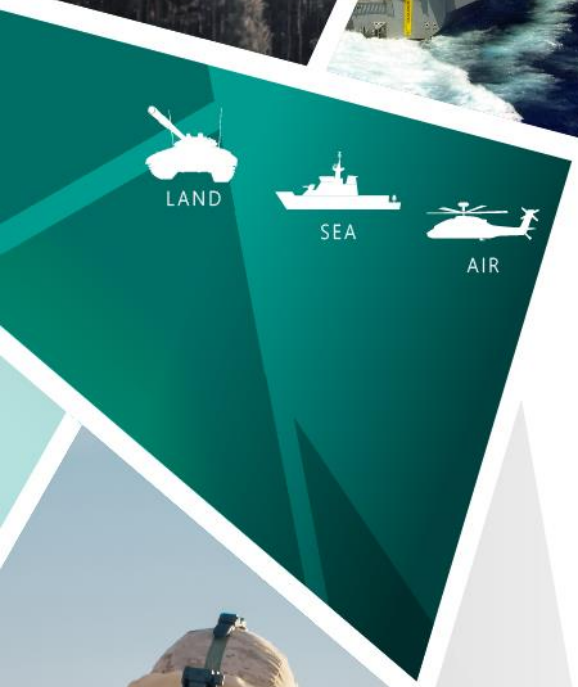

AVA800-L4

Edge AI Inference
NVIDIA Ada Lovelace L4
& AMD® EPYC 8434P

- **Ultra-High-Performance AMD® EPYC® 8434P (2.5GHz, Max 3.1GHz 48 cores, 96 threads TDP 200W)**
- **NVIDIA Ada Lovelace L4 Tensor Core GPU Integrated (7424 CUDA and 30.3 TFLOPS, 24GB GDDR6)**
- **256GB RDIMM ECC DDR5-4800 MHz**
- **2 x 2TB U.2 NVMe for Fast & Mass Storage with SED**
- **Trusted Platform Module (TPM) 2.0 support (AOM-TPM-9672V)**
- **Designed to meet MIL-STD-810**
- **Designed to meet MIL-STD 461**

Features

Edge AI Inference, NVIDIA Ada Lovelace L4 Tensor Core GPU & AMD EPYC 8434P

The AVA800-L4 is a ruggedized AI inference platform designed specifically for advanced inference acceleration applications such as voice, video, image, and recommendation services. This platform is powered by the NVIDIA Ada Lovelace L4 Tensor Core GPU, which features 30.3 TFLOPS of FP32 and 485 TOPS of INT8, and supports a PCIe Gen 4 x16 high-speed bus for real-time inference based on trained neural network models.

In addition to the powerful GPU, the AVA800-L4 is equipped with an AMD 4th-generation EPYC family Siena processor and two U.2 NVMe slots for fast storage access. This combination of high inference performance, a powerful CPU, and expansion capability makes the AVA800-L4 the perfect ruggedized platform for versatile edge AI applications.

The AVA800-L4 utilizes 7STARLAKE's Open Modular, Scalable Architecture and provides an optimized cooling solution for the NVIDIA Ada Lovelace L4 Tensor Core GPU, ensuring stable system operation in harsh environments. Whether it's for outdoor use, manufacturing plants, or other challenging environments, the AVA800-L4 can withstand tough conditions while delivering top-notch AI performance.

Overall, the AVA800-L4 is an ideal solution for customers looking for a ruggedized AI inference platform that can handle a variety of edge computing applications with ease.

Specifications	
FP32	30.3 teraFLOPs
TF32 Tensor Core	120 teraFLOPS*
FP16 Tensor Core	242 teraFLOPS*
BFLOAT16 Tensor Core	242 teraFLOPS*
FP8 Tensor Core	485 teraFLOPs*
INT8 Tensor Core	485 TOPs*
GPU memory	24GB
GPU memory bandwidth	300 GB/s
NVENC | NVDEC | JPEG decoders	2 | 4 | 4
Max thermal design power (TDP)	72W
Form factor	1-slot low-profile, PCIe
Interconnect	PCIe Gen4 x16 64GB/s
Server options	Partner and NVIDIA-Certified Systems with 1–8 GPUs

Features

Ultra-High Performance AMD EPYC Performance with VMware8.x Support

The AMD EPYC 8434P processor is a powerful server-class CPU designed for demanding enterprise workloads. Below is a breakdown of its key capabilities:

- AMD Secure Boot - Protects the boot process from firmware-level attacks.
- AMD Secure Encrypted Virtualization (SEV) - Encrypts virtual machine memory for enhanced isolation, with VMware vSphere 8.0 and later versions fully supported.
- AMD IOMMU – Provides direct I/O access for virtual machines, improving performance.
- DDR5-4800 memory support with ECC – Offers high-speed memory with error correction for mission-critical applications.
- Extended product availability - Suitable for IoT and embedded systems requiring long-term support.

For applications where space is at a premium, this combination of security, performance, and reliability makes the EPYC 8434P particularly suitable for enterprise servers, cloud infrastructure, and IoT applications requiring robust computational power. The AMD EPYC Siena 8434P also offers a five-year extended supply life.

Designed to Meet MIL-STD-810/ MIL-STD-461

AVA800-L4 is designed to meet strict size, weight, and power (SWaP) requirements and to withstand harsh environments, including temperature extremes, shock/ vibration, sand/ dust, and salt/ fog.

AVA800-L4 is a MIL-STD-461 EMI/ EMC compliant rugged Edge AI Inference server. It passes numerous environmental tests including temperature, altitude, shock, vibration, voltage spikes, electrostatic discharge and more. The sealed compact chassis shields circuit cards from external environmental conditions such as sand, dust, and humidity.

Specifications

System	
Processor	AMD® EPYC® Siena Processor 8434P (Frequency 2.5GHz, Turbo Boost Frequency up to 3.1GHz), 48 Core, 96Thread Support, 128MB L3 Cache TDP 200W
Memory type	256GB RDIMM ECC DDR5 4800MHz
Chipset	SoC
GPU	
NVIDIA	TESLA Ada Lovelace L4 Tensor Core GPU
TFLOPS	30.3
CUDA Cores	7424
Memory	24 GB GDDR6, 300 GB/sec
Graphics Output	
1x VGA	ASPEED AST 2600
Resolution	Up to 1920 x1200@ 60Hz 32 bpp
Storage	
HDD/SSD	2 x 2TB U.2 NVMe SSD with SED
Side I/O	
X1	1 x DC-IN with Amphenol TV07RW-13-04P (4PIN) connector
X2	1 x VGA with Amphenol TV07RW-13-98S (10PIN) connector
X3	2 x 1GbE with Amphenol TV07RW13-35SN (22PIN) connector
X4	4 x USB2.0 with Amphenol TV07RW13-35SB (22PIN) connector
X5	1x (1GbE+ IPMI) with Amphenol TV07RW13-35SN (22PIN) connector
Dedicated LED	2 x Red/Green LEDs (SSD)
Hardware	Trusted Platform Module (TPM) 2.0 , Silicon Root Trust (RoT) -NIST 800-193 Compliant
Features	UEFI Secure Boot/ Secure Firmware Updates
Power Requirement	
Power Input	DC-DC 18 to 36V (300W max) MIL-STD-461
Applications, Operating System	
Applications	C4ISR, Commercial and Military Platforms Requiring Compliance to MIL-STD-810 Process Control, where Harsh Temperature, Shock, Vibration, Altitude, Dust and EMI Conditions
OS Support List A	Windows 10 64bit Enterprise, Windows 10 64bit Pro Workstations, Windows 10 IoT 64bit Enterprise, Windows 11 64bit Enterprise (OR001), Windows 11 64bit Pro Workstations (OR001), Windows 11 IoT 64bit Enterprise (OR001), Windows Server 2019 64bit, Windows Server 2022 64bit
OS Support List B	RHEL 8.5 64bit, RHEL 8.6 64bit, RHEL 9.0 64bit, RHEL 9.2 64bit, CentOS 8.5. 64bit, Oracle 8.5 64bit, Oracle 8.6 64bit, Rocky Linux 8.5 64bit, openSUSE Leap 15.4 64bit, SLES 15 SP3 64bit, Ubuntu 22.04 64bit Server, Ubuntu 21.10 64bit Server.
VMware	VMware ESXi 7.0u3d x64, VMware ESXi 8.0 x 64
Physical	

Dimension	450 x 154 x 316 mm (D x H x W)	
Estimated Weight	18Kg (39.68lbs) final weights is dependent on specific configuration	
Chassis	Aluminum Alloy, Corrosion Resistant	
Finish	Anodic Aluminum Oxide	
Cooling	Conduction Cooling with Air Force Smart Fan Ingress Protection	
Ingress Protection	IP65	

MIL-STD 810

High Temperature	High Temperature Storage	+74°C per MIL-STD-810G/ 501.5/ I for 7 cycles
High Temperature	High Temperature Operation	55°C per MIL-STD-810G/ 501.5/ II for 3 cycles
Low Temperature	Low Temperature Storage	-46°C for 72 hours per MIL-STD-810G/ 502.5/ I
Low Temperature	Low Temperature Operation	-33°C per MIL-STD-810G/ 502.5/ II
Vibration	C-130(J/K) aircraft	Test duration 400 minutes per axis (x,y,z), simulating 120 flight hours including 20 landings and takeoffs
	Functional Vibration	Vibration experienced on Ford F-550 in neutral gear
	Tactical Transportation test Not Operational	Test duration: 120 minutes per axis to simulate 500,000 km driving distance.
Shock	Road Transportation	10 Grms, 11ms, 3 (X, Y, Z) axes, Sawtooth Pulse
Immersion	Method 502.5	Test according to IEC 60529/ IP65

MIL-STD 461

Conducted Emissions Power Leads	CE102	10KHz to 10MHz (Figure CE102-1)
Conducted Susceptibility Power Leads	CS101	30Hz to 150KHz (Figure CS101-1: Curve #2)
Conducted Susceptibility, bulk cable injection	CS114	10KHz to 200MHz, curves 3&4 (10 kHz to 2 MHz: Curve #3 2MHz to 200MHz: Curve #4)
Conducted Susceptibility, bulk cable injection	CS115	Impulse excitation (5A)
Conducted Susceptibility Damped sinusoidal transients, cables and power leads	CS116	10KHz to 100MHz (10A)
Radiated Emissions electric filed	RE102	2MHz to 18GHz (Figure RE102-4)
Radiated Susceptibility electric filed	RS103	2Mhz to 18GHz, 50V/m (2MHz to 100MHz: 50V/m 100MHz to 18GHz: 50V/m)
Personnel borne electrostatic discharge	CS118	Personnel borne electrostatic discharge

Appearance