



PER800-S4L4

MILITARY 2U NVIDIA ADA L4
XEON® SP GOLD SERVER



- Edge AI Inference NVIDIA Ada Lovelace L4 & Xeon® SP Gold 5411N
- Ultra-High-Performance Intel® Xeon® SP Gold 5411N (1.9GHz, Max 3.9GHz 20 cores, 40 threads)
- NVIDIA Ada Lovelace L4 Tensor Core GPU Integrated (7424 CUDA and 30.3 TFLOPS, 24GB GDDR6)
- 512GB RDIMM ECC DDR5-5600 MHz
- 2 x 8TB U.2 NVMe for Fast & Mass Storage with SED
- RoHS and REACH Compliance

Features

Edge AI Inference, NVIDIA Ada Lovelace L4 Tensor Core GPU & INTEL XEON SP 5411N

The PER800-S4L4 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 in FP32 and 485 TOPs in INT8 PCIe Gen 4 x 16 high speed bus for real-time inference based on trained neural network models.

In addition to the powerful GPU, the PER800-S4L4 is equipped with an Intel® XEON Sapphire Rapids processor and two U.2 NVMe slots for fast storage access. This combination of stunning inference performance, a powerful CPU, and expansion capability makes the PER800-S4L4 the perfect ruggedized platform for versatile edge AI applications.

The PER800-S4L4 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 PER800-S4L4 can withstand tough conditions while delivering top-notch AI performance.

Overall, the PER800-S4L4 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

* Shown with sparsity. Specifications 1/2 lower without sparsity.

Features

Ultra-High Performance Intel Xeon SP Performance with VMware8.x Support



Intel XEON Sapphire Rapids: The Intel Xeon Sapphire Rapids Technology is a fully support based on Intel® Boot Guard, Intel® Trusted Execution Technology, Intel® AES New Instructions, Intel® Software Guard Extensions (Intel® SGX), Supports virtualization (VMware v8 and upwards), Intel® Virtualization Technology (VT-x), Intel® Virtualization Technology for Directed I/O (VT-d), Intel® VT-x with Extended Page Tables (EPT) technology delivers exceptional performance for demanding workloads, such as database management, virtualization, and cloud computing. The processor also supports DDR5-5600 memory with ECC for enhanced reliability, and Intel Hyper-Threading Technology for increased processing efficiency.

For applications where space is at a premium, the Intel Xeon Sapphire Rapids Technology offers an integrated Platform Controller Hub C741 chipset technology, offering an inspiring level of design simplicity. The Intel Xeon Sapphire Rapids Gold 5411N Technology also offers a seven-year extended supply life for Internet of Things designs.

Specifications

SYSTEM

Processor	Intel® Xeon® Sapphire Rapids Processor Gold 5411N(Frequency 1.9GHz, Turbo Boost Frequency up to 3.9GHz), 20 Core, 40 Thread Support, 45MB Smart Cache TDP 165W
Memory type	512GB RDIMM ECC DDR5 5600MHz
Chipset	Intel C741

GPU

NVIDIA	TESLA Ada Lovelace L4 Tensor Core GPU
TFLOPS	30.3
CUDA Cores	7424
Memory	24 GB GDDR6, 300 GB/sec

GRAPHICS OUTPUT

1xVGA	ASPEED AST2600
Resolution	Up to 1920x1200@60Hz 32bpp

STORAGE

HDD/SSD	2 x 8TB U.2 NVMe SSD with SED
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SIDE I/O

10GbE	2 x 10GbE
VGA	1 x VGA
USB3.0/2.0	1 x USB3.0/2.0
USB3.0/2.0	1 x USB3.0/2.0
USB3.0/2.0	1 x USB3.0/2.0
USB3.0/2.0	1 x USB3.0/2.0
1GbE	2 x 1GbE
IPMI	1x IPMI
AC-IN	1 x AC-IN
Button	1 x Power Switch with Dedicated LED
Dedicated LED	2 x Red/Green LEDs (SSD)

POWER REQUIREMENT

Power Input	AC 800W max
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PHYSICAL

Dimension	389 x 88 x 438 mm (D x H x W)
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Estimated Weight	10 Kg
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Chassis	Aluminum Alloy, Corrosion Resistant
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Finish	Anodic aluminum oxide
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Cooling	Air Force Fan cooling
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ENVIRONMENTAL

Operating Test

Low air pressure	Method 500.5 Procedure 2	Operation/Air Carriage 4572m (15.000 ft)
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Low Temperature	Method 502.5 Procedure 2	-20°C, 4 hours, ±3°C
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High Temperature	Method 501.5 Procedure 2	+55°C, 4 hours, ±3°C
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Humidity	Method 507.5	85%-95% RH without condensation, 24 hours/ cycle, conduct 10 cycle
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Vibration	Method 514.6	5-500Hz, Vertical 7.7Grms, 40mins x 3axis
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Shock	Method 516.6	20 Grms, 11ms, 3 axis
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Non-Operating Test

Low Temperature	Method 502.5	-33°C, 4 hours, change rate: ≤ 20°C/ Hour -15°C, 72hours (By request)
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High Temperature	Method 501.5 Procedure 1	+71°C, 4 hours, change rate: ≤ 20°C/ Hour +68°C, 240 hours (By request)
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Vibration	Method 514.6	5-500Hz, Vertical 7.7Grms, 40mins x 3axis
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Shock	Method 516.6	20 Grms, 11ms, 3 axes
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