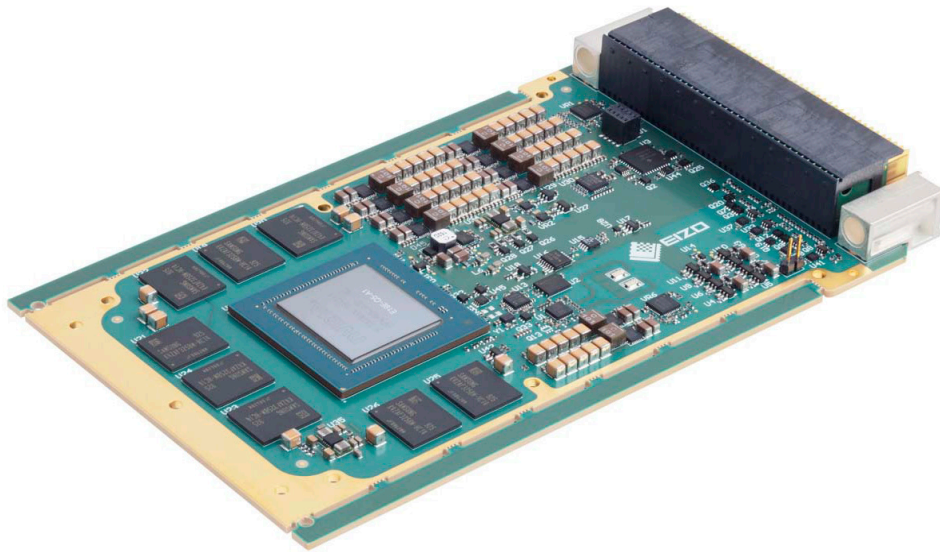




Condor GR5-RTX3000



Rugged 3U VPX Graphics & GPGPU Card Based on NVIDIA Quadro RTX 3000

The Condor GR5-RTX3000 is a rugged 3U VPX form factor card based on NVIDIA® Turing™ architecture and the NVIDIA RTX™ platform. This highly integrated “chip-down” graphics and GPGPU card incorporates the most powerful GPU that is currently available in the rugged market. With exceptional performance in GPGPU computing, AI inferencing, deep learning, sensor processing, and data analytics, the card is ideal for ISR (Intelligence, Surveillance & Reconnaissance), EW (Electronic Warfare), DSP (Digital Signal Processing), DVE (Degraded Visual Environments), Data Science, and other mission computing applications.

The Condor GR5-RTX3000 meets strict data integrity requirements for mission-critical applications with uncompromised computing accuracy and reliability. The 1920 CUDA® parallel processing cores in the NVIDIA Turing™ architecture offer a multitude of capabilities such as mesh shading, variable rate shading, texture space shading, multi-view rendering, and ultra-high performance GPGPU computing. The GPUDirect® RDMA implementation offers fast data transfer/communication from connected hardware, such as FPGAs, and switches directly into GPU memory, avoiding unnecessary memory copies and CPU overhead resulting in minimal latency. With 240 Tensor cores and 30 RT cores, the Condor GR5-RTX3000 delivers high AI inferencing performance. Multiple precision modes such as FP64, FP32, FP16, INT8, INT4, and INT1, enables up to 32X throughput compared to previous generations and even offers features like AI de-noising.

The Condor GR5-RTX3000 delivers real-time performance for encoding and decoding applications with dedicated H.265 (HEVC) and H.264 (MPEG4/AVC) engines. With multiple output configurations, this rugged 3U VPX card offers I/O customizations with options that include DisplayPort++, single-link DVI-D, and VGA using an EIZO Rugged Solutions Adapt™ Video Converter. It is currently available as air cooled or conduction cooled with thermally efficient heatsink technology.

Key features of this product:

- NVIDIA® Quadro RTX® 3000 GPU (TU106)
- Three Output Configurations: 4 Outputs total
(2) Rear DisplayPort & (2) Rear Single-Link DVI-D
OR (4) Rear Single-Link DVI-D
OR (4) DisplayPort
- Chip-down design
- 6 GB GDDR6 Graphics Memory
- 192-bit Memory Interface
- 336 GB/s Memory Bandwidth
- 1920 CUDA, 30 RT, and 240 Tensor Cores
- Up to 5.3 TFLOPs FP32 Compute Performance
- 16, 8 or 4 Lane PCI Express 3.0
- NVIDIA CUDA® 11 & OpenCL™ 1.2 support
- H.265 & H.264 Hardware Encoder/Decoder
- NVIDIA GPUDirect™ RDMA, NVENC & NVDEC
- Conduction Cooled & Air Cooled
- Thermally Efficient Heatsink Technology

Fully Ruggedized



Condor GR5-RTX3000 Specifications

Graphics Processor	NVIDIA® Quadro RTX® 3000 GPU (Turing TU106) Supporting DirectX 12, OpenGL 4.6 and Vulkan 1.0
Interface	3U VPX Form Factor 0.8" Pitch (conduction cooled), 1" Pitch (air cooled)
Graphics Memory	6 GB GDDR6 192-bit Memory Interface 336 GB/s Memory Bandwidth
Video Outputs	Two DisplayPort & Two Single-Link DVI-D OR Four Single-Link DVI-D OR Four DisplayPort
GPGPU Capabilities	1920 CUDA Cores. 30 RT Cores. 240 Tensor Cores. Up to 5.3 TFLOPS FP32 Single Floating Point Performance CUDA 11 (Compute Capability 7.5) and OpenCL 1.2 H.265 (HEVC) / H.264 (MPEG4/AVC) Hardware Encode & Decode NVIDIA GPUDirect™ RDMA, NVENC, NVDEC
Power Consumption	110 W
Operating Temperature (MIL-STD-810)	-40°C to 70°C (Rugged Air Cooled) -40°C to 85°C (Rugged Conduction Cooled)
Vibration (MIL-STD-810)	0.1 g ² /Hz
Shock (MIL-STD-810)	40 g
Humidity (MIL-STD-810)	95% Without Condensation
Software & Platform Support	Windows or Linux on x86 3U VPX & PCIe

Condor GR5-RTX3000 Block Diagram

