

# UP SuperServer SYS-510P-WT



## Key Applications

Virtualization  
Cloud Computing  
Enterprise Server  
Data Center Optimized

## Key Features

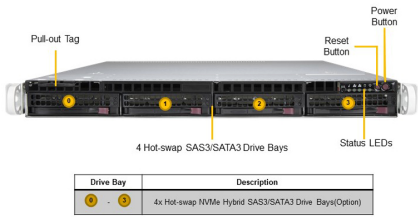
- Single Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable processors. Up to 270W TDP.;
- 8 DIMMs; Supports 3DS DDR4-3200: RDIMM/LRDIMM/Intel® DCPMM;
- 2 PCI-E 4.0 x16 (FHFL) slots, 1 PCI-E 4.0 x16 (LP) slot;
- Intel® Ethernet Controller X550 2x 10GbE RJ45;
- 4x hot-swap 3.5" Hybrid SATA3/NVMe drive bays, SAS3 with additional SAS controller card; Onboard 1x NVMe/SATA M.2;
- Single Platinum 600W Power Supply;

[More details here](#)

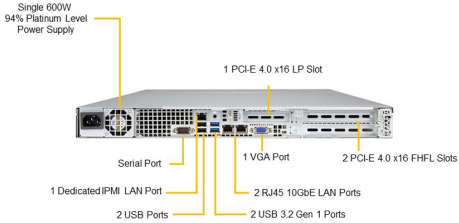


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|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Form Factor</b>      | 1U Rackmount<br>Enclosure: 437 x 43 x 650mm (17.2" x 1.7" x 25.6")<br>Package: 596.9 x 215.9 x 855.98mm (23.5" x 8.5" x 33.7")                                                                                                                                                                                                                                      |
| <b>Processor</b>        | Support Intel® 3rd Gen Xeon® Scalable Processors<br>Single Socket LGA 4189 (Socket P+) supported<br>TDP up to 270W;                                                                                                                                                                                                                                                 |
| <b>System Memory</b>    | 8 DIMM slots<br>ECC RDIMM, DDR4-3200MHz<br>ECC LRDIMM, DDR4-3200MHz<br>Intel® DCPMM, DDR4-3200MHz                                                                                                                                                                                                                                                                   |
| <b>Drive Bays</b>       | 4x 3.5" NVMe/SATA drive bays; 4x 3.5" NVMe hybrid;                                                                                                                                                                                                                                                                                                                  |
| <b>Expansion Slots</b>  | Slot 1: PCI-E 4.0 x16 FHFL<br>Slot 2: PCI-E 4.0 x16 FHFL<br>Slot 3: PCI-E 4.0 x16 LP                                                                                                                                                                                                                                                                                |
| <b>On-Board Devices</b> | SATA: SATA3 (6Gbps); RAID 0/1/5/10 support<br>NVMe: NVMe; RAID 0/1/5/10 support (*VROC HW key is required)<br>Chipset: Intel® C621A<br>Network Connectivity: 2x 10GbE BaseT with Intel® X550<br>IPMI:<br>Support for Intelligent Platform Management Interface v.2.0<br>IPMI 2.0 with virtual media over LAN and KVM-over-LAN support                               |
| <b>Input / Output</b>   | SATA: 10 SATA (6Gbps) port(s)<br>LAN: 2 RJ45 10GBase-T LAN ports<br>1 RJ45 Dedicated IPMI LAN port<br>USB: 2 USB 2.0 port(s) (2 rear)<br>4 USB 3.2 Gen 1 port(s) (2 rear; 2 headers)<br>3 USB port(s) (1 Type A; 2 headers)<br>Video: 1 VGA 2 port(s)<br>Serial Port: 2 COM Port(s) (1 header; 1 rear)<br>DOM: 2 SuperDOM (Disk on Module) port with built-in power |

(Front View – System)



(Rear View – System)



|                       |                                                                                                                                                                                                                                                                                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cooling System        | 5x (4cm x 4cm x 5.6cm) heavy duty fan(s)<br>5x (4cm x 4cm x 5.6cm) heavy duty fan(s)                                                                                                                                                                                                                                      |
| Power Supply          | 1U 600W Multi Output Power Supply PMbus<br>Dimension (W x H x L): 76 x 40.4 x 279.4 mm                                                                                                                                                                                                                                    |
| System BIOS           | BIOS Type: AMI 32MB SPI Flash EEPROM                                                                                                                                                                                                                                                                                      |
| Management            | NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; IPMI2.0                                                                                                                                                                                                                                     |
| PC Health Monitoring  | CPU: Monitors for CPU Cores, Chipset Voltages, Memory<br>7+1 Phase-switching voltage regulator<br>FAN: Fans with tachometer monitoring<br>Status monitor for speed control<br>Pulse Width Modulated (PWM) fan connectors<br>Temperature: Monitoring for CPU and chassis environment<br>Thermal Control for fan connectors |
| Dimensions and Weight | Height: 1.7" (43 mm)<br>Width: 17.2" (437 mm)<br>Depth: 25.6" (650 mm)<br>Gross Weight: 46 lbs (20.87 kg)<br>Net Weight: 22 lbs (9.98 kg)<br>Packaging: 8.5" (H) x 23.5" (W) x 33.7" (D)<br>Available Color: Black                                                                                                        |
| Operating Environment | Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F)<br>Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)<br>Operating Relative Humidity: 8% to 90% (non-condensing)<br>Non-operating Relative Humidity: 5% to 95% (non-condensing)                                                                                   |
| Motherboard           | <a href="#">Super X12SPW-TF</a>                                                                                                                                                                                                                                                                                           |
| Chassis               | CSE-815TS-605WBP2                                                                                                                                                                                                                                                                                                         |

Parts List - (Items Included)

|                       | Part Number       | Qty  | Description                                                                                       |
|-----------------------|-------------------|------|---------------------------------------------------------------------------------------------------|
| Motherboard / Chassis | MBD-X12SPW-TF     | 1    | Super X12SPW-TF Motherboard                                                                       |
|                       | CSE-815TS-605WBP2 | 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-SAST-0699     | 1    | MINI SAS HD-4 SATA,12G,INT,75/75/90/90CM,75CM SB,28/30AWG,Ro                                      |
| FAN 1                 | FAN-0141L4        | 1    | 40x40x56 mm 20.5K RPM / 17.6K RPM Counter-rotating Fan                                            |
| Manual                | MNL-2266-QRG      | 1    | 510P-WT/WTR Quick Reference Guide                                                                 |
| Riser Card            | RSC-W-66G4        | 1    | 1U LHS WIO Riser card with two PCI-E 4.0 x16 slots,HF,RoHS                                        |
| Riser Card            | RSC-WR-6          | 1    | 1U RHS WIO Riser card with one PCI-E 4.0 x16 slot,HF,RoHS                                         |
| 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-605P-1H       | 1    | 1U 600W Multi Output Power Supply PMbus                                                           |
| *Cable 2              | CBL-0335L         | 1    | FRONT CTL CABLE 20 PIN TO 20 PIN W/TUBE,70CM,PBF                                                  |
| *Cable 3              | CBL-PWCD-0160-IS  | 1    | PWCD,US,NEMA5-15P TO IEC60320 C13,6FT,16AWG,RoHS/REACH                                            |
| *Fan Holder           | CSE-PT0135        | 1    | FAN HOLDER FOR SIX 40X56MM COUNTER ROTATING FANS                                                  |
| *Peripheral Drive1    | CSE-PT93L-B       | 1    | Black DVD dummy cover for SC813, 813M, 815, PBF-RoHS                                              |
| *FAN 2                | FAN-0141L4        | 4    | 40x40x56 mm 20.5K RPM / 17.6K RPM Counter-rotating Fan                                            |
| *Front Panel          | FPB-FP815U        | 1    | 815 UIO front control board (U)                                                                   |
| *Parts                | MCP-120-00030-0N  | 1    | Blank LP L-bracket (1 raw of capsule hole)                                                        |
| *Parts                | MCP-120-00053-0N  | 2    | Blank FH L bracket w/o SCSI cutout for SC825,836,846,743                                          |
| *Drive Tray(s)        | MCP-220-00075-0B  | 4    | Black gen 5.5 hot-swap 3.5" HDD tray                                                              |
| *Rear Window          | MCP-240-00097-0N  | 1    | WIO rear window for SC113,SC116, SC815 Single PWS                                                 |
| *Rail Set             | MCP-290-00054-0N  | 1set | Rail set, quick/quick, optional for 1U 17.2                                                       |
| *Air Shroud           | MCP-310-19001-0N  | 1    | SC815/113/116 Intel DP X9, X8 PC air shroud,1368x13/12x13MB                                       |
| *Fan Holder           | 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                                                                             |
|-----------------------------------------|-----------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------|
| 3.5" to 2.5" Converter Tray(s)          | MCP-220-00043-0N <a href="#">eStore</a>                                                 | -   | 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 <a href="#">eStore</a>                                                 | -   | 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          | <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            |
| CacheVault                              | BTR-TFM8G-LSICVM02 + MCP-240-00203-0N (For S3108)                                       | 1   | CacheVault for Broadcom 3108 with SuperCap mounting bracket for PCI-E location          |
|                                         | BTR-CV3916-1U1 (For S3908)                                                              | 1   | CacheVault for Broadcom 3908 with SuperCap mounting in 1U 40x56 fan tray                |
|                                         | BTR-CV3108-1U1 (For S3108)                                                              | 1   | CacheVault for Broadcom 3108 with SuperCap mounting in 1U 40x56 fan tray                |
|                                         | BTR-CVPM05 + MCP-240-00203-0N (For S3908)                                               | 1   | CacheVault for Broadcom 3908 with SuperCap mounting bracket for PCI-E location          |
| Cooling Fan                             | FAN-0141L4 <a href="#">eStore</a>                                                       | 1   | 40x40x56 mm, 20.5K RPM / 17.6K RPM, Counter-rotating Fan                                |
| DVD-ROM / DVD-RW                        | DVM-TEAC-DVD-SBT5                                                                       | 1   | TEAC slim DVD-ROM SATA drive                                                            |
|                                         | DVM-TEAC-DVDRW-SBT5                                                                     | 1   | PHILIPS slim DVD-RW SATA drive                                                          |
| DVD-ROM Accessory                       | MCP-220-81502-0N <a href="#">eStore</a> + 1pc CBL-0099 <a href="#">eStore</a> (max 1pc) | 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 <a href="#">eStore</a> + 1pc CBL-0099 <a href="#">eStore</a> (max 1pc) | 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 <a href="#">eStore</a>                                                 | 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            | <a href="#">AOC-VROCSTNMOD</a>                                                          | 1   | Standard Upgrade module (Intel + 3rd party Vendor SSD); RAID 0/1/10                     |
|                                         | <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                    |
| NVMe Cable (Drive Bay 0-1)              | CBL-SAST-1149-85                                                                        | 1   | SLIMLINE x8 (RE) to 2x Oculink x4,INT, 49CM, 85 OHM                                     |
| NVMe Cable (Drive Bay 2-3)              | CBL-SAST-1154-85                                                                        | 1   | SLIMLINE x8 (RE) to 2x Oculink x4,INT, 54CM, 85 OHM,RoH                                 |
| Software                                | SFT-DCMS-Single                                                                         | 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 |
|                                         | <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               |
| Storage Control Card and Cable(s) (HBA) | <a href="#">AOC-S3808L-L8iIT</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                        |
| TPM                                     | AOM-TPM-9671V-S-O                                                                       | 1   | TPM 1.2, vertical form factor, provisioned for server                                   |
|                                         | AOM-TPM-9670V-S-O                                                                       | 1   | TPM 2.0, vertical form factor, provisioned for server                                   |