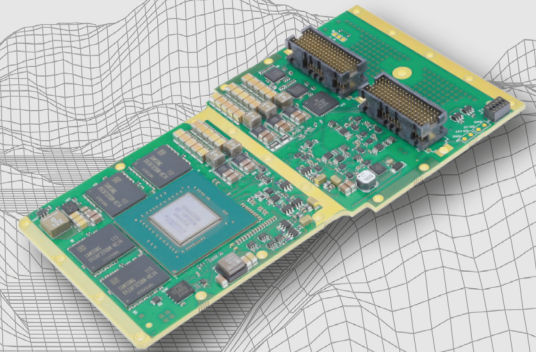


Embedded XMC graphics & GPGPU card
powered the NVIDIA RTX A2000 GPU



HIGH PERFORMANCE GPU

NVIDIA Ampere Architecture:
RTX A2000 GPU

AI & DEEP LEARNING

2560 CUDA Cores, 80 Tensor
Cores, and 20 RT Cores

FLEXIBLE OUTPUTS

Four DisplayPort++ / DVI
Video Outputs

XMC Graphics & GPGPU Card with Four Outputs

The Condor NVA2000xX is a rugged XMC video graphics and GPGPU card designed with an embedded NVIDIA RTX GPU. The NVIDIA® RTX A2000 GPU supports 8 GB GDDR6 graphics memory with Error Correction Code (ECC) and features 2,560 CUDA Cores, 80 Tensor Cores, and 20 RT Cores for accelerated performance in neural network training and inferencing functions.

The NVIDIA Ampere architecture supports NVIDIA GPUDirect™ RDMA which enables direct memory access between NVIDIA GPUs and other devices, such as network adapters, storage systems, and other GPUs. It allows for efficient data transfers without involving the CPU, resulting in reduced latency and increased bandwidth. The Condor NVA2000xX is designed with four DisplayPort++/DVI video outputs and support for PCI Express Gen 4, and includes dedicated H.265/H.264 encode and decode engines. The rear XMC pin-out is compatible with 3U and 6U VPX systems that follow VITA 46.9 x12d+x8d+x16s.



MIL-STD 810
Shock



MIL-STD 810
Temperature



MIL-STD 810
Vibration



SWaP

Condor NVA2000xX Specifications

Interface

XMC 1.0, XMC 2.0 or XMC+
8 Lane PCIe 4.0

Graphics Processor

NVIDIA RTX A2000 GPU (Ampere Architecture)
Supporting DirectX 12, OpenGL 4.6 and Vulkan 1.2

Graphics Memory

8GB GDDR6 with ECC memory
128-bit Memory Interface
192 GB/s Memory Bandwidth

GPGPU Capabilities

2560 CUDA Cores. 80 Tensor Cores. 20 RT Cores
Up to 8.25 TFLOPS FP32 Single Floating Point Performance
Supports CUDA, CUDA-X, OpenCL and Shader Model 5.1
H.265 (HEVC) / H.264 (MPEG4/AVC) Hardware Encode & Decode
NVIDIA GPUDirect® RDMA, NVENC, NVDEC

Video Outputs

Four DisplayPort++/DVI
Rear Pn6 XMC I/O. VITA 46.9 x12d+x8d+x16s

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

35W-60W @ 12V Input
TBD @ 5V Input

Vibration (MIL-STD-810)

0.1 g²/Hz

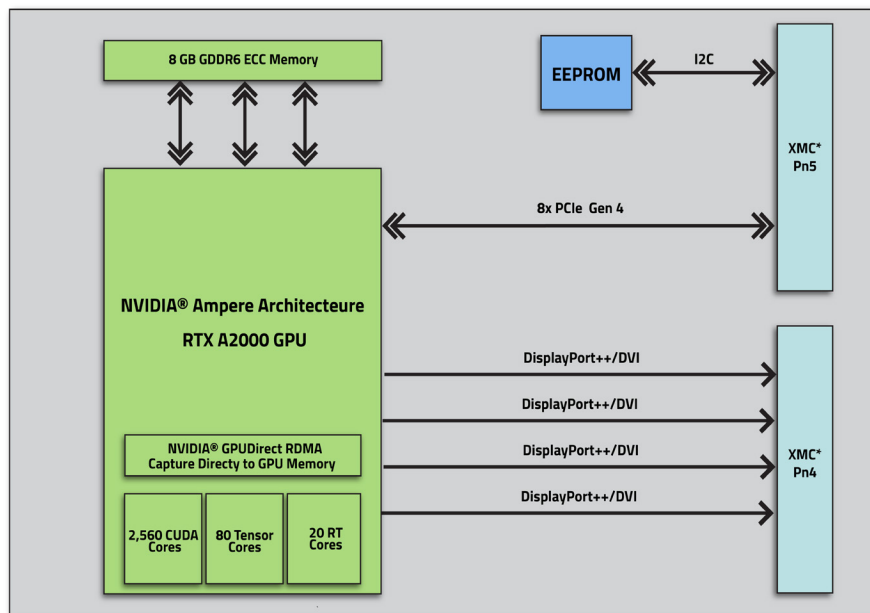
Shock (MIL-STD-810)

40 g

Humidity (MIL-STD-810)

95% Without Condensation

Condor NVA2000xX Block Diagram



*Options in:
VITA42 XMC1.0
VITA61 XMC2.0
VITA88 XMC+