



THE WORLD'S FIRST RAY TRACING GPU NVIDIA QUADRO RTX 5000



REAL TIME RAY TRACING FOR PROFESSIONALS

Shatter the boundaries of what's possible with the NVIDIA® Quadro RTX™ 5000, powered by NVIDIA Turing GPU to bring real-time ray tracing and accelerated AI to next-generation workflows. Creative and technical professionals can supercharge demanding design and visualization workloads and make more informed decisions faster than ever before. Equipped with 3072 CUDA cores, 384 Tensor cores, 48 RT Cores and 16GB GDDR6 memory, Quadro RTX 5000 can render complex models and scenes with physically accurate shadows, reflections, and refractions to empower users with instant insight. Support for NVIDIA NVLink¹ enables applications to scale memory and performance with multi-GPU configurations². And with the industry's first implementation of the new VirtualLink³, Quadro RTX 5000 provides connectivity to the next-generation of high-resolution VR head-mounted displays to let designers view their work in the most compelling virtual environments possible.

Quadro cards are certified with a broad range of sophisticated professional applications, tested by leading workstation manufacturers, and backed by a global team of support specialists. This gives you the peace of mind to focus on doing your best work. Whether you're developing revolutionary products or telling spectacularly vivid visual stories, Quadro gives you the performance to do it brilliantly.

¹ NVIDIA NVLink sold separately | ² Connecting two RTX 5000 cards with NVLink to scale performance and memory capacity to 32 GB is only possible if your application supports NVLink technology. Please contact your application provider to confirm their support for NVLink. | ³ In preparation for the emerging VirtualLink standard, Turing GPUs have implemented hardware support according to the "VirtualLink Advance Overview". To learn more about VirtualLink, please see www.virtuallink.org | ⁴ Via adapter/connector/bracket | ⁵ Quadro Sync II card sold separately | ⁶ Windows 7, 8, 8.1, 10 and Linux | ⁷ GPU supports DX 12.0 API, Hardware Feature Level 12_1 | ⁸ Product is based on a published Khronos Specification, and is expected to pass the Khronos Conformance Testing Process when available. Current conformance status can be found at www.khronos.org/conformance

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FEATURES

- > Four DisplayPort 1.4 Connectors
- > VirtualLink Connector³
- > DisplayPort with Audio
- > VGA Support⁴
- > 3D Stereo Support with Stereo Connector⁴
- > NVIDIA GPUDirect™ Support
- > Quadro Sync II⁵ Compatibility
- > NVIDIA nView® Desktop Management Software
- > HDCP 2.2 Support
- > NVIDIA Mosaic⁶

PACKAGE CONTENTS

- > NVIDIA Quadro RTX 5000
- > Quadro RTX Quick Start Guide
- > Quadro Support Guide
- > 1 DisplayPort to DVI Adapter
- > 1 Auxiliary Power Cable (8-pin to dual 6-pin adapter)

WARRANTY AND SUPPORT

- > 3-Year Warranty
- > Pre- and Post-Sales Technical Support
- > Dedicated Field Application Engineers
- > Direct Tech Support Hot Lines



PNY PART NUMBER	VCQRTX5000-PB
SPECIFICATIONS	
GPU Memory	16 GB GDDR6
Memory Interface	256-bit
Memory Bandwidth	Up to 448 GB/s
ECC	Yes
NVIDIA CUDA Cores	3,072
NVIDIA Tensor Cores	384
NVIDIA RT Cores	48
Single-Precision Performance	11.2 TFLOPS
Tensor Performance	89.2 TFLOPS
NVIDIA NVLink	Connects 2 Quadro RTX 5000 GPUs ¹
NVIDIA NVLink bandwidth	50 GB/s (bidirectional)
System Interface	PCI Express 3.0 x 16
Power Consumption	Total board power: 265 W Total graphics power: 230 W
Thermal Solution	Active
Form Factor	4.4" H x 10.5" L, Dual Slot, Full Height
Display Connectors	4xDP 1.4, 1x USB-C
Max Simultaneous Displays	4x 4096x2160 @ 120 Hz, 4x 5120x2880 @ 60 Hz, 2x 7680x4320 @ 60 Hz
Encode / Decode Engines	1X Encode, 2X Decode
VR Ready	Yes
Graphics APIs	DirectX 12.0 ⁷ , Shader Model 5.1 ⁷ , OpenGL 4.5 ⁸ , Vulkan 1.0 ⁸
Compute APIs	CUDA, DirectCompute, OpenCL™

NVIDIA QUADRO
AUTHORIZED PARTNER



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