



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers



HP WORKSTATIONS GRAPHICS CARD OPTIONS

QUICK REFERENCE GUIDE

PROFESSIONAL GRAPHICS SOLUTIONS FOR HP Z WORKSTATIONS

HP is proud to exclusively offer professional graphics choices on all of our HP Workstations—from the HP ZBook Mobile Workstation family to our ultimate workstation, the HP Z8.

HP's professional graphics line-up is perfect for users who are running business critical applications based on OpenGL and DirectX® 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.

1. HP recommends Windows 10 Pro.



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers

HP DESKTOP WORKSTATIONS GRAPHICS SUPPORT MATRIX¹

Platform		HP Z2 Mini G3	HP Z240 SFF	HP Z240 Tower	HP Z4 G4	HP Z6 G4	HP Z8 G4
Graphics	Category						
Intel® HD Graphics 510	Office 2D		•	•			
Intel® HD Graphics 530	Office 2D	•	•	•			
Intel® HD Graphics P530	Entry 3D	•*	•	•			
Intel® HD Graphics 630	Office 2D	•	•	•			
Intel® HD Graphics P630	Entry 3D	•	•	•			
NVIDIA® NVS™ 310	Pro 2D		••	••			
NVIDIA® NVS™ 315	Pro 2D		••	••			
NVIDIA® NVS™ 510	Pro 2D		•	•			
NVIDIA® Quadro® M620	Entry 3D	•					
AMD FirePro™ W2100	Entry 3D		•	••	••	••	••
AMD Radeon™ Pro WX 3100	Low-end 3D				••	••	•••
AMD FirePro™ W4300	Mid-range 3D			••			
AMD Radeon™ Pro WX 4100	Mid-range 3D		•	•	••**	••**	••••**
AMD Radeon™ Pro WX 7100	High-end 3D			•	••	••	•••
NVIDIA® Quadro® K420	Sub-entry 3D		•	••			
NVIDIA® Quadro® K620	Entry 3D		•	•			
NVIDIA® Quadro® K1200	Mid-range 3D		•	••			
NVIDIA® Quadro® K2200	Mid-range 3D			•			
NVIDIA® Quadro® M2000	Mid-range 3D			•			
NVIDIA® Quadro® M4000	High-end 3D			•			



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers

HP DESKTOP WORKSTATIONS GRAPHICS SUPPORT MATRIX¹ (CONTINUED)

Platform		HP Z2 Mini G3	HP Z240 SFF	HP Z240 Tower	HP Z4 G4	HP Z6 G4	HP Z8 G4
NVIDIA® Quadro® P400	Sub-entry 3D		•	••	••	••	••
NVIDIA® Quadro® P600	Entry 3D		•	•	••	••	••
NVIDIA® Quadro® P620	Entry 3D				••	••	••
NVIDIA® Quadro® P1000	Mid-range 3D		•	•	••	•••	••••
NVIDIA® Quadro® P2000	Mid-range 3D			•	••	••	••••
NVIDIA® Quadro® P4000	High-end 3D			•	••	••	•••
NVIDIA® Quadro® P5000 ¹	Ultra 3D			•	•	••	•••
NVIDIA® Quadro® P6000 ¹	Ultra 3D				•	•	•••
NVIDIA® Quadro® GP100	Ultra HD				•	•	•••
NVIDIA® Quadro® GV100	Ultra 3D				•***		•
AMD Radeon™ Pro WX 9100	Ultra 3D				•	•	••

Key Legend:

- single
- dual
- triple
- quad

Note: *Premium solution can be configured to use both discrete and integrated GPUs.
**Offered via AMO.
*** Available 2H18



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers

HP DESKTOP WORKSTATIONS INTEGRATED GRAPHICS SPEC SUMMARY

Graphics Module	Intel® HD Graphics 510	Intel® HD Graphics 530	Intel® HD Graphics P530	Intel® HD Graphics 630 (for Intel® Core™ processors)	Intel® HD Graphics P630 (for Intel® Xeon® processors)
Graphics Category	Office 2D	Office 2D	Entry 3D	Office 2D	Entry 3D
Memory (shared with system)	up to 1.7 GB	up to 1.7 GB	up to 1.7 GB	up to 1.7 GB	up to 1.7 GB
Execution Units	12	24	24	24	72
DirectX Support ²	12	12	12	12	12
OpenGL Support	4.4	4.4	4.4	4.4	4.4
Max Resolution (DP) ³	4096 x 2304 @ 60 Hz	4096 x 2304 @ 60 Hz	4096 x 2304 @ 60 Hz	4096 x 2304 @ 60 Hz	4096 x 2304 @ 60 Hz
Max Displays	3	3	3	3	3
Video Outputs:					
HP Z2 Mini		3x DP	3x DP	3x DP	3x DP
HP Z240 SFF	3x DP	3x DP	3x DP	3x DP	3x DP
HP Z240 Tower	2x DP 1x DVI-I	2x DP 1x DVI-I	2x DP 1x DVI-I	2x DP 1x DVI-I	2x DP 1x DVI-I
ISV Certified	No	No	No	Yes	Yes
Other	OpenCL™ 2.0	OpenCL™ 2.0	OpenCL™ 2.0	OpenCL™ 2.0	OpenCL™ 2.0



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers

HP DESKTOP WORKSTATIONS GRAPHICS SPEC SUMMARY

Graphics Module	NVIDIA® NVS™ 310	NVIDIA® NVS™ 315	NVIDIA® NVS™ 510	NVIDIA® Quadro® K420
Graphics Category	Pro 2D	Pro 2D	Pro 2D	Sub-entry 3D
Memory (dedicated memory)	1 GB DDR3	1 GB DDR3	2 GB DDR3	2 GB DDR3
Memory Bandwidth	14 GB/s	14 GB/s	28.5 GB/s	28.8 GB/s
Cores	48	48	192	192
Power	20 W	20 W	35 W	41 W
Host Interface	PCIe x16, Gen 2	PCIe x16, Gen 2	PCIe x16, Gen 2	PCIe x16, Gen 2
Form Factor	single slot, Half Height	single slot, Half Height	single slot, Half Height	single slot, Half Height
DirectX Support ²	11/11	11/11	11/11	11/11.2
OpenGL Support	4.3	4.3	4.3	4.4
Max Resolution (DP) ³	2560 x 1600 @ 60 Hz	2560 x 1600 @ 60 Hz	3840 x 2160 @ 60 Hz	3840 x 2160 @ 60 Hz
Max Displays	2	2	4	2 or 4 with DP MST
Video Outputs	2x DP	DMS-59	4x mini-DP	DP and DL-DVI
Included Video Cables:				
CTO	None	1x DMS-59 to Dual DVI	4x mini-DP to DP	None
AMO	2x DP to DVI	1x DMS-59 to Dual DVI	4x mini-DP to DP	1x DP to DVI
ISV Certified	No	No	No	Yes
Other	Nview®	Nview®	Nview®	CUDA®, Mosaic™



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers

HP DESKTOP WORKSTATIONS GRAPHICS SPEC SUMMARY (CONTINUED)

Graphics Module	NVIDIA® Quadro® M620	AMD FirePro™ W2100	AMD Radeon™ Pro WX 3100	NVIDIA® Quadro® K620
Graphics Category	Entry 3D	Entry 3D	Entry 3D	Entry 3D
Memory (dedicated memory)	2 GB GDDR5	2 GB DDR3	4 GB GDDR5	2 GB GDDR5
Memory Bandwidth	80 GB/s	14.4 GB/s	96 GB/s	28.8 GB/s
Cores	512	320	512	384
Power	22 W	26 W	35 W	45 W
Host Interface	PCIe x16, Gen 3	PCIe x8, Gen 3	PCIe x16, Gen 3	PCIe x16, Gen 2
Form Factor	Motherboard down	single slot, Half Height	single slot, Half Height	single slot, Half Height
DirectX Support ²	12	11.2/12	12/12	11/11.2
OpenGL Support	4.5	4.4	4.5	4.4
Max Resolution (DP) ³	4096 x 2160 @ 60 Hz	5120 x 2880 @ 60 Hz ⁴	5120 x 2880 @ 60Hz ⁵	4096 x 2160 @ 60 Hz
Max Displays	4	2	4 or 6 with DP MST	2 or 4 with DP MST
Video Outputs	4x DP 1.2	2x DP	1x DP + 2x mDP 1.4	DP and DL-DVI
Included Video Cables:				
CTO	None	None	None	None
AMO	None	None	1x mini-DP to DP	1x DP to DVI
ISV Certified	Yes	Yes	Yes	Yes
Other	CUDA®, Mosaic™, Nview®	OpenCL™ 2.0	AMD® Sync, OpenCL™ 2.0, Eyefinity, DirectGMA, FreeSync, HDR Ready	CUDA®, Mosaic™



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers

HP DESKTOP WORKSTATIONS GRAPHICS SPEC SUMMARY (CONTINUED)

Graphics Module	AMD FirePro™ W4300	NVIDIA® Quadro® K1200	NVIDIA® Quadro® P1000	AMD Radeon™ Pro WX 4100	NVIDIA® Quadro® K2200	NVIDIA® Quadro® M2000	NVIDIA® Quadro® P2000
Graphics Category	Mid-range 3D	Mid-range 3D	Mid-range 3D	Mid-range 3D	Mid-range 3D	Mid-range 3D	Mid-range 3D
Memory (shared with system)	4 GB GDDR5	4 GB GDDR5	4 GB GDDR5	4 GB GDDR5	4 GB GDDR5	4 GB GDDR5	5 GB GDDR5
Memory Bandwidth	96 GB/s	80 GB/s	Up to 80 GB/s	160 GB/s	80 GB/s	105 GB/s	Up to 140 GB/s
Cores	768	512	640	1024	640	768	1024
Power	<50 W	46 W	47 W	50 W	68 W	75 W	75 W
Host Interface	PCIe x16, Gen 3	PCIe x16, Gen 2	PCIe x16, Gen 3	PCIe x16, Gen 3	PCIe x16, Gen 2	PCIe x16, Gen 3	PCIe x16, Gen 3
Form Factor	single slot, Full Height	single slot, Half Height	single slot, Half Height	single slot, Half Height	single slot, Full Height	single slot, Full Height	single slot, Full Height
DirectX Support ²	11.2/12	11/12	12/12	12/12	11/11.2	12/12	12/12
OpenGL Support	4.4	4.4	4.5	4.5	4.4	4.5	4.5
Max Resolution (DP) ³	4096 x 2160 @ 60 Hz	5120 x 2880 @ 60 Hz ⁴	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz ⁵	5120 x 2880 @ 60 Hz ⁴	5120 x 2880 @ 60 Hz ⁴	5120 x 2880 @ 60 Hz
Max Displays	4 or 6 with DP MST	4	4	4 or 6 with DP MST	3 or 4 with DP MST	4	4
Video Outputs	4x mini-DP	4x mini-DP	4x mini-DP	4x mDP 1.4	2x DP and DL-DVI	4x DP	4x DP 1.4
Included Video Cables:							
CTO	None	4x mini-DP to DP	None	None	None	None	None
AMO	None	4x mini-DP to DP	2x mini-DP to DP	4x mini-DP to DP	1x DP to DVI	None	None
ISV Certified	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other	OpenCL™ 2.0, Eyefinity, DirectGMA, FreeSync	CUDA®, Mosaic™	GPU Boost 3.0, CUDA®, Mosaic™	AMD® Sync, OpenCL™ 2.0, Eyefinity, DirectGMA, FreeSync, HDR Ready	CUDA®, Mosaic™	CUDA®, Mosaic™	GPU Boost 3.0, CUDA®, Mosaic™



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers

HP DESKTOP WORKSTATIONS GRAPHICS SPEC SUMMARY (CONTINUED)

Graphics Module	AMD Radeon™ Pro WX 7100	NVIDIA® Quadro® M4000	NVIDIA® Quadro® P4000	NVIDIA® Quadro® M5000	NVIDIA® Quadro® P5000
Graphics Category	High-end 3D	High-end 3D	High-end 3D	High-end 3D	High-end 3D
Memory (shared with system)	8 GB GDDR5	8 GB GDDR5	8 GB GDDR5	8 GB GDDR5	16 GB GDDR5X
Memory Bandwidth	224 GB/s	192 GB/s	Up to 243 GB/s	211 GB/s	288 GB/s
Cores	2304	1664	1792	2048	2560
Power	130 W	~120 W	120 W	~150 W	180 W
Host Interface	PCIe x16, Gen 3	PCIe x16, Gen 3	PCIe x16, Gen 3	PCIe x16, Gen 3	PCIe x16, Gen 3
Form Factor	single slot, Full Height	single slot, Full Height	single slot, Full Height	dual slot, Full Height	dual slot, Full Height
DirectX Support ²	12/12	12/12	12/12	12/12	12/12
OpenGL Support	4.5	4.4	4.5	4.4	4.5
Max Resolution (DP) ³	5120 x 2880 @ 60 Hz ⁵	5120 x 2880 @ 60 Hz ⁴	5120x2880 @ 60Hz	5120 x 2880 @ 60 Hz ⁴	5120 x 2880 @ 60 Hz
Max Displays	4 or 6 with DP MST	4	4	4	4
Video Outputs	4x DP 1.4	4x DP	4x DP 1.4	4x DP and DL-DVI	4x DP 1.4 and DL-DVI
Included Video Cables:					
CTO	None	None	None	None	None
AMO	None	None	None	None	None
ISV Certified	Yes	Yes	Yes	Yes	Yes
Other	AMD® Sync, OpenCL™ 2.0, Eyefinity, DirectGMA, FreeSync, HDR Ready, VR Capable	Quadro® Sync, GPUDirect, SLI®, CUDA®, Mosaic™	Quadro® Sync II, GPUDirect, GPU Boost 3.0, SLI®, CUDA®, Mosaic™, VR Ready	Quadro® Sync, GPUDirect, SLI®, CUDA®, Mosaic™	Quadro® Sync II, GPUDirect, GPU Boost 3.0, SLI®, CUDA®, Mosaic™, VR Ready



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers

HP DESKTOP WORKSTATIONS GRAPHICS SPEC SUMMARY (CONTINUED)

Graphics Module	NVIDIA® Quadro® P6000	NVIDIA® Quadro® GP100	NVIDIA® Quadro® GV100	AMD Radeon™ Pro WX 9100
Graphics Category	Ultra 3D	Ultra 3D	Ultra 3D	Ultra 3D
Memory (shared with system)	24 GB GDDR5X	16 GB HBM2	32 GB HBM2	16 GB HBM2
Memory Bandwidth	432 GB/s	717 GB/s	870 GB/s	483 GB/s
Cores	3840	3584	5120	4096
Power	250 W	235 W	250 W	250 W
Host Interface	PCIe x16, Gen 3	PCIe x16, Gen 3	PCIe x16, Gen 3	PCIe x16, Gen 3
Form Factor	dual slot, Full Height	dual slot, Full Height	dual slot, Full Height	dual slot, Full Height
DirectX Support ²	12/12	12/12	12/12	12/12.1
OpenGL Support	4.5	4.5	4.5	4.5
Max Resolution (DP) ³	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60Hz	7680 x 4320 @ 60Hz ⁸
Max Displays	4	4	4	6
Video Outputs	4x DP 1.4 and DL-DVI	4x DP 1.4 and DL-DVI	4x DP 1.4	6x mDP 1.4
Included Video Cables:				
CTO	None	None	None	None
AMO	None	None	None	2x mini-DP to DP
ISV Certified	Yes	Yes ⁶	Yes ⁶	Yes
Other	Quadro® Sync II, GPUDirect, GPU Boost 3.0, SLI®, CUDA®, Mosaic™, VR Ready	Quadro® Sync II, GPUDirect, GPU Boost 3.0, CUDA®, Mosaic™, VR Ready, Multi-GPU Scalability NVLink (2-way) ⁷	Quadro® Sync II, GPUDirect, GPU Boost 3.0, CUDA®, Mosaic™, VR Ready, Multi-GPU Scalability NVLink (2-way) ⁷	AMD® Sync, OpenCL™ 2.0, Eyefinity, DirectGMA, FreeSync, HDR Ready, VR Ready



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers

HP MOBILE WORKSTATIONS GRAPHICS SUPPORT MATRIX

		HP ZBook 14u G5	HP ZBook 15u G5	HP ZBook x2 G4	HP ZBook Studio x360 G5	HP ZBook Studio G5	HP ZBook 15v G5	HP ZBook 15 G5	HP ZBook 17 G5
Graphics	Category								
Intel® HD Graphics 620	Office 2D			•					
Intel® UHD Graphics 620	Office 2D			•					
Intel® UHD Graphics 630	Office 2D	•	•		•	•	•	•	•
Intel® UHD Graphics P630	Entry 3D				•	•	•	•	•
AMD Radeon™ Pro WX3100	Entry 3D	•	•						
AMD Radeon™ Pro WX 4150	Entry 3D							•	
AMD Radeon™ Pro WX 4170	Mid-range 3D								•
NVIDIA® Quadro® M620	Entry 3D			•					
NVIDIA® Quadro® P600	Entry 3D						•		
NVIDIA® Quadro® P1000	Mid-range 3D				•	•		•	•
NVIDIA® Quadro® P2000	Mid-range 3D							•	•
NVIDIA® Quadro® P3200	High-end 3D								•
NVIDIA® Quadro® P4200	High-end 3D								•
NVIDIA® Quadro® P5200	Ultra 3D								•

Key Legend:

- single



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers

HP MOBILE WORKSTATIONS INTEGRATED GRAPHICS SPEC SUMMARY

Graphics Module	Intel® HD Graphics 620	Intel® UHD Graphics 620	Intel® UHD Graphics 630	Intel® UHD Graphics P630
Graphics Category	Office 2D	Office 2D	Office 2D	Entry 3D
Memory (shared with system)	up to 32 GB	up to 32 GB	up to 64 GB	up to 1.7 GB
Execution Units	24	24	24	24
DirectX Support	12	12	12	12
OpenGL Support	4.4	4.4	4.4	4.4
Max Resolution (DP) ¹	4096 x 2304 @ 60 Hz	4096 x 2304 @ 60 Hz	4096 x 2304 @ 60 Hz	4096 x 2304 @ 60 Hz
Max Displays ¹	3	3	3	3
ISV Certified	No	No	No	Yes
Other	OpenCL™ 2.0	OpenCL™ 2.0	OpenCL™ 2.0	OpenCL™ 2.0



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers

HP MOBILE WORKSTATIONS DISCRETE GRAPHICS SPEC SUMMARY

Graphics Module	NVIDIA® Quadro® M620	NVIDIA® Quadro® P600	AMD Radeon™ Pro WX 3100	AMD Radeon™ Pro WX 4150	AMD Radeon™ Pro WX 4170
Graphics Category	Entry 3D	Entry 3D	Entry 3D	Entry 3D	Mid-range 3D
Memory	2 GB GDDR5	4 GB GDDR5	2 GB GDDR5	4 GB GDDR5	4 GB GDDR5
Cores	512	384	512	896	1024
Power	30 W	25 W	18 W	35 W	50 W
Host Interface	MXM	-	-	MXM	MXM
DirectX Support	12	12	-	12	12
OpenGL Support	4.5	4.5	4.5	4.5	4.5
Max Resolution (DP) ³	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz	-	5120 x 2880 @ 60 Hz	5120 x 2880 @ 60 Hz
Display Pipelines ³	4	4	-	5	5
ISV Certified	Yes	Yes	-	Yes	Yes
Other	CUDA®	CUDA®	OpenCL™ 2.0	OpenCL™ 2.0	OpenCL™ 2.0

HP MOBILE WORKSTATIONS DISCRETE GRAPHICS SPEC SUMMARY (CONTINUED)

Graphics Module	NVIDIA® Quadro® P1000	NVIDIA® Quadro® P2000	NVIDIA® Quadro® P3000	NVIDIA® Quadro® P4200	NVIDIA® Quadro® P5200
Graphics Category	Mid-range 3D	Mid-range 3D	High-end 3D	High-end 3D	Ultra 3D
Memory	4 GB GDDR5	4 GB GDDR5	6 GB GDDR5	8 GB GDDR5	16 GB GDDR5
Cores	-	-	-	-	2560
Power	40 W	-	80 W	94 W	100 W
Host Interface	MXM ²	MXM	MXM	MXM	MXM
DirectX Support	12	12	12	12	12
OpenGL Support	4.5	4.5	4.5	4.5	4.5
Max Resolution (DP) ³	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 ³	4	4	4	4	4
ISV Certified	Yes	Yes	Yes	Yes	Yes
Other	CUDA®	CUDA®	CUDA®	CUDA®	CUDA®



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers

GRAPHICS ACCESSORIES

DisplayPort™ to DVI-D	Single link DVI-D support (max 1920x1200 @ 60 Hz) Part number: FH973AA
DisplayPort™ to dual link DVI	Dual link DVI-D supports 2560x1600 @60 Hz Part number: NR078AA
DisplayPort™ to HDMI 4K Adapter	Supports audio over DP, supports UHD up to 30 Hz and True 4K up to 24 Hz (HDMI 1.4) Part number: K2K92AA
DisplayPort™ to VGA	VGA support Part number: AS615AA
DMS-59 to dual DVI-I	Transmits two DVI-I signals via single connector and split into 2 DVI-I connectors Part number: DL139AA
DMS-59 to dual VGA	Transmits two VGA signals via single connector and split into 2 VGA connectors Part number: G5567AA
DMS-59 to dual DisplayPort™	Transmits two DP protocols via single connector and split into 2 DP connectors Part number: XP688AA
DVI to VGA	VGA support Part number: VE053AA
6-pin to 8-pin Power Adapter	HP Z Workstation PSU adaptor for graphics Part number: N1G35AA
6-pin to Dual 6-pin Power Adapter	HP Z Workstation PSU adaptor for graphics Part number: F5J05AA
NVIDIA® Quadro® Sync	For NVIDIA® Quadro® M4000, M5000, M6000 applications Part number: G5K57AA
NVIDIA® SLI® Connector	For NVIDIA® Quadro® M4000, M5000, M6000, P5000, P6000 applications but with 4K display limitation Part number: PP654A
NVIDIA® SLI® 2-Slot Connector	For NVIDIA® Quadro® P4000, P5000, and P6000 on HP Z4 G4 or HP Z8 G4 Part number: 2YY84A
NVIDIA® SLI® 3-Slot Connector	For NVIDIA® Quadro® P4000, P5000, and P6000 on HP Z6 G4 Part number: 2YY85AA
NVIDIA® 3D Stereo Bracket	For NVIDIA® Quadro® M4000, M5000, M6000, P5000, P6000 applications Part number: K0A25AA
NVIDIA® Quadro® Sync II	For NVIDIA® Quadro® P4000, P5000, P6000, GP100, Part number: 1ZE81AA
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® GP100 NVLINK Bridge Kit (Pair)	To connect two GP100 graphics cards for GPU-compute scaling Part number: 2YY86AA
HP NVIDIA® GV100 NVLINK Bridge Kit (Pair)	To connect two GV100 graphics cards for GPU-compute scaling Part number: 3NZ66AA



SALES GUIDE

CONTENTS & NAVIGATION

2-3

HP Desktop Workstations graphics support matrix¹

4

HP Desktop Workstations integrated graphics spec summary

5-9

HP Desktop Workstations graphics spec summary

10

HP Mobile Workstations graphics support matrix

11

HP Mobile Workstations integrated graphics spec summary

12

HP Mobile Workstations integrated graphics spec summary

13

Graphics accessories

14

Sources and legal disclaimers

ADDITIONAL RESOURCES

Resources, contacts, or additional links

AMD FirePro™ Professional Graphics amd.com/en-us/solutions/workstations

NVIDIA® Quadro® Graphics nvidia.com/object/hp_workstations.html

High Performance Computing www8.hp.com/us/en/campaigns/workstations/gpu-computing.html

Learn more at hp.com/go/leadershipgraphics

SOURCES AND LEGAL DISCLAIMERS

HP Z Desktop Workstation notes

- ¹ Please refer to platform specifications and ordering guides for applicable configuration restrictions.
- ² 1st/2nd where 1st is DirectX HW level version support, and 2nd is SW API DirectX version support.
- ³ Not all video outputs of the graphics card may support the stated Max Resolution. See the card QuickSpecs for details and any restrictions.
- ⁴ Two video card DP outputs must be cabled using two DP cables to a 5K (5120x2880) display that accepts dual DP inputs (such as the HP Z27q).
- ⁵ 2x dual DP 1.3 cabled 5k displays max., or 1x single cable DP 1.4.
- ⁶ Tested by select ISVs.
- ⁷ NVLink is not supported due to mechanical limitation.
- ⁸ 6x DP 1.3 4K @60 Hz or 3x 5K @60 Hz or 1x 8K @60 Hz.

HP ZBook Mobile Workstation notes

- ¹ On system board for the HP ZBook Studio G4.
- ² On system board for the HP ZBook Studio G3.
- ³ See Mobile Workstation system specifications for display output types and max displays supported.
- ⁴ 4 GB GDDR5 configuration offered on HP ZBook Studio G3 only.

Sign up for updates
hp.com/go/getupdated



Share with colleagues

LET US HELP YOU CREATE AMAZING BUSINESS
SOLUTIONS TODAY

LEARN MORE

© Copyright 2018 HP Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Intel and Iris are a trademark of Intel Corporation in the U.S. and other countries. AMD® and FirePro are trademarks of Advanced Micro Services, Inc. All other trademarks are the property of their respective owners. NVIDIA, CUDA, Mosaic, nView, NVS, Quadro and SLI, and the NVIDIA logo are trademarks and/or registered trademarks of NVIDIA Corporation in the U.S. and other countries.

4AA4-6106ENW, March 2018

