NVIDIA RTX PRO 6000
Blackwell Workstation Edition

Powering the next era of AI.

Transform Workflows With the Ultimate Single-GPU Powerhouse

The NVIDIA RTX™ PRO 6000 Blackwell Workstation Edition sets a new benchmark for professional compute and visualization, delivering the raw power needed for the most complex AI and graphics workloads. Built on the **revolutionary NVIDIA Blackwell architecture**, this flagship GPU provides up to **4000 TOPS of AI processing power**, enabling real-time LLM fine-tuning, simulation, and precision-driven engineering at scale.

Equipped with **96 GB of GDDR7 memory**, the RTX PRO 6000 effortlessly handles massive datasets and multi-billion parameter models, supporting advanced workflows that range from developing AI assistants to photorealistic design visualization and scientific modeling.

With a **600W power design** and a highly efficient **dual-flow-through cooling system**, the RTX PRO 6000 is engineered to deliver peak performance under sustained workloads. This innovation ensures reliability and stability across the most demanding environments whether you're training trillion-parameter AI models, simulating complex fluid dynamics, or rendering cinematic-grade VFX.

The RTX PRO 6000 empowers **developers, researchers, and creative professionals** to break through barriers in real-time ray tracing, low-latency AI inference, and advanced simulation. From optimizing LLMs and developing generative AI applications to simulating hyper-detailed 3D environments, it represents a new era of workstation performance bringing AI and visualization together without compromise.

SYSTEM SPECIFICATIONS

GPU architecture	**NVIDIA Blackwell**
CUDA® Cores	**24,064**
Tensor Cores	**5th Generation**
Ray Tracing Cores	**4th Generation**
AI TOPS	**4000 AI TOPS***
Single-precision performance	**125 TFLOPS***
RT Core performance	**380 TFLOPS***
GPU memory	**96 GB GDDR7 with ECC**
Memory interface	**512-bit**
Memory bandwidth	**1792 GB/s**
System interface	**PCIe 5.0 ×16**
Display connectors	**4× DisplayPort 2.1b**
Max simultaneous displays	**• 4× 4096 × 2160 @ 120 Hz** **• 4× 5120 × 2880 @ 60 Hz** **• 2× 7680 × 4320 @ 60 Hz**
Video Engines	**4× NVENC (9th Gen)** **4× NVDEC (6th Gen)**
MIG Support	**• Up to 24× 4 GB** **• Up to 12× 8 GB** **• Up to 8× 96 GB**
Power consumption	**Total board power: 600 W**
Power connector	**1× PCIe CEM5 16-pin**
Thermal solution	**Double-flow-through**
Form factor	**5.4″ H × 12″ L, dual slot, extended height**
Graphics APIs	**DirectX 12 Ultimate, Shader Model 6.8, OpenGL 4.6, Vulkan 1.3***
Compute APIs	**CUDA 11.6, OpenCL 3.0, DirectCompute**

Performance values marked with an asterisk () may depend on configuration or sparsity support. *

Groundbreaking Innovations

The NVIDIA RTX™ PRO 6000 Blackwell introduces groundbreaking technologies designed to power next-generation AI, visualization, and compute workloads with unmatched speed and efficiency.

9th Gen Tensor Cores

Deliver up to **3X performance gains** over the previous generation, optimized for FP4 precision, accelerating AI model training, inference, and fine-tuning for LLMs and generative AI.

4th Gen Ray Tracing Cores

Double the ray-triangle intersection throughput, enabling physically accurate photorealistic rendering and immersive 3D experiences with RTX Mega Geometry supporting up to **100X more ray-traced triangles**.

Next-Gen Video Engines

Enhanced NVENC and NVDEC deliver **real-time AI video processing**, unlocking new levels of high-resolution video editing, streaming, and conferencing.

GDDR7 Memory

Powered by **96 GB of GDDR7** with **1.8 TB/s bandwidth**, ensuring faster application performance, seamless scaling, and the ability to handle massive 3D, AI, and simulation datasets.

DLSS 4 with Multi-Frame Generation

Provides up to **3X faster frame rates** and exceptional image quality for supported game engines, AI-driven applications, and advanced rendering workflows.

PCIe Gen 5 Support

Doubles bandwidth over PCIe Gen 4, accelerating data transfer from CPU memory and boosting performance for data-intensive workloads like AI training, rendering, and 3D modeling.

DisplayPort 2.1

Supports resolutions up to **8K at 240 Hz and 16K at 60 Hz** with HDR and higher color depth, ensuring unmatched accuracy and clarity for professional design and visualization.

Universal MIG (Multi-Instance GPU)

Partition a single RTX PRO 6000 into multiple GPU instances, enabling multi-tenant usage, workload optimization, and secure isolation of different apps or users.

Double-Flow Cooling Design

An advanced cooling system with dual axial pathways ensures sustained peak performance, eliminating thermal throttling even under the most demanding conditions.

Enterprise Reliability

The NVIDIA RTX™ PRO solutions are engineered for professionals who demand the highest levels of performance, reliability, and long-term support. Every GPU undergoes rigorous testing to ensure it meets the needs of design, engineering, AI, and visualization workflows.

Backed by **extensive ISV certifications, robust IT management tools, and enterprise-grade support**, RTX PRO workstations provide the confidence required for mission-critical deployments. With continual optimization through enterprise drivers, these GPUs are trusted by organizations worldwide to deliver consistent performance for the most demanding workloads.

Why Choose RTX 6000 Blackwell on AceCloud?

- Ultimate workstation GPU for AI, rendering & compute
- Optimized for Generative AI, LLMs & advanced simulations
- Scalable performance for enterprise data centers
- Enterprise-ready with 99.99% uptime SLA

Key Features

- Enhanced streaming multiprocessors (SMs) built for neural shaders
- 5th Gen Tensor Cores with FP4 precision and DLSS 4 multi-frame generation
- 4th Gen Ray Tracing Cores for highly detailed geometry and advanced rendering
- 96 GB of GDDR7 memory for large, complex datasets
- 1.8 TB/s memory bandwidth for ultra-fast data throughput
- 9th Gen NVENC and 6th Gen NVDEC with 4:2:2 support for high-efficiency video processing
- PCIe Gen 5 support for next-generation connectivity
- Four DisplayPort 2.1b connectors
- Multi-Instance GPU (MIG) support for workload isolation
- Integrated AI Management Processor for smarter resource utilization
- Double flow-through thermal design for efficient cooling

Launch NVIDIA RTX 6000 Blackwell on AceCloud Today

- Next-gen AI & LLM acceleration
- vGPU-ready for enterprise workloads
- Real-time rendering & simulation power
- 99.99% uptime SLA

Scan to launch your RTX PRO 6000 VM →

Start with RTX PRO 6000 now ↗