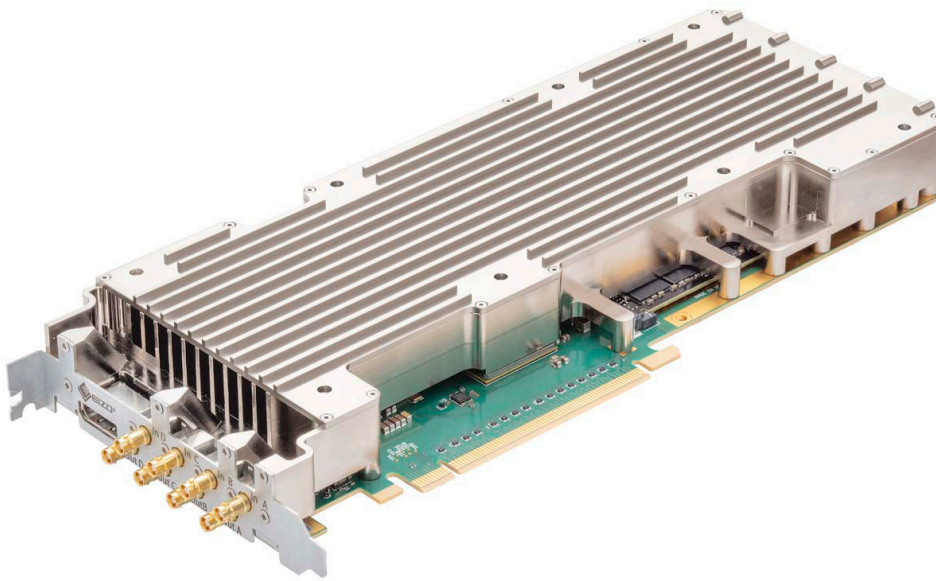




Condor GR4 PCIe



Rugged NVIDIA® Quadro® Pascal™ PCIe Graphics & Video Capture w/ 3G-SDI I/O

The Condor GR4 PCIe is a rugged, passively cooled PCI Express form factor graphics/video capture/GPGPU processing card specifically designed for rugged rackmount servers and ISR applications. Based on NVIDIA's Pascal™ GPU architecture, the product comes in two variants based on the NVIDIA® GPUs — Quadro® P3000 or Quadro® P5000. This card offers exceptional GPGPU performance with both CUDA® and OpenCL™ support.

The Condor GR4 PCIe supports four 3G-SDI video inputs and four 3G-SDI video outputs simultaneously. The 3G-SDI I/O supports the Full HD resolution of 1920x1080@60Hz. The board also has one DisplayPort video output that supports 4K UHD. The product supports PCI Express Gen 3.0 (16, 8 or 4 lane) when mated with a compatible computer. The maximum power consumption ranges from 85 W to 110 W depending upon the variant. It is designed to operate in harsh environments to withstand extended temperatures, shock, vibration, humidity, etc.

This product is ideal for a myriad of compute intensive applications that require 3G-SDI (or HD-SDI) data to be processed and displayed. Some examples are ISR, C4ISR and remote sensing / analysis. The product also has a built-in H.265 (HEVC) / H.264 (MPEG4 AVC) hardware encoder (NVENC) and decoder (NVDEC) and supports NVIDIA GPUDirect RDMA for transferring video data to the GPU with very low latency. The board design is modular and allows for GPU performance upgrades in the future. The product can be customized for other I/O configurations, video formats or form factors. Please contact EIZO Rugged Solutions at condor@eizo.com for more information.

Key features of this product:

- NVIDIA® Quadro® Pascal™ GPU (GP104)
- GPUs Supported: Quadro P5000 & P3000
- Video Outputs: (4) 3G-SDI and (1) DisplayPort
- Video Inputs: (4) 3G-SDI
- SDI VANC KLV Metadata Insertion/Extraction
- 16 GB or 6 GB GDDR5 Graphics Memory
- 256-bit or 192-bit Memory Interface
- 192 GB/s or 168 GB/s Memory Bandwidth
- 2048 or 1280 CUDA Cores
- Up to 6.4 TFLOPs FP32 Compute Performance
- 16, 8 or 4 Lane PCI Express 3.0
- NVIDIA CUDA® 10 & OpenCL™ 1.2 support
- H.265 & H.264 Hardware Encoder/Decoder
- NVIDIA GPUDirect™ RDMA, NVENC & NVDEC
- Extended Temperature (-40°C to 70°C)
- Thermally Efficient Heatsink Technology
- Passively Cooled (No Fans)

Fully Ruggedized



Condor GR4 PCIe Specifications

Graphics Processor	NVIDIA® Pascal™ GPU Architecture (GP104) NVIDIA® Quadro® P5000 or Quadro® P3000 Supporting DirectX 12 and OpenGL 4.5
Interface	Full-length PCI Express Card 16 lane PCI Express 3.0, 2.0
Graphics Memory	<u>Quadro P5000:</u> 16 GB GDDR5, 256-bit Memory Interface, 192 GB/s Memory Bandwidth <u>Quadro P3000:</u> 6 GB GDDR5, 192-bit Memory Interface, 168 GB/s Memory Bandwidth
Video Outputs	Four 3G-SDI on HD-BNC Connectors One DisplayPort (4K UHD) (customizations available) (DisplayPort can be converted to DVI or VGA with adapters)
Video Inputs	Four 3G-SDI on HD-BNC Connectors w/ SDI VANC KLV metadata insertion/extraction
GPGPU Capabilities	CUDA Cores: 2048 (P5000) or 1280 (P3000) Up to 6.4 TFLOPS FP32 Single Floating Point Performance Supports CUDA 10 (Compute Capability 6.1) 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	Up to 85W (P3000) or 110W (P5000) (Based on Application)
Operating Temperature (MIL-STD-810)	-40°C to 70°C (Rugged Air Cooled. VITA 47.2 AC2)
Humidity (MIL-STD-810)	95% Without Condensation
Software & Platform Support	Windows or Linux on x86. PCIe

Condor GR4 PCIe Block Diagram

