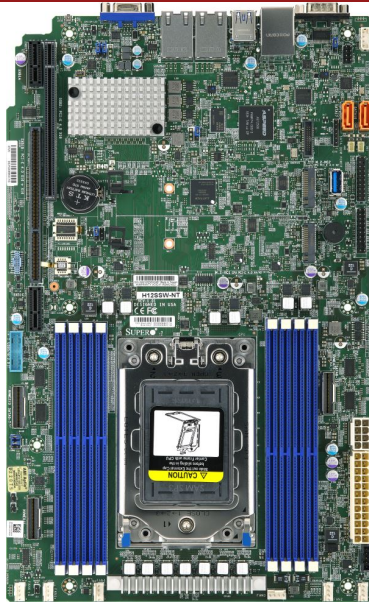


## H12SSW-NT (For A+ Server Only)



### Links & Resources

- ▶ [Tested Memory List](#)
- ▶ [Tested HDD List](#)
- ▶ [Tested M.2 List](#)
- ▶ [Tested AOC List](#)
- ▶ [Motherboard Manual](#)
- ▶ [Update Your BIOS](#)
- ▶ [IPMI Firmware](#)
- ▶ [Download the Latest Drivers and Utilities](#)
- ▶ [Download Driver CD](#)
- ▶ [OS Compatibility](#)

### 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. 2TB Registered ECC DDR4 3200MHz SDRAM in 8 DIMMs
3. Expansion slots:
  - 1 PCI-E 4.0 x32 Left Riser Slot
  - 1 PCI-E 4.0 x16 Right Riser Slot**M.2 Interface:** 2 SATA/PCI-E 3.0 x2  
**M.2 Form Factor:** 2280, 22110  
**M.2 Key:** M-key
4. 2 NVMe via SlimSAS,  
4 NVMe or 16 SATA3 via SlimSAS,  
2 M.2,  
2 SATA3
5. 2x 10GBase-T LAN Ports via Broadcom BCM57416
6. ASPEED AST2500 BMC graphics
7. Up to 7 USB 3.0 ports
8. 6x 4-pin PWM Fans & Speed control

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

### Specifications

## Product SKUs

### MBD-H12SSW-NT

H12SSW-NT (for server SKUs only)

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## Physical Stats

### Form Factor

Proprietary WIO

### Dimensions

8.15" x 13.05"

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## 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

### Cores

Up to 64 Cores

### Chipset

System on Chip

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## System Memory

### Memory Capacity

8 DIMM slots

Supports up to 2TB Registered ECC DDR4 3200MHz SDRAM in 8 DIMMs

8-channel memory bus

### Memory Type

DDR4 3200 MHz Registered ECC, 288-pin gold-plated DIMMs

### DIMM Sizes

8GB, 16GB, 32GB, 64GB, 128GB, 256GB

### Memory Voltage

1.2V

### Error Detection

Corrects single-bit errors

Detects double-bit errors (using ECC memory)

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## 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

2x 10GbE LAN Ports via Broadcom BCM57416

1 Realtek RTL8211E PHY (dedicated IPMI)

### VGA

ASPEED AST2500 BMC

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## Input / Output

### SATA

2 SATA3 (6 Gbps) ports

### SATA/NVMe Hybrid

16 SATA3 / 4 NVMe (PCI-E Gen3)

### NVMe

2 NVMe (PCI-E Gen4)

## Chassis (Optimized for H12SSW-NT)

### 1U

[SC116AC10-R706WB3](#)

SC116TS-R504WBP2

[SC815TQC-R504WB2](#)

SC815TS-R504WBP4

[SCLA15TQC-563W](#)

[SCLB16AC2-R504W](#)

### 2U

[SC213BAC8-R1K23WB](#)

[SC825TQC-R802WB](#)

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## Server(s) (with H12SSW-NT)

### Model(s)

[AS -1014S-WTRT](#)

[AS -1114S-WTRT](#)

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## 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

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## Management

### Software

[Super Doctor 5](#)

Watch Dog

NMI

### SUM

[IPMI 2.0](#), KVM with dedicated LAN

### Power Configurations

ACPI Power Management

Power-on mode control for AC power loss recovery

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## PC Health Monitoring

### CPU

Monitors CPU Core Voltages, +1.5V, +1.8V, +12V, +5V, +5V standby

CPU switching voltage regulator

### FAN

Up to 6 fan status tachometer monitoring

Up to 6 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

I<sup>2</sup>C Temperature Sensing Logic

**LAN**

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

**USB**

7 USB 3.0 ports (4 rear, 2 via header, 1 Type A)

**VGA**

1 VGA port

**Others**

1 COM port  
2 SuperDOM power connectors  
1 TPM 1.2/2.0 header

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## Expansion Slots

**PCI-Express**

1 PCI-E 4.0 x32 Left Riser Slot  
1 PCI-E 4.0 x16 Right Riser Slot

**M.2**

Interface: 2 SATA/PCI-E 3.0 x2  
Form Factor: 2280, 22110  
Key: M-key

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## Parts List

**LED**

CPU / System Overheat LED

**Other Features**

Chassis Intrusion Detection  
Chassis Intrusion Header

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## Operating Environment / Compliance

**Environmental Specifications**

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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