

Manufacturers and product designers know they must take advantage of the latest technological innovations to stay ahead of the competition. NVIDIA Quadro RTX with NVIDIA's Turing™ architecture fuses AI, realtime ray tracing, and advanced programmable shaders to fundamentally transform the traditional product design process by reducing costs, optimizing and validating designs, speeding development cycles, and improving project team efficiency.

VISUALIZE CINEMATIC QUALITY, PHYSICALLY ACURATE DESIGNS FASTER

REALTIME RAY TRACED RENDERING

Product designers and engineers can utilize GPU accelerated ray traced rendering to get physically accurate and predictable visualizations of how their products will appear in real life. With Quadro RTX GPUs, engineers and designers can explore alternatives, such as changing materials, and view the effects interactively, even when working with the largest and most complex 3D models. Instead of waiting several minutes or even hours for photorealistic renders, instant viewing of renders means that designers – and their clients – remain in the creative flow and can iterate faster to explore more design options.

INTERACT WITH GIANT COMPLEX DESIGNS IN REALTIME

MASSIVE ULTRA-FAST MEMORY

Product designers and engineers can connect two Quadro RTX 8000, RTX 6000, or RTX 5000 graphics boards using NVIDIA NVLink technology to provide up to 96 GB of GDDR6 GPU memory with 40% better bandwidth than the prior generation for even faster performance when designing extremely large products consisting of massive datasets. Combining Quadro GPUs with GPU-accelerated rendering software delivers an interactive and essentially cinematic visualization experience. Designers can view changes in realtime and stakeholders can interact with realistic models to make faster decisions with greater confidence.

NEXT GENERATION VR

TAKING IMMERSION TO THE NEXT LEVEL

The NVIDIA Quadro RTX Family of professional graphics solutions offers product design teams utilizing VR unsurpassed performance for truly immersive virtual reality experiences. This includes everything from design optimization and earlier identification of design flaws, to virtual showrooms and realistic service and maintenance training. With support for Virtuallink and 4-way VR SLI (RTX 8000 and RTX 6000), advanced shading technologies that provide a wider Field of View (FOV), and foveated rendering, which places more detail where the human vision is most acute, Quadro RTX GPUs provide the capabilities required to drive advanced head mounted displays, for even more immersive and realistic professional VR experiences.

ACCELERATE INNOVATIVE DESIGNS

DEEP LEARNING (AI) TECHNOLOGY

NVIDIA Quadro RTX GPUs feature new Tensor Cores, processors that accelerate deep learning training and inferencing, providing up to 500 trillion Tensor Operations Per Second (TOPS). This level of performance dramatically accelerates AI-enhanced features such as rendering denoising and generative design. Generative design software running on NVIDIA GPUs offers a powerful new method to drive design productivity and innovation. AI-powered rendering denoising running on Quadro GPUs speeds up noiseless visualization of photorealistic renders.

SPECIFICATIONS AT A GLANCE

GPU	MEMORY	RAYTRACING	RT CORES	CUDA CORES	TENSOR CORES
NVIDIA Quadro RTX 8000	48 GB GDDR6	10 GigaRays/sec	72	4,608	576
NVIDIA Quadro RTX 8000 Passive	48 GB GDDR6	10 GigaRays/sec	72	4,608	576
NVIDIA Quadro RTX 6000	24 GB GDDR6	10 GigaRays/sec	72	4,608	576
NVIDIA Quadro RTX 6000 Passive	24 GB GDDR6	10 GigaRays/sec	72	4,608	576
NVIDIA Quadro RTX 5000	16 GB GDDR6	6 GigaRays/sec	48	3,072	384
NVIDIA Quadro RTX 4000	8 GB GDDR6	6 GigaRays/sec	36	2,304	288