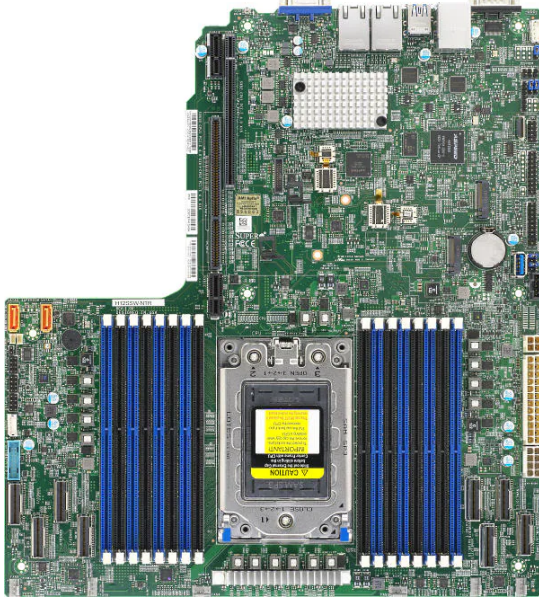


H12SSW-NTR

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. 4TB Registered ECC DDR4 3200MHz SDRAM in 16 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 PCI-E 4.0 x2
M.2 Form Factor: 2280, 22110
M.2 Key: M-key
4. 12 native NVMe via SlimSAS,
4 NVMe or 16 SATA3 ports 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-NTR	<ul style="list-style-type: none"> ■ H12SSW-NTR (for server SKUs only)
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Physical Stats

Form Factor	<ul style="list-style-type: none"> ■ Proprietary
Dimensions	<ul style="list-style-type: none"> ■ 13.4" x 12.29" (34cm x 31.2cm)

Processor/Chipset

CPU	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ Up to 64 Cores
Chipset	<ul style="list-style-type: none"> ■ System on Chip

System Memory

Memory Capacity	<ul style="list-style-type: none"> ■ 16 DIMM slots ■ Supports up to 4TB Registered ECC DDR4 3200MHz SDRAM in 8 DIMMs ■ 8-channel memory bus
Memory Type	<ul style="list-style-type: none"> ■ DDR4 3200 MHz Registered ECC, 288-pin gold-plated DIMMs
DIMM Sizes	<ul style="list-style-type: none"> ■ 8GB, 16GB, 32GB, 64GB, 128GB, 256GB
Memory Voltage	<ul style="list-style-type: none"> ■ 1.2V
Error Detection	<ul style="list-style-type: none"> ■ Corrects single-bit errors ■ Detects double-bit errors (using ECC memory)

On-Board Devices

SATA	<ul style="list-style-type: none"> ■ SATA3 (6 Gbps)
IPMI	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 2x 10GBase-T LAN Ports via Broadcom BCM57416 ■ 1 Realtek RTL8211F PHY (dedicated IPMI)
VGA	<ul style="list-style-type: none"> ■ ASPEED AST2500 BMC

Input / Output

SATA	<ul style="list-style-type: none"> ■ 2 SATA3 (6 Gbps) ports
SATA/NVMe Hybrid	<ul style="list-style-type: none"> ■ 16 SATA3 or 4 NVMe via SlimSAS (PCI-E Gen4)
NVMe	<ul style="list-style-type: none"> ■ 12 NVMe (PCI-E Gen4)
LAN	<ul style="list-style-type: none"> ■ 2 RJ45 10GBase-T LAN ports ■ 1 RJ45 Dedicated IPMI LAN port
USB	<ul style="list-style-type: none"> ■ 7 USB 3.0 ports (4 rear, 2 via header, 1 Type A)
VGA	<ul style="list-style-type: none"> ■ 1 VGA port

Others	<ul style="list-style-type: none"> 1 COM port 2 SuperDOM power connectors 1 TPM 1.2/2.0 header
Expansion Slots	
PCI-Express	<ul style="list-style-type: none"> 1 PCI-E 4.0 x32 Left Riser Slot 1 PCI-E 4.0 x16 Right Riser Slot
M.2	<ul style="list-style-type: none"> Interface: 2 PCI-E 4.0 x2 Form Factor: 2280, 22110 Key: M-key

Chassis (Optimized for H12SSW-NTR)

1U	<ul style="list-style-type: none"> SC116AC10-R706WB3 SCLA15TQC-563W SCLB16AC2-R504W
2U	<ul style="list-style-type: none"> SC213AC8-R1K23WB SC825TQC-R802WB SC826BAC4-R1K23WB

Server(s) (with H12SSW-NTR)

Model(s)	<ul style="list-style-type: none"> AS -1114S-WN10RT AS -2114S-WN24RT
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System BIOS

BIOS Type	<ul style="list-style-type: none"> AMI 256Mb SPI Flash EEPROM
BIOS Features	<ul style="list-style-type: none"> Plug and Play (PnP) DMI 2.3 PCI 2.2 ACPI 5.1 USB Keyboard Support SMBIOS 3.1.1

Management

Software	<ul style="list-style-type: none"> Super Doctor 5 Watch Dog NMI SUM IPMI 2.0, KVM with dedicated LAN
Power Configurations	<ul style="list-style-type: none"> ACPI Power Management Power-on mode control for AC power loss recovery

PC Health Monitoring

CPU	<ul style="list-style-type: none"> Monitors CPU Core Voltages, +1.5V, +1.8V, +12V, +5V, +5V standby CPU switching voltage regulator
FAN	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Monitoring for CPU and chassis environment CPU Thermal Trip Support Thermal control for 6x Fan connectors I²C Temperature Sensing Logic
LED	<ul style="list-style-type: none"> CPU / System Overheat LED
Other Features	<ul style="list-style-type: none"> Chassis Intrusion Detection Chassis Intrusion Header

Operating Environment / Compliance

Environmental Specifications	<ul style="list-style-type: none"> 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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Parts List

Bulk Pack List

	Part Number	Qty	Description
H12SSW-NTR	MBD-H12SSW-NTR-B	1	H12SSW-NTR Motherboard
I/O Cable	CBL-SAST-0813	1	SLIMLINE SAS x8 (LA) to SATA x4,INT, 16/26CM,32AWG

Retail Pack List

	Part Number	Qty	Description
H12SSW-NTR	MBD-H12SSW-NTR-O	1	H12SSW-NTR Motherboard
I/O Cable	CBL-SAST-0813	1	SLIMLINE SAS x8 (LA) to SATA x4,INT, 16/26CM,32AWG

Optional Parts List

	Part Number	Qty	Description
TPM security module	<u>AOM-TPM-9655V</u>	-	TPM 1.2 module with Infineon 9655, RoHS/REACH,PBF;
	<u>AOM-TPM-9665V</u>	-	TPM 2.0 module with Infineon 9665, RoHS/REACH,PBF;