



# THE WORLD'S FIRST RAY TRACING GPU NVIDIA QUADRO RTX 8000

## Real time ray tracing for professionals

Experience unbeatable performance, power, and memory with the NVIDIA® Quadro RTX™ 8000, the world's most powerful graphics card for professional workflows. The Quadro RTX 8000 is powered by the NVIDIA Turing™ architecture and NVIDIA RTX™ platform to deliver the latest hardware-accelerated ray tracing, deep learning, and advanced shading to professionals. Equipped with 4608 NVIDIA CUDA® cores, 576 Tensor cores, and 72 RT Cores, the Quadro RTX 8000 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> lets applications scale performance, providing 96 GB of GDDR6 memory with multi-GPU configurations<sup>2</sup>. And with the industry's first implementation of the new VirtualLink™<sup>3</sup> port, the Quadro RTX 8000 provides simple 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 8000 cards with NVLink to scale performance and memory capacity to 96 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 8000
- > 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	VCQRTX8000-PB
<b>SPECIFICATIONS</b>	
GPU Memory	48 GB GDDR6
Memory Interface	384-bit
Memory Bandwidth	672 GB/s
ECC	Yes
NVIDIA CUDA Cores	4,608
NVIDIA Tensor Cores	576
NVIDIA RT Cores	72
Single-Precision Performance	16.3 TFLOPS
Tensor Performance	130.5 TFLOPS
NVIDIA NVLink	Connects 2 Quadro RTX 8000 GPUs <sup>1</sup>
NVIDIA NVLink bandwidth	100 GB/s (bidirectional)
System Interface	PCI Express 3.0 x 16
Power Consumption	Total board power: 295 W Total graphics power: 260 W
Thermal Solution	Active
Form Factor	4.4" H x 10.5" L, Dual Slot, Full Height
Display Connectors	4xDP 1.4, VirtualLink (1)
Max Simultaneous Displays	4x 3840 x 2160 @ 120 Hz, 4x 5120x2880 @ 60 Hz, 2x 7680x4320 @ 60 Hz
Encode / Decode Engines	1X Encode, 1X 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™



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)