Arm-based (ARS) | 1U Rackmount | GPU Server

Supermicro ARS-123GL-NRB-ALC

Arm-based (ARS) · 1U Rackmount · GPU Server · Liquid Cooling Server

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Form Factor **1U Rackmount**	CPU **NVIDIA Vera CPU with Dual 88-core processors**
GPU **4 onboard GPUs**	Memory **Onboard Memory**

Key Features

- NVIDIA Vera Rubin with 4 NVIDIA NVLink® (VR NVL4)
- Dual NVIDIA 88-core Vera CPUs with liquid cooling
- Quad NVIDIA Rubin GPUs with liquid cooling
- 1536GB onboard memory
- Quad OSFP 800Gbps Infiniband/Ethernet + Dual QSFP112 400Gbps Infiniband/Ethernet
- 2 front hot-swap E1.S NVMe drive bays
- 48-52V DC Busbar

Form Factor	1U Rackmount
Platform	Arm-based (ARS)
CPU	Dual processor(s) NVIDIA Vera CPU with Dual 88-core processors
Max GPU Count	4 onboard GPUs
Supported GPU	NVIDIA: Rubin GPU on Vera Rubin Superchip
Memory	Onboard Memory 1536GB ECC LPDDR5X
Drive Bays	Default: Total 3 bays2 front hot-swap E1.S PCIe 6.0 x4 NVMe drive bays 1 internal fixed E1.S PCIe 6.0 x4 NVMe drive bay
Fans	N/A
Power Supply	Power via Busbar (48-54V DC)

Full Specifications — ARS-123GL-NRB-ALC

Product SKUs

Part numbers	ARS-123GL-NRB-ALC

Motherboard

Motherboard	Super GPU-NVVR-NVL4

Processor

CPU	Dual processor(s) NVIDIA Vera CPU with Dual 88-core processors
Core Count	88C/176T; 164MB Cache per CPU
Note	Supports up to 600W TDP CPUs (Liquid Cooled)

GPU

Max GPU Count	4 onboard GPUs
Supported GPU	NVIDIA: Rubin GPU on Vera Rubin Superchip
GPU-GPU Interconnect	Sixth-Generation NVIDIA NVLink™

System Memory

Memory	Onboard Memory 1536GB ECC LPDDR5X

On-Board Devices

Network Connectivity	1 RJ45 1GbE with Realtek 4 OSFP 800Gb InfiniBand with NVIDIA ConnectX®-9 2 QSFP112 400Gb InfiniBand with NVIDIA BlueField®-4 (optional) 1 OSFP 800Gb InfiniBand with NVIDIA ConnectX®-9 (optional)

Input / Output

LAN	1 RJ45 1 GbE BMC Shared LAN port (ASPEED AST2600)
USB	1 USB 3.2 Gen1 Type-C port (Front)
Video	1 DisplayPort over USB Type-C port (Front)
TPM	1 TPM Onboard TPM & TPM Header

System BIOS

BIOS Type	AMI 64MB SPI Flash EEPROM

Management

Software	SuperCloud Composer® (SCC) SuperServer Automation Assistant (SAA) New!
Power configurations	ACPI Power Management

Security

Hardware	Trusted Platform Module (TPM) 2.0
Features	Secure Firmware Updates

PC Health Monitoring

CPU	Monitors for CPU Cores, Chipset Voltages, Memory
Temperature	Monitoring for CPU and chassis environment; CPU Thermal Trip Support; I²C Temperature Sensing Logic

Chassis

Form Factor	1U Rackmount
Model	CSE-MG108TS-V01DP-NVL4

Dimensions and Weight

Height	1.7" (43.6 mm)
Width	17.26" (438 mm)
Depth	30.15" (766 mm)
Package	9.05" (H) x 24.8" (W) x 45.27" (D)
Weight	Gross Weight: 79.36 lbs (36 kg) Net Weight: 77.16 lbs (35 kg)
Available Color	Silver

Front Panel

Buttons	Power On/Off

Drive Bays / Storage

Drive Bays Configuration	Default: Total 3 bays2 front hot-swap E1.S PCIe 6.0 x4 NVMe drive bays 1 internal fixed E1.S PCIe 6.0 x4 NVMe drive bay
M.2	1 M.2 PCIe 6.0 x4 NVMe slot (M-key 22110(default)/2280)

System Cooling

Fans	N/A
Liquid Cooling	Direct to Chip (D2C) Cold Plate

Power Supply

Power	Power via Busbar (48-54V DC)
Power	Power via Busbar (48-54V DC)

Operating Environment

RoHS	RoHS Compliant
Environmental Spec.	Name: A2 Operating Temperature: 10°C to 35°C (50°F to 95°F) Non-operating Temperature: -30°C to 60°C (-40°F to 140°F) Operating Relative Humidity: 8% to 80% (max 21° DP; non-condensing) Non-operating Relative Humidity: 8% to 90% (max 38° DP; non-condensing)