

A+ Server 2124US-TNRP (Complete System Only)



Integrated Board



H12DSU-iN

Views: | [Angled View](#) | [Top View](#) |
| [Front View](#) | [Rear View](#) |

Complete System Only: To maintain quality and integrity, this product is sold only as a completely-assembled system (for optimal performance 16 DIMMs & at least 24/32 cores per CPU is recommended). Minimum requirement is 2 CPUs, 4 DIMMs, 1 NVMe HDD drive.

▶ [Drivers & Utilities](#) ▶ [BIOS](#) ▶ [IPMI](#) ▶ [Tested Memory](#) ▶ [Tested M.2 List](#) ▶ [NVMe Options](#) ▶ [Tested AOC](#) ▶ [Manuals](#) ▶ [OS Certification Matrix](#) ▶ [Quick-References Guide](#)

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

Key Features

Virtualization
Cloud Computing
High-End Enterprise Server
Hyperconverged Storage

1. Dual AMD EPYC™ 7003/7002 Series Processors (7003 Series Processor drop-in support requires BIOS version 2.0 or newer)
2. 8TB Registered ECC DDR4 3200MHz SDRAM in 32 DIMMs
3. Expansion slots:
1 PCI-E 4.0 x16 slot (FH, 9.5" L) [\[Details\]](#)
4. Integrated IPMI 2.0 + KVM with dedicated LAN
• **Software Out of Band License key (SFT-OOB-LIC) included for OOB BIOS management**
5. Dual-port 10GBase-T and Dual-port 10G SFP+ via Intel® X710-TM4
6. Drive Bays:
24 hot-swap 2.5" U.2 NVMe drive bays
Up to 24 SATA/SAS drive support via optional SAS kit
7. 1600W Redundant Power Supplies
Titanium Level (96%)
(Full redundancy based on configuration and application load)



Specifications

Product SKUs

- AS -2124US-TNRP
 - A+ Server 2124US-TNRP

Motherboard

H12DSU-IN

Processor/Chipset

- CPU**
 - Dual AMD EPYC™ 7003/7002 Series Processors (7003 Series Processor drop-in support requires BIOS version 2.0 or newer)
 - Socket SP3
 - Supports CPU TDP up to 280W*

- Cores**
 - Up to 64 Cores

- Chipset**
 - System on Chip (SoC)

- Note**
 - * Certain CPUs with TDP higher than 225W may be supported only under specific conditions. Please contact Supermicro Technical Support for additional information about specialized system optimization

System Memory

- Memory Capacity**
 - 32 DIMM slots
 - Supports up to 8TB Registered ECC DDR4 3200MHz SDRAM
 - 8-channel memory bus

- Memory Type**
 - DDR4 3200 MHz Registered ECC, 288-pin gold-plated DIMMs

- DIMM Sizes**
 - 4GB, 8GB, 16GB, 32GB, 64GB, 128GB, 256GB

- Memory Voltage**
 - 1.2V

- Error Detection**
 - Corrects single-bit errors
 - Detects double-bit errors (using ECC memory)

On-Board Devices

- IPMI**
 - 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 Connectivity**
 - Dual-port 10GBase-T and Dual-port 10G SFP+ via Intel® X710-TM4

- VGA**
 - ASPEED AST2500 BMC

Input / Output

- NVMe**
 - 24 U.2 NVMe support

- LAN**
 - Dual 10GBase-T LAN ports
 - Dual 10G SFP+ LAN ports
 - 1 RJ45 Dedicated IPMI LAN port

- USB**
 - 3 USB 3.0 ports (2 rear + 1 Type A)

- VGA**
 - 2 VGA ports (1 rear, 1 onboard)

Chassis

- Form Factor**
 - 2U

- Model**
 - CSE-219U2TS-R1K62P3-TN24

Dimensions and Weight

- Height**
 - 3.5" (89mm)

- Width**
 - 17.2" (437mm)

- Depth**
 - 28.46" (723mm)

- Package**
 - 9.96" (H) 24.60" (W) 45.43" (D)

- Weight**
 - Net Weight: 39 lbs (17.7 kg)
 - Gross Weight: 63 lbs (28.6 kg)

Front Panel

- Buttons**
 - Power On/Off button
 - System Reset button

- LEDs**
 - Power LED
 - Hard drive activity LED
 - 2x Network activity LEDs
 - System Overheat LED / Fan fail LED / UID LED

Expansion Slots

- PCI-Express**
 - 1 PCI-E 4.0 x16 slot (FH, 9.5" L)
 - (Both CPUs need to be installed for full access to PCI-E slots and onboard controllers. See manual block diagram and [AOC Support](#) for details.)

Drive Bays

- Hot-swap**
 - 24 hot-swap 2.5" U.2 NVMe drive bays
 - Up to 24 SAS/SATA drives supported via optional SAS kit

System Cooling

- Fans**
 - 4 heavy-duty PWM fans with optimal fan speed control

- Air Shroud**
 - 1 Air Shroud

Power Supply

1600W Redundant Power Supplies with PMBus

- Total Output Power**
 - 1600W/1000W

- Dimension (W x H x L)**
 - 73.5 x 40 x 203 mm

- Input**
 - 100-127Vac / 13 - 9A / 50-60Hz
 - 200-240Vac / 10 - 8A / 50-60Hz

- +12V**
 - Max: 83.3A / Min: 0A (100-127Vac)
 - Max: 133A / Min: 0A (200-240Vac)

- 12Vsb**
 - Max: 2.1A / Min: 0A

- Output Type**
 - 25 Pairs Gold Finger Connector

Certification



Operating Environment / Compliance

Others	<ul style="list-style-type: none"> ■ 1 COM port ■ 2 SATA DOM power connectors ■ TPM 2.0 header
System BIOS	
BIOS Type	<ul style="list-style-type: none"> ■ AMI 128Mb SPI Flash EEPROM
BIOS Features	<ul style="list-style-type: none"> ■ Plug and Play (PnP) ■ DMI 2.3 ■ PCI 2.2 ■ ACPI 5.1 ■ USB Keyboard Support ■ SMBIOS 3.1.1
PC Health Monitoring	
CPU	<ul style="list-style-type: none"> ■ Monitors CPU Core Voltages, +12V, +3.3V, +5V, +5V standby, 3.3V standby, VBAT ■ CPU switching voltage regulator
FAN	<ul style="list-style-type: none"> ■ Up to 4-fan status tachometer monitoring ■ Up to four 4-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 4x Fan connectors ■ I²C Temperature Sensing Logic
LED	<ul style="list-style-type: none"> ■ CPU / System Overheat LED
Other Features	<ul style="list-style-type: none"> ■ Chassis Intrusion Detection ■ Chassis Intrusion Header

RoHS	<ul style="list-style-type: none"> ■ RoHS Compliant
Environmental Spec.	<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)

Parts List

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard	MBD-H12DSU-iN	1	Super H12DSU-iN Motherboard
Chassis	CSE-219U2TS-R1K62P3-TN24	1	2U Chassis
Add-on Card / Module	AOC-2UR68G4-I4XTS-O	1	2U Ultra Riser with 2-port 10G RJ45 & 2-port 10G SFP+, Intel Carlsville X710-TM4, with 1 PCIe 4.0 x8 (in x16), 1 PCIe 4.0 x16 and 1 PCIe 4.0x8 (internal, in x16),RoHS
Add-on Card / Module	AOC-SLG4-2E4T-P	2	2-Port Retimer, x8 PCIe Gen 4, Low Profile AOC, RoHS
Add-on Card / Module	AOC-SLG4-4E4T-P	3	4-Port Retimer, x16 PCIe Gen 4,RoHS
Backplane	BPN-NVME4-216N-S24	1	2U 24-slot all-hybrid direct-attached backplane, support 24x 2.5" NVME Gen4 / SAS / SATA storage devices.,RoHS
Cable	CBL-SAST-1248-85	1	Slimline x8 (LE) to Slimline x8 (STR),46CM,85 OHM
Cable	CBL-SAST-1256A-85	1	Slimline x8 (LE) to Slimline x8 (STR),56CM,85 OHM
Cable	CBL-SAST-1262F-85	1	Slimline x8 (STR) to 2x Slimline x4 (RA),FFC,60/62CM,85
Cable	CBL-SAST-1265A-85	4	Slimline x8 (STR) to Slimline x8 (STR),65CM,85 OHM
Cable	CBL-SAST-1268-85	1	Slimline x8 (LE) to Slimline x8 (STR),68CM,85 OHM
Cable	CBL-SAST-1282-85	4	Slimline x8 (STR) to Slimline x8 (STR),82CM,85 OHM
Riser Card	RSC-W2-66G4	1	2U LHS WIO Riser card with two PCI-E 4.0 x16 slots,HF,RoHS
Riser Card	RSC-WR-6	1	1U RHS WIO Riser card with one PCI-E 4.0 x16 slot,HF,RoHS
Heatsink / Retention	SNK-P0063P	2	2U Passive CPU Heat Sink for AMD Socket SP3 Processors

Optional Parts List

	Part Number	Qty	Description
Storage Control Card and Cable(s)	AOC-S3008L-L8e & 2x CBL-SAST-1285-100 <i>(support up to 8 SAS3 HDD)</i>	-	Std LP, 8 WIO L ports, 12Gb/s per port- Gen3, 122HDD, HBA; Slimline x4 (STR) to MiniSAS HD (STR) x4,85CM,100 OHM
	AOC-S3008L-L8i & 2x CBL-SAST-1285-100 <i>(support up to 8 SAS3 HDD)</i>	-	Std LP, 8 WIO L ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E; Slimline x4 (STR) to MiniSAS HD (STR) x4,85CM,100 OHM
	AOC-S3108L-H8iR/16DD & 2x CBL-SAST-1285-100 <i>(support up to 8 SAS3 HDD)</i>	-	Std LP, 8 WIO L ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60; Slimline x4 (STR) to MiniSAS HD (STR) x4,85CM,100 OHM
	AOC-SAS3-9361-16I & 4x CBL-SAST-1285-100 <i>(support up to 16 SAS3 HDD)</i>	-	MegaRAID SAS 9361-16i; Slimline x4 (STR) to MiniSAS HD (STR) x4,85CM,100 OHM
	AOC-S3616L-L16IT & 4x CBL-SAST-1285-100 <i>(support up to 16 SAS3 HDD)</i>	-	16 int 12Gb/s ports, 16xGen3, IOC/IT mode - LP; Slimline x4 (STR) to MiniSAS HD (STR) x4,85CM,100 OHM
	AOC-SAS3-9361-24I & 6x CBL-SAST-1285-100 <i>(support up to 24 SAS3 HDD)</i>	-	MegaRAID SAS 9361-24i; Slimline x4 (STR) to MiniSAS HD (STR) x4,85CM,100 OHM

Optional Parts List			
	HDD)		
Cable Management Arm	Part Number	Qty	Description
	MCP-290-00128-0N	1	2U Supermicro Cable Management Arm 2nd Gen
	MCP-290-00127-0N		
M.2 by AOC	AOC-SLG3-2M2	-	LP, PCIe3 x8, Dual port NVMe M.2 carrier
	AOC-SLG3-2H8M2	-	2x Hybrid NVMe/SATA M.2 RAID Carrier, Standard LP,RoHS
	Note: 2x M.2 per add-on card		
SATADOM	SSD-DM128-SMCMVN1	-	SMC SATADOM, 128GB, SATA 6Gb/s, MLC, uSSD, 15nm, HF, RoHS/REACH
	SSD-DM480-SMCMVN1	-	SMC SATADOM, 480GB, SATA 6Gb/s, 3D TLC, uSSD, HF, RoHS
	SSD-DM064-SMCMVN1	-	SMC SATADOM, 64GB, SATA 6Gb/s, MLC, uSSD, 15nm, HF, RoHS
	SSD-DM032-SMCMVN1	-	SMC SATADOM, 32GB, SATA 6Gb/s, MLC, uSSD, 15nm, HF, RoHS
	MEM-IDSAVS4-032G	-	SATA3DOM SL 3SE4 32GB SLC LP Pin8 VCC NH (L17725)
	MEM-IDSAVM8A-128G	-	SATA3DOM SL 3ME3 V2 128GB MLC LP Pin8 VCC NH (S17411)
	MEM-IDSAVM8A-256G	-	SATA3DOM ML 3ME3 V2 256GB MLC LP Pin8 VCC NH (S17411)
	MEM-IDSAVE1-064G	-	SATA3DOM SL 3IE3 V2 64GB iSLC LP Pin8 VCC NH (S17411i)
	MEM-IDSAVS3-032G	-	SATA3DOM SL 3SE 32GB SLC LP No Pin8 Vcc Support (S130710)
	MEM-IDSAVT1-256G	-	IND SATA3DOM SL 3TE7 256GB 3D TLC Pin8VCC Vertical LP
HDD Tray for SAS/SATA	MCP-220-00117-0B	1~24	Tool-less black hot-swap 2.5" drive tray (red tab)
TPM	AOM-TPM-9655V	-	Vertical TPM with Infineon 9655 TCG 1.2
	AOM-TPM-9655V-S	-	Based on AOM-TPM-9655V with Server TXT package
	AOM-TPM-9665V	-	AOM-TPM-9665V using SLB9665 Chipset supporting TPM2.0, RoHS/REACH
	AOM-TPM-9665V-S	-	Vertical TPM TCG 2.0 Provisioned for a server, RoHS/REACH
Global Services & Support	<u>OS4HR3/2/1</u>	-	3/2/1-year onsite 24x7x4 service
	<u>OSNBD3/2/1</u>	-	3/2/1-year onsite NBD service
Software	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)

