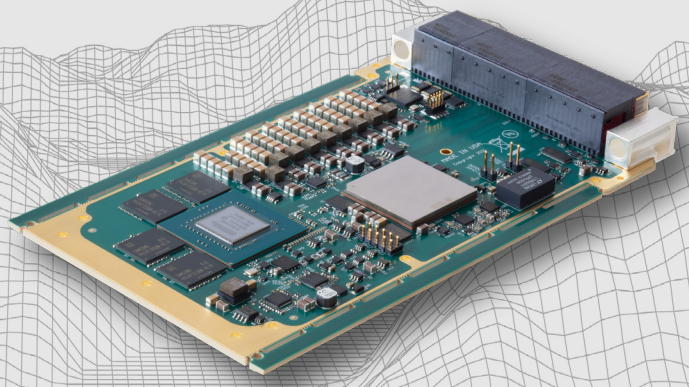
Condor™ GR5-A2000

Embedded 3U VPX graphics & GPGPU card based on NVIDIA Ampere architecture using the NVIDIA RTX A2000 GPU.



NVIDIA RTX

3U VPX GRAPHICS & GPGPU CARD

NVIDIA Ampere Architecture: RTX A2000 GPU

AI & DEEP LEARNING

Multiple precision modes- FP32 and INT32; 2560 CUDA Cores, 80 Tensor Cores and 20 RT Cores

FOUR VIDEO OUTPUTS

Supports DisplayPort, DVI-D, 3G-SDI, and DVI outputs

OpenVPX Graphics & GPGPU Card Based on NVIDIA Ampere Architecture

The Condor GR5-A2000 is a rugged OpenVPX 3U form factor card based on NVIDIA Ampere architecture and the NVIDIA RTX™ platform. This highly integrated "chip-down" graphics and GPGPU card meets strict data integrity requirements for mission-critical applications with uncompromised computing accuracy and reliability.

Powered by NVIDIA Ampere architecture, the Condor GR5-A2000 delivers real-time GPGPU processing with GPU-based computing supporting 2560 NVIDIA® CUDA® cores, 20 RT cores (2nd generation), and 80 Tensor cores (3rd generation). This single-slot solution provides embedded systems with 2x the throughput for matrix operations than previous generations for intensive workloads such as Artificial Intelligence (AI), multi-sensor processing, neural network training, and in simulation environments.

In addition, the Condor GR5-A2000 supports PCI Express Gen 4 (4x or 8x lane), which provides double the bandwidth than previous models, resulting in increased data-transfer speeds for applications such as Digital Signal Processing (DSP), Signals Intelligence (SIGINT), 3D rendering, Electronic Warfare (EW), and within unmanned systems. The Condor GR5-A2000 delivers real-time performance for encoding applications with dedicated H.265/H.264 encode and decode engines. It is available in both SOSA and VITA standards and has multiple I/O configurations.

MIL-STD 810 Shock

MIL-STD 810 Temperature

MIL-STD 810 Vibration

SWaP

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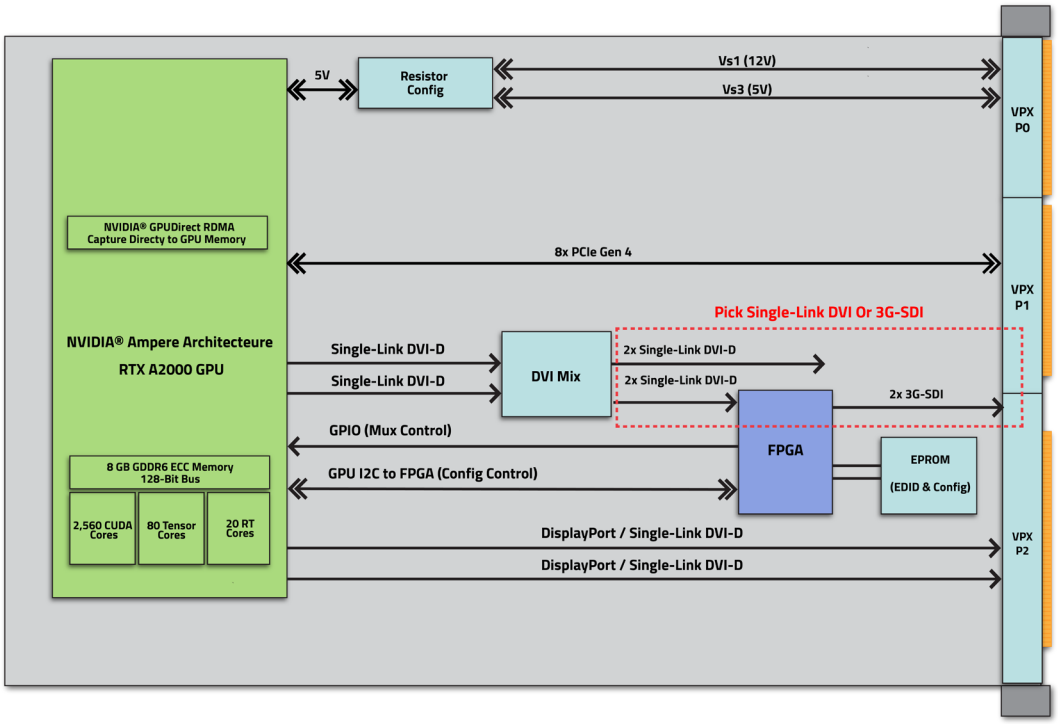
Condor GR5-A2000 Specifications

Graphics Processor	NVIDIA RTX A2000 GPU (Ampere Architecture) Supporting DirectX 12, OpenGL 4.5, and Vulkan 1.2
Interface	3U VPX VITA 65 0.8 Pitch Card PCIe Gen 4 x4 or x8 support 0.8" Pitch (Conduction Cooled) 1" Pitch (Air Cooled)
Graphics Memory	8 GB GDDR6 with ECC memory 128-bit Memory Interface up to 192 GB/s Memory Bandwidth
Video Outputs	Two DisplayPort & Two Single-Link DVI-D (GR5-A2000) OR Four Single-Link DVI-D (GR5-A2000-4DVI) OR Four DisplayPort (GR5-A2000-4DP) OR Two Single-Link DVI & Two 3G-SDI (GR5-A2000-SDI)
GPGPU Capabilities	2560 CUDA Cores. 80 Tensor Cores. 20 RT Cores. Up to 9.3 TFLOPS FP32 Single Floating Point Performance Supports CUDA 10 (Compute Capability 7.5) and CUDA-X OpenCL 1.2 and Shader Model 5.1 H.265 (HEVC) / H.264 (MPEG4/AVC) Hardware Encode & Decode NVIDIA GPUDirect® RDMA, NVENC, NVDEC
Power Consumption	35-95 W
Operating Temperature (MIL-STD-810)	-40°C to 70°C (Rugged Air Cooled) -40°C to 85°C (Rugged Conduction Cooled) Please refer to the Hardware User Guide for details on temperature/performance characterization.
Vibration (MIL-STD-810)	0.1 g^2/Hz
Shock (MIL-STD-810)	40 g
Humidity (MIL-STD-810)	95% Without Condensation

Condor GR5-A2000 Block Diagram



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