

A+ Server 2023US-TR4 (Integrated 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 (with minimum 2 CPUs, 4 DIMMs, 1 HDD/NVMe). Recommended configuration for best performance is at least 1 DIMM per channel per CPU (16 DIMM Total).

► [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 LP)
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 + 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 TDP 225W / cTDP up to 240W*
- 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)

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, 240-pin gold-plated DIMMs (7001 Processors)
 - DDR4 3200 MHz Registered ECC, 240-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

- 2U** ■ 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 LP)

(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.)

Chassis

- Form Factor** ■ 2U
- Model** ■ CSE-829U2TS-R1K62P-T

Dimensions

- Height** ■ 3.5" (89mm)
- Width** ■ 17.2" (437mm)
- Depth** ■ 28.46" (723mm)
- 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-sw ap 3.5" Drive Bays:
 - 12 SATA3 by default
 - Optional Drive Support: 8 SAS3 + 4 SAS3/NVMe
- 2 rear hot-sw ap 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

Input / Output

SATA	■ 12 SATA3 (6 Gbps) ports
LAN	■ Quad Gigabit LAN ports ■ 1 RJ45 Dedicated IPMI LAN port
USB	■ 3 USB 3.0 ports (2 rear + 1 Type A)
VGA	■ 1 VGA port
SAS	■ 12 SAS3 ports support via optional Add-on Card
NVMe	■ 4 NVMe support with optional cables
Others	■ 1 COM port (rear) ■ 2 SATA DOM power connector ■ TPM 1.2 header

System BIOS

BIOS Type	■ AMI 128Mb SPI Flash EEPROM
BIOS Features	■ Plug and Play (PhP) ■ DMI 2.3 ■ PCI 2.2 ■ ACPI 5.1 ■ USB Keyboard Support ■ SMBIOS 3.1.1

FAN

- 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

- Monitoring for CPU and chassis environment
- CPU Thermal Trip Support
- Thermal control for 8x Fan connectors
- iC Temperature Sensing Logic

LED

- CPU / System Overheat LED

Other

Features

- Chassis Intrusion Detection
- Chassis Intrusion Header

Operating Environment / Compliance

RoHS

- RoHS Compliant

Environmental Spec.

- 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-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 x4 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
	MCP-220-00043-0N		STD Black hot-swappable screw type 3.5"-to-2.5" converter drive tray
Hot-swappable 3.5" to 2.5" Hard	MCP-220-00043-0N	-	STD Black hot-swappable screw type 3.5"-to-2.5" converter drive tray

Disk Drive Tray	MCP-220-00118-0B	-	STD Black hot-sw ap tool-less 3.5"-to-2.5" converter drive tray.
Optional Parts List	MCP-220-00116-0B	Qty	Description
Optional Kit for NVMe solution			
	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 w ith 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 w ith 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 w ith 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-9655V	-	Vertical TPM w ith Infineon 9655 TCG 1.2
	AOM-TPM-9655V-S	-	Based on AOM-TPM-9655V w ith 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)