



THE WORLD'S FIRST RAY TRACING GPU NVIDIA QUADRO RTX 6000



REAL TIME RAY TRACING FOR PROFESSIONALS

NVIDIA® Quadro RTX™ 6000, powered by the NVIDIA Turing™ architecture and the NVIDIA RTX™ platform, brings the most significant advancement in computer graphics in over a decade to professional workflows. Designers and artists can now wield the power of hardware-accelerated ray tracing, deep learning, and advanced shading to dramatically boost productivity and create amazing content faster than ever before. Equipped with 4608 CUDA cores, 576 Tensor cores, 72 RT Cores and massive 24GB GDDR6 memory, Quadro RTX 6000 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 VirtualLink^{®3} port, Quadro RTX 6000 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.

To learn more about the NVIDIA Quadro RTX 6000 visit www.nvidia.com/quadro

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



SPECIFICATIONS

GPU Memory	24 GB GDDR6
Memory Interface	384-bit
Memory Bandwidth	Up to 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 6000 GPUs ¹
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, 1x USB-C
Max Simultaneous Displays	4x 4096x2160 @ 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 ⁷ , Shader Model 5.1 ⁷ , OpenGL 4.6 ⁸ , Vulkan 1.1 ⁹
Compute APIs	CUDA, DirectCompute, OpenCL™

¹ NVIDIA NVLink sold separately | ² Connecting two RTX 6000 cards with NVLink to scale performance and memory capacity to 48 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

© 2019 NVIDIA Corporation. All rights reserved. NVIDIA, the NVIDIA logo, Quadro, nView, CUDA, and NVIDIA Turing are trademarks and/or registered trademarks of NVIDIA Corporation in the U.S. and other countries. OpenCL is a trademark of Apple Inc. used under license to the Khronos Group Inc. All other trademarks and copyrights are the property of their respective owners.



THE WORLD'S FIRST RAY TRACING GPU NVIDIA QUADRO RTX 6000



REAL TIME RAY TRACING FOR PROFESSIONALS

NVIDIA® Quadro RTX™ 6000, powered by the NVIDIA Turing™ architecture and the NVIDIA RTX™ platform, brings the most significant advancement in computer graphics in over a decade to professional workflows. Designers and artists can now wield the power of hardware-accelerated ray tracing, deep learning, and advanced shading to dramatically boost productivity and create amazing content faster than ever before. Equipped with 4608 CUDA cores, 576 Tensor cores, 72 RT Cores and massive 24GB GDDR6 memory, Quadro RTX 6000 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 port, Quadro RTX 6000 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.

To learn more about the NVIDIA Quadro RTX 6000 visit www.nvidia.com/quadro

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



SPECIFICATIONS

GPU Memory	24 GB GDDR6
Memory Interface	384-bit
Memory Bandwidth	Up to 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 6000 GPUs ¹
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, 1x USB-C
Max Simultaneous Displays	4x 4096x2160 @ 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 ⁷ , Shader Model 5.1 ⁷ , OpenGL 4.6 ⁸ , Vulkan 1.1 ⁹
Compute APIs	CUDA, DirectCompute, OpenCL™

¹ NVIDIA NVLink sold separately | ² Connecting two RTX 6000 cards with NVLink to scale performance and memory capacity to 48 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

© 2019 NVIDIA Corporation. All rights reserved. NVIDIA, the NVIDIA logo, Quadro, nView, CUDA, and NVIDIA Turing are trademarks and/or registered trademarks of NVIDIA Corporation in the U.S. and other countries. OpenCL is a trademark of Apple Inc. used under license to the Khronos Group Inc. All other trademarks and copyrights are the property of their respective owners.