Condor™ GR2C-A4500

Rugged 3U VPX graphics & GPGPU card based on the NVIDIA Ampere A4500 GPU with single-link DVI and DisplayPort++ outputs.



NVIDIA Preferred Partner

EMBEDDED GPU

NVIDIA RTX A4500 GPU (Ampere Architecture) with 16 GB GDDR6 graphics memory

ADVANCED GPGPU CAPABILITIES

AI/Deep Learning processing, 5,888 CUDA Cores,184 Tensor Cores, 46 RT Cores

THREE VIDEO OUTPUTS

Two DisplayPort++ & one single-link DVI-D or three single-link DVI-D

3U VPX Graphics & GPGPU Card with Three Video Outputs

The Condor GR2C-A4500 is a ruggedized 3U OpenVPX embedded video capture and GPGPU processing card built on the advanced NVIDIA Ampere architecture and the NVIDIA RTX platform. It integrates the NVIDIA Ampere A4500 GPU, featuring 16 GB of GDDR6 graphics memory with Error Correction Code (ECC), 46 RT Cores, 184 Tensor Cores, and 5,888 CUDA® cores to deliver exceptional parallel processing performance.

Designed for high-performance embedded computing (HPEC) environments, the Condor GR2C-A4500 enables low-latency data processing, real-time ray tracing, and accelerated AI and deep learning workloads. The card supports PCI Express Gen 4 for high-bandwidth data transfer and includes dedicated H.265/H.264 encode and decode engines for efficient video processing. It is well-suited for embedded edge computing deployments in rugged systems where reliable, high-throughput processing is required at the point of data generation. The GPU supports NVIDIA GPUDirect RDMA enables direct data movement between connected devices uch as FPGAs and GPU memory, reducing CPU overhead and eliminating unnecessary memory copies. This architecture optimizes throughput and minimizes latency for demanding, data-intensive applications.

MIL-STD 810 Shock

MIL-STD 810 Temperature

MIL-STD 810 Vibration

SWaP

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Condor GR2C-A4500 Specifications

Interface
3U VPX Form Factor
1" Pitch (Conduction Cooled)

Graphics Processor
NVIDIA RTX A4500 GPU (Ampere Architecture)
Supporting DirectX 12, OpenGL 4.6, and Vulkan 1.2

Graphics Memory
16 GB GDDR6 ECC Memory (Error Correction Code)
256-bit Memory Interface
512 GB/s Memory Bandwidth

GPGPU Capabilities
5,888 CUDA Cores. 184 Tensor Cores. 46 RT Cores.
Up to 17.66 TFLOPS FP32 Single Floating Point Performance
Supports CUDA, CUDA-X, OpenCL™ and Shader Model 5.1
H.265 (HEVC) / H.264 (MPEG4/AVC) Hardware Encode & Decode
NVIDIA GPUDirect® RDMA, NVENC, NVDEC

Video Outputs
Two DisplayPort & One Single-Link DVI-D
OR Three Single-Link DVI-D

Software & Platform Support
Windows or Linux on x86
VPX & PCIe

Operating Temperature (MIL-STD-810)
-40°C to 85°C (Rugged Conduction Cooled)

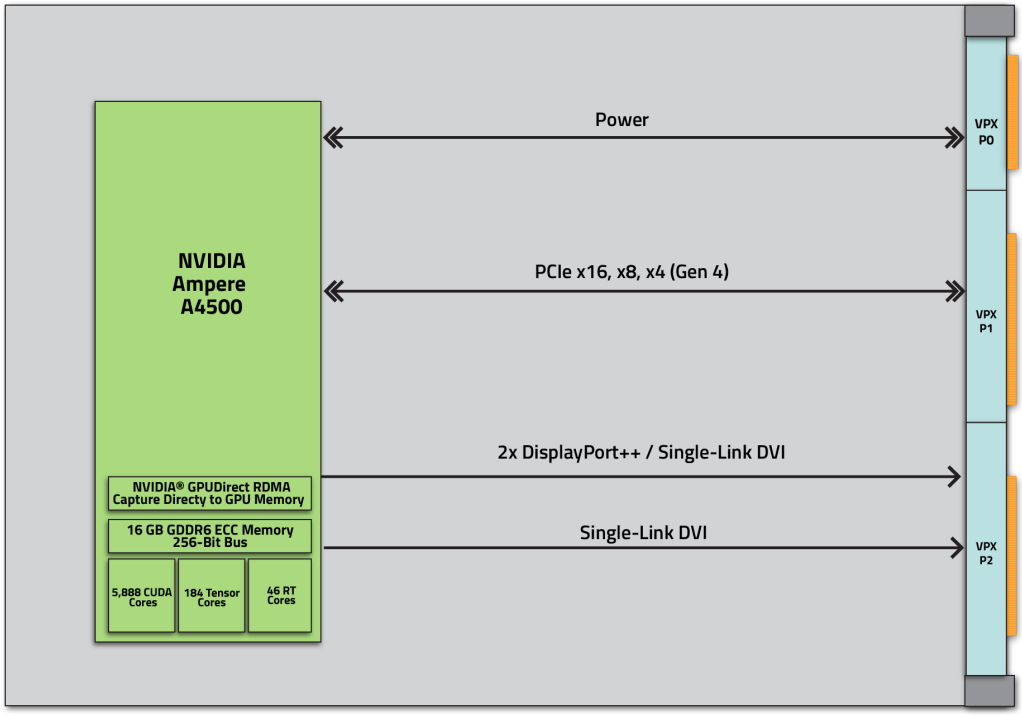
Power Consumption
12V supply only needed
90 - 130 W (factory configurable)

Vibration (MIL-STD-810)
0.1 g^2/Hz

Shock (MIL-STD-810)
40 g

Humidity (MIL-STD-810)
95% Without Condensation

Condor GR2C-A4500 Block Diagram



EIZO Rugged Solutions

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