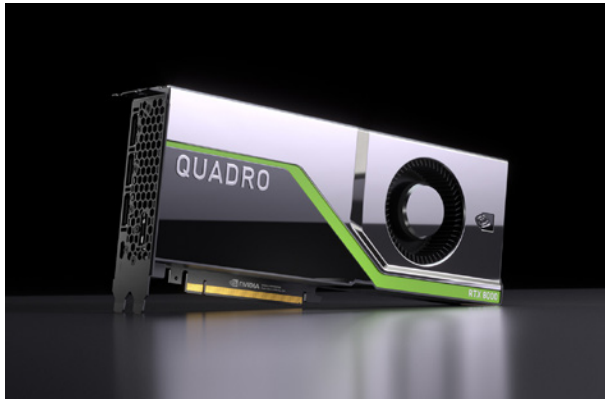
NVIDIA PROFESSIONAL GRAPHICS SOLUTIONS

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

NVIDIA Quadro provides a wide range of solutions that bring the power of NVIDIA RTX™ to millions of professionals, on the go, on desktop, or in the data center. Leverage the latest advancements in AI, virtual reality (VR), and interactive, photorealistic rendering so you can develop revolutionary products, tell vivid visual stories, and design groundbreaking architecture like never before. Support for advanced features, frameworks, and SDKs across all of our products gives you the power to tackle the most challenging visual computing tasks, no matter the scale.

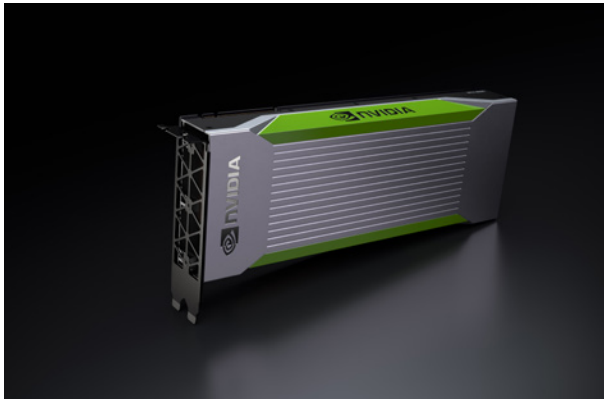
Quadro in Mobile Workstations

Professionals today are increasingly working on complex workflows like VR, 8K video editing, and photorealistic rendering on the go. Quadro RTX™ mobile GPUs deliver desktop-level performance in a portable form factor. With up to 24GB of massive GPU memory, Quadro RTX mobile GPUs combine the latest advancements in real-time ray tracing, advanced shading, and AI-based capabilities so professionals can tackle demanding workflows from anywhere.



Quadro in Desktop Workstations

Drive the most challenging workloads with Quadro RTX powered desktop workstations designed and built specifically for artists, designers, and engineers. Connect multiple Quadro RTX GPUs to scale up to 96 gigabytes (GB) of GPU memory and performance to tackle the largest workloads and speed up your workflow. This delivers significant business impact across industries like manufacturing, media and entertainment, and energy.



Quadro in Servers

Demand for visualization, rendering, data science, and simulation continues to grow as businesses tackle larger, more complex workloads than ever before. Scale up your visual compute infrastructure and tackle graphics intensive workloads, complex designs, photorealistic renders, and augmented and virtual environments at the edge with Quadro RTX in the data center. Optimized for reliability in enterprise data centers, Quadro RTX GPUs feature both active and passive thermal solutions to fit into a variety of servers.

NVIDIA PROFESSIONAL GRAPHICS SOLUTIONS

PROFESSIONAL GRAPHICS SOLUTIONS LINE CARD

		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	Maximum Active Displays	Dual-Link DVI or DVI-D[3]	DisplayPort 1.2[4] and 1.4[5]	HDMI via Adaptors, HDMI	NVIDIA SLI®[6]	High Dynamic Range (HDR)[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]
MOBILE																										
NEW	Quadro RTX 6000	4,608	72	576	24 GB	672 Gbps		14.9	11		119.4		4*	Yes*	Yes*	Yes*		•	•	•		•[12]	•		•	•
NEW	Quadro RTX 5000	3,072	48	384	16 GB	448 Gbps		9.4	7		75.2		4*	Yes*	Yes*	Yes*		•	•	•		•[12]	•		•	•
NEW	Quadro RTX 4000	2,560	40	320	8 GB	448 Gbps		8	5		63.9		4*	Yes*	Yes*	Yes*		•	•	•		•[12]	•		•	•
NEW	Quadro RTX 3000	1,920	30	240	6 GB	336 Gbps		5.4	5		42.9		4*	Yes*	Yes*	Yes*		•	•	•		•[12]			•	•
NEW	Quadro T2000	1,024			4 GB	128 Gbps		3.5					4*	Yes*	Yes*	Yes*		•	•						•	•
NEW	Quadro T1000	896			4 GB	128 Gbps		2.6					4*	Yes*	Yes*	Yes*		•	•						•	•
NEW	Quadro P620	512			4 GB	96 Gbps		1.5					4*	Yes*	Yes*	Yes*		•	•						•	•
NEW	Quadro P520	384			2 GB or 4 GB	48 Gbps		1.1																		
	Quadro P5200	2,560			16 GB	230 Gbps		8.9					4*	Yes*	Yes*	Yes*		•	•	•		•[13]	•		•	•
	Quadro P4200	2,304			8 GB	224 Gbps		7.6					4*	Yes*	Yes*	Yes*		•	•	•		•[13]	•		•	•
	Quadro P3200	1,792			6 GB	168 Gbps		5.3					4*	Yes*	Yes*	Yes*		•	•	•		•[13]			•	•
	Quadro P2000	768			4 GB	96 Gbps		2.4					4*	Yes*	Yes*	Yes*		•	•						•	•
	Quadro P1000	512			4 GB	96 Gbps		1.6					4*	Yes*	Yes*	Yes*		•	•						•	•
	Quadro P600	384			4 GB	80 Gbps		1.2					4*	Yes*	Yes*	Yes*		•	•						•	•
	Quadro P500	256			2 GB	40 Gbps		0.75																		
DESKTOP																										
NEW	Quadro RTX 8000	4,608	72	576	48 GB	672 Gbps	•	16.3	10		130.5	•[11]	4		4	4	•	•	•	•	•	•[12]	•	•	•	•
NEW	Quadro RTX 6000	4,608	72	576	24 GB	672 Gbps	•	16.3	10		130.5	•[11]	4		4	4	•	•	•	•	•	•[12]	•	•	•	•
NEW	Quadro RTX 5000	3,072	48	384	16 GB	448 Gbps	•	11.2	8		89.2	•[11]	4		4	4	•	•	•	•	•	•[12]	•	•	•	•
NEW	Quadro RTX 4000	2,304	36	288	8 GB	288 Gbps		7.1	6		57		4		3	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]	4	1	4	4	•	•	•	•			•	•	•	•
	Quadro P6000	3,840			24 GB	432 Gbps		12.6				•[11]	4	1	4	4	•	•	•	•		•[13]	•	•	•	•
	Quadro P5000	2,560			16 GB	288 Gbps		8.9				•[11]	4	1	4	4	•	•	•	•		•[13]	•	•	•	•
	Quadro P4000	1,792			8 GB	256 Gbps		5.3					4		4	4	•	•	•	•		•[13]	•	•	•	•
	Quadro P2200	1,280			5 GB	200 Gbps		3.8					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 P400	256			2 GB	32 Gbps		0.6					3[14]		3	3		•	•						•	•
SERVER																										
NEW	Quadro RTX 8000 (Passive Thermal Solution)	4,608	72	576	48 GB	624 Gbps	•	14.9	10		119.4	•[11]			N/A[15]		•	•	•	•			•	•	•	•
NEW	Quadro RTX 6000 (Passive Thermal Solution)	4,608	72	576	24 GB	624 Gbps	•	14.9	10		119.4	•[11]			N/A[15]		•	•	•	•			•	•	•	•
	Quadro RTX 8000 (Active Thermal Solution)	4,608	72	576	48 GB	672 Gbps	•	16.3	10		130.5	•[11]	4		4	4	•	•	•	•	•	•[12]	•	•	•	•
	Quadro RTX 6000 (Active Thermal Solution)	4,608	72	576	24 GB	672 Gbps	•	16.3	10		130.5	•[11]	4		4	4	•	•	•	•	•	•[12]	•	•	•	•

* Check with OEM manufacturer for specific display topology

1. CUDA parallel processing cores cannot be compared between GPU generations due to several important architectural differences that exist between streaming multiprocessor designs.
2. FP16 matrix multiply with FP16 or FP32 accumulate.
3. Maximum display resolution: 1050M pixels/sec (32.4 Gbps) (ex 7680x4320 @ 60hz or 5120x2880 @ 60hz). NVIDIA Pascal™ GPUs support dual-link DVI-D.
4. NVIDIA Turing™, Volta™ and Pascal architecture support DP1.4. Adaptors available for DVI-SL, DVI-DL, HDMI, and VGA.
5. Quadro RTX 8000, Quadro RTX 6000, and Quadro RTX 5000 active cards support display stream compression (DSc).
6. SLI functionality is provided via NVLink.
7. Supported adaptors are required for HDMI.
8. VR Ready GPUs have the performance and features required for high-quality VR experiences.
9. For details on GPU-specific video encode/decode format support, refer to: developer.nvidia.com/video-encode-decode-gpu-support-matrix
10. Ensures data integrity and reliability by eliminating soft errors on both GPU cache and on-board DRAM.
11. Ensures data integrity and reliability by eliminating soft errors on DRAM only.
12. Supports Turing GPU's multi-view rendering (MVR) feature.
13. Supports Pascal GPU's simultaneous multi-projection (SMP) feature.
14. P400 can drive four displays via MST.
15. An NVIDIA Quadro vDWS software license is required for graphics display support, including Windows WDDM.

For more information on NVIDIA Quadro solutions, please visit: **www.nvidia.com/en-us/design-visualization/quadro/**

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