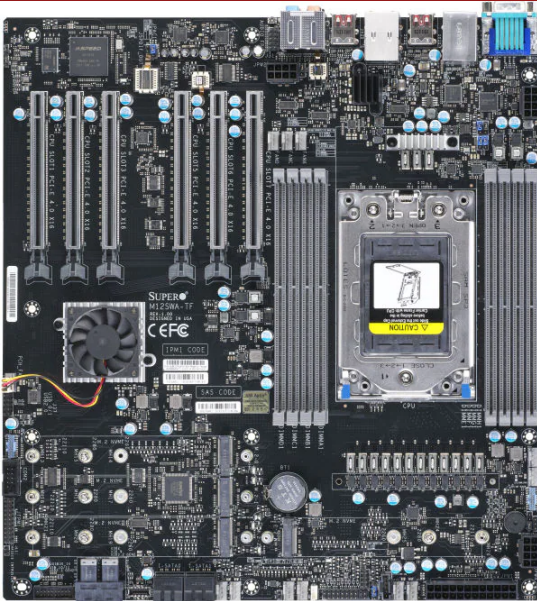# M12SWA-TF

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

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

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

Specifications

Product SKUs

MBD-M12SWA-TF
M12SWA-TF

Physical Stats

Form Factor
E-ATX
Dimensions
12" x 13" (30.48cm x 33.02cm)

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

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)

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

Chassis (Optimized for M12SWA-TF)

Tower/4U Rackmountable
SC743AC-1K26B-SQ
SC745BAC-R1K23B
SC747BTQ-R2K04B
Tower/5U Rackmountable
SCGS7A-2000B

Server(s) (with M12SWA-TF)

Model(s)
AS -5014A-TT

System BIOS

BIOS Type
AMI 256Mb Flash EEPROM

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

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 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

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

FAN
Up to 10 4-pin fan headers
Status monitor for speed control
Temperature
Monitoring for CPU and chassis
environment
CPU Thermal Trip Support
I²C Temperature Sensing Logic
LED
CPU / System Overheat LED
Other Features
Chassis Intrusion Detection
Chassis Intrusion Header

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

Parts List