

## A+ Server 4124GO-NART (Complete System Only)

4U Dual Processor (AMD) GPU System with NVIDIA HGX A100 8-GPU 40GB/80GB, NVLink, NVSwitch.



**Integrated Board**



**H12DGO-6**

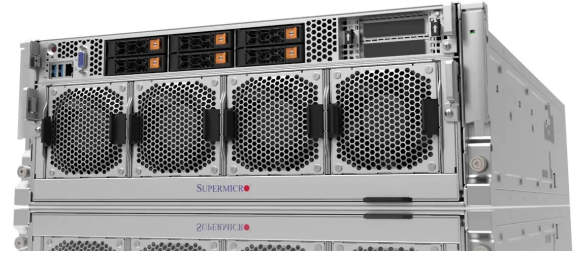
**Views:** | [Top View \(GPU\)](#) | [Top View \(CPU\)](#) |  
| [Angled View](#) | [Front View](#) | [Rear View](#) |

**Complete System Only:** To maintain quality and integrity, this product is sold only as a completely-assembled system (with minimum 2 CPUs, minimum of 1.0TB Memory (2TB highly recommended) for 80G HGX-8 A100 OR minimum of 512GB Memory for 40G HGX-8 A100, 1 Storage device, and 1 NIC).

**Service:** OSNBD3 is highly recommended.

[Drivers & Utilities](#) [BIOS](#) [IPMI](#) [Tested Memory](#) [Tested M.2 List](#)  
[NVMe Options](#) [Tested AOC](#) [Manuals](#) [OS Certification Matrix](#)  
[Drive Options](#)

Note: Image above may show a varied configuration of optional parts. Please refer to parts list for standard parts included.



## Key Applications

- High Performance Computing
- AI / Deep Learning

## Key Features

1. Supports NVIDIA® HGX™ A100 8-GPU; Highest GPU communication using NVIDIA® NVLINK™ v3.0 + NVIDIA® NVSwitch™; NICs for GPUDirect RDMA (1:1 GPU Ratio)
2. Supports HGX A100 8-GPU 40GB (HBM2) or 80GB (HBM2e)
3. Dual AMD EPYC™ 7003/7002 Series Processors (The latest AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer)
4. 8TB Registered ECC DDR4 3200MHz SDRAM in 32 DIMMs
5. 8 PCI-E 4.0 x16 via PCI-E switch; 1 PCI-E 4.0 x 16 LP and 1 PCI-E 4.0 x8 LP via CPUs; AIOM Support
6. 6 Hot-swap U.2 NVMe 2.5" drive bays (4 via PCI-E switch, 2 via CPU) Up to 10 U.2 NVMe 2.5" drives available with an optional 4 drive bays at rear of system
7. Flexible Networking via AIOM, 1 dedicated IPMI LAN Port
8. 4 Hot-swap heavy-duty cooling fans
9. 2200W (3+1) Redundant Platinum Level Power Supplies (*full redundancy based on configuration and application load*); 3000W (2+2) Redundant **Titanium Level (96%+)** Power Supply option available for upgrade



## Specifications

Product SKUs

AS -4124GO-NART

A+ Server 4124GO-NART

Motherboard

Super H12DGO-6

Processor/Cache

CPU

Dual AMD EPYC™ 7003/7002 Series Processors  
(The latest AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer)  
Socket SP3

Supports CPU TDP up to 280W\*

Cores

Up to 128 Cores (64 per CPU)

Note

\* Certain CPUs with high TDP may be supported only under specific conditions. Please contact Supermicro Technical Support for additional information about specialized system optimization

GPU

Supported GPUs

HGX A100 8-GPU 40GB/80GB SXM4 Multi-GPU Board

CPU-GPU Interconnect

PCI-E Gen 4 x16 Switch CPU-to-GPU Interconnect

GPU-GPU Interconnect

NVIDIA® NVLink™ with NVSwitch™ GPU-GPU Interconnect

System Memory

Memory Capacity

32 DIMM slots

Up to 8TB 3DS ECC DDR4-3200MH RDIMM/LRDIMM

Memory Type

3200MHz ECC DDR4 RDIMM/LRDIMM

On-Board Devices

Chipset

System on Chip (SoC)

SATA

SATA3 (6Gbps)

Network Controllers

Provided via AIOM

IPMI

Support for Intelligent Platform Management Interface v.2.0  
IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

Graphics

ASPEED AST2600 BMC

Input / Output

SATA

4 SATA3 (6Gbps) ports

LAN

Provided by AIOM

1 RJ45 Dedicated IPMI LAN port

USB

2 USB 3.0 ports (front)

Video

1 VGA Connector (front)

COM Port

1 COM port (header)

System BIOS

BIOS Type

AMI 256Mb SPI Flash ROM

Management

Chassis

Form Factor

4U Rackmountable

Rackmount Kit (MCP-290-00180-0N)

Model

CSE-438G

Dimensions

Height

6.9" (174mm)

Width

17.6" (446mm)

Depth

35.4" (900mm)

Package

29.5" (750mm) H x 27.4" (695mm) W x 44.9" (1140mm) D

Weight

Net Weight: 166.0 lbs (75.3 kg)

Gross Weight: 225.0 lbs (102.1 kg)

Drive Bays / Storage

Hot-swap

6 hot-swap U.2 NVMe 2.5" drive bays (4 via PCI-E switch, 2 via CPU, SATA/NVMe Hybrid or SAS with optional HBA)  
(up to 10 hot-swap U.2 NVMe 2.5" available)

M.2

2 M.2 NVMe

Expansion Slots

PCI-Express

8 PCI-E 4.0 x16 via PCI-E switch - supporting HGX A100 8-GPU's 1:1 connection to 8 NICs

1 PCI-E 4.0 x16 LP and 1 PCI-E 4.0 x8 LP via CPUs

System Cooling

Fans

4 x Hot-swap 11.5K RPM heavy duty fans

Power Supply

2200W Redundant Platinum Level Power Supplies

Total Output Power

1000W with Input 100 - 127Vac

2200W with Input 220 - 240Vac (for UL/cUL only)

2090W with Input 230 - 240Vdc (for CQC only)

Dimension

(W x H x L)

106.5 x 82.4 x 203.5 mm

Input

1000W: 100-127 Vac / 12-9.5 A / 50-60 Hz

1800W: 200-220 Vac / 10-9.5 A / 50-60 Hz

1980W: 220-230 Vac / 10-9.5 A / 50-60 Hz

2090W: 230-240 Vac / 10-9.8 A / 50-60 Hz

2200W: 220-240 Vac / 11.8-9.6 A / 50-60 Hz (for UL/cUL only)

2090W: 230-240 Vdc / 10-9.8 A / 50-60 Hz (for CQC only)

+12V

Max: 41.67A / Min: 0A (500W)

+54V

Max: 18.5A / Min: 0A (1000W)

Max: 33.33A / Min: 0A (1800W)

Max: 36.6A / Min: 0A (1980W)

Max: 38.7A / Min: 0A (2090W)

Max: 40.74A / Min: 0A (2200W)

12Vsb

Max: 3A / Min: 0A

Software

[IPMI 2.0](#)

KVM with dedicated LAN

[SSM](#), [SPM](#), [SUM](#)

[SuperDoctor® 5](#)

Watchdog

PC Health Monitoring

CPU

Monitors for CPU Cores, Chipset Voltages, Memory.

4+1 Phase-switching voltage regulator

FAN

Fans with tachometer monitoring

Status monitor for speed control

Pulse Width Modulated (PWM) fan connectors

Temperature

Monitoring for CPU and chassis environment

Thermal Control for fan connectors

Output Type

Gold Finger (connector on M/P)

Certification



Platinum Certified  
[ [Test Report](#) ]

Operating Environment

RoHS

RoHS Compliant

Environmental Spec.

Operating Temperature:

10°C ~ 35°C (50°F ~ 95°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)

Parts List