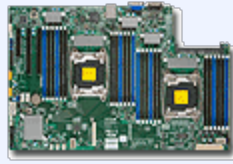


SuperStorage Server 6048R-E1CR60L (Complete System On



Integrated Board



Super X10DSC+

Due to the complexity of integration, this product is sold as completely assembled systems only (with minimum 30 HDDs and 1 NIC or SIOM card).

Key Features

1. Dual socket R3 (LGA 2011) supports Intel® Xeon® processor E5-2600 v4[†]/ v3 family; QPI up to 9.6GT/s
2. Up to 3TB[†] ECC 3DS LRDIMM , up to DDR4- 2400[†]MHz ; 24x DIMM slots
3. 2 PCI-E 3.0 x16, 1 PCI-E 3.0 x8
4. SIOM for flexible networking options
5. 60x 3.5" Hot-swap SAS3/SATA3 drive bays; 2x 2.5" rear Hot-swap SATA3 drive bays; optional 6x NVMe bays
6. LSI 3008 SAS3 IT mode controller
7. Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN
8. 5x 8cm hot-swap redundant PWM fans
9. 2000W Redundant Power Supplies Titanium Level (96%) Certified
10. Front 3.5" LCD display

Note: Image above may show a varied configuration or optional parts, Please refer to parts list for standard parts included.

Specifications

Product SKUs

| | |
|-------------------|-------------------------------------|
| SSG-6048R-E1CR60L | ▪ SuperServer 6048R-E1CR60L (Black) |
|-------------------|-------------------------------------|

Motherboard

Super X10DSC+

Processor/Cache

| | |
|-----|--|
| CPU | ▪ Intel® Xeon® processor E5-2600 v4 [†] / v3 family (up to 145W TDP) * ▪ Dual Socket R3 (LGA 2011) |
|-----|--|

| | |
|---------------|---|
| Cores / Cache | ▪ Up to 22 Cores [†] / Up to 55MB [†] Cache |
|---------------|---|

| | |
|------------|----------------------|
| System Bus | ▪ QPI up to 9.6 GT/s |
|------------|----------------------|

| | |
|------|--|
| Note | [†] BIOS version 2.0 or above is required |
|------|--|

| | |
|------|--|
| Note | * Please contact Supermicro Technical Support for additional information about frequency optimized CPUs and specialized system optimization. |
|------|--|

Chassis

| | |
|-------------|---------------------|
| Form Factor | ▪ 4U Rackmount |
| Model | ▪ CSE-946STS-R2K05P |

Dimensions and Weight

| | |
|------------------|---|
| Width | ▪ 17.2" (437mm) |
| Height | ▪ 7" (178mm) |
| Depth | ▪ 30.2" (767mm) ▪ With Cable Management Arm Installed: 35.2" (895mm) |
| Available Colors | ▪ Black |

Front Panel

| | |
|---------|--|
| Buttons | ▪ Power On/Off button ▪ System Reset button |
| LEDs | ▪ Power status LED ▪ Hard drive activity LED ▪ 2x Network activity LEDs ▪ System Overheat LED ▪ Power fail LED ▪ 3.5" TFT LCD panel |

System Memory

| | |
|-----------------|---|
| Memory Capacity | <ul style="list-style-type: none">24x 288-pin DDR4 DIMM slotsUp to 3TB[†] ECC 3DS LRDIMM, 768 ECC RDIMM |
| Memory Type | <ul style="list-style-type: none">2400[†]/2133/1866/1600MHz ECC DDR4 SDRAM 72-bit |
| DIMM Sizes | <ul style="list-style-type: none">RDIMM: 32GB, 16GB, 8GB, 4GBLRDIMM: 64GB, 32GB3DS LRDIMM: 128GB |
| Memory Voltage | <ul style="list-style-type: none">1.2 V |
| Error Detection | <ul style="list-style-type: none">Corrects single-bit errors |

On-Board Devices

| | |
|---------------------|--|
| Chipset | <ul style="list-style-type: none">Intel® C612 chipset |
| SAS | <ul style="list-style-type: none">LSI 3008 SAS3 IT mode |
| IPMI | <ul style="list-style-type: none">Support for Intelligent Platform Management Interface v.2.0IPMI 2.0 with virtual media over LAN and KVM-over-LAN supportASPEED AST2400 BMC |
| Network Controllers | <ul style="list-style-type: none">SIOM support for flexible networking options |
| Graphics | <ul style="list-style-type: none">ASPEED AST2400 BMC |

Input / Output

| | |
|----------------------|--|
| USB | <ul style="list-style-type: none">3x USB 3.0 ports (2 rear + 1 Type A) |
| VGA | <ul style="list-style-type: none">1x VGA port |
| Serial Port / Header | <ul style="list-style-type: none">1x Fast UART 16550 port / 1 Header |

LCD

- Full-Color display with 320x480 pixels
- Real-time system status from IPMI
- Easy read graphical User Interface

Expansion Slots

| | |
|-------------|--|
| PCI-Express | <ul style="list-style-type: none">2x PCI-E 3.0 x16 slots1x PCI-E 3.0 x8 slots |
|-------------|--|

Drive Bays

| | |
|----------|--|
| Hot-swap | <ul style="list-style-type: none">60x 3.5" Hot-swap SAS3/SATA3 drive bays2x 2.5" rear Hot-swap SATA3 drive bays |
| Optional | <ul style="list-style-type: none">6x NVMe bays (optional) |

Backplane

SAS3/SATA3 single expander per backplane

System Cooling

| | |
|------|--|
| Fans | <ul style="list-style-type: none">2x 80mm hot-swap rear exhaust cooling fansRedundant cooling |
|------|--|

Power Supply with Digital Switching Control

2000W Titanium Level (96%) High-efficiency Redundant Power Supplies

| | |
|--------------------|--|
| Total Output Power | <ul style="list-style-type: none">1000W/1800W/1980W/2000W |
| AC Input | <ul style="list-style-type: none">100-120 V, 50-60 Hz200-220 V, 50-60 Hz220-230 V, 50-60 Hz230-240 V, 50-60 Hz |
| +12V | <ul style="list-style-type: none">Max: 83.3A & Min: 0A (100Vac-120Vac)Max: 150A & Min: 0A (200Vac-220Vac)Max: 165A & Min: 0A (220Vac-230Vac)Max: 166.7A & Min: 0A (230Vac-240Vac) |
| 12V SB | <ul style="list-style-type: none">Max: 2.1A / Min: 0A |

Certification



Titanium Level
(Cert. in progress)

System BIOS

| | |
|---------------|---|
| BIOS Type | <ul style="list-style-type: none">128Mb SPI Flash EEPROM with AMI BIOS |
| BIOS Features | <ul style="list-style-type: none">Plug and Play (PnP)APM 1.2PCI 2.2ACPI 1.0 / 2.0USB Keyboard supportSMBIOS 2.3UEFI |

Operating Environment / Compliance

| | |
|---------------------|--|
| RoHS | <ul style="list-style-type: none">RoHS Compliant |
| Environmental Spec. | <ul style="list-style-type: none">Operating Temperature: 10°C to 35°C (50°F to 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 - (Items Included) | | | |
|-------------------------------|--------------------|-----|--|
| | Part Number | Qty | Description |
| Motherboard / Chassis | MBD-X10DSC+ | 1 | Super X10DSC+ Motherboard |
| | CSE-946STS-R2K05P | 1 | 4U Chassis |
| Backplane | BPN-SAS3-826TQ-B2B | 1 | 2-Port 12Gbps Backplane for 2x2.5 |
| Backplane | BPN-SAS3-946SEL1 | 2 | 30bay Top-load SAS3 12Gbps Single Expander BPN for 946S (use 2 for 60-bay) |
| Cable 1 | CBL-PWEX-0862 | 1 | Powerlug to 5.7 Radsok, black 12AWG, 53cm for SC946S |
| Cable 2 | CBL-SAST-0855 | 2 | SLIMLINE SAS, INT, 60CM, 15D-30F-15D, 32AWG |
| Cable 3 | CBL-PWEX-0861 | 1 | Powerlug to 5.7 Radsok, black 12AWG, 32cm for SC946S |
| Cable 4 | CBL-PWEX-0863 | 1 | Powerlug to 5.7 Radsok, yel 12AWG, 32cm for SC946S |
| Cable 5 | CBL-PWEX-0864 | 1 | Powerlug to 5.7 Radsok, yel 12AWG, 53cm for SC946S |
| Cable 6 | CBL-PWCD-0578 | 2 | Power Cord Type IEC (C14 to C13) 3 ft (14AWG), 15A, 250V,HF,RoHS/REACH,PBF |
| Cable 7 | CBL-SAST-0833 | 2 | SLIMLINE SAS, INT, 55MM, 32AWG |
| Cable 8 | CBL-CDAT-0728 | 2 | 4 Pin to 4 Pin I2C cable, 65cm, 26AWG, 4 wires, pinout 1-1, for vpp header(jnvi2c1),RoHS/REACH |
| Label | LBL-0108 | 1 | CAUTION LABEL FOR REDUNDANT PWR SYSTEMS |
| Heatsink / Retention | SNK-P0048PS | 2 | 2U Passive CPU Heat Sink for X9, X10 Generation Systems Equipped w/ a Narrow ILM MB |
| Power Supply | PWS-2K05A-1R | 2 | 1U 2000W Redundant Titanium Power Supply W/PMbus 73.5x40x265mm,RoHS/REACH |
| Add On Card | AOC-S3008L-L8E-O-P | 1 | 12Gbps SAS3/HBA/ 2 internal HD connectors/STD Gen3 PCI/122 HD support |

| Optional Parts List | | | |
|------------------------|------------------------------|-----|--|
| | Part Number | Qty | Description |
| 3108 Cache Protection | BTR-CV3108-U1 | - | LSI 3108 CacheVault kit (ROHS, Reach) |
| Onsite Service Program | OS4HR3/2/1 | - | 3/2/1-year onsite 24x7x4 service |
| Onsite Service Program | OSNBD3/2/1 | - | 3/2/1-year onsite NBD service |
| Software | SFT-OOB-LIC | 1 | OOB Management Package (per node license) |
| Software | SFT-DCMS-Single | 1 | DataCenter Management Package (per node license) |
| SIOM Network Card(s) | AOC-MGP-I2 | - | SIOM 2-port GbE, Intel i350-AM2 |
| | AOC-MGP-I4 | - | SIOM 4-port GbE, Intel i350-AM4 |
| | AOC-MTGN-I2S | - | SIOM 2-port 10G SFP+, Intel 82599ES |
| | AOC-MTG-I4S | - | SIOM 4-port 10G SFP+, Intel XL710 |