



NVIDIA PROFESSIONAL GRAPHICS SOLUTIONS

You need to do great things. Create and collaborate from anywhere, on any device, without distractions like slow performance, poor stability, or incompatibility. NVIDIA Quadro is the technology that lets you unleash your vision and enjoy the ultimate creative freedom.

Whether you're developing revolutionary products, using AI to work smarter and faster, telling spectacularly vivid visual stories, designing groundbreaking architecture, or creating the most lifelike, immersive virtual experiences, NVIDIA Quadro gives you the performance to do it brilliantly. Support for NVIDIA deep learning SDKs and accelerated AI frameworks, multiple 8K displays, large graphics memory capacity, advanced physically based rendering, VR-specific features, and flexible multi-GPU configurations give you the power to tackle the most challenging visual computing tasks.



NVIDIA® Quadro® 3D Workstation Professional Graphics Solutions

Designed and built specifically for artists, designers, and engineers, NVIDIA Quadro GPUs power more than 100 professional applications across a broad range of industries. Professionals trust them to enable their best work using applications such as Adobe® Creative Cloud, Avid Media Composer, Autodesk Suites, Dassault Systèmes, CATIA and SOLIDWORKS, Siemens NX, PTC Creo, and many more.



NVIDIA® RTX GPUs

NVIDIA® Quadro RTX™ graphics cards, powered by the NVIDIA Turing™ architecture and the NVIDIA RTX™ platform, brings the most significant advancement in computer graphics in over a decade to professional workflows. Designers and artists can now wield the power of hardware-accelerated ray tracing, deep learning, and advanced shading to dramatically boost productivity and create amazing content faster than ever before.



NVIDIA® Multi-GPU Technology

NVIDIA Multi-GPU Technology leverages multiple Quadro GPUs to intelligently scale the performance of your application. Additionally, our latest NVLink technology delivers high-speed GPU interconnection that scales both memory and performance across multiple GPUs, giving professionals the memory capacity they need to accelerate their workflows. This delivers significant business impact across industries such as Manufacturing, Media and Entertainment, and Energy Exploration.

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	GPU SPECIFICATIONS						PERFORMANCE						DISPLAY TECHNOLOGY						VIRTUAL REALITY (VR)			OPTIONS				
	NVIDIA® CUDA® Processing Cores ¹	NVIDIA® RT Cores	Tensor Cores	GPU Memory	Peak Memory Bandwidth	NVIDIA® NVLink®	Floating-Point Performance, Single Precision (TFLOPS, Peak)	Ray Cast (Giga Rays/Sec)	Accelerated Double Precision	Tensor Performance (TFLOPS, Peak) ²	Error Correcting Code (ECC) Memory	Dual-Link DVI or DVI-D ³	DisplayPort 1.2 ⁴ and 1.4 ²	Maximum Active Displays	HDMI via Adaptors, HDMI	NVIDIA® SLI® ⁶	HDR - High Dynamic Range ⁷	NVIDIA Quadro® Mosaic Technology	VR Ready ⁸	VirtualLink™	Single Pass Stereo	GPUDirect™ for Video	Graphics Synchronization with Sync II	3D Stereo	Encode / Decode ⁹	
Quadro RTX 8000 NEW	4,608	72	576	48 GB	672 GBps	•	16.3	10		130.5	• ¹¹		4	4	4	•	•	•	•	•	• ¹²	•	•	•	•	
Quadro RTX 6000 NEW	4,608	72	576	24 GB	672 GBps	•	16.3	10		130.5	• ¹¹		4	4	4	•	•	•	•	•	• ¹²	•	•	•	•	
Quadro RTX 5000 NEW	3,072	48	384	16 GB	448 GBps	•	11.2	8		89.2	• ¹¹		4	4	4	•	•	•	•	•	• ¹²	•	•	•	•	
Quadro RTX 4000 NEW	2,304	36	288	8 GB	416 GBps	•	7.1	6		57	• ¹¹		3	4	4	•	•	•	•	•	• ¹²	•	•	•	•	
Quadro GV100	5,120		640	32 GB	870 GBps	•	14.8		•	118.5	• ¹⁰		4	4	4	•	•	•	•	•		•	•	•	•	
Quadro GP100	3,584			16 GB	717 GBps	•	10.3		•		• ¹⁰	1	4	4	4	•	•	•	•	•		•	•	•	•	
Quadro P6000	3,840			24 GB	432 GBps		12.6				• ¹¹	1	4	4	4	•	•	•	•	•	• ¹³	•	•	•	•	
Quadro P5000	2,560			16 GB	288 GBps		8.9				• ¹¹	1	4	4	4	•	•	•	•	•	• ¹³	•	•	•	•	
Quadro P4000	1,792			8 GB	256 GBps		5.3						4	4	4	•	•	•	•	•	• ¹³	•	•	•	•	
Quadro P2000	1,024			5 GB	140 GBps		3.0						4	4	4		•	•					•	•	•	
Quadro P1000	640			4 GB	80 GBps		1.8						4	4	4		•	•						•	•	
Quadro P620	512			2 GB	80 GBps		1.3						4	4	4		•	•						•	•	
Quadro P600	384			2 GB	64 GBps		1.1						4	4	4		•	•						•	•	
Quadro P400	256			2 GB	32 GBps		0.6						3	3 ¹⁴	3		•	•						•	•	
NVS 810	1,024 ¹⁵			4 GB ¹⁵	29 GBps ¹⁵								8	8	8			•								

- CUDA parallel processing cores cannot be compared between GPU generations due to several important architectural differences that exist between streaming multiprocessor designs.
- FP16 matrix multiply with FP16 or FP32 accumulate.
- Maximum display resolution: 1050M Pixels/sec (32.4 Gbps) [ex 7680x4320 @ 60Hz or 5120x2880 @ 60Hz]. Pascal GPUs support Dual-Link DVI-D.
- Turing, Volta and Pascal architecture support DP1.4. Adaptors available for DVI-SL, DVI-DL, HDMI, and VGA.
- Quadro RTX 8000, Quadro RTX 6000 and Quadro RTX 5000 support display stream compression (DSC).

- SLI functionality provided via the NVLink.
- Supported adaptors required for HDMI.
- VR Ready GPUs have the performance & features required for high-quality VR experiences.
- For details on GPU specific video encode/decode format support, refer to, <https://developer.nvidia.com/video-encode-decode-gpu-support-matrix>.
- 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.

- Supports Turing GPU Multi-View Rendering (MVR) feature.
- Supports Pascal GPU Simultaneous Multi-Projection (SMP) feature.
- P400 can drive 4 displays via MST.
- The NVS 810 is a dual GPU design, so half of this total number is per GPU.

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

