GPU SuperServer ARS-511GD-NB-LCC
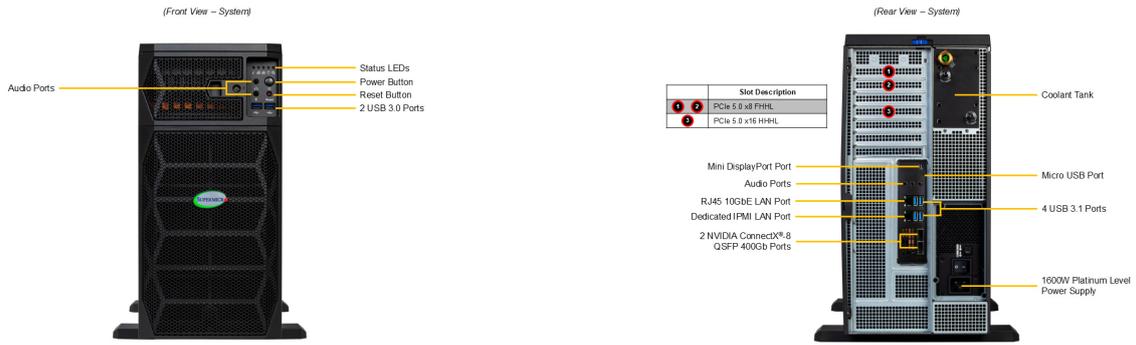
Super AI Station

Key Applications

Research Lab/National Lab, AI Inference / Training, AI Development, Data Science,

Key Features

- NVIDIA Grace™ CPU Superchip, 72 Core;
- NVIDIA Blackwell B300 GPU, up to 279GB HBM3e (Onboard);
- 4x 128GB LPDDR5x SOCAMM (Total 496GB total memory per NVIDIA Grace™ CPU)
  Up to 775GB of coherent memory;
- NVIDIA ConnectX®-8 SuperNIC™;
- Up to 20 PFLOPS of AI Performance
  Closed loop liquid cooling
  Supported OS: Ubuntu with NVIDIA AI Developer Tools;

Form Factor	Tower or 5U Enclosure: 454.7 x 218.4 x 701mm (17.9" x 8.6" x 27.6") Package: 388 x 655 x 956mm (15.3" x 25.8" x 37.6")
Processor	Single processor(s) NVIDIA 72-core NVIDIA Grace CPU on NVIDIA GB300 Grace Blackwell Ultra Superchip
GPU	Max GPU Count: 1 onboard GPU Supported GPU: NVIDIA: B300 GPU on NVIDIA GB300 Grace Blackwell Ultra Superchip CPU-GPU Interconnect: NVIDIA NVLink®-C2C
System Memory	Slot Count: Onboard Memory Max Memory: Up to 496GB ECC LPDDR5X
Drive Bays Configuration	4 M.2 PCIe 5.0 x4 NVMe slots (M-key 2280(default))

Expansion Slots	PCI-Express (PCIe) Configuration: Default
	      • 1 PCIe 5.0 x16 FHHL double-width slot
	      • 2 PCIe 5.0 x8 (in x16) FHHL slots
	M.2: 1 M.2 PCIe 5.0 x4 slot (E-key 2230(default))

On-Board Devices	Chipset: NVIDIA C1 Network Connectivity: 2 QSFP 400GbE with NVIDIA ConnectX®-8 SuperNIC

Input / Output	LAN: 1 RJ45 1 GbE Dedicated BMC LAN port
	     1 RJ45 10 GbE LAN port
	     2 QSFP28 400 GbE LAN ports (NVIDIA ConnectX®-8 SuperNIC)
	USB: 2 USB 2.0 Type-A ports(front)
	     4 USB 3.0 Gen2 Type-A ports(Rear)
	Video: 1 mini-DP port
	Audio: Rear Audio

(Front View – System)

Audio Ports

Status LEDs
Power Button
Reset Button
2 USB 3.0 Ports

(Rear View – System)

Slot Description	
1 2	PCIe 5.0 x8 FHHL
3	PCIe 5.0 x16 HHHL

Coolant Tank

Mini DisplayPort Port
Audio Ports
RJ45 10GbE LAN Port
Dedicated IPMI LAN Port
2 NVIDIA ConnectX®-8
QSFP 400Gb Ports

Micro USB Port

4 USB 3.1 Ports

1600W Platinum Level
Power Supply

System Cooling	Fans: 2x 120mm Fan(s) 1x 80mm Fan(s) Liquid Cooling: Direct to Chip (D2C) Cold Plate
Power Supply	1x 1600W Titanium Level (94%) power supply
System BIOS	BIOS Type: AMI 64MB SPI Flash EEPROM

PC Health Monitoring	CPU: Monitors for CPU Cores, Chipset Voltages, Memory
	FAN: Fans with tachometer monitoring
	        Status monitor for speed control
	Temperature: Monitoring for CPU and chassis environment
	                Thermal Control for fan connectors

Dimensions and Weight	Weight: Gross Weight: 112.4 lbs (51 kg) Net Weight: 88 lbs (40 kg) Available Color: Black Front & Black Body
Operating Environment	Operating Temperature: 10°C to 25°C (50°F to 77°F) Non-operating Temperature: -40°C to 60°C (-40°F to 140°F) Operating Relative Humidity: 8% to 90% (non-condensing) Non-operating Relative Humidity: 5% to 95% (non-condensing)
Motherboard	**Super GPU-NVGB300-WSHPM**
Chassis	**CSE-759TS-R0CNBP**