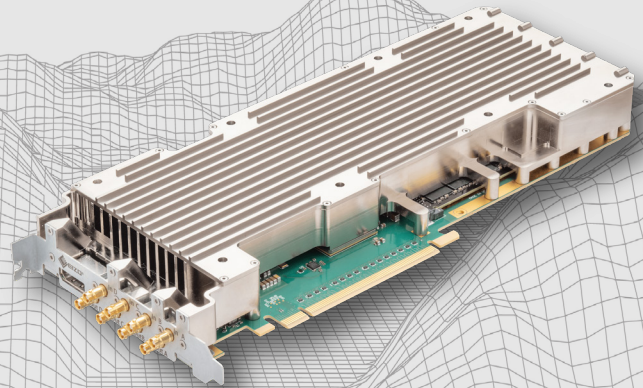


Rugged fanless PCIe graphics, GPGPU & video capture card based on NVIDIA Quadro RTX 3000 GPU



## PCI EXPRESS FORM FACTOR

Graphics & GPGPU Card with  
four 3G-SDI In/Out and  
Metadata Insertion/Extraction

## EMBEDDED GPGPU

NVIDIA Quadro RTX 3000 GPU  
(TU106); 1920 CUDA Cores;  
240 Tensor Cores; 30 RT Cores;

## H.265 ENCODE/DECODE

H.265 (HEVC) / H.264 (MPEG4  
AVC) hardware encoder  
(NVENC) and decoder (NVDEC)

## Rugged PCI Express 3G-SDI Video Capture and GPGPU Processor Card

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. The Condor GR4 PCIe captures and displays video data from up to four 3G-SDI video inputs simultaneously, supporting Full HD (1920 x 1080) at 60 Hz. It also has one Display-Port video output that supports up to 4K UHD (3840 x 2160). 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, such as, 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.



MIL-STD 810  
Shock



MIL-STD 810  
Temperature



MIL-STD 810  
Vibration



SWaP

## Condor GR4 PCIe Specifications

Graphics Processor	NVIDIA® Quadro RTX® 3000 GPU (Turing TU106) Supporting DirectX 12 and OpenGL 4.5
Interface	Full-length PCI Express Card 16 lane PCI Express 3.0, 2.0
Graphics Memory	6 GB GDDR6 192-bit Memory Interface 336 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	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	50 - 125 W
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

