

DATASHEET



NVIDIA RTX A5500

The Power to Create.



Amplified Performance for Professionals

The NVIDIA RTX™ A5500 is a high-performance workstation graphics card that gives you the performance and capabilities required for demanding multi-application workflows. Built on the NVIDIA Ampere architecture, the RTX A5500 combines 80 second-generation RT Cores, 320 third-generation Tensor Cores, and 10,240 CUDA® cores with 24GB of graphics memory with error correction code (ECC) to supercharge rendering, AI, graphics, and compute tasks. Configure multiple GPUs¹ with NVIDIA® NVLink™² to scale memory and performance for memory-intensive tasks, such as large models, ultra-high resolution rendering, and complex compute workloads. With support for NVIDIA RTX Virtual Workstation (vWS) software, the RTX A5500 is ready to handle the most complex design, visualization, and compute work—from anywhere. 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 you need 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 II³ compatibility
- > NVIDIA RTX Experience™
- > NVIDIA RTX Desktop Manager software
- > NVIDIA RTX IO support
- > HDCP 2.2 support
- > NVIDIA Mosaic⁴ technology

¹ Connecting two RTX A5500 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. ² NVIDIA NVLink sold separately. 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 A5500. 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	10,240
NVIDIA third-generation Tensor Cores	320
NVIDIA second-generation RT Cores	80
Single-precision performance	34.1 TFLOPS ⁵
RT Core performance	66.6 TFLOPS ⁵
Tensor performance	272.8 TFLOPS ⁴
NVIDIA NVLink	Low profile bridges connect two NVIDIA RTX A5500 GPUs ²
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 A5500, visit www.nvidia.com/rtx-a5500/

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