



LAND



SEA



AIR

SK901-A05000

3U VPX GPGPU card with NVIDIA 5000 Ada GPU



Key Feature

- 3U VPX Form Factor, 1.5" Pitch (Conduction Cooled), PCIe Gen3 (x4 or 2x x4 support)
- Embedded GPGPU - NVIDIA Ada Lovelace™ Architecture 5000 Ada GPU
- 16GB GDDR6, 9728 CUDA Cores. 304 Tensor Cores. 76 RT Cores.
- SOSA-aligned Solution –
Available with SOSA™ -aligned slot profiles and VITA standard.
- High-Speed Data Transfer-
Configurable PCIe Gen4 Switch and built-in Codec engines.
- Extreme Temperature Support -20°C to 60°C



Instructions

The 7STARLAKE SK901-AD5000 is a ruggedized OpenVPX 3U form factor embedded GPGPU card leveraging the cutting-edge NVIDIA Ampere architecture and the NVIDIA RTX™ platform. This 3U VPX card is designed with the NVIDIA Ada Lovelace 5000 Ada GPU featuring 16 GB of GDDR6 graphics memory equipped with Error Correction Code (ECC), 76 RT Cores, 304 Tensor Cores, and 9,728 CUDA® cores. Distinguished by its single-slot design, the SK901-AD5000 is a high performance GPGPU solution tailored for AI-accelerated tasks including raw video and sensor processing, encoding, decoding, and display.

3U VPX GPGPU Solution with Multi-Sensor Processing Capabilities

The SK901-AD5000 offers high-performance embedded computing (HPEC) capabilities to C5ISR mission processing applications such as low-latency GPGPU processing, real-time ray tracing, deep learning (DL), and AI inferencing. This versatile solution features support for PCI Express Gen3 for increased data transfer speeds, and supports NVIDIA GPU Direct Remote Direct Memory Access (RDMA) for streamlined data transfer operations. The SK901-AD5000 supports one Display Port internal & three Display ports active output.

Hybrid conduction cold plate assisted by Liquid cooling sets

Hybrid conduction cold plate ensure liquid cooling set is across conduction cooled payload modules, minimizing hot-spots and dissipating heat homogeneously

Specifications

Interface

3U VPX Form Factor

1.5" Pitch (Hybrid Conduction Cooled by liquid cooled)

PCIe Gen3 (x4 or 2x x4 support)

Graphics Processoe

NVIDIA 5000 Ada GPU (Ada Lovelace Architecture)

DirectX 12, OpenGL 4.6, And Vulkan 1.2

Graphics Memory

16GB GDDR6 with ECC

256-bit memory interface

576GB/s Memory Bandwidth

GPU Capabilities

9,728 CUDA Cores, 304 Tensor Cores, 76RT Cores

Up to 41.16 TFLOPS FP32 Single floating Point Performance

Support CUDA, CUDA-X, OpenCL™ and Shader Model 5.1

MIL-STD-810

Vibration 3g rms

Shock 40g

Humidity 95% without Condensation

Power 3.3V, 5V, and 12V (80-115W)

Display Outputs

1x Display port internal

3x Display ports active Outputs

Software & Platform Support

Windows or Linux on X86

Physical & Environment

Dimension 170mm x 146.5mm x 36.6 mm

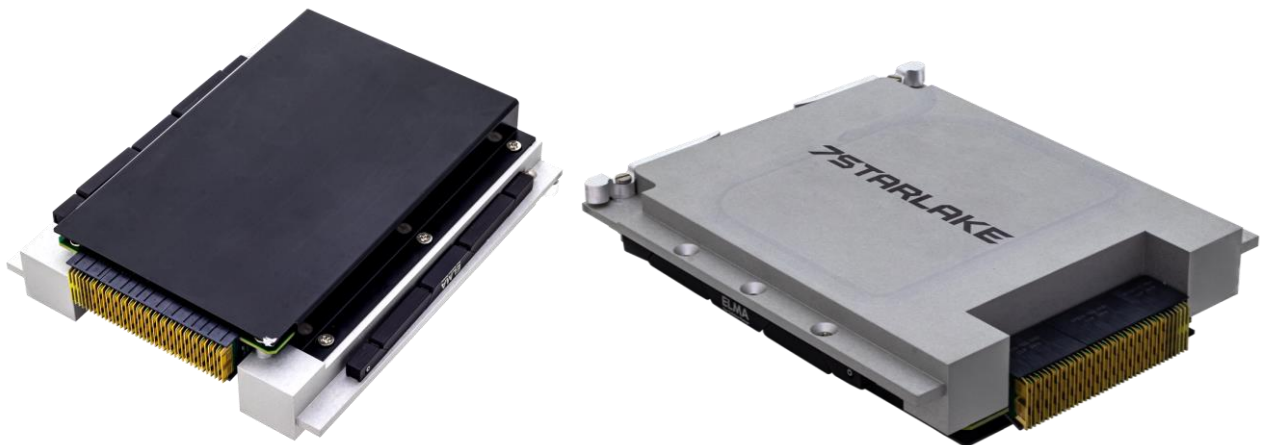
Operating Temp -20°C to 60°C

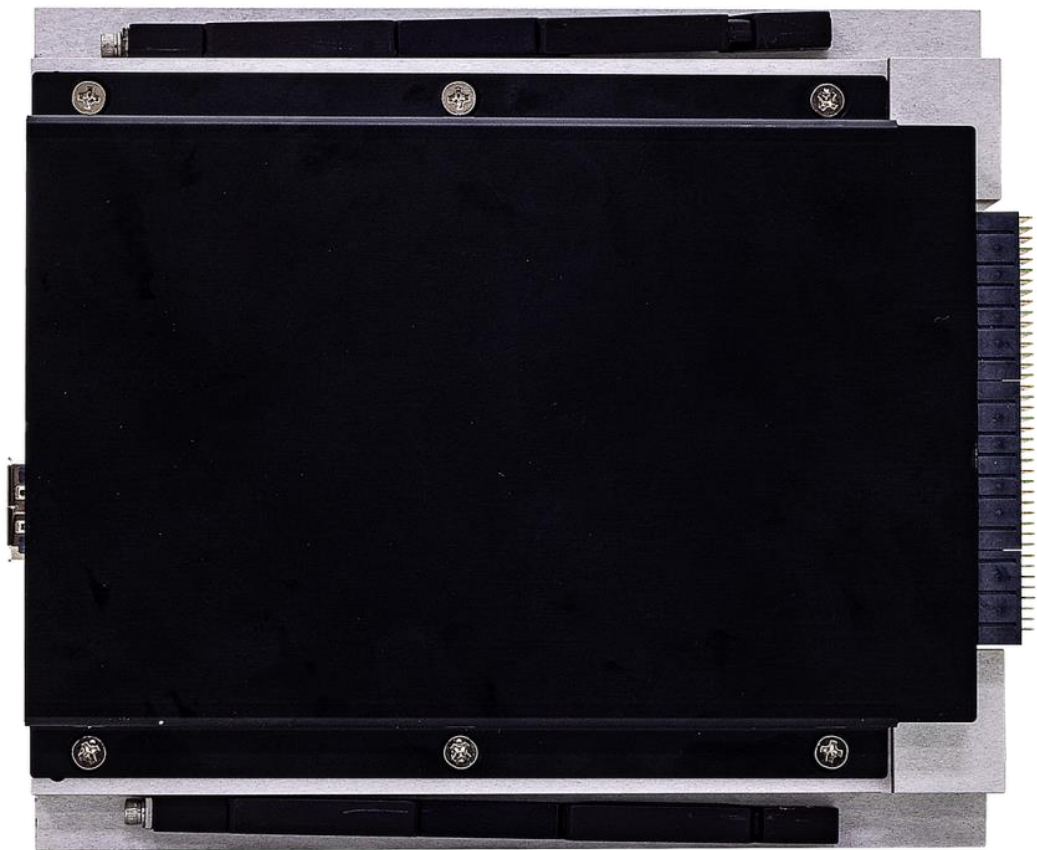
Storage Temp -40°C to 85°C

Relative Humidity 10% to 90%, non-condensing

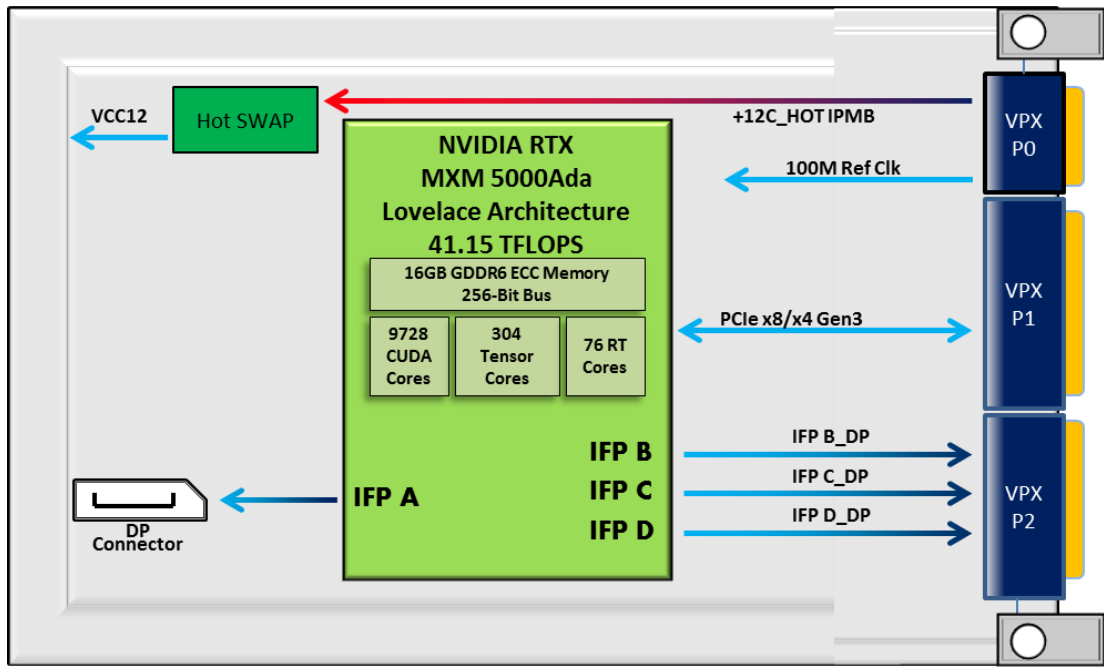
*All specifications and photos are subject to change without notice.

Appearance





Block Diagram



Dimension

