# PNY® | PRO
GRAPHICS | HPC | AI

RTX ON
CREATE AT THE SPEED OF IMAGINATION

WELCOME TO YOUR NEW CREATIVE STUDIO, POWERED BY QUADRO RTX 4000.

A new age of creativity is upon us. Accelerated your creative workflow with the power of Quadro RTX Studio mobile workstations, which combine unparalleled compute and graphics performance with workstation-class stability, security, and reliability to deliver the most powerful mobile solution for creators. With 2304 CUDA Cores, 36 RT Cores, 288 Tensor Cores, and 8 GB of ultra-fast GPU memory, it's everything you need to work across multiple content creation apps simultaneously. Welcome to your new creative studio, powered by Quadro RTX.

DRIVE THE MOST COMPLEX CREATIVE WORKFLOWS WITH QUADRO RTX

1. VIDEO

3. RENDERING

Image courtesy of Lee Griggs

2. 3D GRAPHICS
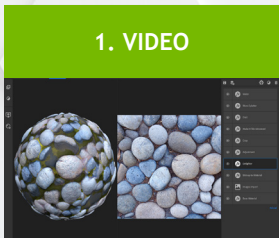
1. VIDEO	3. RENDERING	2. 3D GRAPHICS
• Edit/grade high-res video with more layers, transitions, & effects using large memory with ECC	• Massive GPU memory capacities and multi-GPU configurations let you build entire 3D worlds with high-res textures	• Render massive datasets with up to 96GB of GPU memory using NVLink and multi-GPU configurations
• Bring AI up-res, auto-color matching, auto-reframing to video workflows	• Overlap, blend, and adjust an image across up to 16 curved displays with warp & blend	• Deliver complex renders free of errors with ECC memory and large framebuffers
• Create using 100+ apps tested and certified with Quadro and OEM systems	• Optimize and run creative apps reliably with tested and tuned Quadro drivers	• Render large scene files interactively in the application viewport with RTX-accelerated rendering and AI-denoising
• Efficiently manage workspace with nView Desktop Manager	• Synchronize multiple Quadro GPUs with displays or projects using Quadro Sync	• Unique blower design lets you create personal render farms with high-density multi-GPU workstations
• Avoid unnecessary system memory copies/CPU overhead with GPUDirect for Video	• Project a single image on up to 32 high-res panels using Mosaic multi-display with bezel correction	• Data center tested and certified for maximum reassurance and reliability

NVIDIA RTX TECHNOLOGY LETS YOU WORK SMARTER AND FASTER

REAL-TIME RAY TRACING
Create cinematic quality, photorealistic renders

AI
Optimize workflows with AI-enhanced applications

8K
Work natively with 8K video content

NVIDIA GPU CLOUD (NGC)
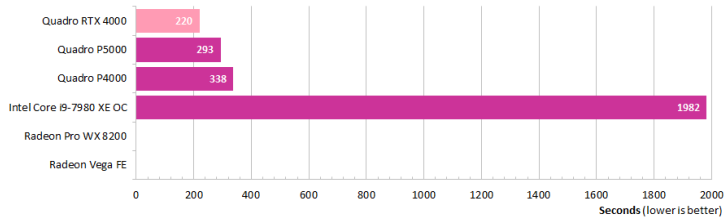Discover the power of GPU-accelerated containers

VR
Build immersive experiences in VR

PNY® | NVIDIA QUADRO RTX STUDIO
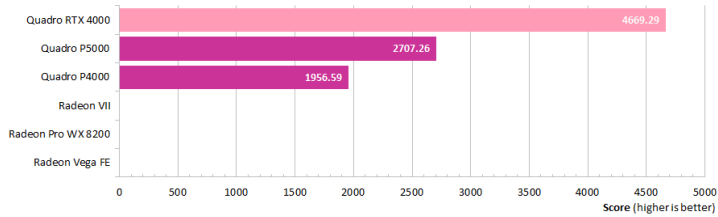
PNY GRAPHICS | HPC | AI PRO

NVIDIA QUADRO RTX 4000 BENCHMARK RESULTS*

* BENCHMARK RESULTS COURTESY OF IGORSLAB. YOU CAN FIND THE COMPLETE TEST ON IGORSLAB.DE IN GERMAN AND ENGLISH
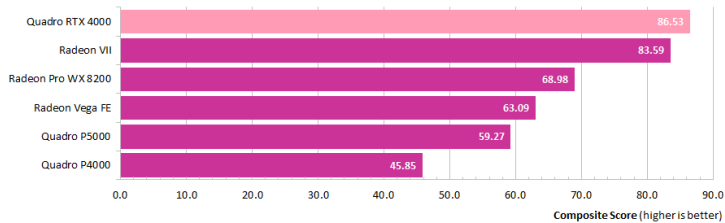
Solidworks 2019 - Visualize
High Quality Rendering, AI Denoiser On
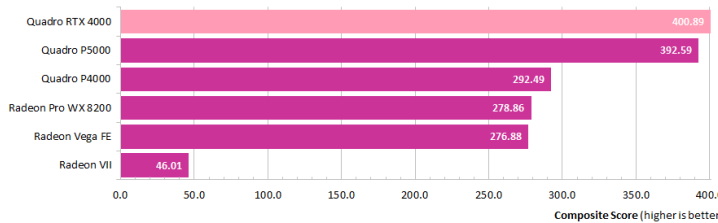1969 Camararo. 3840 x 2160 Pixels, GPU only

igorsLAB

	Seconds (lower is better)
Quadro RTX 4000	220
Quadro P5000	293
Quadro P4000	338
Intel Core i9-7980 XE OC	1982
Radeon Pro WX 8200	
Radeon Vega FE	

Arion Benchmark
Benchmark Value
Hardware-Rendering

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	Score (higher is better)
Quadro RTX 4000	4669.29
Quadro P5000	2707.26
Quadro P4000	1956.59
Radeon VII	
Radeon Pro WX 8200	
Radeon Vega FE	

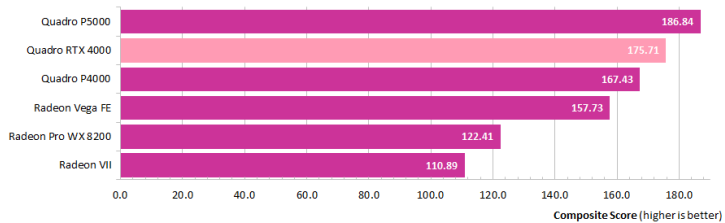**SPECviewperf 13.0 - ImageVis3D (Medical)**
GPU Composite Score
SPECapc Workload, 1900 x 1060 Pixels

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	Composite Score (higher is better)
Quadro RTX 4000	86.53
Radeon VII	83.59
Radeon Pro WX 8200	68.98
Radeon Vega FE	63.09
Quadro P5000	59.27
Quadro P4000	45.85

SPECviewperf 13.0 - Siemens NX 8
GPU Composite Score
SPECapc Workload, 1900 x 1060 Pixels

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	Composite Score (higher is better)
Quadro RTX 4000	400.89
Quadro P5000	392.59
Quadro P4000	292.49
Radeon Pro WX 8200	278.86
Radeon Vega FE	276.88
Radeon VII	46.01

SPECviewperf 13.0 - Solidworks 2013 SP1
GPU Composite Score
SPECapc Workload, 1900 x 1060 Pixels

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	Composite Score (higher is better)
Quadro P5000	186.84
Quadro RTX 4000	175.71
Quadro P4000	167.43
Radeon Vega FE	157.73
Radeon Pro WX 8200	122.41
Radeon VII	110.89

SPECviewperf 13.0 - Maya 2017
GPU Composite Score
SPECapc Workload, 1900 x 1060 Pixels

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	Composite Score (higher is better)
Quadro RTX 4000	291.44
Quadro P5000	262.95
Radeon Vega FE	248.35
Radeon VII	233.14
Radeon Pro WX 8200	223.11
Quadro P4000	222.26
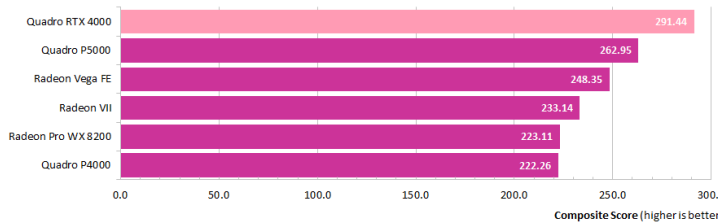
	NVIDIA QUADRO RTX 4000	NVIDIA QUADRO P4000	BENEFIT
GPU Architecture	Turing	Pascal	Greatest leap forward since CUDA GPU
CUDA Cores	2304	1792	Significantly greater compute and rendering performance
RT Cores	36	None	Advanced shading and real-time ray tracing
Tensor Cores	288	None	Supports acceleration of AI/DL/ML/MV applications
FP32 Compute	7,1 TFLOPS	5,3 TFLOPS	FP32 performance 1.34x better
Memory Size	8 GB GDDR6	8 GB GDDR5X	Next generation memory technolog
Memory Bus Width	256-bit	256-bit	Better bandwidth performance at same bus width
Peak Memory Bandwidth	416 GB/sec	243 GB/sec	Move data to and from GPU 1.7x faster
Display Support	3x DP1.4 1x VirtualLink*	4x DP 1.4	Single cable 8K HDR display and VR HMD support
Advanced Display	Quadro SYNC II + Mosaic	Quadro SYNC II + Mosaic	Synchronize up to 8 GPUs per system (32 displays)
Board Power	TGP 125W	TBP 160W	TGP 105W	Includes ability to power VR HMD via VirtualLink
Auxilliary Power Connector	1x PCIe 8-pin	1x PCIe 6-pin	Industry standard 8-pin PCIe connector

* Retail Pack includes 1x USB-C to DP 1.4 adapter