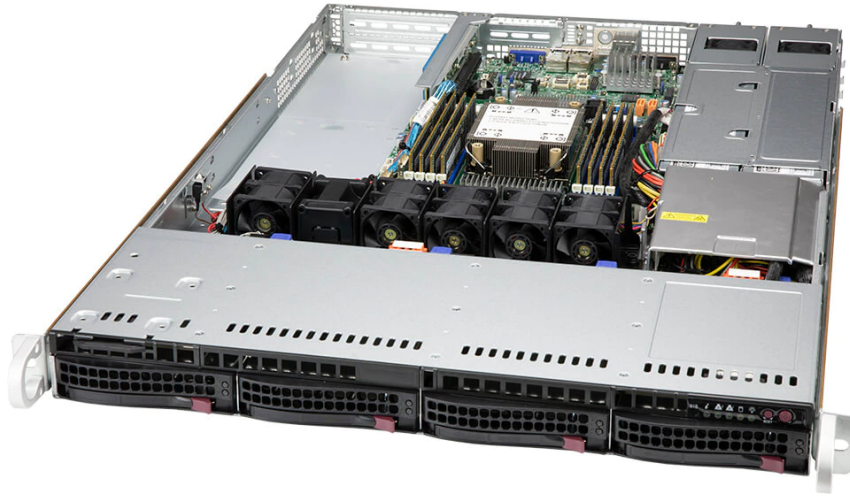


# UP SuperServer SYS-510P-WTR

**NEW**

## Key Applications

- Virtualization
- Cloud Computing
- Enterprise Server
- Data Center Optimized

## Key Features

1. Single Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable processors. Up to 270W TDP.
2. 8 DIMMs; Supports 3DS DDR4-3200: RDIMM/LRDIMM/Intel® DCPMM
3. 2 PCI-E 4.0 x16 (FHFL) slots, 1 PCI-E 4.0 x16 (LP) slot
4. Intel® Ethernet Controller X550 2x 10GbE RJ45
5. 4x hot-swap 3.5" Hybrid SATA3/NVMe drive bays, SAS3 with additional SAS controller card; Onboard 1x NVMe/SATA M.2
6. Redundant Platinum 500W Power Supply

# Specifications

## Product SKUs

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

## Motherboard

### Super X12SPW-TF

## Processor

- CPU**
- Single Socket P+ (LGA 4189)
  - Support Intel® 3rd Gen 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

- SATA**
- SATA3 (6Gbps); RAID 0/1/5/10 support

- NVMe**
- NVMe; 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**
- 3 USB port(s) (2 headers; 1 Type A)
  - 4 USB 3.2 Gen 1 port(s) (2 headers; 2 rear)
  - 2 USB 2.0 port(s) (2 rear)

- Video**
- 1 VGA 2 port(s)

- Serial Port**
- 2 COM Port(s) (1 header; 1 rear)

## Chassis

- Form Factor**
- 1U Rackmount

- Model**
- CSE-815TS-R504WBP6

## Dimensions and Weight

- Height**
- 1.7" (43mm)

- Width**
- 17.2" (437mm)

- Depth**
- 25.6" (650mm)

- Package**
- 8.5" (H) x 23.5" (W) x 33.7" (D)

- Weight**
- Net Weight: 24 lbs (10.89 kg)
  - Gross Weight: 48 lbs (21.77 kg)

- Available Color**
- Black

## Front Panel

- Buttons**
- Power On/Off
  - System Reset
  - 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**
- 4x 3.5" NVMe/SATA drive bays (4x 3.5" NVMe hybrid)

- M.2**
- 1x PCI-E 3.0 x 4 and SATA
  - M-key, 2280, 22110

- Peripheral Bays**
- 2x 2.5" drive bays

## System Cooling

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

## Power Supply

AC-DC/DC-DC 500W, Platinum efficiency, AC inlet: C14,RoHS

- Total Output Power**
- 500W

- Dimension (W x H x L)**
- 54.5 x 40.25 x 320 mm

- +12V**
- Max: 42A / Min: 0.5A

- 5V SB**
- Max: 3A / Min: 0A

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<b>DOM</b>	<ul style="list-style-type: none"> <li>2 SuperDOM (Disk on Module) port with built-in power</li> </ul>
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System BIOS

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<b>BIOS Type</b>	<ul style="list-style-type: none"> <li>AMI 32MB SPI Flash EEPROM</li> </ul>
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Management

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<b>Software</b>	<ul style="list-style-type: none"> <li>IPMI2.0</li> <li>Redfish API</li> <li>SSM</li> <li>Intel® Node Manager</li> <li>SPM</li> <li>KVM with dedicated LAN</li> <li>SUM</li> <li>NMI</li> </ul>
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<b>Power Configurations</b>	<ul style="list-style-type: none"> <li>ACPI/APM Power Management</li> </ul>
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PC Health Monitoring

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<b>CPU</b>	<ul style="list-style-type: none"> <li>7+1 Phase-switching voltage regulator</li> <li>Monitors for CPU Cores, Chipset Voltages, Memory</li> </ul>
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<b>FAN</b>	<ul style="list-style-type: none"> <li>Fans with tachometer monitoring</li> <li>Pulse Width Modulated (PWM) fan connectors</li> <li>Status monitor for speed control</li> </ul>
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<b>Temperature</b>	<ul style="list-style-type: none"> <li>Monitoring for CPU and chassis environment</li> <li>Thermal Control for fan connectors</li> </ul>
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<b>Output Type</b>	<ul style="list-style-type: none"> <li>Gold Finger Connector</li> </ul>
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<b>Certification</b>		<b>Platinum Level</b>
		<b>[ Test Report ]</b>

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Operating Environment

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<b>Environmental Spec.</b>	<ul style="list-style-type: none"> <li>Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F)</li> <li>Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)</li> <li>Operating Relative Humidity: 8% to 90% (non-condensing)</li> <li>Non-operating Relative Humidity: 5% to 95% (non-condensing)</li> </ul>
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## Parts List

### Parts List - (Items Included)

	Part Number	Qty	Description
<b>Motherboard / Chassis</b>	MBD-X12SPW-TF	1	Super X12SPW-TF Motherboard
	CSE-815TS-R504WBP6	1	1U Chassis
<b>Backplane</b>	BPN-SAS3-815TQ-N4	1	4-port 1U SAS3 12Gbps Hybrid backplane, support up to 4x 3.5-inch SAS3/SATA3/NVMe Storage Devices
<b>Cable 1</b>	CBL-SAST-0699	1	MINI SAS HD-4 SATA,12G,INT,75/75/90/90CM,75CM SB,28/30AWG,Ro
<b>FAN 1</b>	FAN-0141L4	1	40x40x56 mm 20.5K RPM / 17.6K RPM Counter-rotating Fan
<b>Manual</b>	MNL-2266-QRG	1	510P-WT/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-504P-1R2	2	1U Redundant 500W/600W, Platinum efficiency, AC inlet: C14,RoHS
<b>*Power Distributor</b>	PDB-PT112-S2424	1	WIO X11 Support,PDB-PT112-S2424 is based on PDB-PT112-2424
<b>*Cable 2</b>	CBL-0335L	1	FRONT CTL CABLE 20 PIN TO 20 PIN W/TUBE,70CM,PBF
<b>*Cable 3</b>	CBL-PWCD-0160-IS	2	PWCD,US,NEMA5-15P TO IEC60320 C13,6FT,16AWG,RoHS/REACH
<b>*Fan Holder</b>	CSE-PT0135	1	FAN HOLDER FOR SIX 40X56MM COUNTER ROTATING FANS
<b>*Peripheral Drive1</b>	CSE-PT93L-B	1	Black DVD dummy cover for SC813, 813M, 815, PBF-RoHS
<b>*FAN 2</b>	FAN-0141L4	4	40x40x56 mm 20.5K RPM / 17.6K RPM Counter-rotating Fan
<b>*Front Panel</b>	FPB-FP815U	1	815 UIO front control board (U)
<b>*Parts</b>	MCP-120-00030-0N	1	Blank LP L-bracket (1 raw of capsule hole)
<b>*Parts</b>	MCP-120-00053-0N	2	Blank FH L bracket w/o SCSI cutout for SC825,836,846,743
<b>*Drive Tray(s)</b>	MCP-220-00075-0B	4	Black gen 5.5 hot-swap 3.5" 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-250-81502-0N	1	SC815 Redundant Power Distributor Cover
<b>*Rail Set</b>	MCP-290-00054-0N	1set	Rail set, quick/quick, optional for 1U 17.2
<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-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>3.5" to 2.5" Converter Tray(s)</b>	MCP-220-00043-0N • <a href="#">eStore</a>	-	Hot-swap Gen-4 3.5" to 2.5" HDD tray, Black
<b>3.5" to 2.5" NVMe Drive Tray(s)</b>	MCP-220-00138-0B • <a href="#">eStore</a>	-	Tool-less Hot-swap Gen-5.5 NVMe 3.5" to 2.5" drive tray, Orange tab, Black

<b>Add-on Card for additional M.2</b>	<a href="#">AOC-SLG3-2H8M2</a>	-	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)	1	CacheVault for Broadcom 3908 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>DVD-ROM / DVD-RW</b>	DVM-PLDS-DVDRW-SBT5	1	PHILIPS slim DVD-RW SATA drive
	DVM-TEAC-DVD-SBT5	1	TEAC slim DVD-ROM SATA drive
<b>DVD-ROM Accessory</b>	MCP-220-81502-0N •eStore + 1pc CBL-0099 •eStore (max 1pc)	1	Slim SATA DVD mounting kit
<b>Front Bezel</b>	CSE-PTFB-813-02B	1	Black Front Bezel w/ Round Venting Holes
	CSE-PTFB-813LB	1	Black Front Bezel
<b>Hot-swap 2.5" kit (DVD slot)</b>	MCP-220-81506-0N •eStore + 1pc CBL-0099 •eStore (max 1pc)	1	Single 2.5" SAS3 (12Gb/s) hot swap in slim DVD form factor
<b>Hot-swap 2.5" kit (FDD slot)</b>	MCP-220-81504-0N •eStore	1	Single 2.5" SAS3 (12Gb/s) hot swap in slim FDD form factor
<b>Inlet Thermal Sensor</b>	MCP-280-00034-0N	1	Universal Thermal sensor kit with 40cm I2C cable
<b>Intel VROC RAID Key for NVMe</b>	<a href="#">AOC-VROCINTMOD</a>	1	Intel SSD Only Upgrade module; RAID 0/1/10/5
	<a href="#">AOC-VROCPREMOD</a>	1	Premium Upgrade module (Intel + 3rd party Vendor SSD); RAID 0/1/10/5
	<a href="#">AOC-VROCSTNMOD</a>	1	Standard Upgrade module (Intel + 3rd party Vendor SSD); RAID 0/1/10
<b>NVMe Cable (Drive Bay 0-1)</b>	CBL-SAST-1149-85	1	SLIMLINE x8 (RE) to 2x Oculink x4,INT, 49CM, 85 OHM
<b>NVMe Cable (Drive Bay 2-3)</b>	CBL-SAST-1154-85	1	SLIMLINE x8 (RE) to 2x Oculink x4,INT, 54CM, 85 OHM,RoH
<b>Software</b>	<a href="#">SFT-DCMS-Single</a>	1	DataCenter Management Package (per node license)
<b>Storage Control Card and Cable(s)</b>	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
	<a href="#">AOC-S3108L-H8iR-16DD</a>	1	Standard LP, 8 Internal ports (12Gb/s) PCI-E 3.0 x8, 16HDD; RAID 0, 1, 5, 6, 10, 50, 60
	<a href="#">AOC-S3008L-L8I</a>	1	Standard LP, 8 internal ports (12Gb/s) PCI-E 3.0 x8, 63HDD; RAID 0, 1, 10
<b>Storage Control Card and Cable(s) (HBA)</b>	<a href="#">AOC-S3808L-L8IT</a> + 1x CBL-SAST-1275A-100	1	Standard LP, 8 internal ports (12Gb/s) PCI-E 4.0 x8, 122HDD; HBA
	<a href="#">AOC-S3008L-L8E</a>	1	Standard LP, 8 internal ports (12Gb/s) PCI-E 3.0 x8, 122HDD; HBA
<b>TPM</b>	AOM-TPM-9670V-O	1	TPM 2.0, vertical form factor, provisioned for server
	AOM-TPM-9671V-O	1	TPM 1.2, vertical form factor, provisioned for server