M12SWA-TF
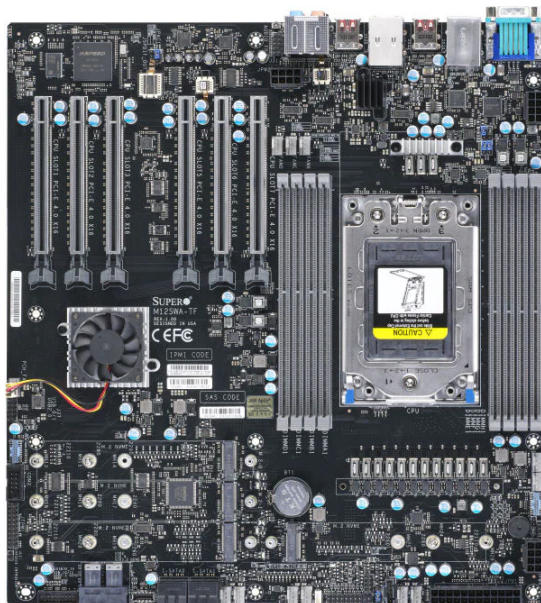

Links & Resources

▶ 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

Workstation

Key Features

1. AMD Ryzen™ Threadripper™ PRO 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.

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 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
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)

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
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

USB	1 USB 3.2 Gen2x2 port (Type C, 20Gbps) 5 USB 3.2 Gen2 ports (4 Type A, 1 front Intel 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

Parts List

Bulk Pack List

	Part Number	Qty	Description
Motherboard	MBD-M12SWA-TF	1	M12SWA-TF Motherboard
SATA Cable	CBL-0044L	2	57.5CM SATA FLAT S-S PBF
IO Shield	MCP-260-00159-0N	1	M12SWA-TF series IO Shield
CPU-GPU Power Connector Adapter	CBL-PWEX-0663	1	PCIe 8 Pin Male(black) to CPU 8 Pin Female(White) Power Adapter
M.2 Screw and Stand Kit	MCP-410-00020-0N	1	Screw kit with bag for M12SWA-TF M.2 card

Retail Pack List

	Part Number	Qty	Description
Motherboard	MBD-M12SWA-TF	1	M12SWA-TF Motherboard
Quick Reference Guide	MNL-2336-QRG	1	M12SWA-TF Quick Reference Guide
SATA Cable	CBL-0044L	4	57.5CM SATA FLAT S-S PBF
IO Shield	MCP-260-00159-0N	1	M12SWA-TF series IO Shield
CPU-GPU Power Connector Adapter	CBL-PWEX-0663	1	PCIe 8 Pin Male(black) to CPU 8 Pin Female(White) Power Adapter
M.2 Screw and Stand Kit	MCP-410-00020-0N	1	Screw kit with bag for M12SWA-TF M.2 card

Optional Parts List

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