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EXPLORE MORE.
DELIVER MORE.

NVIDIA® QUADRO® RTX™

FOR ARCHITECTURE, ENGINEERING AND CONSTRUCTION

NVIDIA Quadro RTX™ powered by the new NVIDIA Turing architecture, is purpose-built for the demands of next generation realtime ray tracing, VR, and AI-enhanced visual computing workflows. AEC project teams can benefit from the latest technological breakthroughs to drive innovation and efficiency as they develop aesthetically pleasing, structurally innovative, and environmentally sustainable buildings or urban environments.

VISUALIZE CINEMATIC QUALITY, PHYSICALLY ACURATE DESIGNS FASTER

PHYSICALLY BASED RENDERING

Architectural design teams can take advantage of GPU accelerated ray traced rendering to get physically accurate and predictable visualizations of how building interiors and exteriors will appear in real life. With Quadro RTX GPUs, architects and designers can make design modifications, such as changing materials like stone and glass, and view the effects interactively, even when working with the most complex BIM models. Instead of waiting several minutes or even hours for the creation of photorealistic renders, instant viewing of renders means designers – and their clients – remain in the creative flow and can iterate faster to explore more design ideas.

INTERACT WITH COMPLEX BIM MODELS IN REALTIME

MASSIVE ULTRA-FAST MEMORY

Architects and designers 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 working on massive BIM models for the largest buildings and infrastructure projects. Combining Quadro GPUs with GPU-accelerated rendering software delivers an interactive visualization experience. Architects can view design changes in realtime and stakeholders can visualize 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 offer AEC design teams unparalleled performance for truly immersive virtual reality experiences. Design teams can collaborate while designing in VR and bring clients into VR for more effective design reviews, and create compelling virtual walkthroughs for potential real estate clients. In addition, AEC teams can produce realistic virtual construction rehearsals and safety training in VR, speeding project delivery and minimizing delays and costs, while providing a safer construction site. With support for VirtualLink and 4-way VR SLI (RTX 8000 and RTX 6000), advanced shading technologies that support a wider Field of View (FOV) and foviated rendering, which places more detail where the human eye is most sensitive, Quadro RTX GPUs provide the capabilities required to drive innovative head mounted displays for even more immersive and realistic 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 architects a powerful new aid to drive design productivity and innovation. AI-powered rendering denoising running on Quadro GPUs or Quadro Virtual Data Center Workstation (vDWS) software speeds up noiseless visualization of photorealistic renders. AI effectively takes Quadro RTX from just being a tool to acting as an assistant throughout the design process.

SPECIFICATIONS AT A GLANCE

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

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