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Z BY HP DISCRETE GRAPHICS QUICK REFERENCE GUIDE

DISCRETE GRAPHICS SOLUTIONS FOR Z BY HP WORKSTATIONS

HP is proud to offer discrete graphics choices on all of our Z by HP workstations—from the HP ZBook family to our ultimate workstation, the HP Z8.

HP's professional graphics line-up is perfect for users who are running business critical applications who require stability, reliability, great performance, additional support, and application-specific features and optimization for things like complex design modeling, dataset manipulation, visual effects and visualization.

Note: Currently, Z2 Mini, Z2 SFF, Z2 Tower, Z1 Entry Tower and all ZBooks support CPUs with built-in integrated graphics. Please refer to platform quickspecs for details on the CPU integrated graphics supported in that platform.
Updated May 2022

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HP Z DESKTOPS: CURRENT DISCRETE GRAPHICS OFFERINGS

Platform		HP Z2 Mini G5	HP Z2 Mini G9	HP Z2 SFF G5	HP Z2 SFF G8	HP Z2 SFF G9	HP ZCentral 4R
Graphics	**Category**						
NVIDIA® T400	Entry 3D		•|•	• •|• •	• •	• •|• •	•|•
AMD Radeon™ Pro WX 3200	Low-end 3D	-		• •	•		
NVIDIA® T600	Low-end 3D		•	• •	• •	• •	
NVIDIA® T1000	Mid-range 3D		•|•	•	•	• •|• •	•
NVIDIA® Quadro® T1000 MXM	Mid-range 3D	•		-	-		
NVIDIA® Quadro® T2000 MXM	Mid-range 3D	•		•	-		
NVIDIA® RTX™ A2000	Mid-range 3D		•		•	•	•|•
AMD Radeon™ Pro W6600	High-mid 3D	-		-	-	•	
AMD Radeon™ RX 6700 XT	High-end 3D	-		-	-	•	
NVIDIA® Quadro RTX™ 3000 MXM	High-end 3D	•		•	•		
NVIDIA® Quadro RTX™ 4000	High-end 3D	-		-	-		• •
NVIDIA® RTX™ A4000	High-end 3D					•	• •
NVIDIA® RTX™ A4500	High-end 3D						•
NVIDIA® Quadro RTX™ 5000	Ultra 3D	-		-	-		•
NVIDIA® RTX™ A5000	Ultra 3D						•
NVIDIA® RTX™ A6000	Ultra 3D						•

Key Legend:

• single • single (2x memory)

• • dual • • dual (2x memory)

NOTE

***Please refer to platform specifications and ordering guides for applicable configuration restrictions**

**MXM are custom graphics modules for space-constrained designs – WX 3200 (4GB), P600 (4GB), P620 (4GB), P1000 (4GB), T1000 (4GB), T2000 (4GB), RTX™ 3000 (4GB)

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HP Z DESKTOPS: CURRENT DISCRETE GRAPHICS OFFERINGS

Platform		HP Z2 Tower G5	HP Z2 Tower G8	HP Z2 Tower G9	HP Z4 G4	HP Z6 G4	HP Z8 G4
Graphics	**Category**						
NVIDIA® T400	Entry 3D	•• | ••	••	•• | ••	•• | ••	•• | ••	•• | ••
AMD Radeon™ Pro WX 3200	Low-end 3D	••	••		••	••	••••
NVIDIA® T600	Low-end 3D	••	••	••	••	••	••
AMD Radeon™ Pro W5500	Mid-range 3D	•	•		••	••	••
AMD Radeon™ Pro W5700	High-end 3D	•	•		••	•	••
AMD Radeon™ Pro W6600	High-mid 3D	•	•	•	••	•	••
AMD Radeon™ RX 6700 XT	High-end 3D		•	•	•	-	-
AMD Radeon™ Pro W6800	Ultra 3D		•	•	••	•	•
NVIDIA® T1000	Mid-range 3D	••	••	•• | ••	•• | ••	•• | ••	••• | •••
NVIDIA® Quadro® GV100	Ultra 3D				••	-	•••
NVIDIA® Quadro RTX™ 4000	High End 3D		•		••	••	••••
NVIDIA® Quadro RTX™ 5000	Ultra 3D		•		••	•	••
NVIDIA® RTX™ A2000	Mid-range 3D	• | •	•	•	•• | ••	•• | ••	••• | •••
NVIDIA® RTX™ A4000	High End 3D	•	•	•	••	••	••••
NVIDIA® RTX™ A4500	High End 3D		•	•	••	••	•••
NVIDIA® RTX™ A5000	Ultra 3D		•	•	••	••	•••
NVIDIA® RTX™ A6000	Ultra 3D				••	•	••

Key Legend:

• single ••• triple • single (2x memory) ••• triple (2x memory)

NOTE •• dual •••• quad •• dual (2x memory)

***Please refer to platform specifications and ordering guides for applicable configuration restrictions**

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HP Z DESKTOPS: DISCRETE GRAPHICS SPEC SUMMARY

Graphics Module	NVIDIA® T400	NVIDIA® T600
Graphics Category	Entry 3D	Low-end 3D
Graphics Memory	2 GB | 4 GB GDDR6	4 GB GDDR6
Memory Bandwidth	Up to 80 GB/s	Up to 160 GB/s
Cores[11]	384	640
Power	30 W	40 W
Form Factor[6]	single slot, Half Height	single slot, Half Height
DirectX Support	12_1	12_1
OpenGL Support	4.6	4.6
Max Resolution (DP)[1]	7680 x 4320 @ 60 Hz	7680 x 4320 @ 60 Hz
Max Displays	4 with MST	4
Video Outputs	3x mini-DP 1.4	4x mDP 1.4
Included Video Cables:		
CTO	None	None
AMO	2 mDP adapters	2 mDP adapters
ISV Certified	Yes	Yes
Other	Vulcan, CUDA®, Mosaic™	Vulcan, CUDA®, Mosaic™

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HP Z DESKTOPS: DISCRETE GRAPHICS SPEC SUMMARY

Graphics Module	AMD Radeon™ Pro WX 3200	NVIDIA® Quadro® T1000 MXM[10]	NVIDIA® T1000	AMD Radeon™ RX 6700 XT
Graphics Category	Low-end 3D	Mid-range 3D	Mid-range 3D	High-end 3D
Graphics Memory	4 GB GDDR5	4 GB GDDR6	4 GB | 8 GB GDDR6	12 GB GDDR6
Memory Bandwidth	Up to 96 GB/s	-	Up to 160 GB/s	Up to 384 GB/s
Cores[11]	640	768	896	2560
Power	56 W	50 W	50 W	230 W
Form Factor[6]	single slot, Half Height	MXM[10]	single slot, Half Height	Dual Slot, Full Length
DirectX Support	12	12_1	12_1	12_1
OpenGL Support	4.5	4.6	4.6	4.6
Max Resolution (DP)[1]	5120 x 2880 @ 60Hz[2]	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz	5210 x 3200 @ 60 Hz
Max Displays	4 or 5 with DP MST	4	4	4
Video Outputs	4x mDP 1.4	-	4x mini-DP	4x mDP 1.4
Included Video Cables:				
CTO	None	-	None	None
AMO	2x mini-DP to DP	-	2x mini-DP to DP	
ISV Certified	Yes	Yes	Yes	No
Other	AMD® Sync, OpenCL 2.0, Eyefinity, DirectGMA, FreeSync, HDR Ready	CUDA®	GPU Boost 3.0, CUDA®, Mosaic™	

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HP Z DESKTOPS: DISCRETE GRAPHICS SPEC SUMMARY

Graphics Module	NVIDIA® RTX™ A2000	AMD Radeon™ Pro W5500	AMD Radeon™ Pro W5700	NVIDIA® Quadro® RTX™ 3000 MXM[10]
Graphics Category	Mid-range 3D	Mid-range 3D	High-end 3D	High-end 3D
Graphics Memory	6 GB | 12 GB GDDR6	8 GB GDDR6	8 GB GDDR6	6 GB GDDR6
Memory Bandwidth	Up to 288 GB/s	Up to 224 GB/s	Up to 448 GB/s	-
Cores[11]	3328	1408	2304	2304
Power	70 W	130 W	205 W	60 W
Form Factor[6]	dual slot, Half Height	single slot, Full Height	dual slot, Full Height	MXM[10]
DirectX Support	12_1	12_1	12_1	12_1
OpenGL Support	4.6	4.6	4.6	4.6
Max Resolution (DP)[1]	5120 x 2880 @ 60 Hz	7690 x 4320 @ 60 Hz[7,9]	7690 x 4320 @ 60 Hz[7,8]	5120 x 2880 @ 60 Hz
Max Displays	4	4	6	4
Video Outputs	4x DP 1.4	4x DP 1.4a	5x mDP 1.4a and 1x USB-C AltMode port	-
Included Video Cables:				
CTO	None	None	None	-
AMO	2 mDP adapters	None	None	-
ISV Certified	Yes	Yes	Yes	Yes
Other	CUDA®, OpenCL™ 2.0	OpenCL 2.0, FreeSync, HDR Ready, Radeon™ Pro Software, AMD Eyefinity, Radeon™ ProRender, Unified Video Decoder, Video Code Engine, VR Ready	OpenCL 2.0, FreeSync, HDR Ready, Radeon™ Pro Software, AMD Eyefinity, Radeon™ ProRender, Unified Video Decoder, Video Code Engine, VR Ready	CUDA®

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HP Z DESKTOPS: DISCRETE GRAPHICS SPEC SUMMARY

Graphics Module	AMD Radeon™ Pro W6600	NVIDIA® Quadro RTX™ 4000	NVIDIA® Quadro RTX™ 5000	NVIDIA® Quadro® GV100
Graphics Category	High-Mid 3D	High-end 3D	Ultra 3D	Ultra 3D
Graphics Memory	8 GB GDDR6	8 GB GDDR6	16 GB GDDR6	32 GB HBM2
Memory Bandwidth	Up to 224 GB/s	Up to 416 GB/s	Up to 448 GB/s	Up to 870 GB/s
Cores[11]	1792	2304	3072	5120
Power	130 W	160 W	265 W	250 W
Form Factor[6]	single slot, Full-height	single slot, Full Height	dual slot, Full Height	dual slot, Full Height
DirectX Support	12_1	12_1	12_1	12
OpenGL Support	4.6	4.6	4.6	4.5
Max Resolution (DP)[1]	5120 x 2880 @ 60Hz	7680 x 4320 @ 60Hz	7680 x 4320 @ 60 Hz	5120 x 2880 @ 60Hz
Max Displays	4	4	4	4
Video Outputs	4x DP 1.4	3x DP 1.4a and VirtualLink[4]	4x DP 1.4a and VirtualLink[4]	4x DP 1.4
Included Video Cables:				
CTO	None	None	None	None
AMO	None	None	None	None
ISV Certified	Yes	Yes	Yes	Yes[3]
Other	Vulkan™ 1.2, OpenCL™ 2.1	Quadro® Sync II, CUDA®, Mosaic™, VR Ready	Quadro® Sync II, GPUDirect, GPU Boost 3.0, NVLink/SLI®, CUDA®, Mosaic™, VR Ready	Quadro® Sync II, GPUDirect, GPU Boost 3.0, CUDA®, Mosaic™, VR Ready, Multi-GPU Scalability NVLink (2-way)

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HP Z DESKTOPS: DISCRETE GRAPHICS SPEC SUMMARY

Graphics Module	AMD Radeon™ Pro W6800	NVIDIA® RTX™ A4000	NVIDIA® RTX™ A4500	NVIDIA® RTX™ A5000	NVIDIA® RTX™ A6000
Graphics Category	Ultra 3D	High-End 3D	High-End 3D	Ultra 3D	Ultra 3D
Graphics Memory	32 GB GDDR6	16 GB GDDR6	20 GB GDDR6	24 GB GDDR6	48 GB GDDR6
Memory Bandwidth	up to 512 GB/s	Up to 448 GB/s	Up to 640 GB/s	Up to 768 GB/s	Up to 768 GB/s
Cores[11]	3840	6144	7168	8192	10752
Power	261W	140W	200W	230 W	300 W
Form Factor[6]	dual slot, Full Height	single slot, Full Length	dual slot, Full Height	dual slot, Full Height	dual slot, Full Height
DirectX Support	12 Ultimate	12_1	12_1	12_1	12_1
OpenGL Support	4.6	4.6	4.6	4.6	4.6
Max Resolution (DP)[1]	5120 x 2880 @ 60 Hz	7680 x 4320 @ 60 Hz	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz
Max Displays	6	4	4	4	4
Video Outputs	6x mDP 1.4a	4X DP 1.4	4X DP 1.4	4x DP 1.4a	4x DP 1.4a
Included Video Cables:					
CTO	None	None	None	None	None
AMO	2 mDP adapters	None	None	None	None
ISV Certified	Yes	Yes	Yes	Yes	Yes
Other	Vulkan™ 1.2, OpenCL™ 2.1	Quadro® Sync II, GPUDirect, GPU Boost 3.0, CUDA®, Mosaic™, VR Ready, Vulcan	Quadro® Sync II, GPUDirect, GPU Boost 3.0, NVLink, CUDA®, Mosaic™, VR Ready	Quadro® Sync II, GPUDirect, GPU Boost 3.0, NVLink, CUDA®, Mosaic™, VR Ready	Quadro® Sync II, GPUDirect, GPU Boost 3.0, NVLink, CUDA®, Mosaic™, VR Ready

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HP ZBOOKS: CURRENT DISCRETE GRAPHICS OFFERINGS

Platform		HP ZBook Studio G8	HP ZBook Power G8	HP ZBook Fury 15.6/17.3 G8	HP ZBook Firefly 14/15.6 G8
Graphics	**Category**				
NVIDIA® T500	Entry 3D				•
NVIDIA® T600	Low-end 3D		•		
NVIDIA® T1200	Mid-range 3D	•	•	•	
NVIDIA® RTX™ A2000	Mid-range 3D	•	•	•	
NVIDIA® RTX™ A3000	High-end 3D	•		•	
NVIDIA® RTX™ A4000	High-end 3D	•		•	
NVIDIA® RTX™ A5000	Ultra 3D	•		•	
NVIDIA® RTX™ 3060	High-end 3D	•			
NVIDIA® RTX™ 3070	High-end 3D	•			
NVIDIA® RTX™ 3080	High-end 3D	•			
AMD RADEON™ Pro W6600M	High-end 3D			•	

Key Legend:

- single

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HP ZBOOKS: CURRENT DISCRETE GRAPHICS OFFERINGS

Platform		HP ZBook Studio G9	HP ZBook Power G9	HP ZBook Fury G9	HP ZBook Firefly G9
Graphics	**Category**				
NVIDIA® T550	Entry 3D				•
NVIDIA® T600	Low-end 3D		•		
NVIDIA® RTX™ A500	Low-end 3D				•
NVIDIA® RTX™ A1000	Mid-range 3D	•	•	•	
NVIDIA® RTX™ A2000 8GB	Mid-range 3D	•	•	•	
NVIDIA® RTX™ A3000 12GB	High-end 3D	•		•	
NVIDIA® RTX™ A4500	High-end 3D	•		•	
NVIDIA® RTX™ A5500	Ultra 3D	•		•	
NVIDIA® RTX™ 3060	High-end 3D	•			
NVIDIA® RTX™ 3070 Ti	High-end 3D	•			
NVIDIA® RTX™ 3080 Ti	High-end 3D	•			
AMD RADEON™ Pro W6600M	High-end 3D			•	

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HP ZBOOKS: DISCRETE GRAPHICS SPEC SUMMARY

Graphics Module	NVIDIA® T500	NVIDIA® T550	NVIDIA® RTX™ 3060	NVIDIA® RTX™ 3070	NVIDIA® RTX™ 3080	AMD RADEON™ Pro W6600M
Graphics Category	Entry 3D	Entry 3D	High-end 3D	High-end 3D	High-end 3D	High-end 3D
Memory	4 GB GDDR6	4 GB GDDR6	6 GB GDDR6	8 GB GDDR6	16 GB GDDR6	8 GB GDDR6
Cores[4]	896	1024	3840	5120	6144	1972
Power	18 W	20 W	60 W	80 W	80 W	80 W
DirectX Support	12	12	12 Ultimate	12 Ultimate	12 Ultimate	12 Ultimate
OpenGL Support	4.5	4.5	4.6	4.6	4.6	4.6
Max Resolution (DP)[1]	Determined by CPU[5]	Determined by CPU[5]	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz
Display Pipelines[1]	4	4	4	4	4	4
ISV Certified	Yes	Yes	Yes	Yes	Yes	Yes
Other	CUDA®	CUDA®	CUDA®	CUDA®	CUDA®	OpenCL 2.0, Vulcan 1.2

Graphics Module	NVIDIA® RTX™ A500	NVIDIA® RTX™ A1000	NVIDIA® RTX™ A2000 8GB	NVIDIA® RTX™ A3000 12GB	NVIDIA® RTX™ A4500	NVIDIA® RTX™ A5500
Graphics Category	Entry 3D	Mid-range 3D	Mid-high 3D	High-end 3D	High-end 3D	Ultra 3D
Memory	4 GB GDDR6	4 GB GDDR6	8 GB GDDR6	12 GB GDDR6	16 GB GDDR6	16 GB GDDR6
Cores[4]	2048	2048	2560	4096	5888	7424
Power	20 W	35 W	35 W	60 W	80 W	80 W
DirectX Support	12 Ultimate	12 Ultimate	12 Ultimate	12 Ultimate	12 Ultimate	12 Ultimate
OpenGL Support	4.6	4.6	4.6	4.6	4.6	4.6
Max Resolution (DP)[1]	Determined by CPU	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz
Display Pipelines[1]	4	4	4	4	4	4
ISV Certified	Yes	Yes	Yes	Yes	Yes	Yes
Other	CUDA®	CUDA®	CUDA®	CUDA®	CUDA®	CUDA®

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Graphics Module	NVIDIA® T600	NVIDIA® T1200	NVIDIA® RTX™ A2000	NVIDIA® RTX™ A3000	NVIDIA® RTX™ A4000	NVIDIA® RTX™ A5000
Graphics Category	Low-end 3D	Mid-range 3D	Mid-range 3D	High-end 3D	High-end 3D	Ultra 3D
Memory	4 GB GDDR6	4 GB GDDR6	4 GB GDDR6	6 GB GDDR6	8 GB GDDR6	16 GB GDDR6
Cores[4]	896	1024	2560	4096	5120	6144
Power	25 W	35 W	35 W	80 W	80 W	80 W
DirectX Support	12_1	12_1	12 Ultimate	12 Ultimate	12 Ultimate	12 Ultimate
OpenGL Support	4.6	4.6	4.6	4.6	4.6	4.6
Max Resolution (DP)[1]	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz
Display Pipelines[1]	4	4	4	4	4	4
ISV Certified	Yes	Yes	Yes	Yes	Yes	Yes
Other	CUDA®	CUDA®	CUDA®	CUDA®	CUDA®	CUDA®

Graphics Module	NVIDIA® RTX™ 3070 Ti	NVIDIA® RTX™ 3080 Ti
Graphics Category	High-end 3D	High-end 3D
Memory	8 GB GDDR6	16 GB GDDR6
Cores[4]	5888	7424
Power	80 W	80 W
DirectX Support	12 Ultimate	12 Ultimate
OpenGL Support	4.6	4.6
Max Resolution (DP)[1]	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz
Display Pipelines[1]	4	4
ISV Certified	Yes	Yes
Other	CUDA®	CUDA®

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Z1 ENTRY TOWER: CURRENT DISCRETE GRAPHICS OFFERINGS

Graphics	Category	HP Z1 G6	HP Z1 G8	HP Z1 G9
AMD Radeon™ R7 430 (DP+VGA)	Office 2D	• •*	• •*	
AMD Radeon™ R7 430 (2DP)	Office 2D	• •*	• •*	
NVIDIA® T400	Entry 3D	•	•	•|•
AMD Radeon™ RX 550X	Mid-range 3D	•	•	
NVIDIA® GeForce RTX™ 2060 Super	High-end 3D	•		
NVIDIA® GeForce RTX™ 3060	High-end 3D		•	•
NVIDIA® GeForce RTX™ 3070	High-end 3D	•	•	•
NVIDIA® Quadro RTX™ 4000	High-end 3D	•		
NVIDIA® Quadro RTX™ 5000	Ultra 3D	•		

Key Legend:

• single • single (2x memory)

• • dual

NOTE

*2nd PCIe slot is not x16, may only be x4 electrically

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Z1 ENTRY TOWER: DISCRETE GRAPHICS SPEC SUMMARY

Graphics Module	AMD Radeon™ R7 430 (DP+VGA)	AMD Radeon™ R7 430 (2DP)	AMD Radeon™ RX 550X
Graphics Category	Office 2D	Office 2D	Mid-range 3D
Graphics Memory	2GB GDDR5	2GB GDDR5	4GB GDDR5
Memory Bandwidth	Up to 17 GB/s	Up to 17 GB/s	Up to 192 GB/s
Graphics Memory Bus	64-bit	64-bit	128-bit
Power	<50W	<50W	50W
Auxilary Power Connector(s)	-	-	-
Form Factor[2]	Single slot, Half Height	Single slot, Half Height	Single slot, Half Height
Max Resolution (DP)[1]	4096x2160 @ 60Hz	4096x2160 @ 60Hz	5120x2880 @ 60Hz
Max Displays	2	2	2
Video Outputs	DP+VGA	2xDP	HDMI+2xDP
ISV Certified	No	No	No

Graphics Module	NVIDIA® GeForce RTX™ 2060 Super	NVIDIA® GeForce RTX™ 3070	NVIDIA® GeForce RTX™ 3060
Graphics Category	High-end 3D	High-end 3D	High-end 3D
Graphics Memory	8 GB GDDR6	8 GB GDDR6	12 GB GDDR6
Memory Bandwidth	Up to 448 MB/s	Up to 448 MB/s	Up to 360 MB/s
Graphics Memory Bus	256-bit	256-bit	192-bit
Power	175W	220W	170W
Auxilary Power Connector(s)	8pin	12pin (adapter)	8pin PCI
Form Factor[2]	Dual slot, Full Height	Dual slot, Full Height	Dual slot, Full Height
Max Resolution (DP)[1]	7680x4320 @ 60Hz	7680x4320 @ 60Hz	7680x4320 @ 60Hz
Max Displays	3	4	4
Video Outputs	HDMI+DP+DVI	3xDP+HDMI	3xDP+HDMI
ISV Certified	No	No	No

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Z1 ENTRY TOWER: DISCRETE GRAPHICS SPEC SUMMARY

Graphics Module	NVIDIA® Quadro RTX™ 4000	NVIDIA® Quadro RTX™ 5000
Graphics Category	High-end 3D	Ultra 3D
Graphics Memory	8 GB GDDR6	16 GB GDDR6
Memory Bandwidth	Up to 416 MB/s	Up to 448 GB/s
Graphics Memory Bus	256-bit	256-bit
Power	160W	2650W
Auxilary Power Connector(s)	8pin	6pin+8pin
Form Factor[2]	Single slot, Full Height	Dual slot, Full Height
Max Resolution (DP)[1]	7680x4320 @ 60Hz	7680x4320 @ 60Hz
Max Displays	4	4
Video Outputs	3xDP 1.4a and VirtualLink[3]	3xDP 1.4a and VirtualLink[3]

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GRAPHICS ACCESSORIES

DisplayPort™ to DVI-D	Single link DVI-D support (max 1920x1200 @ 60 Hz) **Part number: FH973AA**
DisplayPort™ to HDMI True 4K Adapter	Supports audio over DP, supports UHD up to 30 Hz and True 4K up to 24 Hz (HDMI 1.4) **Part number: 2JA63AA**
DisplayPort™ to VGA	VGA support **Part number: AS615AA**
6-pin to 8-pin Power Adapter	HP Z Workstation PSU adaptor for graphics **Part number: N1G35AA**
NVIDIA® 3D Stereo Bracket	For NVIDIA® Quadro® M4000, M5000, M6000, P5000, P6000, RTX 4000, RTX 5000, RTX 6000, RTX 8000, and NVIDIA® RTX A4000, RTX A5000, RTX A6000 applications **Part number: K0A25AA**
NVIDIA® Quadro® Sync II	For NVIDIA® Quadro® P4000, P5000, P6000, GP100, GV100, RTX 4000, RTX 5000, RTX 6000, RTX 8000, and NVIDIA® RTX A4000, RTX A5000, RTX A6000 multi-display applications **Part number: 1WT20AA**
HP (Bulk 12) miniDP-to-DP Adapter Cables	To connect additional displays to graphics cards with miniDP ports **Part number: 2KW87A6**
HP Single miniDP-to-DP Adapter Cable	To connect one additional display to graphics card's miniDP port **Part number: 2MY05AA**
HP NVIDIA® GV100 NVLINK Bridge Kit (Pair)	To connect two GV100 graphics cards for GPU-compute scaling **Part number: 3NZ66AA**
Quadro RTX NVLink 2-slot Bridge	To connect two RTX 5000 graphics cards for GPU-compute scaling in Z4 G4 or Z8 G4 **Part number: 6FY12AA**
Quadro RTX NVLink 3-slot Bridge	To connect two RTX 5000 graphics cards for GPU-compute scaling in Z6 G4 **Part Number:6FY14AA**
Quadro RTX NVLink High-Bandwidth 2-slot Bridge	To connect two RTX 6000 or two RTX 8000 graphics cards for GPU-compute scaling in Z4 G4 or Z8 G4 **Part number: 6FY11AA**
Quadro RTX NVLink High-Bandwidth 3-slot Bridge	To connect two RTX 6000 or two RTX 8000 graphics cards for GPU-compute scaling (not currently recommended for normal Z4/Z6/Z8 G4 configurations) **Part number: 6FY13AA**
NVIDIA® NVLink 2-slot Bridge	To connect two RTX A5000 or two RTX A6000 graphics cards for GPU-compute scaling in Z4 G4 or Z8 G4 **Part Number: 340L2AA**
NVIDIA® NVLink 3-slot Bridge	To connect two RTX A5000 graphics cards for GPU-compute scaling in Z6 G4 **Part Number: 340L3AA**

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AMD Radeon™ Pro Professional Graphics amd.com/en-us/solutions/workstations
NVIDIA® Quadro® Graphics nvidia.com/object/hp_workstations.html

Learn more about our Z workstations at hp.com/z

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HP Z Desktop Workstation notes

[1] Not all video outputs of the graphics card may support the stated Max Resolution. See the card QuickSpecs for details and any restrictions.
[2] 2x dual DP 1.3 cabled 5k displays max., or 1x single cable DP 1.4.
[3] Tested by select ISVs.
[4] As of December 2019, VirtualLink's USB-C (data) can be disabled via BIOS setting.
[5] 6x DP 1.3 4K @60 Hz or 3x 5K @60 Hz or 1x 8K @60 Hz.
[6] "Half Height" is also known as "Low Profile", "Single Slot" is also known as "Single Width", and "Dual Slot" is also known as "Dual Width".
[7] Some video display modes such as 7680x4320@60Hz require the use of DSC (Display Stream Compression).
[8] Up to 6x 4K@60Hz, up to 3x 5K or 8K @60Hz, up to 3x 4K@120Hz.
[9] Up to 4x 4K@60Hz, up to 2x 5K or 8K @60Hz, up to 2x 4K@120Hz.
[10] HP custom graphics module using mobile GPU for space-constrained designs.
[11] Different graphics architectures 'Cores' cannot be directly compared. Cores is useful for comparing graphics that are of the same architecture, usually designated by common prefix letter(s) in the model name.

Z1 notes

[1] Not all video outputs of the graphics card may support the stated Max Resolution. See the card QuickSpecs for details and any restrictions.
[2] "Half Height" is also known as "Low Profile", "Single Slot" is also known as "Single Width", and "Dual Slot" is also known as "Dual Width".
[3] As of December 2019, VirtualLink's USB-C (data) can be disabled via BIOS setting.

HP ZBook Mobile Workstation notes

[1] See mobile workstation system specifications for display output types and max displays and resolutions supported.
[2] HP ZBook 15 G6 uses 65 W MaxQ RTX 3000, and all GPUs are on the system board.
[3] ZBook G6 generation implemented GDDR5, whereas ZBook G7 generation implemented GDDR6
[4] Different graphics architectures 'Cores' cannot be directly compared. Cores is useful for comparing graphics that are of the same architecture, usually designated by common prefix letter(s) in the model name.
[5] The entry notebook design used here requires the CPU's graphics engine to drive all display signals. Hence, it is the CPU's graphics that determines what maximum display resolution is possible to support. The maximum resolutions of the notebook's CPUs are documented in the respective notebook's Quickspecs.

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