



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 let 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.

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	DES	DESKTOP			MOBILE					GPU SPECIFICATIONS			PERFORM	DISP	LAY TE	CHNOLO	OGY	OPTIONS										
	HP Z240sff	HP Z440	HP Z640	HP Z840	Zbook 17	Zbook 15	Zbook Studio	HP Z1 Gen2	HP Z1 Gen3 NEW	NVIDIA® CUDA® Processing Cores¹	GPU Memory	Memory Bandwidth	Floating-Point Performance-Single Precision (Tflops, Peak)	Error Correcting Code (ECC) Memory	Dual-Link DVI²	DisplayPort 1.2 ^{3,11,13,14}	HDMI Via Adaptors, HDMI 1133.14	Maximum Active Displays ^{4, 11}	FSAA (Maximum)	NVIDIA® FXAA" and NVIDIA® TXAA"Antialiasing	NVIDIA® SLI®	NVIDIA Quadro® Mosaic Technology	GPUDirect" for Video	Graphics Syncronization⁵	NVIDIA Multi-GPU Technology Enabled ⁶	Vulkan Support	3D Vision Pro	NVIDIA Optimus
Quadro for Deskto	p Wo	rkst	atior	าร																								
Quadro M6000 24 GB NEW		1	1	2	1					3,072	24 GB	317 GBps	7	•7	1	4	4	4	64x	•	•	•	•	•	•	•	•	
Quadro K6000		1	1	2						2,880	12 GB	288 GBps	5.1	•8	2	2	4	4	64x	•	•	•	•	•	•	•	•	
Quadro M5000		1	2	3						2,048	8 GB	211 GBps	4.2	•7	1	4	4	4	64x		•	•	•	•	•	•	•	
Quadro M4000	1	1	2	3						1,664	8 GB	192 GBps	2.5			4	4	4	64x	•	•	•	•	•	•	•	•	
Quadro M2000 NEW		2	2	3						768	4 GB	106 GBps	1.8			4	4	4	64x	•		•			•	•	•	
Quadro K2200	1	2	2	3						640	4 GB	80 GBps	1.4		1	2	3	4	64x	•		•			•	•	•	
Quadro K1200	1	2	2	3						512	4 GB	80 GBps	1			4	4	4	64x	•		•			•	•	•	
Quadro K620	1	2	2	2						384	2 GB	29 GBps			1	1	2	4	64x	•		•			•	•	•	
Quadro K420	2	2	2	2						192	1 GB/2 GB	29 GBps			1	1	2	4	64x	•		•			•	•	•	
Tesla K40		1	19	2						2,880	12 GB	288 GBps	59	•									•		•			
Quadro for Mobile	and A	All-i	n-On	e W	orks	tatio	ons																					
Quadro M5000M					1					1,536	8 GB	160 GBps	3.2			1.2	2	4	64x	•		•	•			•	•	•
Quadro M4000M					1					1,280	4 GB	160 GBps	2.6			1.2	2	4	64x	•		•				•	•	•
Quadro M3000M					1					1,024	4 GB	160 GBps	1.9			1.2	2	4	64x	•		•				•	•	•
Quadro M2000M					1	1			1	640	4 GB	80 GBps	1.5			1.2	2	4	64x	•		•				•	•	•
Quadro M1000M			<u> </u>		1	1	1		1	512	2 GB	80 GBps	1.1		_	1.2	2	4	64x	•		•				٠	•	•
Quadro K5100M					1					1,536	8 GB	115 GBps	2.3			1.2	2	4	64x	•		•	•			•	•	•
Quadro K4100M					1			1		1,152	4 GB	102 GBps	1.6			1.2	2	4	64x	•		•				٠	•	٠
Quadro K3100M					1			1		768	4 GB	102 GBps	1			1.2	2	4	64x	•		•				•	•	•
Quadro K2200M					1					640	2 GB	80 GBps	1.4			1.2	2	4	64x	•		•				•	•	•
Quadro K2100M						1		1		576	2 GB	48 GBps	0.75			1.2	2	4	64x	•		•				•	•	•
Quadro K1100M					1	1				384	2 GB	45 GBps	0.55			1.2	2	4	64x	•		•				•	•	•
Quadro K610M						1		1		192	1 GB	21 GBps	0.38			1.2	2	4	64x	•		•				•	•	•
NVS for Desktop W	orks/	tatio	ns																									
NVS 810 ¹⁰ NEW	1	2	3	4						1,02411	4 GB ¹¹	29 GBps ¹¹				8	8	8	64x	•		•				•		
NVS 510	1	2	2	2						192	2 GB	29 GBps				4	4	4				•				•		
NVS 315	2	3	4	3						48	1 GB	14 GBps			212	2	2	2								•		
		-	,																									

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

- 1. CUDA parallel processing cores cannot be compared between GPU generations due to several important architectural differences that exist between streaming
- multiprocessor designs.

 2. Maximum display resolution: 330M Pixels/sec (ex 2560x1600 @ 60Hz or

NVS 310

- 1920x1200@120Hz)

 3. 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 K2200 and K2000D are equipped with 3 on-board display connectors, while K620 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.

48 512 MB/1 GB

- 5. Quadro K-series GPUs are only compatible with NVIDIA Quadro Sync. Other GPUs listed are compatible only with Quadro G-Sync II.
- 6. Quadro K-series GPUs are only compatible with Tesla K20 and K40.
 7. Ensures data integrity and reliability by eliminating soft errors on DRAM only.
 8. Ensures data integrity and reliability by eliminating soft errors on both GPU cache
- and on-board DRAM.

 9. 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
- 10. NVS 810 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 NVS 810 is a dual GPU design, so half of this total number is per GPU.
- Combo NVS 510 + NVS 310 for up to 6 displays is supported
 Display support will vary by 0EM; please see HP Mobile Workstation platform specifications for details.
- 14. GPU capability



