

## A+ Server 1023US-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](#) ▶ [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**  
**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:  
2 PCI-E x16 (FH / 9.5"L) slots  
2 PCI-E x8 slots (1 LP, 1 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. Drive Bays:  
4 hot-swap 3.5" SATA3 by default  
or 4 NVMe (optional supported)  
or 4 SAS3 ports  
(SAS Add-on card is optional)
7. 1000W Redundant Power Supplies  
**Titanium Level (96%+)**  
(Full redundancy based on configuration and application load)



# Specifications

## Product SKUs

**AS -1023US-TR4** ■ A+ Server 1023US-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

**VGA** ■ ASPEED AST2500 BMC

## Expansion Slots

- 1U**
- 2 PCI-E x16 (FH/HL 9.5") slots
  - 2 PCI-E x8 slots (1 LP, 1 internal proprietary LP 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** ■ 4 SATA3 (6 Gbps) ports

## Chassis

**Form Factor** ■ 1U

**Model** ■ CSE-819UTS-R1K02P-T

## Dimensions and Weight

- Height** ■ 1.7" (43mm)
- Width** ■ 17.2" (437mm)
- Depth** ■ 29" (737mm)
- Package** ■ 7.8" (H) 23.66" (W) 37.13" (D)
- Weight**
- Net Weight: 26 lbs (11.8 kg)
  - Gross Weight: 41 lbs (18.6 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

## Drive Bays

**Hot-swap** ■ Four 3.5" Hot-swap SATA drive bays

## Backplane

**HDD Backplane** ■ Supports 4 SATA3 or 4 NVMe or 4 SAS3 HDD

## System Cooling

- Fans**
- 8 heavy-duty PWM fans with optimal fan speed control
- Air Shroud** ■ 2 Air Shroud

## Power Supply

1000W Redundant Power Supplies with PMBus

**Total Output Power** ■ 800W/1000W

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

**Input**

- 100-127Vac / 9.8 - 7A / 50-60Hz
- 200-240Vac / 7 - 5A / 50-60Hz
- 200-240Vdc / 7 - 5A (for CCC only)

**+12V**

- Max: 66.7A / Min: 0A (100-127Vac)
- Max: 83A / Min: 0A (200-240Vac)
- Max: 83A / Min: 0A (200-240Vdc)

**12Vsb** ■ Max: 2.1A / Min: 0A

**Output Type** ■ 25 Pairs Gold Finger Connector

## Certification



## PC Health Monitoring

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

<b>LAN</b>	<ul style="list-style-type: none"> <li>■ Quad Gigabit LAN ports</li> <li>■ 1 RJ45 Dedicated IPMI LAN port</li> </ul>
<b>USB</b>	<ul style="list-style-type: none"> <li>■ 3 USB 3.0 ports (2 rear + 1 Type A)</li> </ul>
<b>VGA</b>	<ul style="list-style-type: none"> <li>■ 1 VGA port</li> </ul>
<b>SAS</b>	<ul style="list-style-type: none"> <li>■ 4 SAS3 ports support via optional Add-on Card</li> </ul>
<b>NVMe</b>	<ul style="list-style-type: none"> <li>■ 4 NVMe support with optional cables</li> </ul>
<b>Others</b>	<ul style="list-style-type: none"> <li>■ 1 COM port (rear)</li> <li>■ 2 SATA DOM power connector</li> <li>■ TPM 1.2 header</li> </ul>

#### System BIOS

<b>BIOS Type</b>	<ul style="list-style-type: none"> <li>■ AMI 128Mb SPI Flash EEPROM</li> </ul>
<b>BIOS Features</b>	<ul style="list-style-type: none"> <li>■ Plug and Play (PnP)</li> <li>■ DMI 2.3</li> <li>■ PCI 2.2</li> <li>■ ACPI 5.1</li> <li>■ USB Keyboard Support</li> <li>■ SMBIOS 3.1.1</li> </ul>

<b>FAN</b>	<ul style="list-style-type: none"> <li>■ Up to 8-fan status tachometer monitoring</li> <li>■ Up to eight 4-pin fan headers</li> <li>■ Status monitor for speed control</li> <li>■ Pulse Width Modulated (PWM) fan connectors</li> </ul>
<b>Temperature</b>	<ul style="list-style-type: none"> <li>■ Monitoring for CPU and chassis environment</li> <li>■ CPU Thermal Trip Support</li> <li>■ Thermal control for 8x Fan connectors</li> <li>■ I<sup>2</sup>C Temperature Sensing Logic</li> </ul>
<b>LED</b>	<ul style="list-style-type: none"> <li>■ CPU / System Overheat LED</li> </ul>
<b>Other Features</b>	<ul style="list-style-type: none"> <li>■ Chassis Intrusion Detection</li> <li>■ Chassis Intrusion Header</li> </ul>

#### Operating Environment / Compliance

<b>RoHS</b>	<ul style="list-style-type: none"> <li>■ RoHS Compliant</li> </ul>
<b>Environmental Spec.</b>	<ul style="list-style-type: none"> <li>■ Operating Temperature: 10°C to 35°C (50°F to 95°F)</li> <li>■ Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)</li> <li>■ Operating Relative Humidity: 8% to 90% (non-condensing)</li> <li>■ Non-operating Relative Humidity: 5% to 95% (non-condensing)</li> </ul>

## Parts List

### Parts List - (Items Included)

	Part Number	Qty	Description
<b>Motherboard</b>	MBD-H11DSU-iN	1	Super H11DSU-iN Motherboard
<b>Chassis</b>	CSE-819UTS-R1K02P-T	1	1U Chassis
<b>Add-on Card / Module</b>	AOC-UR-I4G	1	1U Ultra Riser based on Intel i350AM4 controller with 4 GbE RJ45 ports and 1 internal PCI-E x8 3.0 slot
<b>Backplane</b>	BPN-SAS3-815TQ-N4	1	4-port 1U SAS3 12Gbps Hybrid backplane, support up to 4x 3.5-inch SAS3/SATA3/NVMe Storage Devices
<b>Cable 1</b>	CBL-PWEX-0673	1	8 pin female to 2x big 4 pin female power, 65/70CM, 18AWG,RoHS/REACH
<b>Cable 2</b>	CBL-SAST-0880	1	MINI SAS(RA-RS EXIT)-4 SATA,INT,55/55/55/55CM,55CM SB,30AWG
<b>FAN 1</b>	FAN-0101L4	4	40x56,4 Pin PWM,Primary for SC809,111, Sec.for SC816,819,808
<b>Manual</b>	MNL-1959-QRG	1	AS-1023US-TR4 Quick Reference Guide
<b>Riser Card</b>	RSC-R1UW-2E16	1	1U LHS WIO Riser card with two PCI-E x16 slots
<b>Riser Card</b>	RSC-R1UW-E8R	1	1U RHS WIO Riser card with one PCI-E x8 slot
<b>Heatsink / Retention</b>	SNK-P0062P	2	1U Passive CPU Heat Sink for AMD Socket SP3 Processors
<b>* Power Supply</b>	PWS-1K02A-1R	2	1U 1000W Redundant Power Supply 73.5mm width Titanium Level,RoHS/REACH

#### 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
<b>Storage Control Card and Cable(s)</b>	AOC-S3008L-L8e	-	Std LP, 8 WIO L ports, 12Gb/s per port- Gen3, 122HDD, HBA
	1x CBL-SAST-0948		Internal mini SAS HD to 4 SATA 60CM, S, w/ 60cm SB
	AOC-S3008L-L8i	-	Std LP, 8 WIO L ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E
	1x CBL-SAST-0948		Internal mini SAS HD to 4 SATA 60CM, S, w/ 60cm SB
<b>CacheVault(s)</b>	AOC-S3108L-H8iR/16DD	-	Std LP, 8 WIO L ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60
	1x CBL-SAST-0948		Internal mini SAS HD to 4 SATA 60CM, S, w/ 60cm SB
	BTR-TFM8G-LSICVM02	-	CacheVault for Broadcom 3108
	BKT-BBU-BRACKET-05		Supercap mounting bracket for PCI-E location
	MCP-120-81906-0N		Internal AOC bracket for SC819U, 119U (PCIE spec)
	BTR-TFM8G-LSICVM02	-	CacheVault for Broadcom 3108
<b>Hot-swap 3.5" to 2.5" Hard Disk Drive Tray</b>	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
	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
<b>Optional Kit for NVMe Solution</b>	MCP-220-00116-0B	-	Black gen-5 3.5-to-2.5 NVMe drive tray, Orange tab (for hotswap NVMe drive)
	CBL-SAST-0819		OCuLink v.91,INT,PCIe NVMe SSD, 65CM,34AWG
	MCP-220-00138-0B	-	NVMe 3.5-to-2.5 drive tray, Orange tab
	CBL-SAST-0819		OCuLink v.91,INT,PCIe NVMe SSD, 65CM,34AWG
<b>DVD-ROM / DVD-RW</b>	DVM-PNSC-DVD-SBT3	-	Black Panasonic Slim DVD-ROM SATA Drive

Optional Parts List	Part Number	Qty	Description
	MCP-220-81502-0N		Slim SATA DVD mounting kit
	CBL-0099		25CM FDD 4 PIN TO SLIM 4 PIN power cable,24AWG
	DVM-TEAC-DVD-SBT3	-	Black TEAC Slim DVD-ROM SATA Drive
	MCP-220-81502-0N		Slim SATA DVD mounting kit
	CBL-0099		25CM FDD 4 PIN TO SLIM 4 PIN power cable,24AWG
	DVM-PLDS-DVDRW-SBT4	-	Philips Slim Black DVD-RW SATA Drive, HF
	MCP-220-81502-0N		Slim SATA DVD mounting kit
	CBL-0099		25CM FDD 4 PIN TO SLIM 4 PIN power cable,24AWG
<b>USB Port Tray (FDD Slot)</b>	MCP-220-00129-0B	-	Black 2x USB 3.0 port tray in slim FDD bay
<b>Hot-Swap Drive Bays   2.5" HDD Tray (FDD Slot)</b>	MCP-220-81504-0N	-	12G 2.5-in Hot-swap Slim Floppy Size Drive Kit w/Status LED
	CBL-0210L (PWR)		
<b>Hot-Swap Drive Bays   2.5" HDD Tray (DVD Slot)</b>	MCP-220-81506-0N	-	12G 2.5-in Hot-swap Slim DVD Size Drive Kit with Status LED
	CBL-0099 (PWR)		
<b>Hot-Swap Drive Bays   2.5" HDD Tray (DVD Slot) + Hot-Swap Drive Bays   2.5" HDD Tray (FDD Slot)</b>	MCP-220-81504-0N	-	12G 2.5-in Hot-swap Slim DVD Size Drive Kit with Status LED +
	MCP-220-81506-0N		Slim DVD Size Drive Kit w/Status LED
	CBL-SAST-0654 (data) x2		
	CBL-0210L (PWR)		
	CBL-0099 (PWR)		
	CBL-0161L (Y-cable)		
	CBL-PWEX-0702 (PWD)		
<b>Ultra 1U Front Bezel</b>	CSE-PTFB-813L	-	SC813 Front Bezel, PB Free
	CSE-PTFB-813LB	-	Black SC813 Front Bezel, PB Free
	MCP-210-11601-0B	-	Black Front Bezel for SC113, SC113M, SC116, SC119, SC119U, SC514 (No LED indicator support)
<b>1U Cable Management Arm</b>	MCP-290-00165-0N	1	1U Supermicro Cable Management Arm 3rd Gen (optimize for Ultra)
<b>1 Internal M.2 slot (NVMe)</b>	RSC-UMR-8	1	1U Ultra RHS Riser Card with 1 PCI-E (up to 22110)
	MCP-120-81908-0N		
<b>1 Internal M.2 slot (SATA)</b>	RSC-UMR-8	1	1U Ultra RHS Riser Card with 1 SATA M.2 (up to 22110)
	CBL-SAST-0639		
	MCP-120-81908-0N		
<b>2 Internal M.2 slots (NVMe 2260 + SATA 2260)</b>	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-120-81908-0N		
	CBL-SAST-0639		
<b>M.2 by AOC</b>	AOC-SLG3-2M2	1	LP, PCIe3 x8, Dual port NVMe M.2 carrier
<b>TPM</b>	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
<b>Global Services &amp; Support</b>	<u>OS4HR3/2/1</u>	-	3/2/1-year onsite 24x7x4 service
	<u>OSNBD3/2/1</u>	-	3/2/1-year onsite NBD service
<b>Software</b>	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)

