

Specifications

Product SKUs

- SYS-510P-M** ■ SuperServer SYS-510P-M (**Black**)

Motherboard

Super X12SPO-F

Processor

- CPU** ■ Single Socket P+ (LGA-4189)
■ 3rd Gen Intel® Xeon® Scalable processors
■ Support CPU TDP 220W
- 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

- SATA** ■ SATA3 (6Gbps); RAID 0/1/5/10 support
- NVMe** ■ NVMe; RAID 0/1/5/10 support
- Chipset** ■ Intel® C621A
- Network Connectivity** ■ 2x 1GbE BaseT with Intel® i350
- 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 1GbE LAN ports
- USB** ■ 5 USB 3.2 Gen 1 port(s) (2 headers; 2 rear; 1 Type A)
■ 6 USB 2.0 port(s) (4 headers; 2 rear)
- Video** ■ 1 VGA 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

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

Chassis

- Form Factor** ■ 1U Rackmount
- Model** ■ **CSE-813MF2TS-505CBP**

Dimensions and Weight

- Height** ■ 1.7" (43mm)
- Width** ■ 17.2" (437mm)
- Depth** ■ 19.98" (507mm)
- Package** ■ 8.5" (H) x 24" (W) x 29.5" (D)
- Weight** ■ Net Weight: 17.6 lbs (8 kg)
■ Gross Weight: 30.4 lbs (13.8 kg)
- Available Color** ■ Black

Front Panel

- Buttons** ■ Power On/Off
■ System Reset
- 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 FHHL

Drive Bays / Storage

- Drive Bays** ■ 4x 3.5" NVMe/SATA drive bays (4x 3.5" NVMe hybrid)
- M.2** ■ 2x PCI-E 3.0 x 4 and SATA
■ M-key, 2280, 22110
- Peripheral Bays** ■ 2x 2.5" drive bays

System Cooling

- Fans** ■ 2 AOC cooling Fan(s) (optional)
■ 4 middle cooling PWM 40x40x28mm Fan(s)

Power Supply

1U 500W Multi-output, Platinum level with PMbus 24pin, W100xL180xH40mm,RoHS/REACH

- Total Output Power** ■ 500W
- Dimension (W x H x L)** ■ 100 x 40 x 180 mm
- AC Input** ■ 500W: 100-240Vac / 3.2A-6.6A / 50-60Hz
- +12V** ■ Max: 41A / Min: 0.5A
- 5V SB** ■ Max: 3A / Min: 0A

Management

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| Software | <ul style="list-style-type: none">■ IPMI2.0■ Redfish API■ SSM■ SPM■ KVM with dedicated LAN■ SUM■ NMI |
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| Power Configurations | <ul style="list-style-type: none">■ ACPI/APM Power Management |
|-----------------------------|---|

PC Health Monitoring

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| CPU | <ul style="list-style-type: none">■ 7+1 Phase-switching voltage regulator■ Monitors for CPU Cores, Chipset Voltages, Memory |
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| FAN | <ul style="list-style-type: none">■ Fans with tachometer monitoring■ Pulse Width Modulated (PWM) fan connectors■ Status monitor for speed control |
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|--------------------|---|
| Temperature | <ul style="list-style-type: none">■ Monitoring for CPU and chassis environment■ Thermal Control for fan connectors |
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Certification



Platinum Level

[[Test Report](#)]

Operating Environment

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| Environmental Spec. | <ul style="list-style-type: none">■ 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) |
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Parts List

Parts List - (Items Included)			
	Part Number	Qty	Description
Motherboard / Chassis	MBD-X12SPO-F	1	Super X12SPO-F Motherboard
	CSE-813MF2TS-505CBP	1	1U Chassis
Backplane	BPN-SAS3-815TQ-N4	1	4-port 1U SAS3 12Gbps Hybrid backplane, support up to 4x 3.5-inch SAS3/SATA3/NVMe Storage Devices
Cable 1	CBL-0182L	1	PWR EXTENSION.HDD TO RIGHT ANGLE HDD,PBF
Cable 2	CBL-SAST-0811	1	MINI SAS HD-4 SATA (RA),12G,INT,50/50/60/70,70CM SB,30AWG
Manual	MNL-2267-QRG	1	510P-M/MR Quick Reference Guide
Riser Card	RSC-S-6G4	1	1U LHS Standard riser card with one PCI-E 4.0 x16 slot,HF,Ro
Software	SFT-OOB-LIC	1	License key for enabling OOB BIOS management
Heatsink / Retention	SNK-P0077P	1	1U Passive CPU Heat Sink for X12 Generation Intel Whitley and Cedar Island Platforms
*Power Supply	PWS-505P-1H	1	1U 500W Multi-output, Platinum level w/ PMbus 24pin, W100xL180xH40mm,RoHS/REACH
*Cable 3	CBL-0071L	1	ROUND 16 TO 16 PIN RIBBON FP CABLE 30"L, LF
*Peripheral Drive1	CSE-PT93L-B	1	Black DVD dummy cover for SC813, 813M, 815, PBF-RoHS
*FAN 1	FAN-0154L4	4	40x40x28 mm, 22.5K RPM, SC813MF Middle Cooling Fan,RoHS/REACH
*Front Panel	FPB-FP813-D	1	Front control board dual color for SC815,SC813M (C)
*Drive Tray(s)	MCP-220-00075-0B	4	Black gen 5.5 hot-swap 3.5" HDD tray
*Parts	MCP-260-00078-0N	1	1U I/O shield for X10 and X9 Server MB with 5X5mm vent hole and EMI Gasket,RoHS/REACH,PBF
*Rail Set	MCP-290-00102-0N	1set	Outer rail, quick-release type, 25.6\ to 33.05\
*Rail Set	MCP-290-00108-0N	1set	Inner rail, front, short, quick-release type
*Rail Set	MCP-290-00110-0N	1set	Inner rail, extension (quick) for 1U 17.2
*Fan Holder	MCP-320-00060-0N	1	Slim Fan tray for six 40x28 fans in SC813M (for X11DPL-i 12"x10.15")
*Parts	MCP-340-00001-01	2	Dummy fan 40x28mm

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
3.5" to 2.5" Converter Tray(s)	MCP-220-00043-0N • eStore	-	Hot-swap Gen-4 3.5" to 2.5" HDD tray, Black
3.5" to 2.5" NVMe Drive Tray(s)	MCP-220-00138-0B • eStore	-	Tool-less Hot-swap Gen-5.5 NVMe 3.5" to 2.5" drive tray, Orange tab, Black
Add-on Card for additional M.2	AOC-SLG3-2H8M2	-	Standard LP, PCI-E 3.0 x8, supports 2x NVMe/SATA M-Key M.2 Modules; RAID 0,1
Cooling Fan(s)	FAN-0154L4 • eStore	-	40x40x28 mm, 22.5K RPM, Middle Cooling Fan
DVD-ROM / DVD-RW	DVM-PLDS-DVDRW-SBT5	1	PHILIPS slim DVD-RW SATA drive
	DVM-TEAC-DVD-SBT5	1	TEAC slim DVD-ROM SATA drive
DVD-ROM Accessory	MCP-220-81502-0N • eStore	1	Slim SATA DVD mounting kit
Front Bezel	CSE-PTFB-813-02B	1	Black Front Bezel w/ Round Venting Holes

	CSE-PTFB-813LB	1	Black Front Bezel
Hot-swap 2.5" kit (DVD slot)	MCP-220-81506-0N • <i>eStore</i>	1	Single 2.5" SAS3 (12Gb/s) hot swap in slim DVD form factor
Hot-swap 2.5" kit (FDD slot)	MCP-220-81504-0N • <i>eStore</i>	1	Single 2.5" SAS3 (12Gb/s) hot swap in slim FDD form factor
Inlet Thermal Sensor	MCP-280-00034-0N	1	Universal Thermal sensor kit with 40cm I2C cable
Intel VROC RAID Key for NVMe	<u>AOC-VROCPREMOD</u>	1	Premium Upgrade module (Intel + 3rd party Vendor SSD); RAID 0/1/10/5
	<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
NVMe Cable(s)	CBL-SAST-1264-85	-	Slimline x8 (STR) to 2x Oculink x4 (STR),64CM,85 OHM,Ro
Software	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)
Storage Control Card and Cable(s)	AOC-S3908L-H8iR-16DD + 1x CBL-SAST-1275A-100	1	Standard LP, 8 internal ports (12Gb/s) PCI-E 4.0 x8, 16HDD; RAID 0, 1, 5, 6, 10, 50, 60
	<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
	<u>AOC-S3008L-L8I</u>	1	Standard LP, 8 internal ports (12Gb/s) PCI-E 3.0 x8, 63HDD; RAID 0, 1, 10
Storage Control Card and Cable(s) (HBA)	<u>AOC-S3808L-L8IT</u> + 1x CBL-SAST-1275A-100	1	Standard LP, 8 internal ports (12Gb/s) PCI-E 4.0 x8, 122HDD; HBA
	<u>AOC-S3008L-L8E</u>	1	Standard LP, 8 internal ports (12Gb/s) PCI-E 3.0 x8, 122HDD; HBA
TPM	<u>AOM-TPM-9671H-S</u>	1	TPM 1.2, horizontal form factor, provisioned for server
	<u>AOM-TPM-9670H-S</u>	1	TPM 2.0, horizontal form factor, provisioned for server