4.8 TB max; Up to (4) 3.5-inch 15K nax; Up to (1) 2.5-inch SATA self-
	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d	s HW RAID rives: 500 2.4 TB ma ED SSD): 2	D 0, 1, 5, 10 O GB, 1, 2, 3 Ax; Up to (4) 256 GB,180	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); l	Jp to (4) 2.5 olid state dri Jp to (1) 2.5	-inch 10K rpm SAS dri ives: 128, 180, 240, 2 -inch SATA self-encry	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 50	3, 4.8 TB max; Up to (4) 3.5-inch 15K iax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCle
Storage <sup>12,13</sup>	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, i encrypting solid state boot drive (SI	s HW RAID rives: 500 2.4 TB ma ED SSD): 2 (2) PCIe S	D 0, 1, 5, 10 D GB, 1, 2, 3 Ax; Up to (4) 256 GB,180 SSD HP Z Tu	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G	Jp to (4) 2.5 olid state dri Jp to (1) 2.5	-inch 10K rpm SAS dri ives: 128, 180, 240, 2 -inch SATA self-encry	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 50	3, 4.8 TB max; Up to (4) 3.5-inch 15K iax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCIe
Storage <sup>12,13</sup> Dptical Storage <sup>14,15</sup>	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, i encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCIe; Up to DVD-ROM, DVD+/-RW, Blu-ray Write	s HW RAIL rives: 500 2.4 TB ma ED SSD): 2 (2) PCIe S er, 15-in-1	D 0, 1, 5, 10 ) GB, 1, 2, 3 ax; Up to (4) 256 GB,180 (SSD HP Z Tur I Media Carc	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G I Reader	Jp to (4) 2.5 blid state dri Jp to (1) 2.5 iB, 512 GB (	-inch 10K rpm SAS dri ves: 128, 180, 240, 2 -inch SATA self-encry 1 TB max)**** Note: Fr	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 50	3, 4.8 TB max; Up to (4) 3.5-inch 15K iax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCle
Storage <sup>12,13</sup> Dptical Storage <sup>14,15</sup> Drive Bays	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, i encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCIe; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna	s HW RAIL rives: 500 2.4 TB ma ED SSD): 2 (2) PCIe S er, 15-in-1 al 3.5-inch	D 0, 1, 5, 10 0 GB, 1, 2, 3 ax; Up to (4) 256 GB,180 55D HP Z Tuu 1 Media Carco 1 bays, Note:	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G I Reader : Fourth HDD occ	Jp to (4) 2.5 Ilid state dri Jp to (1) 2.5 iB, 512 GB ( tupies one e	-inch 10K rpm SAS dri ves: 128, 180, 240, 2' i-inch SATA self-encry 1 TB max)**** Note: Fi xternal bay	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 5 ourth drive occupies one exte	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCIe rnal 5.25-inch bay
Storage <sup>12,13</sup> Optical Storage <sup>14,15</sup> Drive Bays Expansion Slots	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCIe; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCI Express Gen3 x16; 1 PCI Express	s HW RAII rives: 500 2.4 TB ma ED SSD): 2 (2) PCIe S er, 15-in-1 al 3.5-inch ess Gen3 :	D 0, 1, 5, 10 ) GB, 1, 2, 3 ) x; Up to (4) 256 GB,180 SD HP Z Tuu I Media Carco h bays, Notes x8, 1 PCI Exp	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G I Reader : Fourth HDD occ press Gen2 x8 m	Jp to (4) 2.5 lid state dri Jp to (1) 2.5 B, 512 GB ( upies one e techanical/x	-inch 10K rpm SAS dri ves: 128, 180, 240, 2' i-inch SATA self-encry 1 TB max)**** Note: Fi xternal bay	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 5 ourth drive occupies one exte	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCIe rnal 5.25-inch bay
Storage <sup>12,13</sup> Optical Storage <sup>14,15</sup> Drive Bays Expansion Slots	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, i encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCIe; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCI Express Gen3 x16; 1 PCI Expre Professional 2D: NVIDIA® NVS™ 3:	s HW RAIE rives: 500 2.4 TB ma D SSD): 2 (2) PCIe S er, 15-in-1 al 3.5-inch ess Gen3 : 10, NVIDIA	D 0, 1, 5, 10 D GB, 1, 2, 3 ax; Up to (4) 256 GB,180 55D HP Z Tuu I Media Carco h bays, Note: x8, 1 PCI Exp 4® NVS™ 31	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G I Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™	Jp to (4) 2.5 blid state dri Jp to (1) 2.5 B, 512 GB ( cupies one e nechanical/x	-inch 10K rpm SAS dri ves: 128, 180, 240, 24 5-inch SATA self-encryj 1 TB max)**** Note: Fi external bay 24 electrical; 1 PCI Expr	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 5 ourth drive occupies one exte	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCIe rnal 5.25-inch bay
Storage <sup>12,13</sup> Optical Storage <sup>14,15</sup> Drive Bays Expansion Slots	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, i encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCIe; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCI Express Gen3 x16; 1 PCI Expre Professional 2D: NVIDIA® NVST 3 Entry 3D: NVIDIA® Quadro®	s HW RAIL 2.4 TB ma ED SSD): 2 (2) PCLe S er, 15-in-1 al 3.5-inch ess Gen3 10, NVIDIA 2 410, NVI	D 0, 1, 5, 10 D GB, 1, 2, 3 ax; Up to (4) 256 GB,180 55D HP Z Tuu I Media Carco h bays, Note: x8, 1 PCI Exp 4® NVS™ 31	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G I Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™	Jp to (4) 2.5 blid state dri Jp to (1) 2.5 B, 512 GB ( cupies one e nechanical/x	-inch 10K rpm SAS dri ves: 128, 180, 240, 24 5-inch SATA self-encryj 1 TB max)**** Note: Fi external bay 24 electrical; 1 PCI Expr	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 5 ourth drive occupies one exte	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCIe rnal 5.25-inch bay
Storage <sup>12,13</sup> Dptical Storage <sup>14,15</sup> Drive Bays Expansion Slots	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCle; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCI Express Gen3 x16; 1 PCI Expre Professional 2D: NVIDIA® NVS™ 3 Entry 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro®	s HW RAIE rives: 500 2.4 TB ma D SSD): 2 (2) PCle S er, 15-inch al 3.5-inch ess Gen3 10, NVIDIA 2 410, NVI 2 K2000	D 0, 1, 5, 10 D 0, 1, 5, 10 D 0, 6B, 1, 2, 3 ax; Up to (4) 256 GB,180 55D HP Z Tur 1 Media Carco h bays, Note: x8, 1 PCI Ex; A® NVS™ 31 DIA® Quadro	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G 1 Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™ 5% K600, AMD Fir	Jp to (4) 2.5 lid state dri Jp to (1) 2.5 iB, 512 GB ( cupies one e rechanical/x <sup>4</sup> 510 rePro™ V39	-inch 10K rpm SAS dri ves: 128, 180, 240, 25 -inch SATA self-encry 1 TB max)**** Note: Fr xternal bay 4 electrical; 1 PCI Expr 00	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 5 ourth drive occupies one exte ress Gen2 x4 mechanical/x1 e	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCle rnal 5.25-inch bay electrical; 1 Legacy PCl
Storage <sup>12,13</sup> Optical Storage <sup>14,15</sup> Drive Bays Expansion Slots	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCle; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCI Express Gen3 x16; 1 PCI Expre Professional 2D: NVIDIA® NVS™ 3 Entry 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro®	s HW RAIL rives: 500 2.4 TB ma D SSD): 2 (2) PCIe S (2)	D 0, 1, 5, 10 ) GB, 1, 2, 3 ax; Up to (4) 256 GB,180 55D HP Z Tuu I Media Carc h bays, Note: x8, 1 PCI Ex; 4® NVS™ 31 DIA® Quadro MD FirePro <sup>™</sup>	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G 1 Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™ 5% K600, AMD Fir	Jp to (4) 2.5 lid state dri Jp to (1) 2.5 iB, 512 GB ( cupies one e rechanical/x <sup>4</sup> 510 rePro™ V39	-inch 10K rpm SAS dri ves: 128, 180, 240, 25 -inch SATA self-encry 1 TB max)**** Note: Fr xternal bay 4 electrical; 1 PCI Expr 00	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 5 ourth drive occupies one exte	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCIe rnal 5.25-inch bay electrical; 1 Legacy PCI
Drive Controllers Storage <sup>12,13</sup> Optical Storage <sup>14,15</sup> Drive Bays Expansion Slots Available Graphics Audio	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCIe; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCI Express Gen3 x16; 1 PCI Expre Professional 2D: NVIDIA® NVS™ 3 Entry 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro®	s HW RAIE rives: 50C 2.4 TB ma ED SSD): 2 (2) PCle S er, 15-in-1 al 3.5-inch ess Gen3 3 10, NVIDIA P 410, NVI P 42000 K4000, A Sync (GPU	2 0, 1, 5, 10 0 6B, 1, 2, 3 10; 5B, 1, 2, 3 10; 5C 6B, 180 10; 5CD HP Z Tuu 10; Media Carco 10; bays, Note: 10; x8, 1 PCI Ext 10; x8, 1 P	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); rbo Drives 256 G 1 Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™ 5% K600, AMD Fir	Jp to (4) 2.5 lid state dri Jp to (1) 2.5 B, 512 GB ( upies one e rechanical/x <sup>4</sup> 510 rePro™ V39 © Quadro® k	-inch 10K rpm SAS dri ves: 128, 180, 240, 25 -inch SATA self-encry 1 TB max)**** Note: Fr xternal bay 4 electrical; 1 PCI Expr 00	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 5 ourth drive occupies one exte ress Gen2 x4 mechanical/x1 e	8, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 20 GB, 500 GB max; Up to (1) PCIe rnal 5.25-inch bay electrical; 1 Legacy PCI
Storage <sup>12,13</sup> Dptical Storage <sup>14,15</sup> Drive Bays Expansion Slots Available Graphics Audio	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, i encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCIe; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCI Express Gen3 x16; 1 PCI Expre Professional 2D: NVIDIA® NVS™ 3 Entry 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® High-end 3D: NVIDIA® Quadro® Integrated Intel/Realtek HD ALC262	s HW RAIL rives: 500 2.4 TB ma 50 SSD): 2 (2) PCIe S er, 15-in-1 al 3.5-inch ess Gen3 10, NVIDI/ P 410, NVI P 410, NVI P 42000 K4000, A Sync (GPU 2 Audio, op	D 0, 1, 5, 10 ) GB, 1, 2, 3 ) GB, 1, 2, 3 ) X; Up to (4) 256 GB, 180 55D HP Z Tur 1 Media Carcc 1 bays, Note: x8, 1 PCI Exp A® NVS <sup>™</sup> 31 DIA® Quadro MD FirePro <sup>™</sup> U) ptional HP T	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G d Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™ 5, NVIDIA® NVS™ % K600, AMD Fir M W7000, NVIDIA hin USB Powered	Jp to (4) 2.5 Jp to (1) 2.5 Jp to (1) 2.5 JB, 512 GB ( upies one e uechanical/x <sup>4</sup> 510 * 210 * Quadro® k d Speakers	-inch 10K rpm SAS dri ves: 128, 180, 240, 24 -inch SATA self-encryj 1 TB max)**** Note: Fr xternal bay :4 electrical; 1 PCI Expr 00	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 50 ourth drive occupies one exte ress Gen2 x4 mechanical/x1 e y® K6000, NVIDIA® Tesla™ K20	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCIe rnal 5.25-inch bay electrical; 1 Legacy PCI
Storage <sup>12,13</sup> Dptical Storage <sup>14,15</sup> Drive Bays Expansion Slots Available Graphics Audio	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, i encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCIe; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCI Express Gen3 x16; 1 PCI Expre Professional 2D: NVIDIA® NVS™ 3 Entry 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® High-end 3D: NVIDIA® Quadro® Integrated Intel/Realtek HD ALC262	s HW RAIL rives: 500 2.4 TB ma D SSD): 2 (2) PCIe S (2)	D 0, 1, 5, 10 D 0, 10 D 0, 1, 5, 10 D 0,	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G 1 Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™ b® K600, AMD Fir M W7000, NVIDIA hin USB Powered er; Optional Broa	Jp to (4) 2.5 Jp to (1) 2.5 Jp to (1) 2.5 JB, 512 GB ( upies one e uechanical/x <sup>4</sup> 510 * 210 * Quadro® k d Speakers	-inch 10K rpm SAS dri ves: 128, 180, 240, 24 -inch SATA self-encryj 1 TB max)**** Note: Fr xternal bay :4 electrical; 1 PCI Expr 00	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 50 ourth drive occupies one exte ress Gen2 x4 mechanical/x1 e y® K6000, NVIDIA® Tesla™ K20	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCIe rnal 5.25-inch bay electrical; 1 Legacy PCI
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Storage <sup>12,13</sup> Optical Storage <sup>14,15</sup> Drive Bays Expansion Slots Available Graphics Audio	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCle; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCl Express Gen3 x16; 1 PCl Expre Professional 2D: NVIDIA® NVSTM 3 Entry 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® High-end 3D: NVIDIA® Quadro® NVIDIA® Quadro® Integrated Intel/Realtek HD ALC262 Dual integrated Intel/Realtek HD ALC262 Dual integrated Intel/ GbE LAN; Infin I210-T1 PCle NIC; WLAN Intel 7260 Front: 2 USB 3.0, 1 USB 2.0, 1 IE	s HW RAIE rives: 500 2.4 TB ma 20 SSD): 2 (2) PCle S (2) PCle S ar, 15-inch al 3.5-inch ass Gen3 : 10, NVIDI/ A 410, NVI A 410, NVI	2 0, 1, 5, 10 0 6B, 1, 2, 3 10; 5B, 1, 2, 3 10; 5C 6B, 180 10; 5SD HP Z Tuu 10; Media Carce 10; bays, Note: 10; N	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G 1 Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™ o® K600, AMD Fir M W7000, NVIDIA hin USB Powered pr; Optional Broa x 1 NIC 1 microphone in,	Jp to (4) 2.5 blid state dri Jp to (1) 2.5 B, 512 GB ( uples one e rechanical/x ⁴ 510 rePro™ V39 @ Quadro® k d Speakers dcom GbE N 1 headpho	-inch 10K rpm SAS dri ves: 128, 180, 240, 25 -inch SATA self-encry 1 TB max)**** Note: Fr xternal bay 4 electrical; 1 PCI Expr 00 (\$5000, NVIDIA® Quadro IIC; Optional Intel GbE ne out, HP 14-in-1 Me	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 5 ourth drive occupies one exte ress Gen2 x4 mechanical/x1 e p® K6000, NVIDIA® Tesla™ K20 NIC; Optional HP X520 10GbE edia Card Reader (optional)	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCIe rnal 5.25-inch bay electrical; 1 Legacy PCI 2.c, NVIDIA® Tesla™ K40,
Storage <sup>12,13</sup> Optical Storage <sup>14,15</sup> Drive Bays Expansion Slots Available Graphics Audio	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCle; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCl Express Gen3 x16; 1 PCl Expre Professional 2D: NVIDIA® NVSTM 3 Entry 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® High-end 3D: NVIDIA® Quadro® NVIDIA® Quadro® Integrated Intel/Realtek HD ALC262 Dual integrated Intel/Realtek HD ALC262 Dual integrated Intel/ GbE LAN; Infin I210-T1 PCle NIC; WLAN Intel 7260 Front: 2 USB 3.0, 1 USB 2.0, 1 IE	s HW RAIE rives: 500 2.4 TB ma D SSD): 2 (2) PCle S (2)	2 0, 1, 5, 10 0 6, 1, 2, 3 0 6, 1, 2, 3 0 6, 1, 2, 3 0 550 HP Z Tur 1 Media Carco 1 bays, Note: x8, 1 PCI Exit 10 A® Quadro MD FirePro <sup>™</sup> U) ptional HP T 1.2 Controllef (b/g/n/ PCIe a standard, 1 audio out, 1 f	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G 1 Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™ p® K600, AMD Fir M W7000, NVIDIA hin USB Powered er; Optional Broa x 1 NIC 1 microphone in, 2	Jp to (4) 2.5 blid state dri Jp to (1) 2.5 B, 512 GB ( uples one e rechanical/x ⁴ 510 rePro™ V39 @ Quadro® k d Speakers dcom GbE N 1 headpho	-inch 10K rpm SAS dri ves: 128, 180, 240, 25 -inch SATA self-encry 1 TB max)**** Note: Fr xternal bay 4 electrical; 1 PCI Expr 00 (\$5000, NVIDIA® Quadro IIC; Optional Intel GbE ne out, HP 14-in-1 Me	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 5 ourth drive occupies one exte ress Gen2 x4 mechanical/x1 e p® K6000, NVIDIA® Tesla™ K20 NIC; Optional HP X520 10GbE edia Card Reader (optional)	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCIe rnal 5.25-inch bay electrical; 1 Legacy PCI
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itorage <sup>12,13</sup> Iptical Storage <sup>14,15</sup> Intre Bays Expansion Slots Expansion Slo	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCle; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCI Express Gen3 x16; 1 PCI Expre Professional 2D: NVIDIA® NVS™ 3: Entry 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® NVIDIA® Quadro® Integrated Intel/Realtek HD ALC262 Dual integrated Intel/Realtek HD ALC262 Dual integrated Intel/Realtek HD ALC262 Front: 2 USB 3.0, 1 USB 2.0, 1 IE Rear: 2 USB 3.0, 1 USB 2.0, 1 a 1 Thunderbolt™ 2 port vi Internal: 6 USB 2.0 HP Remote Graphics Software (RGS	s HW RAIE rives: 500 2.4 TB ma 20 SSD): 2 (2) PCle S (2) PCle S (2	2 0, 1, 5, 10 0 6B, 1, 2, 3 10; 6B, 1, 2, 3 10; 10; 10; 10; 10; 10; 10; 10; 10; 10;	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G 1 Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™ b® K600, AMD Fir M W7000, NVIDIA hin USB Powered er; Optional Broa x 1 NIC 1 microphone in, 2 e card <sup>3.4,16</sup>	Jp to (4) 2.5 Llid state dri Jp to (1) 2.5 B, 512 GB ( upies one e echanical/x 4 510 * Quadro® k d Speakers d Speakers dcom GbE N 1 headpho PS/2, 2 RJ-i	-inch 10K rpm SAS dri ives: 128, 180, 240, 29 -inch SATA self-encryj 1 TB max)**** Note: Fr external bay 4 electrical; 1 PCI Expr 00 (5000, NVIDIA® Quadro (5000, NVIDIA® Quadro) (5000, NVID	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 50 ourth drive occupies one exte ress Gen2 x4 mechanical/x1 e 0 <sup>®</sup> K6000, NVIDIA <sup>®</sup> Tesla <sup>™</sup> K20 NIC; Optional HP X520 10GbE edia Card Reader (optional) it LAN, 1 serial via optional ada	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCle rnal 5.25-inch bay electrical; 1 Legacy PCI 0c, NVIDIA® Tesla™ K40,
itorage <sup>12,13</sup> Iptical Storage <sup>14,15</sup> Inve Bays Expansion Slots Expansion Slot	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, i encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCle; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCI Express Gen3 x16; 1 PCI Expre Professional 2D: NVIDIA® NVS™ 3 Entry 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® Integrated Intel/Realtek HD ALC262 Dual integrated Intel GbE LAN; Infini I210-T1 PCIe NIC; WLAN Intel 7260 Front: 2 USB 3.0, 1 USB 2.0, 1 IB Rear: 2 USB 3.0, 1 USB 2.0, 1 a 1 Thunderbolt™ 2 port vi Internal: 6 USB 2.0 HP Remote Graphics Software (RGS HP PS/2 keyboard, HP USB keyboar HP SpaceMouse Pro USB 3D, HP Sp	s HW RAIE rives: 500 2.4 TB ma D SSD): 2 (2) PCle S er, 15-in-1 al 3.5-inch ess Gen3 : 10, NVIDIA 2 410, NVI 2 410, NVI 2 410, NVI 2 400, A Sync (GPL 2 Audio, op eon TPM 1 802.11 a) 2 EE 1394a Jdio in, 1 a a optiona .) d, HP USE acePiot P	20, 1, 5, 10 0, 6, 1, 2, 3 1, 2, 3 1, 2, 10 1, 2, 5 1, 2, 3 1, 2, 0, 10 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G 1 Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™ b® K600, AMD Fir M W7000, NVIDIA hin USB Powered er; Optional Broa x 1 NIC 1 microphone in, 2 e card <sup>3.4,16</sup>	Jp to (4) 2.5 Llid state dri Jp to (1) 2.5 B, 512 GB ( upies one e echanical/x 4 510 * Quadro® k d Speakers d Speakers dcom GbE N 1 headpho PS/2, 2 RJ-i	-inch 10K rpm SAS dri ives: 128, 180, 240, 29 -inch SATA self-encryj 1 TB max)**** Note: Fr external bay 4 electrical; 1 PCI Expr 00 (5000, NVIDIA® Quadro (5000, NVIDIA® Quadro) (5000, NVID	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 50 ourth drive occupies one exte ress Gen2 x4 mechanical/x1 e 0 <sup>®</sup> K6000, NVIDIA <sup>®</sup> Tesla <sup>™</sup> K20 NIC; Optional HP X520 10GbE edia Card Reader (optional) it LAN, 1 serial via optional ada	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCle rnal 5.25-inch bay electrical; 1 Legacy PCI 0c, NVIDIA® Tesla™ K40,
Storage <sup>12,13</sup> Optical Storage <sup>14,15</sup> Drive Bays Expansion Slots Available Graphics Audio Network Ports Remote Technology Input Devices Dimensions (H x W x D)	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCle; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCI Express Gen3 ×16; 1 PCI Expre Professional 2D: NVIDIA® NVS™ 3: Entry 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® Integrated Intel/Realtek HD ALC262 Dual integrated Intel GbE LAN; Infini I210-T1 PCIe NIC; WLAN Intel 7260 Front: 2 USB 3.0, 1 USB 2.0, 1 IB Rear: 2 USB 3.0, 4 USB 2.0, 1 a 1 Thunderbolt™ 2 port vi Internal: 6 USB 2.0 HP Remote Graphics Software (RGS HP PS/2 keyboard, HP USB keyboar HP SpaceMouse Pro USB 3D, HP Sp 17.5 × 6.75 × 18.3 in (44.45 × 17.15)	s HW RAIE rives: 500 2.4 TB ma D SSD): 2 (2) PCle S (2)	D 0, 1, 5, 10 D 0,	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G 1 Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™ b® K600, AMD Fir M W7000, NVIDIA hin USB Powered er; Optional Broa x 1 NIC 1 microphone in, 2 e card <sup>3.4,16</sup>	Jp to (4) 2.5 Llid state dri Jp to (1) 2.5 B, 512 GB ( upies one e echanical/x 4 510 * Quadro® k d Speakers d Speakers dcom GbE N 1 headpho PS/2, 2 RJ-i	-inch 10K rpm SAS dri ives: 128, 180, 240, 29 -inch SATA self-encryj 1 TB max)**** Note: Fr external bay 4 electrical; 1 PCI Expr 00 (5000, NVIDIA® Quadro (5000, NVIDIA® Quadro) (5000, NVID	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 50 ourth drive occupies one exte ress Gen2 x4 mechanical/x1 e 0 <sup>®</sup> K6000, NVIDIA <sup>®</sup> Tesla <sup>™</sup> K20 NIC; Optional HP X520 10GbE edia Card Reader (optional) it LAN, 1 serial via optional ada	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCIe rnal 5.25-inch bay electrical; 1 Legacy PCI 0c, NVIDIA® Tesla™ K40,
Storage <sup>12,13</sup> Optical Storage <sup>14,15</sup> Drive Bays Expansion Slots Available Graphics Audio Network Ports Remote Technology Input Devices Dimensions (H x W x D) Power Supply	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCle; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCI Express Gen3 x16; 1 PCI Expre Professional 2D: NVIDIA® NVS™ 3 Entry 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® Integrated Intel/Realtek HD ALC262 Dual integrated Intel/Realtek HD ALC262 Dual integrated Intel/Realtek HD ALC262 Front: 2 USB 3.0, 1 USB 2.0, 1 IE Rear: 2 USB 3.0, 1 USB 2.0, 1 IE Rear: 2 USB 3.0, 1 USB 2.0, 1 IE Rear: 2 USB 3.0, 4 USB 2.0, 1 at 1 Thunderbolt™ 2 port vi Internal: 6 USB 2.0 HP Remote Graphics Software (RGS HP PS/2 keyboard, HP USB keyboar HP SpaceMouse Pro USB 3D, HP Sp 17.5 x 6.75 x 18.3 in (44.45 x 17.15 800 Watt 90% efficient tool-free po	s HW RAIE rives: 500 2.4 TB ma ED SSD): 2 (2) PCle S (2) PCle S er, 15-inch al 3.5-inch ess Gen3 : 10, NVIDI/ 2 410, NVI 2 410, NVI 2 410, NVI 2 4000, A Sync (GPI 2 4	2 0, 1, 5, 10 0 0, 1, 5, 10 0, 10 0	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G 1 Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™ b® K600, AMD Fir M W7000, NVIDIA hin USB Powered er; Optional Broa x 1 NIC 1 microphone in, 2 e card <sup>3,4,16</sup>	Jp to (4) 2.5 lid state dri Jp to (1) 2.5 B, 512 GB ( uples one e rechanical/x <sup>4</sup> 510 rePro™ V39 ® Quadro® k d Speakers dcom GbE N PS/2, 2 RJ PS/2 mouse	-inch 10K rpm SAS dri ves: 128, 180, 240, 25 -inch SATA self-encryf 1 TB max)**** Note: Fr external bay 4 electrical; 1 PCI Expr 00 (SO00, NVIDIA® Quadro (SO00, SO00, SO00, SO00) (SO00, SO00, SO	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 5 ourth drive occupies one exte ress Gen2 x4 mechanical/x1 e p® K6000, NVIDIA® Tesla™ K20 NIC; Optional HP X520 10GbE edia Card Reader (optional) it LAN, 1 serial via optional ada se, USB 1000dpi laser mouse,	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCle rnal 5.25-inch bay electrical; 1 Legacy PCl 0c, NVIDIA® Tesla™ K40, E Dual Port NIC; Optional Intel Etherne apter, Rear power button with LED, HP USB optical 3-button mouse,
Storage <sup>12,13</sup> Dptical Storage <sup>14,15</sup> Drive Bays Expansion Slots Available Graphics Audio Network Ports Remote Technology nput Devices Dimensions (H x W x D)	LSI 9270-8i SAS/SATA, 8-port 6 Gb/ Up to (4) 3.5-inch 7200 rpm SATA d rpm SAS drives: 300, 450, 600 GB, encrypting solid state boot drive (SI SSD Fusion ioFX 410 GB PCle; Up to DVD-ROM, DVD+/-RW, Blu-ray Write 2 external 5.25-inch bays, 3 interna 2 PCI Express Gen3 ×16; 1 PCI Expre Professional 2D: NVIDIA® NVS™ 3: Entry 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® Mid-range 3D: NVIDIA® Quadro® Integrated Intel/Realtek HD ALC262 Dual integrated Intel GbE LAN; Infini I210-T1 PCIe NIC; WLAN Intel 7260 Front: 2 USB 3.0, 1 USB 2.0, 1 IB Rear: 2 USB 3.0, 4 USB 2.0, 1 a 1 Thunderbolt™ 2 port vi Internal: 6 USB 2.0 HP Remote Graphics Software (RGS HP PS/2 keyboard, HP USB keyboar HP SpaceMouse Pro USB 3D, HP Sp 17.5 × 6.75 × 18.3 in (44.45 × 17.15)	s HW RAIE rives: 500 2.4 TB ma D SSD): 2 (2) PCle S (2)	D 0, 1, 5, 10 D 0, 10	capable TB, 12 TB max; L 2.5-inch SATA sc GB, (1 TB max); L rbo Drives 256 G 1 Reader : Fourth HDD occ press Gen2 x8 m 5, NVIDIA® NVS™ o® K600, AMD Fir M W7000, NVIDIA hin USB Powered er; Optional Broa x 1 NIC 1 microphone in, 2 e card <sup>3.4,16</sup> d Keyboard, HP F diagonal widescr	Jp to (4) 2.5 bild state dri Jp to (1) 2.5 B, 512 GB ( upies one e rechanical/x 510 ePro™ V39 @ Quadro® k dom GbE N .1 headpho PS/2, 2 RJ-1 2 S/2 mouse reen), HP Z	-inch 10K rpm SAS dri ves: 128, 180, 240, 25 -inch SATA self-encryj 1 TB max)**** Note: Fr external bay 4 electrical; 1 PCI Expr 00 (SO00, NVIDIA® Quadro (SO00, SO00, SO00, SO00) (SO00, SO00,	ives: 300, 600, 900 GB, 1.2 TE 56, 480, 512 GB, 1 TB, 4 TB m pting hard drive (SED HDD): 5 ourth drive occupies one exte ress Gen2 x4 mechanical/x1 e y® K6000, NVIDIA® Tesla™ K20 NIC; Optional HP X520 10GbE edia Card Reader (optional) it LAN, 1 serial via optional ada e, USB 1000dpi laser mouse, PS Display, HP Z Display Z27i	3, 4.8 TB max; Up to (4) 3.5-inch 15K hax; Up to (1) 2.5-inch SATA self- 00 GB, 500 GB max; Up to (1) PCIe rnal 5.25-inch bay electrical; 1 Legacy PCI 0c, NVIDIA® Tesla™ K40, E Dual Port NIC; Optional Intel Ethern apter, Rear power button with LED, HP USB optical 3-button mouse,

Screen images courtesy of Autodesk.

- \* This system may require upgraded and/or separately purchased hardware to take full advantage of Windows 7 functionality. Not all features are available in all editions of Windows 7. See microsoft.com/windows/windows-7/ for details.
- \*\* Not all features are available in all editions of Windows 8 and 8.1. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows 8 and 8.1 functionality.
- \*\*\* This system is preinstalled with Windows 7 Pro software and also comes with a license and media for Windows 8.1 Pro software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.
- \*\*\*\* Each drive requires a PCIe x4 (minimum)
- 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.
- 2. 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.
- 3. Thunderbolt is new technology. 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. Thunderbolt™ 2.0 is planned to be available via an optional add-in card in early 2014.
- 4. Sold as an optional or add on feature.
- 5. HP Remote Graphics Software requires Windows and an internet connection.
- 6. 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.
- 7. 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. See intel.com/info/em64t for more information.
- 8. Intel's numbering is not a measurement of higher performance.
- 9. HP Z620 systems configured with E5-1600 v2 series processors may not add a 2nd processor. To support two processors, E5-2600 series processor must be chosen.
- 10. The specifications shown in this column represent the following: (all core maximum turbo steps, one core maximum turbo steps). Turbo boost stepping occurs in 100 MT/s increments. Processors that do not have turbo functionality are denoted as N/A. 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. Please visit intel.com/technology/turboboost for more information.
- 11. Each processor supports up to 4 channels of DDR3 memory. To realize full performance at least 1 DIMM must be inserted into each channel.
- 12. 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 hardwarebased RAID. Please visit h20000.www2.hp.com/bc/docs/support/SupportManual/c00060684/c00060684.pdf for RAID capabilities with Linux
- 13. For hard drives and solid state drives, GB=1 billion bytes. TB= 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB is reserved for system recovery software.
- 14. Actual speeds may vary. Does not permit copying of commercially available DVD movies or other copyright protected materials. Intended for creation and storage of your original material and other lawful uses. Note that DVD-RAM cannot read or write to 2.6 GB Single Sided/5.2 GB Double Sided Version 1.0 media.
- 15. As Blu-ray is a new format containing new technologies, 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 on this workstation.
- 16. Planned availability early 2014.
- 17. HP Care Pack Services extend service contracts beyond the standard warranties. Service starts from date of hardware purchase. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at hp.com/go/Lookuptool. Additional HP Care Pack Services information by product is available at hp.com/go/carepack. Service levels and response times for HP Care Packs may vary depending on your geographic location.

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