

A+ Server 2023US-TR4 (Complete System Only)



Integrated Board



H11DSU-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.

▶ [Drivers & Utilities](#) ▶ [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
Hyperconverge Storage
Cloud Computing
High End Enterprise Server
Flexible Networking Options

1. Dual AMD EPYC™ 7001/7002* Series Processors (*AMD EPYC 7002 series drop-in support requires board revision 2.x)
2. 4TB Registered ECC DDR4 2666MHz SDRAM in 32 DIMMs (7001 Processors)
8TB Registered ECC DDR4 3200MHz SDRAM in 32 DIMMs (Board revision 2.x required + 7002 Processors)
3. Expansion slots:
1 PCI-E 3.0 x16 slot (FH, 10.5" L)
5 PCI-E 3.0 x8 slots (FH, 9.5" L)
1 PCI-E 3.0 x8 slot (LP)
1 PCI-E 3.0 x8 (internal proprietary LP 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. Quad Gigabit LAN ports via Intel i350AM4
6. 12 hot-swap 3.5" Drive Bays:
12 SATA3 by default
or 8 SATA3 + 4 NVMe (optional supported)
or 12 SAS3 (SAS Add-on card is optional)
7. 1600W Redundant Power Supplies
Titanium Level (96%+)
(Full redundancy based on configuration and application load)



Specifications

Product SKUs

AS -2023US-TR4 ■ A+ Server 2023US-TR4

Motherboard

H11DSU-iN

Processor/Chipset

- CPU**
- Dual AMD EPYC™ 7001/7002* series Processors (* Board revision 2.x required)
 - Socket SP3
 - Supports CPU cTDP up to 280W**
- Cores**
- Up to 32 Cores (Board revision 1.x + 7001 Processors)
 - Up to 64 Cores (Board revision 2.x + 7002 Processors)
- 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 4TB Registered ECC DDR4 2666MHz SDRAM (7001 Processors)
 - Supports up to 8TB Registered ECC DDR4 3200MHz SDRAM (Board revision 2.x required + 7002 Processors)
 - 8-channel memory bus
- Memory Type**
- DDR4 2666 MHz Registered ECC, 288-pin gold-plated DIMMs (7001 Processors)
 - DDR4 3200 MHz Registered ECC, 288-pin gold-plated DIMMs (Board revision 2.x required + 7002 Processors)
- DIMM Sizes**
- 4GB, 8GB, 16GB, 32GB, 64GB, 128GB, 256GB* (* Board revision 2.x required + 7002 Processors)
- Memory Voltage**
- 1.2V
- Error Detection**
- Corrects single-bit errors
 - Detects double-bit errors (using ECC memory)

On-Board Devices

- SATA**
- SATA3 (6 Gbps)
- 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 Controllers**
- Provided via Ultra Riser Card
- VGA**
- ASPEED AST2500 BMC

Expansion Slots

Chassis

- Form Factor**
- 2U
- Model**
- CSE-829U2TS-R1K62P-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
 - Optional Drive Support: 8 SAS3 + 4 SAS3/NVMe
 - 2 rear hot-swap 2.5" drive bays

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

- CPU**
- Monitors CPU Core Voltages, +12V, +3.3V, +5V, +5V standby, 3.3V standby, VBAT
 - CPU switching voltage regulator

2U	<ul style="list-style-type: none"> 1 PCI-E 3.0 x16 slot (FH, 10.5" L) 5 PCI-E 3.0 x8 slots (FH, 9.5" L) 1 PCI-E 3.0 x8 slot (LP) 1 PCI-E 3.0 x8 (internal proprietary LP slot) <p>(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.)</p>
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Input / Output

SATA	<ul style="list-style-type: none"> 12 SATA3 (6 Gbps) ports
LAN	<ul style="list-style-type: none"> Quad Gigabit LAN ports 1 RJ45 Dedicated IPMI LAN port
USB	<ul style="list-style-type: none"> 3 USB 3.0 ports (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 Add-on Card
NVMe	<ul style="list-style-type: none"> 4 NVMe support with optional cables
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

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
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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
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LED	<ul style="list-style-type: none"> CPU / System Overheat LED
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Other Features	<ul style="list-style-type: none"> Chassis Intrusion Detection Chassis Intrusion Header
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Operating Environment / Compliance

RoHS	<ul style="list-style-type: none"> RoHS Compliant
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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)
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Parts List

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard	MBD-H11DSU-iN	1	Super H11DSU-iN Motherboard
Chassis	CSE-829U2TS-R1K62P-T	1	2U Chassis
Add-on Card / Module	AOC-2UR68-I4G-P	1	2U Ultra Riser based on Intel i350AM4 controller with 4 GbE RJ45 ports, 1 internal PCI-E x8 3.0 slot, 1 PCI-E x16 3.0, and 1 PCI-E x8 3.0 (in x16 slot)
Backplane	BPN-SAS3-826A-N4	1	12-port 2U SAS3 12Gbps hybrid backplane, support up to 8x 3.5-inch SAS3/SATA3 HDD/SSD and 4x SAS3/SATA3/NVMe Storage Devices
Cable 1	CBL-PWEX-0673	2	8 pin female to 2x big 4 pin female power, 65/70CM, 18AWG,RoHS/REACH
Cable 2	CBL-SAST-0657	3	MINI SAS HD(ST)-MINI SAS(RA-RS EXIT),6G,INT,55CM,SB,30AWG
Parts	MCP-290-82915-0N	1	2U internal cable management holder
Manual	MNL-1961-QRG	1	AS-2023US-TR4 Quick Reference Guide
Riser Card	RSC-R1UW-E8R	1	1U RHS WIO Riser card with one PCI-E x8 slot
Riser Card	RSC-R2UW-4E8	1	2U LHS WIO Riser card with four PCI-E x8 slots
	SFT-OOB-LIC	1	License key for enabling OOB BIOS management
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 1	FAN-0118L4	4	80 x 80 x 38 mm, 9.5K RPM, 4-pin PWM Fan, Hot

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-0593		Internal Mini-SAS HD to Mini-SAS HD 60cm,30AWG,12Gb/s
	AOC-S3008L-L8i	-	Std LP, 8 WIO L ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E
	2x CBL-SAST-0593		Internal Mini-SAS HD to Mini-SAS HD 60cm,30AWG,12Gb/s
	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-0593		Internal Mini-SAS HD to Mini-SAS HD 60cm,30AWG,12Gb/s
	AOC-SAS3-9361-16i	-	MegaRAID SAS 9361-16i
	3x CBL-SAST-0593		Internal Mini-SAS HD to Mini-SAS HD 60cm,30AWG,12Gb/s
	AOC-S3616L-L16IT	-	16 int 12Gb/s ports, 16xGen3, IOC/IT mode - LP
	3x CBL-SAST-0593		Internal Mini-SAS HD to Mini-SAS HD 60cm,30AWG,12Gb/s
GPU Kit	AOC-2UR66-I4G	1	2U Ultra Riser with 4 GbE ports and 2 PCI-E x16 3.0, Intel i350
	RSC-W2-66	1	RSC-W2-66
	FAN-0166L4	4	80x80x38 mm, 13.5K RPM, Optional Middle Cooling Fan for 2U Ultra Series Servers (Hot-swappable Version of FAN-0162L4)
	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
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

Optional Parts List	Part Number	Qty	Description
	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	-	Black gen-5 3.5"-to-2.5" NVMe drive tray, Orange tab (for hotswap NVMe drive)
	CBL-SAST-0929	-	OCuLink source to MiniSAS HD target V.91,INT,PCIe NVMe SSD, 57CM
	MCP-220-00138-0B	-	Black gen-5.5 tool-less NVMe 3.5"-to-2.5" drive tray, Orange tab
	CBL-SAST-0929	-	OCuLink source to MiniSAS HD target V.91,INT,PCIe NVMe SSD, 57CM
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 & MCP-290-00127-0N	1	2U Supermicro Cable Management Arm 2nd Gen
Ultra 2U Front Bezel	MCP-210-82601-0B	-	
1 Internal M.2 slot (NVMe)	RSC-UMR-8	1	1U Ultra RHS Riser Card with 1 PCI-E (up to 22110)
	MCP-120-82924-0n		
1 Internal M.2 slot (SATA)	RSC-UMR-8	1	1U Ultra RHS Riser Card with 1 SATA M.2 (up to 22110)
	CBL-SAST-0639		
	MCP-120-82924-0n		
2 Internal M.2 slots (NVMe 2260 + SATA 2260)	RSC-UMR-8	1	1U Ultra RHS Riser Card with 1 PCI-E/SATA Hybrid M.2 & 1 PCI-E x8 (up to 2260 for each device)
	MCP-120-82924-0n		
	CBL-SAST-0639		
M.2 by AOC	AOC-SLG3-2M2	1	LP, PCIe3 x8, Dual port NVMe M.2 carrier
TPM	AOM-TPM-9665V	-	Vertical TPM with Infineon 9665 TCG 1.2
	AOM-TPM-9665V	-	AOM-TPM-9665V using SLB9665 Chipset supporting TPM2.0,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)

