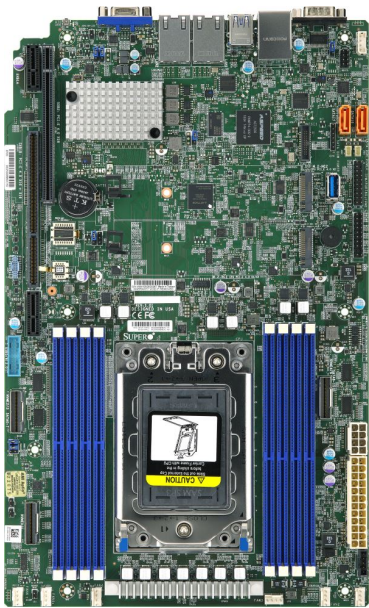




Key Features

|                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Single AMD EPYC™ 7002 Series Processor                                                                                                                                                               |
| 2. 2TB Registered ECC DDR4 3200MHz SDRAM in 8 DIMMs                                                                                                                                                     |
| 3. Expansion slots:<br>1 PCI-E 4.0 x32 Left Riser Slot<br>1 PCI-E 4.0 x16 Right Riser Slot<br><b>M.2 Interface:</b> 2 SATA/PCI-E 3.0 x2<br><b>M.2 Form Factor:</b> 2280, 22110<br><b>M.2 Key:</b> M-key |
| 4. 16 SATA3, 2 M.2, 2 SuperDOM                                                                                                                                                                          |
| 4. 2 NVMe via SlimSAS,<br>4 NVMe or 16 SATA3 via SlimSAS,<br>2 M.2,<br>2 SATA3                                                                                                                          |
| 6. 1 Realtek RTL8211E PHY (dedicated IPMI)                                                                                                                                                              |
| 7. ASPEED AST2500 BMC graphics                                                                                                                                                                          |
| 8. Up to 7 USB 3.0 ports                                                                                                                                                                                |
| 9. 6x 4-pin PWM Fans & Speed control                                                                                                                                                                    |

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](#)



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

# Specifications

## Product SKUs

|                      |             |
|----------------------|-------------|
| <b>MBD-H12SSW-iN</b> | ■ H12SSW-iN |
|----------------------|-------------|

## Physical Stats

|                    |                   |
|--------------------|-------------------|
| <b>Form Factor</b> | ■ Proprietary WIO |
| <b>Dimensions</b>  | ■ 8.15" x 13.05"  |

## Processor/Chipset

|                |                                                          |
|----------------|----------------------------------------------------------|
| <b>CPU</b>     | ■ Single AMD EPYC™ 7002 Series Processor<br>■ Socket SP3 |
| <b>Cores</b>   | ■ Up to 64 Cores                                         |
| <b>Chipset</b> | ■ System on Chip                                         |

## System Memory

|                        |                                                                                                               |
|------------------------|---------------------------------------------------------------------------------------------------------------|
| <b>Memory Capacity</b> | ■ 8 DIMM slots<br>■ Supports up to 2TB Registered ECC DDR4 3200MHz SDRAM in 8 DIMMs<br>■ 8-channel memory bus |
| <b>Memory Type</b>     | ■ DDR4 3200 MHz Registered ECC, 288-pin gold-plated DIMMs                                                     |
| <b>DIMM Sizes</b>      | ■ 8GB, 16GB, 32GB, 64GB, 128GB, 256GB                                                                         |
| <b>Memory Voltage</b>  | ■ 1.2V                                                                                                        |
| <b>Error Detection</b> | ■ Corrects single-bit errors<br>■ Detects double-bit errors (using ECC memory)                                |

## On-Board Devices

|                            |                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SATA</b>                | ■ SATA3 (6 Gbps)                                                                                                                                          |
| <b>IPMI</b>                | ■ Support for Intelligent Platform Management Interface v. 2.0<br>■ IPMI 2.0 with virtual media over LAN and KVM-over-LAN support<br>■ ASPEED AST2500 BMC |
| <b>Network Controllers</b> | ■ 2x 1GbE LAN Ports via Broadcom BCM5720L<br>■ 1 Realtek RTL8211E PHY (dedicated IPMI)                                                                    |
| <b>VGA</b>                 | ■ ASPEED AST2500 BMC                                                                                                                                      |

## Input / Output

|                         |                                                                         |
|-------------------------|-------------------------------------------------------------------------|
| <b>SATA</b>             | ■ 2 SATA3 (6 Gbps) ports                                                |
| <b>SATA/NVMe Hybrid</b> | ■ 16 SATA3 / 4 NVMe (PCI-E Gen3)                                        |
| <b>NVMe</b>             | ■ 2 NVMe (PCI-E Gen4)                                                   |
| <b>LAN</b>              | ■ 2 RJ45 Gigabit Ethernet LAN ports<br>■ 1 RJ45 Dedicated IPMI LAN port |
| <b>USB</b>              | ■ 7 USB 3.0 ports (4 rear, 2 via header, 1 Type A)                      |
| <b>VGA</b>              | ■ 1 VGA port                                                            |
| <b>Others</b>           | ■ 1 COM port<br>■ 2 SuperDOM power connectors<br>■ 1 TPM 1.2/2.0 header |

## Expansion Slots

|                    |                                                                                |
|--------------------|--------------------------------------------------------------------------------|
| <b>PCI-Express</b> | ■ 1 PCI-E 4.0 x32 Left Riser Slot<br>■ 1 PCI-E 4.0 x16 Right Riser Slot        |
| <b>M.2</b>         | ■ Interface: 2 SATA/PCI-E 3.0 x2<br>■ Form Factor: 2280, 22110<br>■ Key: M-key |

## System BIOS

|                      |                                                                                                           |
|----------------------|-----------------------------------------------------------------------------------------------------------|
| <b>BIOS Type</b>     | ■ AMI 256Mb SPI Flash EEPROM                                                                              |
| <b>BIOS Features</b> | ■ Plug and Play (PnP)<br>■ DMI 2.3<br>■ PCI 2.2<br>■ ACPI 5.1<br>■ USB Keyboard Support<br>■ SMBIOS 3.1.1 |

## Management

|                             |                                                                                                               |
|-----------------------------|---------------------------------------------------------------------------------------------------------------|
| <b>Software</b>             | ■ <u>Super Doctor 5</u><br>■ Watch Dog<br>■ NMI<br>■ <u>SUM</u><br>■ <u>IPMI 2.0</u> , KVM with dedicated LAN |
| <b>Power Configurations</b> | ■ ACPI Power Management<br>■ Power-on mode control for AC power loss recovery                                 |

## PC Health Monitoring

|                       |                                                                                                                                                                 |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CPU</b>            | ■ Monitors CPU Core Voltages, +1.5V, +1.8V, +12V, +5V, +5V standby<br>■ CPU switching voltage regulator                                                         |
| <b>FAN</b>            | ■ Up to 6 fan status tachometer monitoring<br>■ Up to 6 4-pin fan headers<br>■ Status monitor for speed control<br>■ Pulse Width Modulated (PWM) fan connectors |
| <b>Temperature</b>    | ■ Monitoring for CPU and chassis environment<br>■ CPU Thermal Trip Support<br>■ Thermal control for 6x Fan connectors<br>■ iC Temperature Sensing Logic         |
| <b>LED</b>            | ■ CPU / System Overheat LED                                                                                                                                     |
| <b>Other Features</b> | ■ Chassis Intrusion Detection<br>■ Chassis Intrusion Header                                                                                                     |

## Operating Environment / Compliance

|                                     |                                                                                                                                                                                                                                                   |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Environmental Specifications</b> | ■ Operating Temperature: 10°C to 35°C (50°F to 95°F)<br>■ Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)<br>■ Operating Relative Humidity: 8% to 90% (non-condensing)<br>■ Non-operating Relative Humidity: 5% to 95% (non-condensing) |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

# Parts List

## Retail Pack List

|           | Part Number      | Qty | Description           |
|-----------|------------------|-----|-----------------------|
| H12SSW-iN | MBD-H12SSW-iN -O | 1   | H12SSW-iN Motherboard |

## 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-9655V-S</u> | -   | TPM 1.2 module w ith Infineon 9655, RoHS/REACH,PBF; Provisioned for TXT |
|                     | <u>AOM-TPM-9665V</u>   | -   | TPM 2.0 module with Infineon 9665, RoHS/REACH,PBF;                      |
|                     | <u>AOM-TPM-9665V-S</u> | -   | TPM 2.0 module w ith Infineon 9665, RoHS/REACH,PBF; Provisioned for TXT |