

# Specifications

## Product SKUs

- SYS-110P-WTR** ■ SuperServer SYS-110P-WTR (**Black**)

## Motherboard

### Super X12SPW-TF

## Processor

- CPU** ■ Single Socket P+ (LGA-4189)  
 ■ 3rd Gen Intel® Xeon® Scalable processors  
 ■ Support CPU TDP 270W
- Cores** ■ Up to 36C/72T; Up to 60MB Cache

## System Memory

- Memory** ■ Memory Capacity: 8 DIMM slots  
 ■ UP to 2TB: 8x 256 GB DRAM  
 ■ UP to 3TB: 4x 256 GB DRAM and 4x 512 GB PMem  
 ■ Memory Type: 3200/2933/2666MHz ECC DDR4 RDIMM;LRDIMM  
 ■ Intel® Optane™ persistent memory 200 series
- Memory Voltage** ■ 1.25 V
- Error Detection** ■ Yes

## On-Board Devices

- NVMe** ■ NVMe; RAID 0/1/5/10 support
- SATA** ■ SATA3 (6Gbps); RAID 0/1/5/10 support
- Chipset** ■ Intel® C621A
- Network Connectivity** ■ 2x 10GbE BaseT with Intel® X550
- IPMI** ■ Support for Intelligent Platform Management Interface v.2.0  
 ■ IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

## Input / Output

- SATA** ■ 10 SATA (6Gbps) port(s)
- LAN** ■ 1 RJ45 Dedicated IPMI LAN port  
 ■ 2 RJ45 10GBase-T LAN ports
- USB** ■ 4 USB 3.2 Gen 1 port(s) (2 front; 2 rear)  
 ■ 3 USB port(s) (2 headers; 1 Type A)  
 ■ 2 USB 2.0 port(s) (2 rear)
- Video** ■ 1 VGA 2 port(s)
- Serial Port** ■ 2 COM Port(s) (1 header; 1 rear)
- DOM** ■ 2 SuperDOM (Disk on Module) port with built-in power

## System BIOS

## Chassis

- Form Factor** ■ 1U Rackmount
- Model** ■ **CSE-116TS-R706WBP4**

## Dimensions and Weight

- Height** ■ 1.7" (43mm)
- Width** ■ 17.2" (437mm)
- Depth** ■ 23.5" (597mm)
- Package** ■ 8" (H) x 24" (W) x 32" (D)
- Weight** ■ Net Weight: 15.5 lbs (7.03 kg)  
 ■ Gross Weight: 27 lbs (12.25 kg)
- Available Color** ■ Black

## Front Panel

- Buttons** ■ Power On/Off  
 ■ UID button
- LEDs** ■ Device Activity  
 ■ LAN 1 Activity  
 ■ LAN 2 Activity  
 ■ Power status  
 ■ System information

## Expansion Slots

- PCI-Express (PCI-E)** ■ Slot 1: PCI-E 4.0 x16 FHFL  
 ■ Slot 2: PCI-E 4.0 x16 FHFL  
 ■ Slot 3: PCI-E 4.0 x16 LP

## Drive Bays / Storage

- Drive Bays** ■ 10x 2.5" SATA drive bays (4x 2.5" NVMe hybrid)
- M.2** ■ 1x PCI-E 3.0 x 4 and SATA  
 ■ M-key, 2280, 22110

## System Cooling

- Fans** ■ 1 AOC cooling Fan(s) (optional)  
 ■ 5 counter-rotation PWM 40x40x56mm Fan(s)

## Power Supply

- 1U 750W redundant power width 54.5mm
- Total Output Power** ■ 750W
- Dimension (W x H x L)** ■ 54.5 x 40.25 x 320 mm
- AC Input** ■ 750W: 100-240Vac / 3.8A-8A / 50-60Hz
- +12V** ■ Max: 62A / Min: 0.5A
- 5V SB** ■ Max: 3A / Min: 0A
- Output Type** ■ Gold Finger Connector

**BIOS Type** ■ AMI 32MB SPI Flash EEPROM

## Management

- Software**
- IPMI2.0
  - Redfish API
  - SSM
  - SPM
  - KVM with dedicated LAN
  - SUM
  - NMI

- Power Configurations**
- ACPI/APM Power Management

## PC Health Monitoring

- CPU**
- 7+1 Phase-switching voltage regulator
  - Monitors for CPU Cores, Chipset Voltages, Memory

- FAN**
- Fans with tachometer monitoring
  - Pulse Width Modulated (PWM) fan connectors
  - Status monitor for speed control

- Temperature**
- Monitoring for CPU and chassis environment
  - Thermal Control for fan connectors

**Certification**



**Platinum Level**

[ [Test Report](#) ]

## Operating Environment

- Environmental Spec.**
- Operating Temperature: 10°C ~ 35°C (50°F ~ 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)

# Parts List

Parts List - (Items Included)			
	Part Number	Qty	Description
<b>Motherboard / Chassis</b>	MBD-X12SPW-TF	1	Super X12SPW-TF Motherboard
	CSE-116TS-R706WBP4	1	1U Chassis
<b>Backplane</b>	BPN-SAS3-LB16A-N10	1	1U 10-Slot SFF Hybrid Backplane Supports 10xSAS3/SATA3/NVMe4 Storage Devices with 1x(2x4) + 2x(1x4) + 1x(2x2) Power Connectors
<b>Cable 1</b>	CBL-SAST-1234-100	1	Slimline x4 (STR) to 4x SATA,35CM,SB 50CM,Xover,100 OHM,
<b>Cable 2</b>	CBL-SAST-1285-100	2	Slimline x4 (STR) to MiniSAS HD (STR) x4,85CM,100 OHM,R
<b>FAN 1</b>	FAN-0141L4	1	40x40x56 mm 20.5K RPM / 17.6K RPM Counter-rotating Fan
<b>Manual</b>	MNL-2265-QRG	1	110P-WTR Quick Reference Guide
<b>Riser Card</b>	RSC-W-66G4	1	1U LHS WIO Riser card with two PCI-E 4.0 x16 slots,HF,RoHS
<b>Riser Card</b>	RSC-WR-6	1	1U RHS WIO Riser card with one PCI-E 4.0 x16 slot,HF,RoHS
<b>Software</b>	SFT-OOB-LIC	1	License key for enabling OOB BIOS management
<b>Heatsink / Retention</b>	SNK-P0077P	1	1U Passive CPU Heat Sink for X12 Generation Intel Whitley and Cedar Island Platforms
<b>*Power Supply</b>	PWS-706P-1R	2	1U 750W redundant power width 54.5mm(Platinum),HF,RoHS/REACH,PBF
<b>*Power Distributor</b>	PDB-PT112-S2424	1	WIO X11 Support,PDB-PT112-S2424 is based on PDB-PT112-2424
<b>*Cable 3</b>	CBL-0160L	2	US POWER CORD 16AWG, PB FREE
<b>*Cable 4</b>	CBL-0335L	1	FRONT CTL CABLE 20 PIN TO 20 PIN W/TUBE,70CM,PBF
<b>*FAN 2</b>	FAN-0141L4	4	40x40x56 mm 20.5K RPM / 17.6K RPM Counter-rotating Fan
<b>*FAN 3</b>	FAN-0163L4	4	40x40x56 mm, 23.3K-20.3K RPM, Counter-rotating Fan
<b>*Front Panel</b>	FPB-FP116-DU3	1	Front control board with two USB 3.0 for SC116/SC119X
<b>*Parts</b>	MCP-120-00029-0N	2	Blank FH L bracket without SCSI cutout for SC815,823
<b>*Parts</b>	MCP-120-00030-0N	1	Blank LP L-bracket (1 raw of capsule hole)
<b>*Drive Tray(s)</b>	MCP-220-00047-0B	10	Black gen 3rd hot-swap 2.5inch HDD tray
<b>*Rear Window</b>	MCP-240-00098-0N	1	WIO rear window for SC113,SC116, SC815 Redundant PWS
<b>*Power Supply</b>	MCP-250-00009-0N	1	SC113 Redundant Power Distributor Cover
<b>*Rail Set</b>	MCP-290-00063-0N	1set	Rail set, quick/quick, default for 1U 17.2"W for SC113/SC116,RoHS/REACH
<b>*Air Shroud</b>	MCP-310-19002-0N	1	SC815/113/116 Intel DP X9, X8 PC air shroud, 12x13MB
<b>*Fan Holder</b>	MCP-320-00027-0B	24	Plastic pin for 40x28, 40x56 fan
<b>*Fan Holder</b>	MCP-320-00028-0B	1	Fan holder for 6pcs 40x56 fan, assemble-able for SC819/SC119/SC818/SC116
<b>*Fan Holder</b>	MCP-340-00035-0B	2	Dummy fan 40x56mm for 40x56 counter-rotating fan (cost-effective)

Notes:

1. Parts with \* are inside the chassis
2. Excessive parts might not be shipped, including but not limited to excessive drive trays, fans, riser brackets, air shrouds, IO shields, cables.....etc.

Optional Parts List			
	Part Number	Qty	Description
<b>Add-on Card for additional M.2</b>	<u>AOC-SLG3-2H8M2</u>	-	Standard LP, PCI-E 3.0 x8, supports 2x NVMe/SATA M-Key M.2 Modules; RAID 0,1
<b>CacheVault</b>	BTR-CVPM05 + BKT-BBU-BRACKET-05 (For S3908/S3916)	1	CacheVault for Broadcom 3908/3916 with SuperCap mounting bracket for PCI-E location

	BTR-TFM8G-LSICVM02 + BKT-BBU-BRACKET-05 (For S3108)	1	CacheVault for Broadcom 3108 with SuperCap mounting bracket for PCI-E location
	BTR-CV3108-1U1 (For S3108)	1	CacheVault for Broadcom 3108 with SuperCap mounting in 1U 40x56 fan tray
<b>Cooling Fan</b>	FAN-0141L4 • eStore	1	40x40x56 mm, 20.5K RPM / 17.6K RPM, Counter-rotating Fan
<b>Front Bezel</b>	MCP-210-11601-0B	1	Black Front Bezel
<b>Inlet Thermal Sensor</b>	MCP-280-00033-0N	1	Universal Thermal sensor kit with 80cm I2C cable
<b>Intel VROC RAID Key for NVMe</b>	<u>AOC-VROCSTNMOD</u>	1	Standard Upgrade module (Intel + 3rd party Vendor SSD); RAID 0/1/10
	<u>AOC-VROCINTMOD</u>	1	Intel SSD Only Upgrade module; RAID 0/1/10/5
	<u>AOC-VROCPREMOD</u>	1	Premium Upgrade module (Intel + 3rd party Vendor SSD); RAID 0/1/10/5
<b>NVMe Cable(s)</b>	CBL-SAST-1231-85	-	Slimline x8 (STR) to Slimline x8 (STR),INT,30CM, 85 OHM
<b>NVMe Drive Tray(s)</b>	MCP-220-00167-0B • eStore	-	Tool-less Hot-swap Gen-3 NVMe drive tray, Orange tab, Black
<b>Software</b>	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)
<b>Storage Control Card and Cable(s)</b>	<u>AOC-S3108L-H8iR-16DD</u>	1	Standard LP, 8 Internal ports (12Gb/s) PCI-E 3.0 x8, 16HDD; RAID 0, 1, 5, 6, 10, 50, 60
	AOC-S3916L-H16iR-32DD + 2x CBL-SAST-1261-100	1	Standard LP, 16 internal ports (12Gb/s) PCI-E 4.0 x8, 32HDD; RAID 0, 1, 5, 6, 10, 50, 60
	<u>AOC-S3008L-L8i</u>	1	Standard LP, 8 internal ports (12Gb/s) PCI-E 3.0 x8, 63HDD; RAID 0, 1, 10
	AOC-S3908L-H8iR-16DD + 1x CBL-SAST-1261-100	1	Standard LP, 8 internal ports (12Gb/s) PCI-E 4.0 x8, 16HDD; RAID 0, 1, 5, 6, 10, 50, 60
<b>Storage Control Card and Cable(s) (HBA)</b>	<u>AOC-S3008L-L8E</u>	1	Standard LP, 8 internal ports (12Gb/s) PCI-E 3.0 x8, 122HDD; HBA
	AOC-S3816L-L16IT + 2x CBL-SAST-1261-100	1	Standard LP, 16 internal ports (12Gb/s) PCI-E 4.0 x8, 122HDD; HBA
	<u>AOC-S3808L-L8IT</u> + 1x CBL-SAST-1261-100	1	Standard LP, 8 internal ports (12Gb/s) PCI-E 4.0 x8, 122HDD; HBA
<b>TPM</b>	<u>AOM-TPM-9671V-S</u>	1	TPM 1.2, vertical form factor, provisioned for server
	<u>AOM-TPM-9670V-S</u>	1	TPM 2.0, vertical form factor, provisioned for server