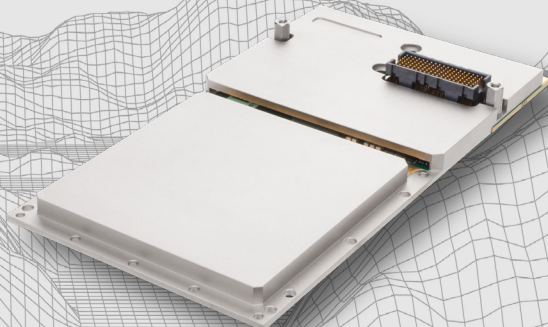Embedded XMC graphics & GPGPU card based on NVIDIA Ampere architecture using the NVIDIA RTX A500 GPU.

NVIDIA | Preferred Partner

HIGH PERFORMANCE GPU

NVIDIA Ampere Architecture: RTX A500 GPU

AI & DEEP LEARNING

Supports CUDA and OpenCL based GPGPU computing, AI processing,& deep learning

HEADLESS GPU

The NVIDIA RTX A500 is a headless GPU that operates without a display output

XMC Graphics & GPGPU Card Supporting NVIDIA Ampere A500

The Condor NVA500xX is a high-performance XMC video graphics and GPGPU processing card based on the NVIDIA® Ampere™ architecture using the RTX A500 GPU. The Condor NVA500xX XMC card supports 4 GB GDDR6 graphics memory along with 2,048 NVIDIA CUDA Cores, 64 Tensor Cores, and 16 RT Cores for uncompromised computing accuracy and reliability.

The NVIDIA RTX A500 GPU is a headless GPU that operates without a display output. Headless GPUs can be leveraged to perform parallel processing on large datasets, making them suitable for tasks like object detection, image recognition, and other computationally intensive operations. Headless GPUs can contribute to reducing latency by offloading specific computational tasks from the CPU to the GPU, enabling faster processing of data.

The Condor NVA500xX offers high-performance embedded computing (HPEC) capabilities such as low-latency GPGPU processing, real-time ray tracing, deep learning (DL), and AI inferencing. This versatile solution features support for PCI Express Gen 4 for increased data transfer speeds, incorporates dedicated H.265/H.264 encode and decode engines, and supports NVIDIA GPUDirect Remote Direct Memory Access (RDMA) for streamlined data transfer operations.

MIL-STD 810 Shock

MIL-STD 810 Temperature

MIL-STD 810 Vibration

SWaP

Condor NVA500xX Specifications

Interface
XMC 1.0 or XMC 2.0
8 Lane PCIe 4.0

Graphics Processor
NVIDIA RTX A500 GPU (Ampere Architecture)
Supporting DirectX 12, OpenGL 4.5, and Vulkan 1.2

Graphics Memory
4 GB GDDR6
64-bit Memory Interface
112 GB/s Memory Bandwidth

GPGPU Capabilities
2048 CUDA Cores. 64 Tensor Cores. 16 RT Cores.
Up to 2.7 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

Humidity (MIL-STD-810)
95% Without Condensation

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 - 35 W

Vibration (MIL-STD-810)
0.1 g²/Hz

Shock (MIL-STD-810)
40 g

Condor NVA500xX Block Diagram

EIZO Rugged Solutions