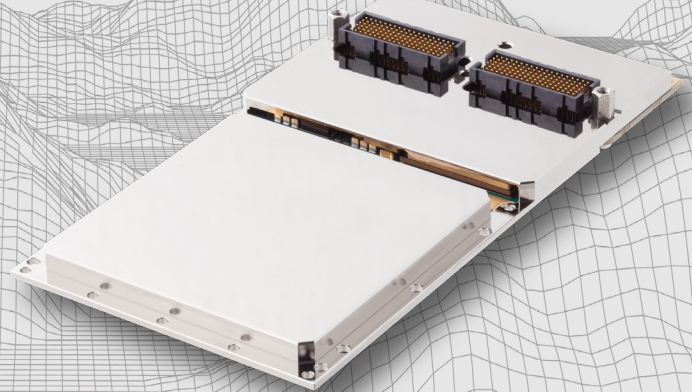


Rugged XMC graphics & video capture card based on the NVIDIA Quadro Pascal P2000 GPU with 3G-SDI and CVBS inputs, and DVI/DisplayPort outputs.



### **HIGH PERFORMANCE GPU**

Chip-down NVIDIA® Quadro® Pascal™ P2000 (GP107) with up to 2.3 TFLOPS FP32 Single Floating Point Performance.

### **SIMULTANEOUS I/O**

Four 3G-SDI & two CVBS (NTSC/PAL/SECAM) video inputs. Two 3G-SDI, and two DVI/DisplayPort video outputs. Rear XMC I/O.

### **ALL-IN-ONE SOLUTION**

Simultaneously capture, process, display, encode, decode, and stream video/audio data, including metadata.

## **Capture, Process, Display, Encode, Decode & Stream**

The Condor NVP2102AxX is a rugged high-performance XMC graphics card 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.



MIL-STD 810  
Shock



MIL-STD 810  
Temperature



MIL-STD 810  
Vibration



SWaP

## Condor NVP2102AxX Specifications

|                                     |                                                                                                                                                                                                                                                                |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Graphics Processor                  | NVIDIA® Quadro® Pascal™ P2000 GPU (Chip-down GP107)<br>Supporting DirectX 12 and OpenGL 4.5                                                                                                                                                                    |
| Interface                           | XMC 1.0 or XMC 2.0<br>4 Lane PCIe 3.0                                                                                                                                                                                                                          |
| Graphics Memory                     | 4 GB GDDR5<br>128-bit Memory Interface<br>96 GB/s Memory Bandwidth                                                                                                                                                                                             |
| Video Outputs                       | Two 3G-SDI and Two DVI/DisplayPort<br>Rear Pn6 XMC I/O. VITA 46.9 x12d+x8d+24s                                                                                                                                                                                 |
| Video Inputs                        | Four 3G-SDI and Two CVBS (NTSC/PAL)<br>Rear Pn6 XMC I/O. VITA 46.9 x12d+x8d+24s.                                                                                                                                                                               |
| Audio Inputs                        | Two Stereo Line In                                                                                                                                                                                                                                             |
| GPGPU Capabilities                  | 768 CUDA Cores<br>Up to 2.3 TFLOPS FP32 Single Floating Point Performance<br>Supports CUDA 10 (Compute Capability 6.1)<br>OpenCL 1.2 and Shader Model 5.1<br>H.265 (HEVC) / H.264 (MPEG4/AVC) Hardware Encode & Decode<br>NVIDIA GPUDirect™ RDMA, NVENC, NVDEC |
| Power Consumption                   | 25 - 50 W                                                                                                                                                                                                                                                      |
| Operating Temperature (MIL-STD-810) | -40°C to 70°C (Rugged Air Cooled)<br>-40°C to 85°C (Rugged Conduction Cooled)                                                                                                                                                                                  |
| Vibration (MIL-STD-810)             | 0.1 g <sup>2</sup> /Hz                                                                                                                                                                                                                                         |
| Shock (MIL-STD-810)                 | 40 g                                                                                                                                                                                                                                                           |
| Humidity (MIL-STD-810)              | 95% Without Condensation                                                                                                                                                                                                                                       |
| Software & Platform Support         | Windows or Linux on x86<br>VPX & PCIe                                                                                                                                                                                                                          |

## Condor NVP2102AxX Block Diagram

