

# A+ Server 2114S-WN24RT (Complete System Only)



**Integrated Board**



**H12SSW-NTR**

**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 8 DIMMs is recommended). Minimum requirement is 1 CPU, 2 DIMMs, 1 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 Applications

- Virtualization
- Hyperconverged Storage
- Cloud Computing
- All Flash Storage

## Key Features

1. Single AMD EPYC™ 7003/7002 Series Processor  
(The latest AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer)
2. Up to 4TB Registered ECC DDR4 3200MHz SDRAM in 16 DIMMs
3. Expansion slots:  
Up to 2 PCI-E 4.0 x16 (FH/HL) slots:  
24-NVMe configuration (Standard) – 1 slot available  
20-NVMe configuration – 2 slots available  
**M.2 Interface:** 2 PCI-E 4.0 x2  
**M.2 Form Factor:** 2280, 22110  
**M.2 Key:** Onboard M-key
4. Integrated IPMI 2.0 + KVM with dedicated LAN  
• **Software Out of Band License key (SFT-OOB-LIC) included for OOB BIOS management**
5. 2x 10GBase-T LAN ports via Broadcom BCM57416
6. Up to 24 hot-swap 2.5" U.2 NVMe drive bays
7. 1200W Redundant Power Supplies  
**Titanium Level (96%)**  
*(Full redundancy based on configuration and application load)*



## Product SKUs

- AS -2114S-WN24RT
- A+ Server 2114S-WN24RT

## Motherboard

### H12SSW-NTR

## Processor/Chipset

- CPU**
  - Single AMD EPYC™ 7003/7002 Series Processor (The latest AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer)
  - Socket SP3
  - Support CPU TDP up to 280W

- Cores**
  - Up to 64 Cores

- Chipset**
  - System on Chip (SoC)

## System Memory

- Memory Capacity**
  - 16 DIMM slots
  - Supports up to 4TB 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

- 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**
  - Broadcom BCM57416 Controller

- VGA**
  - ASPEED AST2500 BMC

## Expansion Slots

- PCI Express**
  - 1 or 2\* PCI-E 4.0 x16 (FH/HL) slots

- M.2**
  - Interface: 2 PCI-E 4.0 x2
  - Form Factor: 2280, 22110
  - Key: Onboard M-key

- Note**
  - \* 2 slots available using 20-NVMe configuration (24 NVMe is standard)

## Input / Output

- NVMe**
  - Up to 24 U.2 NVMe support

- LAN**
  - 2x 10GBase-T LAN ports
  - 1 RJ45 Dedicated IPMI LAN port

- USB**
  - 5 USB 3.0 ports (4 rear + 1 Type A)

- VGA**
  - 1 VGA port

- Others**
  - 1 COM port
  - 2 SATA DOM power connectors
  - TPM 1.2 header, TPM 2.0 header

## System BIOS

- BIOS Type**
  - AMI 256Mb SPI Flash EEPROM

- BIOS Features**
  - Plug and Play (PnP)
  - DMI 2.3
  - PCI 2.2
  - ACPI 5.1
  - USB Keyboard Support
  - SMBIOS 3.1.1

## Chassis

- Form Factor**
  - 2U

- Model**
  - CSE-216BTS-R1K23WBP

## Dimensions

- Height**
  - 3.5" (89mm)

- Width**
  - 17.2" (437mm)

- Depth**
  - 24.8" (630mm)

- Weight**
  - Net Weight: 34 lbs (15.42 kg)
  - Gross Weight: 59 lbs (26.76 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**
  - Up to 24 hot-swap 2.5" U.2 NVMe drive bays

## System Cooling

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

- Air Shroud**
  - 1 Air Shroud

## Power Supply (76mm Width)

1200W Redundant Power Supplies with PMBus

- Total Output Power**
  - 1000W/1200W

- Dimension (W x H x L)**
  - 76 x 40 x 336 mm

- Input**
  - 100-127Vac / 15-12A / 50-60Hz
  - 200-240Vac / 8.5-7A / 50-60Hz
  - 200-240Vdc / 8.5-7A (for CCC only)

- +12V**
  - Max: 83A / Min: 0A (100-127Vac)
  - Max: 100A / Min: 0A (200-240Vac)
  - Max: 100A / Min: 0A (200-240Vdc)

- +5Vsb**
  - Max: 4A / Min: 0A

- Output Type**
  - 19 Pairs Gold Finger Connector

## Certification



**Titanium Level**  
[ [Test Report](#) ]

## PC Health Monitoring

- CPU**
  - Monitors CPU Core Voltages, +1.8V, +3.3V, +5V, +5V standby, 3.3V standby, VBAT
  - CPU switching voltage regulator

- FAN**
  - Up to 6-fan status tachometer monitoring
  - Up to six 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 6x Fan connectors
  - PC 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 - (Items Included)

	Part Number	Qty	Description
<b>Motherboard</b>	MBD-H12SSW-NTR	1	Super H12SSW-NTR Motherboard
<b>Chassis</b>	CSE-216BTS-R1K23WBP	1	2U Chassis
<b>Add-on Card / Module</b>	AOC-SLG4-2E4T-P	2	2-Port Retimer, x8 PCIe Gen 4, Low Profile AOC, RoHS
<b>Add-on Card / Module</b>	AOC-SLG4-4E4T-P	1	4-Port Retimer, x16 PCIe Gen 4, RoHS
<b>Backplane</b>	BPN-NVME4-216N-S24	1	2U 24-slot all-hybrid direct-attached backplane, support 24x 2.5" NVME Gen4 / SAS / SATA storage devices.,RoHS
<b>Cable 1</b>	CBL-0234L	1	Y CABLE FOR 4-PIN HDD
<b>Cable 2</b>	CBL-PWEX-1108-10	2	MicroFit,2x4,PH3.0,F to MiniFit 2x2,P4.2,M and 2x BIG, 1
<b>Cable 3</b>	CBL-PWEX-1109-10	1	MicroFit,2x4,PH3.0,F to 2x BIG,1x4,PH5.08,M,10CM,10A/pin
<b>Cable 4</b>	CBL-SAST-1049	4	SLIMLINE SAS (LE) to SLIMLINE SAS, INT, 30.2CM,85 OHM,R
<b>Cable 5</b>	CBL-SAST-1221D-85	2	Slimline x8 (LE) to Slimline x8 (STR),20CM,85 OHM,RoHS
<b>Cable 6</b>	CBL-SAST-1222-85	2	Slimline X8 (LE) to Slimline X8 (STR), 22CM,85 OHM,RoHS
<b>Cable 7</b>	CBL-SAST-1267-85	4	Slimline x8 (STR) to Slimline x8 (STR),INT,67CM,85 OHM,
<b>Chassis Part(s)</b>	MCP-240-00146-0N	1	2U WIO Half Length riser card bkt for SC825, 826, 213, 216,RoHS/REACH
<b>Drive Tray(s)</b>	MCP-220-00167-0B	24	Gen 3 2.5-inch Tool-less NVMe drive tray (clip design),RoHS
<b>Riser Card</b>	RSC-W2-66G4	1	2U LHS WIO Riser card with two PCI-E 4.0 x16 slots,HF,RoHS
<b>Riser Card</b>	RSC-W2R-88G4	1	2U RHS WIO Riser card with two PCI-E 4.0 x8 slots,HF,RoHS
<b>Heatsink / Retention</b>	SNK-P0063P	1	2U Passive CPU Heat Sink for AMD Socket SP3 Processors
<b>*Power Supply</b>	PWS-1K23A-1R	2	AC-DC 1200W, Titanium Level, Redundancy, 1U, PMBUS 1.2, +12V/+5Vsb, 360x76x40 mm,HF,RoHS/REACH
<b>*Power Distributor</b>	PDB-PT216-2824	1	PDB with 23pairs input connectors for SC216B
<b>Software</b>	<u>SFT-OOB-LIC</u> • eStore	1	OOB Management Package (per node license)

## 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>Parts</b>	MCP-220-82616-0N	1	12G 2.5x2 Drive Kit w / Status LED(216B/826B/417B/846X/847B)
<b>Cable Management Arm</b>	MCP-290-00073-0N MCP-120-82503-0N	-	Supermicro Cable Management Arm for 2U, 3U and 4U chassis Cable arm adapter for SC825,213,829H,847B (MCP-290-00073-0N required),HF,RoHS/REACH,PBF
<b>TPM</b>	AOM-TPM-9655V AOM-TPM-9665V	-	Vertical TPM with Infineon 9655 TCG 1.2 AOM-TPM-9665V using SLB9665 Chipset supporting TPM2.0,RoHS/REACH
<b>Global Services &amp; Support</b>	<u>OS4HR3/2/1</u> <u>OSNBD3/2/1</u>	-	3/2/1-year onsite 24x7x4 service 3/2/1-year onsite NBD service
<b>Software</b>	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)