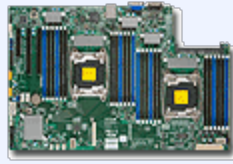


SuperStorage Server 6048R-E1CR60N (Complete System On



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 3108 SAS3 HW RAID 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-E1CR60N	▪ SuperServer 6048R-E1CR60N (Black)
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Motherboard

Super X10DSC+

Processor/Cache

CPU	▪ Intel® Xeon® processor E5-2600 v4 [†] / v3 family (up to 145W TDP) * ▪ Dual Socket R3 (LGA 2011)
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Cores / Cache	▪ Up to 22 Cores [†] / Up to 55MB [†] Cache
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System Bus	▪ QPI up to 9.6 GT/s
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Note	[†] BIOS version 2.0 or above is required
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Note	* Please contact Supermicro Technical Support for additional information about frequency optimized CPUs and specialized system optimization.
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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 slots Up 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, 4GB LRDIMM: 64GB, 32GB 3DS 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"> SAS3 (12Gbps) via LSI 3108 (optional SuperCap) HW RAID 0, 1, 5, 6, 10, 50, 60
IPMI	<ul style="list-style-type: none"> Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support ASPEED 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	<ul style="list-style-type: none"> Full-Color display with 320x480 pixels Real-time system status from IPMI Easy read graphical User Interface
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Expansion Slots	
PCI-Express	<ul style="list-style-type: none"> 2x PCI-E 3.0 x16 slots 1x PCI-E 3.0 x8 slots

Drive Bays	
Hot-swap	<ul style="list-style-type: none"> 60x 3.5" Hot-swap SAS3/SATA3 drive bays 2x 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 fans Redundant 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 Hz 200-220 V, 50-60 Hz 220-230 V, 50-60 Hz 230-240 V, 50-60 Hz
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+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)
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12V SB	<ul style="list-style-type: none"> Max: 2.1A / Min: 0A
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Certification	  Titanium Level (Cert. in progress)
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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 1.2 PCI 2.2 ACPI 1.0 / 2.0 USB Keyboard support SMBIOS 2.3 UEFI

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
Add-on Card / Module	AOM-S3108M-H8L-P	1	sas3 roc mez for X10dsc
Backplane	BPN-SAS3-946SEL1	2	30bay Top-load SAS3 12Gbps Single Expander BPN for 946S (use 2 for 60-bay)
Backplane	BPN-SAS3-826TQ-B2B	1	2-Port 12Gbps Backplane for 2x2.5
Cable 1	CBL-0481L	2	81CM 30AWG SATA S-S cable
Cable 2	CBL-PWCD-0578	2	Power Cord Type IEC (C14 to C13) 3 ft (14AWG), 15A, 250V, HF, RoHS/REACH, PBF
Cable 3	CBL-CDAT-0728	2	4 Pin to 4 Pin I2C cable, 65cm, 26AWG, 4 wires, pinout 1-1, for vpp header(jnvi2c1), RoHS/REACH
Cable 4	CBL-PWEX-0864	1	Powerlug to 5.7 Radsok, yel 12AWG, 53cm for SC946S
Cable 5	CBL-PWEX-0863	1	Powerlug to 5.7 Radsok, yel 12AWG, 32cm for SC946S
Cable 6	CBL-SAST-0833	2	SLIMLINE SAS, INT, 55MM, 32AWG
Cable 7	CBL-PWEX-0861	1	Powerlug to 5.7 Radsok, black 12AWG, 32cm for SC946S
Cable 8	CBL-SAST-0855	2	SLIMLINE SAS, INT, 60CM, 15D-30F-15D, 32AWG
Cable 9	CBL-PWEX-0862	1	Powerlug to 5.7 Radsok, black 12AWG, 53cm for SC946S
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

Optional Parts List

	Part Number	Qty	Description
3108 Cache Protection	BTR-CV3108-U1	-	LSI 3108 CacheVault kit (ROHS, Reach)
Onsite Service Program	QS4HR3/2/1	-	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