NVIDIA RTX A5000

Perfectly Balanced. Blazing Performance.

Amplified Performance for Professionals

The NVIDIA RTX™ A5000 delivers the power, performance, capabilities, and reliability professionals need to bring their boldest ideas to life. Built on the NVIDIA Ampere architecture, the RTX A5000 combines 64 second-generation RT Cores, 256 third-generation Tensor Cores, and 8,192 CUDA® cores with 24GB of graphics memory to supercharge rendering, AI, graphics, and compute tasks. Connect two RTX A5000s with NVIDIA NVLink[1] to scale memory and performance with multi-GPU configurations[2], allowing professionals to work with memory intensive tasks such as large models, ultra-high resolution rendering, and complex compute workloads. Support for NVIDIA virtual GPU software increases the versatility for enterprise deployments.

NVIDIA RTX professional graphics cards are certified with a broad range of professional applications, tested by leading independent software vendors (ISVs) and workstation manufacturers, and backed by a global team of support specialists. Get the peace of mind needed to focus on what matters with the premier visual computing solution for mission-critical business.

Features

- > PCI Express Gen 4
- > Four DisplayPort 1.4a connectors
- > AV1 decode support
- > DisplayPort with audio
- > 3D stereo support with stereo connector
- > NVIDIA GPUDirect® for Video support

- > NVIDIA virtual GPU (vGPU) software support
- > NVIDIA Quadro® Sync II[3] compatibility
- > NVIDIA RTX Experience™
- > NVIDIA RTX Desktop Manager software
- > NVIDIA RTX IO support
- > HDCP 2.2 support
- > NVIDIA Mosaic[4] technology

1 NVIDIA NVLink sold separately. | 2 Connecting two RTX A5000 cards with NVLink to scale performance and memory capacity to 48GB is only possible if your application supports NVLink technology. Please contact your application provider to confirm their support for NVLink. | 3 Quadro Sync II card sold separately. | 4 Windows 10, Windows 11, and Linux. | 5 Peak rates based on GPU Boost Clock. | 6 Effective teraFLOPS (TFLOPS) using the new sparsity feature. | 7 Display ports are on by default for RTX A5000. Display ports are not active when using vGPU software. | 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**

SPECIFICATIONS

GPU memory	24GB GDDR6
Memory interface	384-bit
Memory bandwidth	768 GB/s
Error-correcting code (ECC)	Yes
NVIDIA Ampere architecture-based CUDA Cores	8,192
NVIDIA third-generation Tensor Cores	256
NVIDIA second-generation RT Cores	64
Single-precision performance	27.8 TFLOPS[5]
RT Core performance	54.2 TFLOPS[5]
Tensor performance	222.2 TFLOPS[6]
NVIDIA NVLink	Low profile bridges connect two NVIDIA RTX A5000 GPUs[1]
NVIDIA NVLink bandwidth	112.5 GB/s (bidirectional)
System interface	PCIe 4.0 x16
Power consumption	Total board power: 230 W
Thermal solution	Active
Form factor	4.4" H x 10.5" L, dual slot, full height
Display connectors	4x DisplayPort 1.4a[7]
Max simultaneous displays	4x 4096 x 2160 @ 120 Hz, 4x 5120 x 2880 @ 60 Hz, 2x 7680 x 4320 @ 60 Hz
Power connector	1x 8-pin PCIe
Encode/decode engines	1x encode, 2x decode (+AV1 decode)
VR ready	Yes
vGPU software support[7]	NVIDIA vPC/vApps, NVIDIA RTX Virtual Workstation
vGPU profiles supported	See the **Virtual GPU Licensing Guide**
Graphics APIs	DirectX 12 Ultimate , Shader Model 6.6, OpenGL 4.6[8], Vulkan 1.3[8]
Compute APIs	CUDA 11.6, DirectCompute, OpenCL 3.0

Learn more To learn more about the NVIDIA RTX A5000, visit **www.nvidia.com/rtx-a5000/**