NVIDIA QUADRO RTX 8000 AND RTX 6000 FOR SERVERS DESIGNED, BUILT, TESTED AND AUTHORIZED BY NVIDIA





NVIDIA QUADRO

NVIDIA[®] Quadro[®] RTX[™] features such as RT Cores for real-time ray tracing at cinematic quality, Tensor Cores that accelerate AI/DL/ML/MV applications and big data analytics, or AI enhanced design and visualization tools, even virtual GPU capabilities for products ranging from smartphones to tablets and non-Quadro equipped mobile or desktop PCs, are compelling and beneficial to institutions.

NVIDIA now authorizes and supports the deployment of NVIDIA Quadro RTX 8000 and RTX 6000 professional graphics boards in server chassis for data center deployment to realize these use cases. Either choice offers the same GPU performance, but the RTX 8000 offers an unprecedented 48 GB of GPU memory, while the NVIDIA Quadro RTX 6000 provides 24 GB. Both utilize ultra-fast GDDR6 with optional ECC, and NVLink offers GPU memory pooling for two cards, providing 96 GB or 48 GB respectively, along with performance scaling since GPU core counts are effectively doubled. Since NVLink provides 100 GB/ sec of bidirectional communications between two Quadro boards, far in excess of what PCIe provides, NVIDIA Quadro RTX equipped server solutions for data center deployment offer previously unrealizable levels of performance and paradigm shifting capabilities – all with Quadro IT manageability.

THESE SERVER VENDORS OFFER SYSTEMS CAPABLE OF HOSTING UP TO 8X NVIDIA QUADRO RTX 8000 OR RTX 6000 BOARDS:

VENDOR	SERVER CHASSIS SUPPORTED
ASUS	ESC8000 G4 ESC4000 G4/G4S/G4X E900 G4 RS720-E9-RS8-G
Quanta	D528V-2U D52G 4U D43J-3U D43KQ-2U D43N-5U
Supermicro	4029GP-TRT2 7049GP-TR
TYAN	FT77D-B7109 T48T-B7105

FOR MORE INFORMATION, CONTACT YOUR PNY ACCOUNT MANAGER OR EMAIL GOPNY@PNY.COM WWW.PNY.COM/QUADRO

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HERE ARE SOME ESSENTIAL NVIDIA QUADRO RTX 8000 AND RTX 6000 SPECIFICATIONS WHEN USING ONE, TWO, FOUR, OR EIGHT GRAPHICS BOARDS:

	1X GPU	2X GPU	4X GPU	8X GPU	
CUDA Cores	4608	9216	18432	36864	
RT Cores	72	144	288	576	
Tensor Cores	576	1152	2304	4608	
RTX-OPS	84T	168T	336T	672T	
Rays Cast	10 Giga Rays/Sec	20 Giga Rays/Sec	40 Giga Rays/Sec	80 Giga Rays/Sec	
Peak FP32 Performance	16.3 TFLOPS	32.6 TFLOPS	65.2 TFLOPS	130.4 TFLOPS	
Peak FP16 Performance	32.6 TFLOPS	65.2 TFLOPS	130.4 TFLOPS	260.8 TFLOPS	
Peak INT8 Performance	206.1 TOPS	412.2 TOPS	824.4 TOPS	1684.8 TOPS	
Deep Learning TFLOPS	130.5 Tensor TFLOPS	261.0 Tensor TFLOPS	522.0 Tensor TFLOPS	1044.0 Tensor TFLOPS	
Board Power Consumption	295 W	590 W	1180 W	2360 W	
RTX 8000 GPU Memory	48 GB	96 GB	192 GB	384 GB	
RTX 6000 GPU Memory	24 GB	48 GB	96 GB	192 GB	
NVLink Bandwidth	100 GB/sec Bidirectional Between 2x GPUs				

NVIDIA QUADRO RTX 8000 AND RTX 6000 POWERED SERVERS SUPPORT A WIDE ARRAY OF MARKETS AND SOLUTIONS:

	VIRTUAL WORKSTATIONS	RENDERING	DATA SCIENCE	HPC AND SIMULATION	AR/VR AT THE EDGE			
Workload	Workstations for Design and Visualization	Offline Rendering, On- Demand Viewport Rendering, Workstations and Render Nodes	Workstations for Data Science R&D	Workstations for HPC Compute and Visualization	Development Platforms for AR/ VR over 5G			
ISV Software	Hypervisor, ISV Applications	Renderer, ISV Applications, Hypervisor	Data Science Software, Hypervisor	HPC Applications, Hypervisor	AR/VR Applications, Development Tools, Hypervisor			
NVIDIA Software	Quadro vDWS, CUDA-X AI, OptiX	Quadro vDWS, CUDA-X AI, OptiX	Quadro vDWS, CUDA-X AI, NGC Containers	Quadro vDWS, NGC Containers	Quadro vDWS, Development Tools			
NVLink Bandwidth	100 GB/sec Bidirectional Between 2x GPUs							
Server Enclosure	ASUS, Quanta, Supermicro and TYAN Qualified Systems							

NVIDIA Quadro RTX 8000 and RTX 6000 fueled servers deliver exponential power at a fraction of the cost of CPU-based alternatives. For rendering the RTX solution is typically 1/4th the cost, for AI 1/5th the cost, and for HPC 1/7th the cost. To learn more about how NVIDIA Quadro RTX servers can enhance innovation, boost productivity, and realize significant operational efficiencies, please email **gopny@pny.com**.

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