# OpenVPX Graphics and GPGPU Card Based on NVIDIA® Ampere™

Key Features

The Condor GR5-A2000 is a rugged OpenVPX 3U form factor card based on NVIDIA® Ampere™ architecture and the NVIDIA® RTX™ platform. This highly integrated "chip-down" graphics and GPGPU card meets strict data integrity requirements for mission-critical applications with uncompromised computing accuracy and reliability.
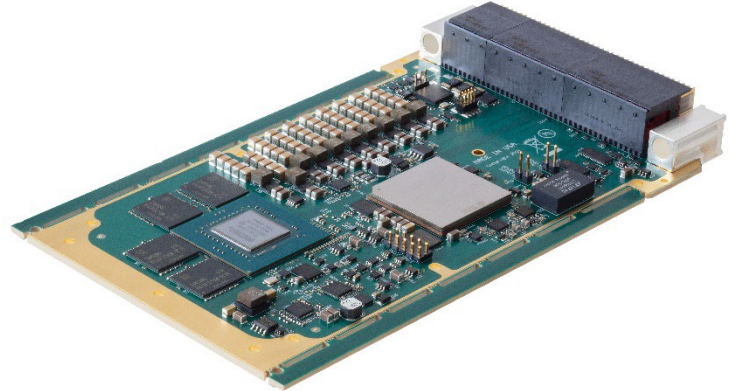
- GPU-based computing supporting 2560 CUDA® cores, 20 RT cores and 80 Tensor cores

- 2x the throughput for matrix operations than previous generations

- PCIe Gen4 (x4 or x8 lane)

- Real-time performance for encoding applications with dedicated H.265 and H.264 encode and decode engines

Specification
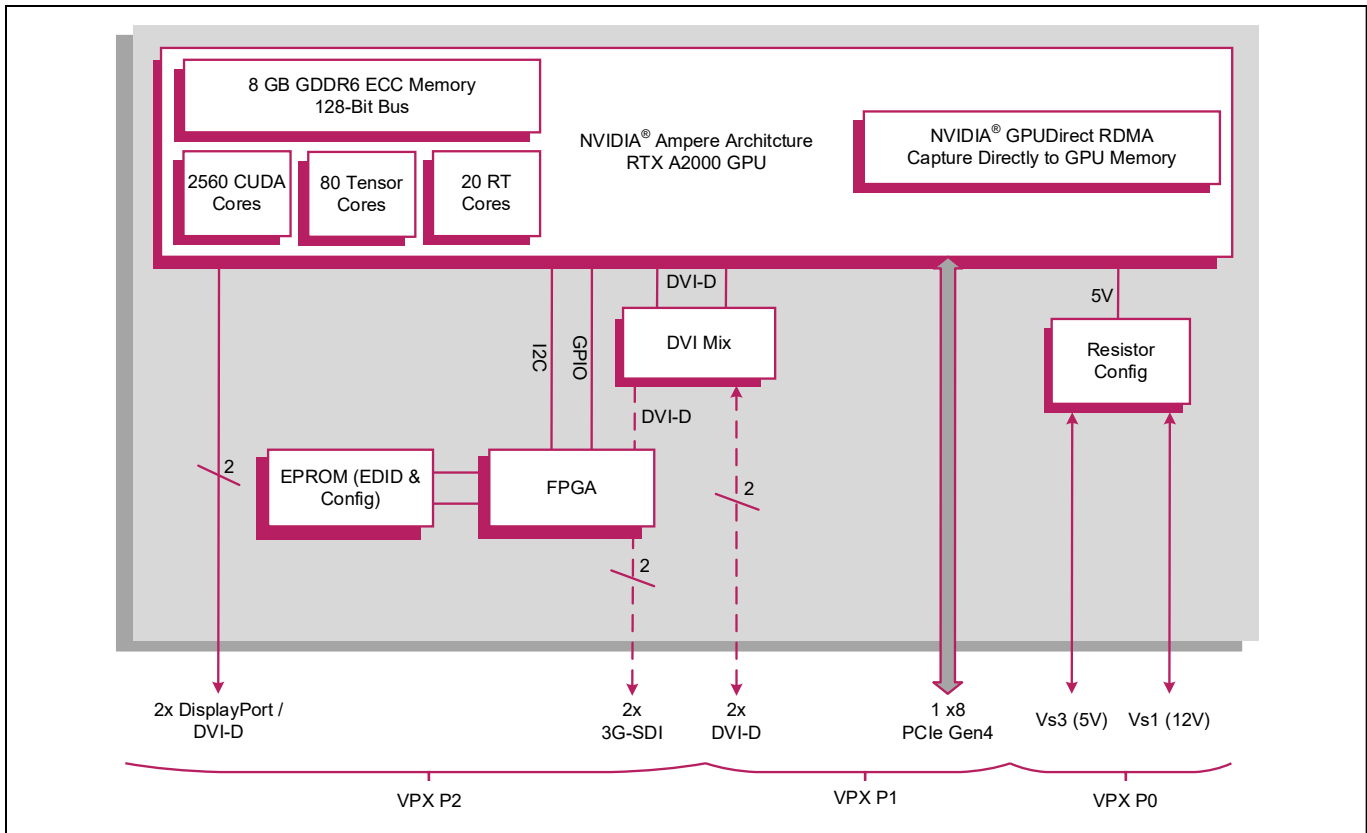
Graphics Processor
- NVIDIA RTX A2000 GPU (Ampere Architecture)
- supports Microsoft® DirectX 12, OpenGL 4.5 and Vulkan 1.2

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

GPGPU Capabilities
- 2560 CUDA Cores. 80 Tensor Cores. 20 RT Cores.
- up to 9.49 TFLOPS FP32 Single Floating Point Performance
- supports CUDA 11 (Compute Capability 7.5) and CUDA-X
- OpenCL 1.2 and Shader Model 5.1
- H.265 (HEVC) / H.264 (MPEG4/AVC) Hardware Encode and Decode
- NVIDIA® GPUDirect™ RDMA, NVENC, NVDEC

Video Outputs
- up to 4x video outputs accessed via P1 and P2:
  - 2x DisplayPort and 2x DVI-D or
  - 4x DVI-D or
  - 4x DisplayPort or
  - 2x DVI-D and 2x 3G-SDI

Software Support
- supports Linux® and Windows®

Electrical Specification
- 50 W (typical max)
- Vss = +5 V or +12 V
- surge currents may cause power consumption to go past 50 W temporarily

Environmental Specification
- conduction-cooled
- operating temperature at card edge:
  - MIL-STD-810, -40°C to +85°C
- non-operating temperature:
  - MIL-STD-810, -55°C to +105°C
- 5% to 95% Relative Humidity, non-condensing

Mechanical Specification
- 3U VPX form-factor
- slot width:
  - 0.8-inch pitch
- connectors to VITA 46.0 for P0, P1 and P2
- captive screws available to secure front handles
- operating mechanical:
  - shock - MIL-STD-810, 40g
  - random vibration - MIL-STD-810, 0.1g²/Hz

Please contact your local Concurrent Technologies sales office for further details on board build options and accessories.