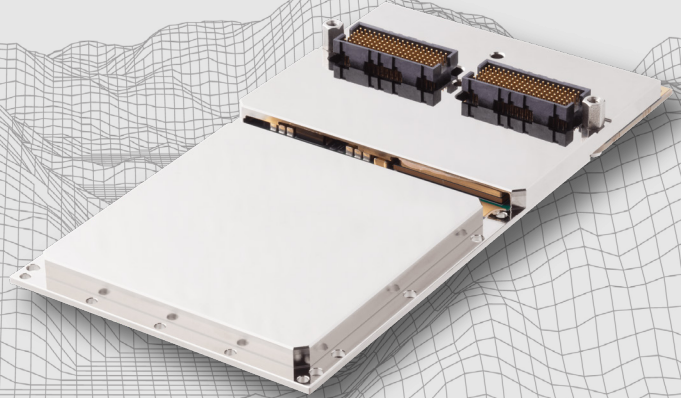


XMC Graphics & 3G-SDI video capture card based on the NVIDIA Quadro Pascal P2000 featuring NVIDIA Pascal architecture (GP107).



## HIGH PERFORMANCE GPU

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

## SIMULTANEOUS VIDEO I/O

Four 3G-SDI Inputs. Two 3G-SDI, Two DVI/DisplayPort and One VGA Video Output.

## ALL-IN-ONE SOLUTION

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

## XMC Graphics & Video Capture Card with 3G-SDI I/O

The Condor NVP2102xX is a rugged high-performance XMC graphics card that captures 3G-SDI raw frame-by-frame 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 NVP2102xX card is very I/O intensive and supports four 3G-SDI video inputs as well as two 3G-SDI, one VGA and two DVI or DisplayPort video outputs. SDI VANC KLV Metadata insertion and extraction is also supported. This innovative XMC card is designed for use in high-end surveillance applications that require support for 3G-SDI video inputs and outputs in addition to the advanced capabilities of the NVIDIA GPU.

The video capture (frame grabber) auto detects the input resolution and then transfers raw video frames directly to GPU memory or host memory. 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 cooled or air cooled with rear XMC I/O on Pn6.



MIL-STD 810  
Shock



MIL-STD 810  
Temperature



MIL-STD 810  
Vibration



SWaP

# Condor NVP2102xX Specifications

## Interface

XMC 1.0 or XMC 2.0  
8 Lane PCIe 3.0

## Graphics Processor

NVIDIA® Quadro® Pascal™ P2000 GPU (Chip-down GP107)  
Supporting DirectX 12, OpenGL 4.5

## Graphics Memory

4 GB GDDR5  
128-bit Memory Interface  
96 GB/s Memory Bandwidth

## GPGPU Capabilities

769 CUDA Cores  
Up to 2.3 TFLOPS FP32 Single Floating Point Performance  
Supports CUDA, OpenCL and Shader Model 5.1  
H.265 (HEVC) / H.264 (MPEG4/AVC) Hardware Encode & Decode  
NVIDIA GPUDirect® RDMA, NVENC, NVDEC

## 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  
Rear Pn6 XMC I/O. VITA 46.9 x12d+x8d+24s.

## Software & Platform Support

Windows or Linux on x86  
VPX & PCIe

## Operating Temperature (MIL-STD-810)

-40°C to 70°C (Rugged Air Cooled)  
-40°C to 85°C (Rugged Conduction Cooled)

## Power Consumption

20 - 50 W

## Vibration (MIL-STD-810)

0.1 g<sup>2</sup>/Hz

## Shock (MIL-STD-810)

40 g

## Humidity (MIL-STD-810)

95% Without Condensation

# Condor NVP2102xX Block Diagram

