NVIDIA RTX 6000 ADA

PERFORMANCE FOR ENDLESS POSSIBILITIES

Amplified Performance for Professionals

The NVIDIA RTX™ 6000 Ada Generation is designed to meet the challenges of today's professional workflows. Built on the NVIDIA Ada Lovelace architecture, the RTX 6000 combines 142 third-generation RT Cores, 568 fourth-generation Tensor Cores, and 18,176 CUDA® cores with 48GB of graphics memory to deliver the next generation of AI graphics and petaflop inferencing performance for unprecedented speed-up of rendering, AI, graphics, and compute workloads. RTX 6000-powered workstations provide what you need to succeed in today's ultra-challenging business environment.

NVIDIA CUDA CORES

With up to 2X the throughput over the previous generation, third-generation RT Cores deliver massive speedups for workloads like photorealistic rendering of movie content, architectural design evaluations, and virtual prototyping of product designs. This technology also accelerates the rendering of ray-traced motion blur with greater visual accuracy.

Third-Generation RT Cores

Fourth-generation Tensor Cores provide faster AI compute performance, delivering more than 2X the performance of the previous generation. These new Tensor Cores support acceleration of the FP8 precision data type and provide independent floating-point and integer data paths to speed up execution of mixed floating point and integer calculations.

Fourth-Generation Tensor Cores

Double-speed processing for single-precision floating point (FP32) operations provides significant performance improvements for graphics and simulation workflows, such as complex 3D computer-aided design (CAD) and computer-aided engineering (CAE), on the desktop.

48 Gibabytes (GB) of GPU Memory

With 48GB GDDR6 memory, the RTX 6000 gives data scientists, engineers, and creative professionals the large memory necessary to work with massive datasets and workloads like rendering, data science, and simulation.

SPECIFICATIONS

Part Number	**VCNRTX6000ADA-PB**
EAN Number	**3536403392635**
GPU memory	**48 GB GDDR6 with ECC**
Memory interface	**384-bit**
Memory bandwidth	**768 GB/s**
Error-correcting code (ECC)	**Yes**
CUDA Parallel Processing Cores	**18176**
NVIDIA fourth-generation Tensor Cores	**568**
NVIDIA third-generation RT Cores	**142**
Single-precision performance	**Up to 87.5 TFLOPS**
Rendering performance	**Up to 202.3 TFLOPS**
Tensor performance	**Up to 700 TFLOPS***
NVIDIA NVLink	**No**
System interface	**PCI Express 4.0 x16**
Power consumption	**Total board power: 300 W**
Thermal solution	**Active**
Form factor	**111.76 cm H x 266,7 cm L, dual slot, full height**
Display connectors	**4x DisplayPort 1.4a**
Max simultaneous displays	**4x 4096 x 2160 @ 120 Hz, 4x 5120 x 2880 @ 60 Hz, 2x 7680 x 4320 @ 60 Hz**
Power connector	**1x CEM5 16-pin CPU**
Encode/decode engines	**3x encode, 3x decode (+ AV1) 4 JPEG Decode Engines**
VR ready	**Yes**
vGPU software support	**NVIDIA vPC/vApps, NVIDIA RTX Virtual Workstation**
vGPU profiles supported	**1 GB, 2 GB, 3 GB, 4 GB, 6 GB, 8 GB, 12 GB, 16 GB, 24 GB, 48 GB**
Graphics APIs	**DirectX 12.07, Shader Model 6.5, OpenGL 4.68, Vulkan 1.18**
Compute APIs	**CUDA, DirectCompute, OpenCL™**

* using FP8 data format with structural sparsity enabled.