

## A+ Server 1024US-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](#) ▶ [Quick-References Guide](#) ▶ [Drive Options](#)

### Key Features

**Virtualization  
Cloud Computing  
High End Enterprise Server**

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 / 9.5"L) slots  
1 PCI-E 4.0 x16 (LP) slot  
1 PCI-E 4.0 x16 (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. Dual 10GBase-T LAN ports via Intel® X710-AT2
6. Drive Bays:  
4 hot-swap 3.5" SATA3 by default  
or 4 NVMe (via optional drive tray)  
or 4 SAS3 (via optional SAS kit)
7. 1000W Redundant Power Supplies  
**Titanium Level (96%+)**  
*(Full redundancy based on configuration and application load)*



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

# Specifications

## Product SKUs

- AS -1024US-TRT ■ A+ Server 1024US-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

- VGA**
  - ASPEED AST2500 BMC

## Expansion Slots

- 1U**
  - 2 PCI-E 4.0 x16 (FH/HL 9.5") slots
  - 1 PCI-E 4.0 x16 (LP) slot
  - 1 PCI-E 4.0 x16 (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

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

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

- VGA**
  - 1 VGA port

## Chassis

- Form Factor**
  - 1U

- Model**
  - CSE-819UTS-R1K02P-A

## 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**
  - 4 Hot-swap 3.5" SATA3 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



Titanium Level  
[ Test Report ]

## PC Health Monitoring

<b>SAS</b>	<ul style="list-style-type: none"> <li>4 SAS3 ports support via optional SAS kit</li> </ul>
<b>NVMe</b>	<ul style="list-style-type: none"> <li>4 NVMe support via optional drive tray</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>
<b>System BIOS</b>	
<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>CPU</b>	<ul style="list-style-type: none"> <li>Monitors CPU Core Voltages, +12V, +3.3V, +5V, +5V standby, 3.3V standby, VBAT</li> <li>CPU switching voltage regulator</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>
<b>Note</b>	<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
<b>Motherboard</b>	MBD-H12DSU-iN	1	Super H12DSU-iN Motherboard
<b>Chassis</b>	CSE-819UTS-R1K02P-A	1	1U Chassis
<b>Add-on Card / Module</b>	AOC-URG4N4-I2XT-P	1	1U Ultra Riser with 2-port 10GBase-T RJ45, based on Intel Carlsville X710-AT2, with 1 PCI-E 4.0 x16 (internal), and 4 NVMe ports (2x SlimSAS x8),RoHS
<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-0650	1	8 Pin Female to 2x RA(Right Angle) Big 4 Pin Female Power
<b>Cable 2</b>	CBL-SAST-1252-85	1	Slimline x8 (LE) to 2x Oculink x4 (STR),INT,55/44CM,85
<b>Cable 3</b>	CBL-SAST-1255-85	1	Slimline x8 (LE) to 2x Oculink x4 (STR),INT,55/44CM,85 O
<b>Cable 4</b>	CBL-SAST-1277-100	1	Slimline X8 (LE) to 4x SATA,INT,P0 520mm,P1 440mm,P2 52
<b>Parts</b>	MCP-160-11901-0B	1	1U Ultra Mylar cable channel for X12
<b>Riser Card</b>	RSC-W-66G4	1	1U LHS WIO Riser card with two PCI-E 4.0 x16 slots,HF,RoHS
<b>Riser Card</b>	RSC-WR-6	1	1U RHS WIO Riser card with one PCI-E 4.0 x16 slot,HF,RoHS
<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
<b>* FAN</b>	FAN-0163L4	8	40x40x56 mm, 23.3K-20.3K RPM, Counter-rotating Fan
<b>* Rear Window</b>	MCP-240-81909-0N	1	Ultra I/O Rear Window for SC819U, 119U-T tool-less chassis(i2XT)

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-0699		MINI SAS HD-4 SATA,12G,INT,75/75/90/90CM,75CM SB
	AOC-S3008L-L8i	-	Std LP, 8 WIO L ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E
	1x CBL-SAST-0699		MINI SAS HD-4 SATA,12G,INT,75/75/90/90CM,75CM SB
	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-0699		MINI SAS HD-4 SATA,12G,INT,75/75/90/90CM,75CM SB
<b>CacheVault(s)</b>	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
	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
<b>Hot-swap 3.5" to 2.5" Hard Disk Drive Tray</b>	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)
	MCP-220-00138-0B	-	Black gen-5.5 tool-less NVMe 3.5-to-2.5 drive tray, Orange tab
<b>DVD Kits</b>	MCP-220-81502-0N	-	Slim SATA DVD mounting kit

Optional Parts List	Part Number	Qty	Description
	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		+
	CBL-0481L (data) x2		Slim DVD Size Drive Kit w/Status LED
	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>M.2 by AOC</b>	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
<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>SATADOM</b>	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
<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)

