



NVIDIA PROFESSIONAL GRAPHICS SOLUTIONS

Accelerate your creativity and expand your innovation with NVIDIA® Quadro®—the world's most powerful workstation graphics. Support for multiple 4K displays, large memory capacity, advanced photorealistic rendering, and flexible multi-GPU configurations lets you tackle the most challenging visual computing tasks effortlessly. Whether you're developing revolutionary products or telling spectacularly vivid visual stories, Quadro gives you the performance to do it brilliantly.



NVIDIA® Quadro® 3D Workstation Professional Graphics Solutions

Designed and built specifically for professional workstations, NVIDIA Quadro GPUs power more than 150 professional applications across a broad range of industries. Professionals trust them to deliver the best possible experience in applications such as Adobe® Creative Cloud, Avid Media Composer, Autodesk Inventor, Dassault Systemes CATIA and SOLIDWORKS, Siemens NX, PTC Creo, and many more.



NVIDIA® Tesla® Co-Processors

NVIDIA Tesla GPU parallel processors provide the highest-performance NVIDIA CUDA® acceleration for your workflow. Designed for professional systems and demanding professional applications, Tesla GPUs perform the complex calculations required for CAE/CFD calculations, seismic processing, ray-traced rendering, compositing, image processing, physics, and effects many times faster than a CPU.



NVIDIA® Multi-GPU Technology

NVIDIA® Multi-GPU Technology leverages combinations of Quadro and Tesla GPUs to intelligently scale the performance of your application and dramatically speed up your workflow. This delivers significant business impact across industries such as Manufacturing, Media and Entertainment, and Energy Exploration.



NVIDIA® NVS™ Commercial Graphics Solutions

NVIDIA NVS graphics boards provide robust IT management tools for seamless enterprise deployment. They're the graphics solutions of choice for financial institutions, emergency call centers, digital signage systems, and other mission-critical environments.

NVIDIA PROFESSIONAL GRAPHICS SOLUTIONS

DESKTOP								MOBILE		GPU SPECIFICATIONS			PERFORMANCE		DISPLAY TECHNOLOGY										OPTIONS			
HP Z1	HP Z230	HP Z230sff	HP Z440	HP Z440	HP Z840	DL380Z		Zbook 15	Zbook 17	NVIDIA® CUDA® Processing Cores ¹	GPU Memory	Memory Bandwidth	Floating-Point Performance-Single Precision (GigaFlops, Peak)	Error Correcting Code (ECC) Memory	Dual-Link DVI ²	DisplayPort 1.1 ³	DisplayPort 1.2 ³	HDMI Via Adaptors	Maximum Active Displays ⁴	FSAA (Maximum)	NVIDIA® FXAA™ Antialiasing	NVIDIA® TXAA™ Antialiasing	NVIDIA® SLI®	NVIDIA Quadro® Mosaic Technology	GPUDirect™ for Video	Graphics Synchronization ⁵	NVIDIA 3D Vision® /3D Vision Pro ⁶	NVIDIA Multi-GPU Technology Enabled ⁷

Quadro for Desktop Workstations

NEW	DESKTOP								MOBILE		GPU SPECIFICATIONS			PERFORMANCE		DISPLAY TECHNOLOGY										OPTIONS			
	HP Z1	HP Z230	HP Z230sff	HP Z440	HP Z440	HP Z840	DL380Z		Zbook 15	Zbook 17	NVIDIA® CUDA® Processing Cores ¹	GPU Memory	Memory Bandwidth	Floating-Point Performance-Single Precision (GigaFlops, Peak)	Error Correcting Code (ECC) Memory	Dual-Link DVI ²	DisplayPort 1.1 ³	DisplayPort 1.2 ³	HDMI Via Adaptors	Maximum Active Displays ⁴	FSAA (Maximum)	NVIDIA® FXAA™ Antialiasing	NVIDIA® TXAA™ Antialiasing	NVIDIA® SLI®	NVIDIA Quadro® Mosaic Technology	GPUDirect™ for Video	Graphics Synchronization ⁵	NVIDIA 3D Vision® /3D Vision Pro ⁶	NVIDIA Multi-GPU Technology Enabled ⁷
				1	1	2	2			2,880	12 GB	288 GBps	5,196	• ⁸	2		2	4	4	64x	•	•	•	•	•	•	•	•	•
				1	2	3				2,304	8 GB	192 GBps	4,037		2		2	4	4	64x	•	•	•	•	•	•	•	•	
		1		1	2	2				1,344	4 GB	173 GBps	2,390		1		2	3	4	64x	•	•	•	•	•	•	•	•	
		1		2	2	3				640	4 GB	80 GBps			1		2	3	4	64x	•	•	•	•	•	•	•	•	
		1	1	2	2	2				384	2 GB	29 GBps			1		1	2	4	64x	•	•	•	•	•	•	•	•	
		2	1	2	2	2				192	1 GB	29 GBps			1		1	2	4	64x	•	•	•	•	•	•	•	•	
							2			1,536	4 GB	173 GBps	2,150	• ⁹	2		2	4	4	64x	•	•	•	•	•	•	•	•	
		1					3			768	3 GB	134 GBps	1,246		1		2	3	4	64x	•	•	•	•	•	•	•	•	
		1								384	2 GB	64 GBps			1		2	3	4	64x	•	•	•	•	•	•	•	•	
										384	2 GB	64 GBps			2		1	3	4	64x	•	•	•	•	•	•	•	•	
		1	1							192	1 GB	29 GBps			1		1	2	2	64x	•	•	•	•	•	•	•	•	
		2	1							192	512 MB	14 GBps			1		1	2	2	32x	•	•	•	•	•	•	•	•	

Tesla for Desktop Workstations

DESKTOP								MOBILE		GPU SPECIFICATIONS			PERFORMANCE		DISPLAY TECHNOLOGY										OPTIONS			
HP Z1	HP Z230	HP Z230sff	HP Z440	HP Z440	HP Z840	DL380Z		Zbook 15	Zbook 17	NVIDIA® CUDA® Processing Cores ¹	GPU Memory	Memory Bandwidth	Floating-Point Performance-Single Precision (GigaFlops, Peak)	Error Correcting Code (ECC) Memory	Dual-Link DVI ²	DisplayPort 1.1 ³	DisplayPort 1.2 ³	HDMI Via Adaptors	Maximum Active Displays ⁴	FSAA (Maximum)	NVIDIA® FXAA™ Antialiasing	NVIDIA® TXAA™ Antialiasing	NVIDIA® SLI®	NVIDIA Quadro® Mosaic Technology	GPUDirect™ for Video	Graphics Synchronization ⁵	NVIDIA 3D Vision® /3D Vision Pro ⁶	NVIDIA Multi-GPU Technology Enabled ⁷
				1	1	2				2,880	12 GB	288 GBps	5040 ¹¹	•												•	•	•
				1	1	2				2,496	5 GB	208 GBps	3,520	•												•	•	•

Quadro for Mobile and All-in-One Workstations

DESKTOP								MOBILE		GPU SPECIFICATIONS			PERFORMANCE		DISPLAY TECHNOLOGY										OPTIONS			
HP Z1	HP Z230	HP Z230sff	HP Z440	HP Z440	HP Z840	DL380Z		Zbook 15	Zbook 17	NVIDIA® CUDA® Processing Cores ¹	GPU Memory	Memory Bandwidth	Floating-Point Performance-Single Precision (GigaFlops, Peak)	Error Correcting Code (ECC) Memory	Dual-Link DVI ²	DisplayPort 1.1 ³	DisplayPort 1.2 ³	HDMI Via Adaptors	Maximum Active Displays ⁴	FSAA (Maximum)	NVIDIA® FXAA™ Antialiasing	NVIDIA® TXAA™ Antialiasing	NVIDIA® SLI®	NVIDIA Quadro® Mosaic Technology	GPUDirect™ for Video	Graphics Synchronization ⁵	NVIDIA 3D Vision® /3D Vision Pro ⁶	NVIDIA Multi-GPU Technology Enabled ⁷
								1		1,536	8 GB	115 GBps	2,350	• ⁹	• ¹²	• ¹²	• ¹²	• ¹²	• ¹²	64x	•	•	•	•	•	•	•	•
	1							1		1,152	4 GB	102 GBps	1,600		• ¹²	• ¹²	• ¹²	• ¹²	• ¹²	64x	•	•	•	•	•	•	•	
	1							1		768	4 GB	102 GBps	1,050		• ¹²	• ¹²	• ¹²	• ¹²	• ¹²	64x	•	•	•	•	•	•	•	
	1							1		576	2 GB	48 GBps	750		• ¹²	• ¹²	• ¹²	• ¹²	• ¹²	64x	•	•	•	•	•	•	•	
								1		384	2 GB	45 GBps	550		• ¹²	• ¹²	• ¹²	• ¹²	• ¹²	64x	•	•	•	•	•	•	•	
	1							1	1	192	1 GB	21 GBps	375		• ¹²	• ¹²	• ¹²	• ¹²	• ¹²	64x	•	•	•	•	•	•	•	

NVS for Desktop Workstations

DESKTOP								MOBILE		GPU SPECIFICATIONS			PERFORMANCE		DISPLAY TECHNOLOGY										OPTIONS			
HP Z1	HP Z230	HP Z230sff	HP Z440	HP Z440	HP Z840	DL380Z		Zbook 15	Zbook 17	NVIDIA® CUDA® Processing Cores ¹	GPU Memory	Memory Bandwidth	Floating-Point Performance-Single Precision (GigaFlops, Peak)	Error Correcting Code (ECC) Memory	Dual-Link DVI ²	DisplayPort 1.1 ³	DisplayPort 1.2 ³	HDMI Via Adaptors	Maximum Active Displays ⁴	FSAA (Maximum)	NVIDIA® FXAA™ Antialiasing	NVIDIA® TXAA™ Antialiasing	NVIDIA® SLI®	NVIDIA Quadro® Mosaic Technology	GPUDirect™ for Video	Graphics Synchronization ⁵	NVIDIA 3D Vision® /3D Vision Pro ⁶	NVIDIA Multi-GPU Technology Enabled ⁷
		1	1	2	2	2				192	2 GB	29 GBps	300					4	4	4					•	•	•	
		2	2	3	4	3				48	1 GB	14 GBps	50		2 ¹³	2 ¹³	2	2	2					•	•	•	•	
		2	2	3	4	3				48	512 MB	14 GBps	50					2	2	2					•	•	•	

For more information on NVIDIA NVS mobile solutions, please visit www.nvidia.com/object/notebook-nvs.html

- CUDA parallel processing cores cannot be compared between GPU generations due to several important architectural differences that exist between streaming multiprocessor designs.
- Maximum display resolution: 330M Pixels/sec (ex 2560x1600 @ 60Hz or 1920x1200@120Hz)
- Adaptors available for DVI-SL, DVI-DL, HDMI, and VGA. NVS 315 offers DP1.2 through the use of DMS-59 to DP1.2 cable.
- Quadro K4200, K4000, K2200, K2000, and K2000D are equipped with 3 on-board display connectors, while K620, K600 and K420 have 2 on-board display connectors with the option to connect a third and/or fourth display using DisplayPort 1.2's new

- multi-streaming capabilities. 4 Displays require a supported DisplayPort 1.2 Multi-Stream capable hub or displays.
- Quadro K-series GPUs are only compatible with NVIDIA Quadro Sync. Other GPUs listed are compatible only with Quadro G-Sync II.
- Requires 3D Vision-ready display. Visit www.nvidia.com/3dvision
- Quadro K-series GPUs are only compatible with Tesla K20 and K40. Other GPUs listed are compatible only with Tesla C2075.
- Ensures data integrity and reliability by eliminating soft errors on both GPU cache and on-board DRAM.
- Ensures data integrity and reliability by eliminating soft errors on DRAM only.

- K2000D is offered as a 'test & certified' graphics option on HP Z440/640/840. For more information see the "Test and Certified" program information on HP's website.
- The Single Precision theoretical peak performance for Tesla K40 is calculated for the highest GPU Boost level of 875MHz. For more information on Tesla K40 and GPU Boost visit, www.nvidia.com/tesla
- Display support will vary by OEM; please see HP Mobile Workstation platform specifications for details.
- Combo NVS 510 + NVS 300/310 for up to 6 displays is supported.

