



Condor NVP2102AxX



NVIDIA® Quadro® Pascal™ P2000 (GP107) XMC Graphics & Analog/Digital Video Capture

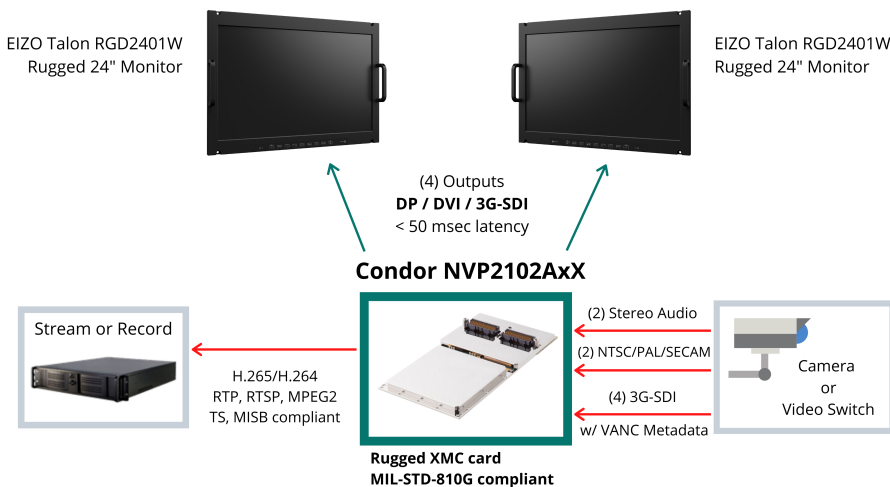
The Condor NVP2102AxX is a rugged high-performance XMC graphics card based on the NVIDIA Quadro P2000 GPU (chip-down), that captures both analog & digital raw frame-by-frame audio/video and metadata with exceptionally low latency. This all-in-one solution provides the ability to simultaneously capture, process, display, encode, decode, and stream video data while supporting CUDA and OpenCL based GPGPU computing, AI processing, deep learning and H.265/H.264 encoding & decoding.

The Condor NVP2102AxX card is very I/O intensive and supports four 3G-SDI inputs, two CVBS (NTSC/PAL/SECAM), and two stereo line in audio inputs, as well as two 3G-SDI and two DVI or DisplayPort video outputs. SDI VANC KLV metadata insertion and extraction is also supported. This innovative XMC card is designed for applications that combine legacy video with newer digital video formats in high-end surveillance applications. The video capture (frame grabber) auto detects the input resolution and then transfers raw video frames directly to GPU memory or host memory using NVIDIA GPUDirect™ RDMA. In GPU memory, the applications can do processing such as image analysis, image enhancement, 360 degree video stitching, sensor fusion and target detection, using GPGPU (CUDA / OpenCL), all with very low latency. NVIDIA NVENC (HW encode) and NVDEC (HW decode) can be used to hardware encode or decode video on the GPU. The card is available in conduction or air cooled with rear XMC I/O on Pn6.

Key features of this product:

- NVIDIA® Quadro® Pascal™ P2000 (Chip-down)
- Video Outputs: (2) 3G-SDI & (2) DVI/DisplayPort
- Video Inputs: (4) 3G-SDI & (2) NTSC/PAL/SECAM
- Audio Inputs: (2) Stereo Line In
- SDI VANC KLV Metadata Insertion/Extraction
- 4 GB GDDR5 Graphics Memory
- 128-bit Memory Interface
- 96 GB/s Memory Bandwidth
- 768 CUDA Cores
- Up to 2.3 TFLOPs FP32 Compute Performance
- H.265 & H.264 Hardware Encoder/Decoder
- NVIDIA GPUDirect™ RDMA, NVENC & NVDEC
- MIL-STD-810
- Conduction Cooled & Air Cooled
- Thermally Efficient Heatsink Technology

Capture, Process, Display, Encode, Decode & Stream



Fully Ruggedized



Condor NVP2102AxX Specifications

Graphics Processor	NVIDIA® Quadro® Pascal™ P2000 GPU (Chip-down GP107) Supporting DirectX 12 and OpenGL 4.5
Interface	XMC 1.0 or XMC 2.0 4 Lane PCIe 3.0
Graphics Memory	4 GB GDDR5 128-bit Memory Interface 96 GB/s Memory Bandwidth
Video Outputs	Two 3G-SDI and Two DVI/DisplayPort Rear Pn6 XMC I/O. VITA 46.9 x12d+x8d+24s
Video Inputs	Four 3G-SDI and Two CVBS (NTSC/PAL/SECAM) Rear Pn6 XMC I/O. VITA 46.9 x12d+x8d+24s.
Audio Inputs	Two Stereo Line In
GPGPU Capabilities	768 CUDA Cores Up to 2.3 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	25 - 50 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 VPX & PCIe

Condor NVP2102AxX Block Diagram

