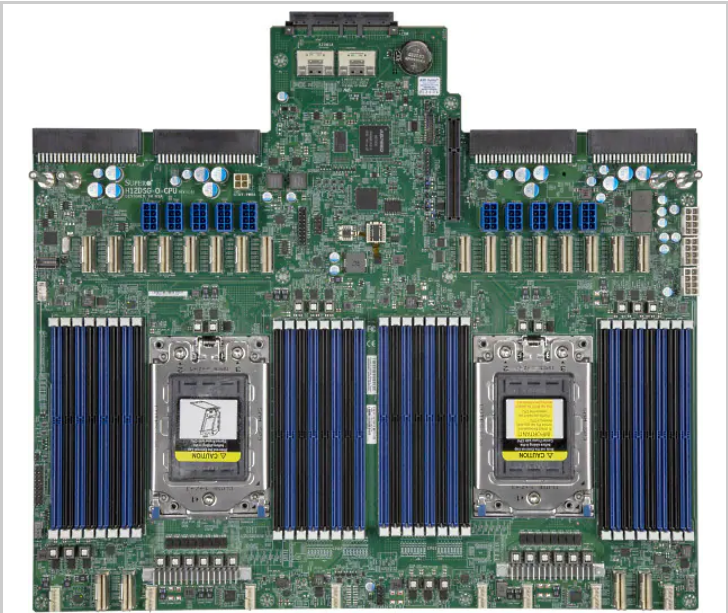


H12DSG-O-CPU (For A+ Server Only)



Key Features

1. 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)
2. 8TB Registered ECC DDR4 3200MHz SDRAM in 32 DIMMs
3. 20 PCI-E 4.0 x8 SlimSAS to PCI-E board
4. 2 SATA3, 4 NVMe, 1 AIOM slot
5. Integrated IPMI 2.0 + KVM with dedicated LAN
6. ASPEED AST2500 BMC graphics via I/O board
7. 2 USB 3.0 ports via I/O board
8. 8x 6-pin PWM Fans & Speed control

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

Links & Resources

- ▶ [Tested Memory List](#)
- ▶ [Tested HDD List](#)
- ▶ [Tested AOC List](#)
- ▶ [Motherboard Manual](#)
- ▶ [Update Your BIOS](#)
- ▶ [IPMI Firmware](#)
- ▶ [Download the Latest Drivers and Utilities](#)
- ▶ [Download Driver CD](#)
- ▶ [OS Compatibility](#)



Specifications

Product SKUs

MBD-H12DSG-O-CPU	■ H12DSG-O-CPU (for server SKUs only)
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Physical Stats

Form Factor	■ Proprietary
Dimensions	■ 17" x 14.7" (43.2cm x 37.3cm)

Processor/Chipset

CPU	<ul style="list-style-type: none"> ■ 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
Cores	■ Up to 64 Cores
Chipset	■ System on Chip

System Memory

Memory Capacity	<ul style="list-style-type: none"> ■ 32 DIMM slots ■ Supports up to 8TB Registered ECC DDR4 3200MHz SDRAM ■ 8-channel memory bus ■ For Dual CPUs: Recommended that memory be populated equally in adjacent memory banks
Memory Type	■ DDR4 3200 MHz Registered ECC, 288-pin gold-plated DIMMs
DIMM Sizes	■ 8GB, 16GB, 32GB, 64GB, 128GB, 256GB
Memory Voltage	■ 1.2V
Error Detection	<ul style="list-style-type: none"> ■ Corrects single-bit errors ■ Detects double-bit errors (using ECC memory)

On-Board Devices

SATA	■ Marvell 88SE9230 controller for 2 SATA3 (6 Gbps) ports; RAID 1
IPMI	<ul style="list-style-type: none"> ■ Support for Intelligent Platform Management Interface v. 2.0 ■ IPMI 2.0 with virtual media over LAN and KVM-over-LAN support ■ ASPEED AST2500 BMC
Network Controllers	■ OCP 3.0 NIC slot with NCSI interface via AIOM slot
Graphics	■ ASPEED AST2500 BMC

Input / Output

SATA	■ 2 SATA3 (6 Gbps) ports
LAN	<ul style="list-style-type: none"> ■ Provided via AIOM ■ 1 RJ45 dedicated IPMI port via I/O board (AOM-PIO-i2G)
USB	■ 2 USB 3.0 ports via I/O board (AOM-PIO-i2G)
VGA	■ 1 VGA port via I/O board (AOM-PIO-i2G)

Chassis (Optimized for H12DSG-O-CPU)

4U	■ SC418GTS-R4016BP
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Server(s) (with H12DSG-O-CPU)

Models(s)	■ AS-4124GS-TNR
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System BIOS

BIOS Type	■ AMI 256Mb SPI Flash EEPROM
BIOS Features	<ul style="list-style-type: none"> ■ Plug and Play (PnP) ■ DMI 2.3 ■ PCI 2.2 ■ ACPI 6.2 ■ USB Keyboard Support ■ SMBIOS 3.1.1

Management

Software	<ul style="list-style-type: none"> ■ Super Doctor 5 ■ Watch Dog ■ NMI ■ SUM ■ IPMI 2.0, KVM with dedicated LAN
Power Configurations	<ul style="list-style-type: none"> ■ ACPI Power Management ■ Power-on mode control for AC power loss recovery

PC Health Monitoring

CPU	<ul style="list-style-type: none"> ■ Monitors CPU Core Voltages, +3.3V, +3.3V, +5V, +5V standby, +12V ■ CPU switching voltage regulator ■ VBAT
FAN	<ul style="list-style-type: none"> ■ Up to 8 fan status tachometer monitoring ■ Up to 8x 6-pin fan headers ■ Status monitor for speed control ■ Pulse Width Modulated (PWM) fan connectors
Temperature	<ul style="list-style-type: none"> ■ Monitoring for CPU and chassis environment ■ CPU Thermal Trip Support ■ Thermal control for 8x Fan connectors ■ I²C Temperature Sensing Logic
LED	■ CPU / System Overheat LED
Other Features	<ul style="list-style-type: none"> ■ Chassis Intrusion Detection ■ Chassis Intrusion Header

Operating Environment / Compliance

Environmental Specifications	<ul style="list-style-type: none"> ■ Operating Temperature: 10°C to 35°C (50°F to 95°F) ■ Non-operating Temperature: -40°C to 70°C (-40°F to 158°F) ■ Operating Relative Humidity: 8% to 90% (non-condensing) ■ Non-operating Relative Humidity: 5% to 95% (non-condensing)
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Others	<ul style="list-style-type: none">■ 1 COM port (rear)■ 4 internal NVMe (PCI-E 4.0 x4) ports via SlimSAS■ TPM 2.0 header
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Expansion Slots

PCI-Express	<ul style="list-style-type: none">■ 20 PCI-E 4.0 x8 SlimSAS to PCI-E board (AOM-PCIE4-418N-1)
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Parts List

Retail Pack List

	Part Number	Qty	Description
H12DSG-O-CPU	MBD-H12DSG-O-CPU - O	1	H12DSG-O-CPU Motherboard

Optional Parts List

	Part Number	Qty	Description
TPM security module	AOM-TPM-9655V	-	TPM 1.2 module with Infineon 9655, RoHS/REACH,PBF;
	AOM-TPM-9665V	-	TPM 2.0 module with Infineon 9665, RoHS/REACH,PBF;