

A+ Server 2024US-TRT (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 is recommended). Minimum requirement is 2 CPUs, 4 DIMMs, 1 HDD/NVMe.

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

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
Flexible Networking Options

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:
2 PCI-E 4.0 x16 (FH, 10.5" L) slots,
1 PCI-E 4.0 x16 (FH, 9.5" L) slot,
1 PCI-E 4.0 x16 (LP) slot,
1 PCI-E 4.0 x8 (FH, 9.5" L, in x16) slot,
1 PCI-E 4.0 x8 (internal proprietary LP in x16) slot
[[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 10GBase-T LAN ports via Intel® X710-AT2
6. 12 hot-swap 3.5" Drive Bays:
12 SATA3 by default
or 8 SATA3 + 4 NVMe via optional tray
or 12 SAS3 via optional SAS kit
7. 1600W Redundant Power Supplies
Titanium Level (96%+)
(Full redundancy based on configuration and application load)



Specifications

Product SKUs

- AS -2024US-TRT ■ A+ Server 2024US-TRT

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 high 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

- SATA**
 - SATA3 (6 Gbps)

- Graphics**
 - ASPEED AST2500 BMC

Expansion Slots

- 2U**
 - 2 PCI-E 4.0 x16 (FH, 10.5" L) slots
 - 1 PCI-E 4.0 x16 (FH, 9.5" L) slot
 - 1 PCI-E 4.0 x16 (LP) slot
 - 1 PCI-E 4.0 x8 (FH, 9.5" L, in x16) slot
 - 1 PCI-E 4.0 x8 (internal proprietary LP in x16) slot

(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.)

Input / Output

- SATA**
 - 12 SATA3 (6 Gbps) ports

- LAN**
 - Dual 10GBase-T LAN ports via Intel® X710-AT2
 - 1 RJ45 Dedicated IPMI LAN port

Chassis

- Form Factor**
 - 2U

- Model**
 - CSE-829U2TS-R1K62P3-T

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: 36 lbs (16.4 kg)
 - Gross Weight: 72 lbs (32.7 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

Drive Bays

- Hot-swap**
 - 12 hot-swap 3.5" Drive Bays:
 - 12 SATA3 by default
 - or 8 SATA3 + 4 NVMe via optional kit
 - or 12 SAS3 via optional SAS kit

Backplane

- HDD Backplane**
 - Supports 12 SATA3 or 8 SATA3 + 4 NVMe or 12 SAS3 HDD

System Cooling

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

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



Titanium Level
[Test Report]

PC Health Monitoring

USB	<ul style="list-style-type: none"> 4 USB 3.0 ports (1 front + 2 rear + 1 Type A)
VGA	<ul style="list-style-type: none"> 1 VGA port
SAS	<ul style="list-style-type: none"> 12 SAS3 ports support via optional SAS kit
NVMe	<ul style="list-style-type: none"> 4 NVMe support via optional tray
Others	<ul style="list-style-type: none"> 1 COM port (rear) 2 SATA DOM power connector TPM 1.2 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

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 8-fan status tachometer monitoring Up to eight 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 8x 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

Operating Environment / Compliance	
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)
Note	<p>* Support for operating 35°C is available in certain system configurations. Contact your Supermicro sales rep or Technical Support for more details.</p>

Parts List

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard	MBD-H12DSU-iN	1	Super H12DSU-iN Motherboard
Chassis	CSE-829U2TS-R1K62P3-T	1	2U Chassis
Add-on Card / Module	AOC-2UR68G4-I2XT-P	1	2U Ultra Riser with 2-port 10G RJ45, Intel Carlsville X710-AT2, 1 PCIe 4.0 x8 (in x16), 1 PCIe 4.0 x16 and 1 PCIe 4.0x8 (internal, in x16),RoHS
Backplane	BPN-SAS3-LA26A-N12	1	2U 12-Slot LFF Backplane Supports 12 x SAS3/SATA3/NVMe4 Storage Devices with 1x(2x4) + 4x(1x4) power connectors, co-lay with BPN-SAS3-LA26A-N12,HF,RoHS
Cable 1	CBL-PWEX-0673	2	8 Pin Female to 2x Big 4 Pin Female Power, 65/70CM, 18AWG,Ro
Cable 2	CBL-SAST-1245-85	1	Slimline x8 (LE) to Slimline x8 (LE),48CM,85 OHM,RoHS
Cable 3	CBL-SAST-1247-85	1	Slimline x8 (LE) to Slimline x8 (LE),47CM,85 OHM,RoHS
Cable 4	CBL-SAST-1253-100	1	Slimline x8 (LE) to 2x Slimline x4 (STR),42/53CM,100 OHM
Cable 5	CBL-SAST-1269F-100	1	Slimline x4 (RA) to Slimline x4 (STR),70CM,100 OHM,RoHS
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
*Power Supply	PWS-1K62A-1R	2	AC-DC 1600W, Titanium Level, Redundancy, 1U, DC Output: +12V and +12Vs, 203 x 73.5 x 40 mm, AC Input: 90 - 264 VAC/47-63Hz, PMBus 1.2 with DSP controller,HF,RoHS/REACH
*FAN	FAN-0206L4	4	80x80x38 mm, 13.5K RPM, Middle Cooling Fan for 2U and above Servers
*Drive Tray(s)	MCP-220-00075-0B	12	Black gen 5.5 hot-swap 3.5"; HDD tray

Notes:

1. Parts with * are inside the chassis
2. Excessive parts might not be shipped, including but not limited to excessive drive trays, fans, riser brackets, air shrouds, IO shields, cables.....etc.

Optional Parts List

	Part Number	Qty	Description
Storage Control Card and Cable(s)	AOC-S3008L-L8e	-	Std LP, 8 WIO L ports, 12Gb/s per port- Gen3, 122HDD, HBA
	2x CBL-SAST-1285-100 <i>(support up to 8 SAS3 HDD)</i>		Slimline x4 (STR) to MiniSAS HD (STR) x4,85CM,100 OHM
	AOC-S3008L-L8i	-	Std LP, 8 WIO L ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E
	2x CBL-SAST-1285-100 <i>(support up to 8 SAS3 HDD)</i>		Slimline x4 (STR) to MiniSAS HD (STR) x4,85CM,100 OHM
	AOC-S3108L-H8iR/16DD	-	Std LP, 8 WIO L ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60
	2x CBL-SAST-1285-100 <i>(support up to 8 SAS3 HDD)</i>		Slimline x4 (STR) to MiniSAS HD (STR) x4,85CM,100 OHM
AOC-SAS3-9361-16i	-	MegaRAID SAS 9361-16i	
3x CBL-SAST-1285-100 <i>(support up to 12 SAS3 HDD)</i>		Slimline x4 (STR) to MiniSAS HD (STR) x4,85CM,100 OHM	
AOC-S3616L-L16IT	-	16 int 12Gb/s ports, 16xGen3, IOC/IT mode - LP	

Optional Parts List	3x CBL-SAST-1285-100 (support up to 12 SAS3 HDD)	Qty	Description
			Slimline x4 (STR) to MiniSAS HD (STR) x4,85CM,100 OHM
CacheVault(s)	BTR-TFM8G-LSICVM02	-	CacheVault for Broadcom 3108
	BKT-BBU-BRACKET-05		Supercap mounting bracket for PCI-E location
	BTR-TFM8G-LSICVM02	-	CacheVault for Broadcom 3108
	MCP-240-00127-0N		Supercap mounting bracket for 2.5" HDD location
	MCP-220-00043-0N		STD Black hot-swap screw type 3.5"-to-2.5" converter drive tray
Hot-swap 3.5" to 2.5" Hard Disk Drive Tray	MCP-220-00043-0N	-	STD Black hot-swap screw type 3.5"-to-2.5" converter drive tray
	MCP-220-00118-0B	-	STD Black hot-swap tool-less 3.5"-to-2.5" converter drive tray.
Optional Kit for NVMe solution	MCP-220-00116-0B	Up to 4	Black gen-5 3.5"-to-2.5" NVMe drive tray, Orange tab (for hotswap NVMe drive)
	MCP-220-00138-0B	Up to 4	Black gen-5.5 tool-less NVMe 3.5"-to-2.5" drive tray, Orange tab
Additional HDD Kit	MCP-240-82922-0N-OEM	-	Rear 2x 2.5" HDDs riser bracket kit for SC829U/219U
2U Cable Management Arm	MCP-290-00128-0N	1	2U Supermicro Cable Management Arm 2nd Gen
	MCP-290-00127-0N		
Ultra 2U Front Bezel	MCP-210-82601-0B	-	
M.2 by AOC	AOC-SLG3-2M2	1	LP, PCIe3 x8, Dual port NVMe M.2 carrier
	AOC-SLG3-2H8M2	1	2x Hybrid NVMe/SATA M.2 RAID Carrier, Standard LP,RoHS
GPU Kit	SNK-P0062P	2	1U Passive CPU Heat Sink for AMD Socket SP3 Processors
	MCP-310-00091-0B	1	Ultra 2U GPU Air Shroud Kit for AMD
Riser Card	RSC-W2-8888G4	-	2U LHS WIO Riser card with four PCI-E 4.0 x8 slots,HF,RoHS

TPM	AOM-TPM-9655V	-	Vertical TPM with Infineon 9655 TCG 1.2
	AOM-TPM-9665V	-	AOM-TPM-9665V using SLB9665 Chipset supporting TPM2.0,RoHS/REACH
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
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)