

PCI Express Graphics Cards based on NVIDIA Ampere Architecture

PCI Express Graphics Cards
with NVIDIA GPUs



• NVIDIA RTX A1000



• NVIDIA RTX A2000E



• NVIDIA RTX A4000E



• NVIDIA RTX A6000E

Features

- NVIDIA Ampere architecture
- Third gen Tensor cores
- Second gen RT cores
- Third gen NVLINK technology
- PCI Express Gen 4.0 support
- AV1 decode support
- NVIDIA GPUDirect® for video
- NVIDIA RTX Experience™
- NVIDIA RTX Desktop Manager software
- HDCP 2.2 support
- NVIDIA Mosaic1 technology
- NVIDIA Quadro® Sync II compatible
- vGPU support

Ordering Information

NVIDIA RTX A1000	PCIe x8 Gen4, 4x mDP 1.4, 2.7" H x 6.4" L, single slot
NVIDIA RTX A2000E	PCIe x16 Gen4, 4x mDP 1.4, 2.7" H x 6.6" L, dual slot
NVIDIA RTX A4000E	PCIe x16 Gen4, 4x DP 1.4, 4.4" H x 9.5" L, single slot
NVIDIA RTX A6000E	PCIe x16 Gen4, 4x DP 1.4, 1x Type C, 4.4" H x 10.5" L, dual slot, full height

* The product is sold with ADLINK platforms. Recommended models are DLAP-4000, AmITX-SL, IMB-M43H, IMB-M43-C236, IMB-M43, and NuPRO-E43 paired with EBP-13E2.

Specifications



Model Name	NVIDIA RTX A1000	NVIDIA RTX A2000E	NVIDIA RTX A4000E	NVIDIA RTX A6000E
Graphic Core				
Graphic Architecture	NVIDIA® Ampere™ GA107	NVIDIA® Ampere™ GA106	NVIDIA® Ampere™ GA104	NVIDIA® Ampere™ GA102
GPU	RTX A1000	RTX A2000E	RTX A4000E	RTX A6000E
Memory	8 GB GDDR6 memory, 128-bit, Bandwidth: Up to 192 GB/s	6/12 GB GDDR6 memory, 192-bit, Bandwidth: Up to 288 GB/s	16 GB GDDR6 memory, 256-bit, Bandwidth: Up to 448 GB/s	48 GB GDDR6 memory, 384-bit, Bandwidth: Up to 768 GB/s
ECC	No	Yes		
GPGPU Computing				
CUDA Cores	2,304 CUDA® cores, 6.7 TFLOPS SP Peak	3,328 CUDA® cores, 8.0 TFLOPS SP Peak	6,144 CUDA® cores, 19.2 TFLOPS SP Peak	10,752 CUDA® cores, 38.7 TFLOPS SP Peak
Tensor Cores	72 53.8 TFLOPS	104 63.9 TFLOPS	192 153.4 TFLOPS	336 309.7 TFLOPS
RT Cores	18 13.2 TFLOPS	26 15.6 TFLOPS	48 37.4 TFLOPS	84 75.6 TFLOPS
Compute API	CUDA Toolkit 11.6, OpenCL 3.0 Direct Compute	CUDA Toolkit 8.0, CUDA Compute version 6.1, OpenCL™ 1.2		
Graphics API	Shader Model 6.6, OpenGL 4.6, DirectX 12, Vulkan 1.3	Shader Model 5.17, OpenGL 4.68, DirectX 12.07, Vulkan 1.2		
Display				
Display Outputs	4 x mDP 1.4 with latching mechanism 4x 4096 x 2160 @ 120Hz 4x 5120 x 2880 @ 60Hz 2x 7680 x 4320 @ 60Hz		4 x DP 1.4 4x 4096 x 2160 @ 120Hz 4x 5120 x 2880 @ 60Hz 2x 7680 x 4320 @ 60Hz	
Interface	PCI Express 4.0 x8	PCI Express 4.0 x16		
Mechanicals				
Dimensions	2.7" H x 6.4" L, single slot	2.7" H x 6.6" L, dual slot	4.4" H x 9.5" L, single slot	4.4" H x 10.5" L, dual slot
Form Factor				Full height, full length NVIDIA Form Factor 5.0 compliant
Environmental				
Operating Temperature	0°C~50°C			0°C~45°C
Storage Temperature	-40°C~75°C			
Module Power Consumption	50W	70W	140W	300W
SW Support				
OS Support	Windows 10, 11 & Linux drivers, 64-bit			