



## 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 NVLink<sup>1</sup> enables applications to scale memory and performance with multi-GPU configurations<sup>2</sup>. And with the industry's first implementation of the new VirtualLink<sup>®3</sup>, 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.

<sup>1</sup> NVIDIA NVLink sold separately | <sup>2</sup> 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 | <sup>3</sup> 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](http://www.virtuallink.org) | <sup>4</sup> Via adapter/connector/bracket | <sup>5</sup> Quadro Sync II card sold separately | <sup>6</sup> Windows 7, 8, 8.1, 10 and Linux | <sup>7</sup> GPU supports DX 12.0 API, Hardware Feature Level 12\_1 | <sup>8</sup> 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](http://www.khronos.org/conformance)

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### FEATURES

- > Four DisplayPort 1.4 Connectors
- > VirtualLink Connector<sup>3</sup>
- > DisplayPort with Audio
- > VGA Support<sup>4</sup>
- > 3D Stereo Support with Stereo Connector<sup>4</sup>
- > NVIDIA GPUDirect™ Support
- > Quadro Sync II<sup>5</sup> Compatibility
- > NVIDIA nView® Desktop Management Software
- > HDCP 2.2 Support
- > NVIDIA Mosaic<sup>6</sup>

### PACKAGE CONTENTS

- > NVIDIA Quadro RTX 5000
- > Quadro RTX Quick Start Guide
- > Quadro Support Guide
- > 1 DisplayPort to DVI Adapter
- > 1 DisplayPort to HDMI 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 <sup>1</sup>
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 <sup>7</sup> , Shader Model 5.1 <sup>7</sup> , OpenGL 4.5 <sup>8</sup> , Vulkan 1.0 <sup>8</sup>
Compute APIs	CUDA, DirectCompute, OpenCL™

**NVIDIA QUADRO  
AUTHORIZED PARTNER**  
**PNY**

PNY Technologies, Inc.  
100 Jefferson Road, Parsippany, NJ 07054  
Tel 408 567 5500 | Fax 408 855 0680

For more information visit: [www.pny.com/quadro](http://www.pny.com/quadro)