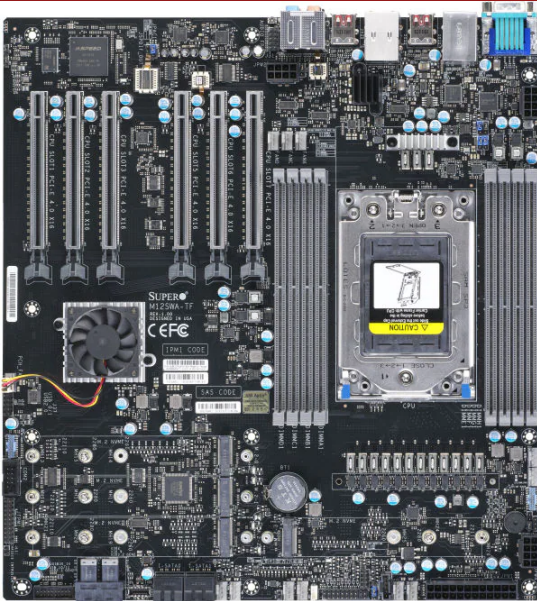


# M12SWA-TF



## Workstation

## Key Features

1. AMD Ryzen™ Threadripper™ PRO 5000WX/3000WX Series Processor, up to 64 Cores
2. Up to 2TB (RDIMM) / 256GB (UDIMM), ECC/Non-ECC, Unbuffered, U-DIMM, R-DIMM, LRDIMM, and 3DS R-DIMM; 3200Mhz in 8 DIMM slots
3. 6 PCI-E 4.0 x16 slots  
**M.2 Interface:** 4 PCI-E 4.0 x4 (Software RAID 0,1,5,10)  
**M.2 Form Factor:** 2280, 22110  
**M.2 Key:** M-key  
**U.2 Interface:** 2 U.2 sockets (Software RAID 0,1)
4. 4 SATA 3.0 6Gbps (Software Raid 0,1,5 & 10)
5. 1x 10GBase-T LAN port,  
1 GbE LAN port (shared with IPMI)
6. ASPEED AST2600 BMC graphics
7. 1 USB 3.2 Gen2x2 port (Type C, 20Gbps),  
5 USB 3.2 Gen2 ports  
(4 type A + 1 front type C header),  
5 USB 3.2 Gen1 ports  
(3 type A + 2 via header),  
2 USB 2.0 ports via header
8. 1 COM port (rear),  
TPM 2.0 header,  
7.1 Channel HD Audio
9. 10 fan header, 4-pin type fan header,  
112V-power header for liquid cooling

## Links & Resources

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

AMD  
THREADRIPPER  
PRO



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

## Specifications

## Product SKUs

**MBD-M12SWA-TF**  
M12SWA-TF

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## Physical Stats

### Form Factor

E-ATX

### Dimensions

12" x 13" (30.48cm x 33.02cm)

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## Processor/Cache

### CPU

Single AMD Ryzen™ Threadripper™ PRO  
5000WX/3000WX Series Processor  
Socket sWRX8/SP3  
Supports CPU TDP up to 280W

### Cores

Up to 64 Cores

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## System Memory

### Memory Capacity

8 DIMM slots  
ECC and Non-ECC, buffered and Un-  
buffered, U-DIMM, R-DIMM, LRDIMM and  
3DS R-DIMM Memory  
RDIMM up to 2TB, UDIMM up to 256GB  
8-channel memory bus

### Memory Type

ECC and Non-ECC, buffered and Un-  
buffered, U-DIMM, R-DIMM, LRDIMM and  
3DS R-DIMM Memory  
DDR4 3200 / 3000 / 2933 / 2800 / 2666 /  
2400 / 2133 Mhz

### 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

### Chipset

AMD WRX80

### SATA

AMD WRX80 controller for 4 SATA3 (6  
Gbps)ports, Software RAID 0,1,5,10

## Expansion Slots

### PCI-Express

6 PCI-E 4.0 x16 slots

### M.2

Interface: 4 PCI-E 4.0 x4  
Form factor: 2280, 22110  
Key: M-key  
Software RAID 0,1,5,10 support

### U.2

Interface: 2 U.2 Sockets  
Software RAID 0,1 support

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## Chassis ( Optimized for M12SWA-TF )

### Tower/4U Rackmountable

SC743AC-1K26B-SQ

SC745BAC-R1K23B

SC747BTQ-R2K04B

### Tower/5U Rackmountable

SCG57A-2000B

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## Server(s) (with M12SWA-TF)

### Model(s)

AS -5014A-TT

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## System BIOS

### BIOS Type

AMI 256Mb Flash EEPROM

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## Management

### Software

Super Doctor 5

Watch Dog

### SUM

IPMI, KVM with shared LAN

### Power Configurations

ACPI Power Management  
Power button override mechanism  
Keyboard wakeup from S5  
S3/S4

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## PC Health Monitoring

### CPU

Monitors CPU Core Voltages, +3.3V, +12V,  
+3.3Vstb, +5Vstb, Vcore, Vmem  
Supports system management utility

### **Network Controllers**

10G LAN: Single LAN via Marvell AQC113C  
10Gb controller

1GbE LAN: Single LAN via Intel® i210AT  
controller (shared with IPMI)

### **IPMI**

Support for Intelligent Platform

Management Interface v.2.0

IPMI 2.0 with virtual media over LAN and

KVM-over-LAN support

ASPEED AST2600 BMC

### **Audio**

ALC4050H + ALC1220 7.1 Channel HD

Audio

### **Graphics**

ASPEED AST2600 BMC

VGA connector is dedicated for IPMI

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## **Input / Output**

### **SATA**

4 SATA3 (6 Gbps) ports

### **LAN**

1 RJ45 10GBase-T LAN port

1 RJ45 GbE LAN port (shared with IPMI)

### **USB**

1 USB 3.2 Gen2x2 port (Type C, 20Gbps)

5 USB 3.2 Gen2 ports (4 Type A, 1 Type C  
header, 10Gbps)

5 USB 3.2 Gen1 ports (3 Type A, 1 via  
header)

2 USB 2.0 via header

### **VGA**

1 VGA port (dedicated for IPMI)

### **Others**

1 COM port (rear)

1 TPM 2.0 header

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### **FAN**

Up to 10 4-pin fan headers

Status monitor for speed control

### **Temperature**

Monitoring for CPU and chassis  
environment

CPU Thermal Trip Support

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

### **LED**

CPU / System Overheat LED

### **Other Features**

Chassis Intrusion Detection

Chassis Intrusion Header

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## **Operating Environment / Compliance**

### **Environmental**

#### **Specifications**

Operating Temperature:

0°C to 50°C (32°F to 122°F)

Non-operating Temperature:

-5°C to 55°C (23°F to 131°F)

FCC class B

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## **Parts List**