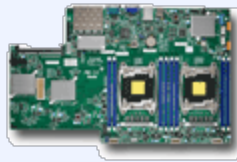


SuperStorage Server 6048R-E1CR90L (Complete System On



Integrated Board



X10DSC-TP4S

Due to the complexity of integration, this product is sold as completely assembled systems only (including but not limited to CPUs, memory, and 45 HDDs). Please contact your Supermicro sales rep for special requirements.

[▶ Drivers & Utilities](#)
[▶ BIOS](#)
[▶ IPMI](#)
[▶ Tested Memory](#)
[▶ Manuals](#)
[▶ OS Certification Matrix](#)
[▶ Drive Options](#)

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

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 1TB[†] ECC 3DS LRDIMM , up to DDR4- 2400[†]MHz ; 8x DIMM slots
3. SIOM card for multiple IO options
4. 90x 3.5" Hot-swap SAS3/SATA3 drive bays; 2x 2.5" rear Hot-swap SATA drive bays
5. 2 Onboard LSI 3008 SAS3 controllers
6. Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN
7. 5x 8cm hot-swap redundant PWM fans
8. 4x 1000W Redundant Power Supplies Titanium Level (96%) Certified

Specifications

Product SKUs	
SSG-6048R-E1CR90L	▪ SuperServer 6048R-E1CR90L (Black)
Motherboard	
Super X10DSC-TP4S	
Processor/Cache	
CPU	<ul style="list-style-type: none"> ▪ 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-946E1C-R3KB
Dimensions and Weight	
Width	▪ 17.6" (447mm)
Height	▪ 7" (178mm)
Depth	▪ 35.66" (906mm)
Weight	<ul style="list-style-type: none"> ▪ Gross Weight: 235 lbs (106.6 kg) ▪ Net Weight: 160 lbs (72.6 kg)
Available Colors	▪ Black
Front Panel	
Buttons	<ul style="list-style-type: none"> ▪ Power On/Off button ▪ Unit Identification (UID) button
LEDs	<ul style="list-style-type: none"> ▪ Power status LED ▪ Hard drive activity LED ▪ Network activity LEDs ▪ System information LED ▪ Power fail LED

System Memory

Memory Capacity	<ul style="list-style-type: none">8x 288-pin DDR4 DIMM slotsUp to 1TB[†] ECC 3DS LRDIMM, 256GB 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">2 Onboard LSI 3008 SAS3 controllers
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">Quad LAN with Intel® XL710 10G SFP+SIOM card for multiple IO options
Graphics	<ul style="list-style-type: none">ASPEED AST2400 BMC

Input / Output

LAN	<ul style="list-style-type: none">4 10G SFP+ LAN ports1 RJ45 Dedicated IPMI LAN port
USB	<ul style="list-style-type: none">2 USB 3.0 ports (rear)4 USB 2.0 ports (2 rear + 2 via headers)
VGA	<ul style="list-style-type: none">1 VGA port
Serial Port / Header	<ul style="list-style-type: none">1 Fast UART 16550 port / 1 Header

Drive Bays

Hot-swap	<ul style="list-style-type: none">90x 3.5" Hot-swap SAS3/SATA3 drive bays2x 2.5" rear Hot-swap SATA drive bays
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Backplane

SAS3/SATA3 single expander per backplane
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System Cooling

Fans	<ul style="list-style-type: none">5x 8cm hot-swap redundant PWM cooling fans
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Power Supply

1000W Redundant Power Supplies with PMBus	
Total Output Power	<ul style="list-style-type: none">800W/1000W
Dimension (W x H x L)	<ul style="list-style-type: none">73.5 x 40 x 185 mm
Input	<ul style="list-style-type: none">100-127Vac / 9.8 - 7A / 50-60Hz200-240Vac / 7 - 5A / 50-60Hz
+12V	<ul style="list-style-type: none">Max: 66.7A / Min: 0A (100-127Vac)Max: 83A / Min: 0A (200-240Vac)
12Vsb	<ul style="list-style-type: none">Max: 2.1A / Min: 0A
Output Type	<ul style="list-style-type: none">25 Pairs Gold Finger Connector

Certification	  UL/cUL/CB/BSMI/CE/CCC Titanium Level [Test Report]
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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 1.2PCI 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

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X10DSC-TP4S	1	Super X10DSC-TP4S Motherboard
	CSE-946E1C-R3KB	1	4U Chassis
Add-on Card / Module	AOM-SAS3-946E90-P	1	90 Bay Server Expander Board, 3 SAS3EXP48. Support 16-PHY to on board HBA for SAS3/SAS2/SATA3/SATA2
Backplane	BPN-SAS3-946BA	3	30-port SC946 SAS3 12Gbps top-loaded bottom board, support up to 30x 3.5-inch SAS3/SATA3 HDD/SSD
Backplane	BPN-SAS3-826TQ-B2B	1	2-port 2U SAS3 12Gbps backplane, support up to 2x 2.5-inch SAS3/SATA3 HDD/SSD
Cable 1	CBL-PWEX-0900	2	PWR EXT,2X4F/P4.2 TO 2X4F/P4.2,CPU 12V,17CM,16AWG
Cable 2	CBL-PWEX-0751	1	Powerlug to 5.7 Radsok, black 12AWG, 85.5cm for SC946,RoHS/REACH
Cable 3	CBL-PWEX-0753	1	Powerlug to 5.7 Radsok, yel 12AWG, 63.2cm for SC946,RoHS/REACH
Cable 4	CBL-CDAT-0716	2	4 Pin to 4 Pin I2C cable for JBOD chassis, 25cm, 26AWG,RoHS/REACH
Cable 5	CBL-PWEX-0749	1	Powerlug to 5.7 Radsok, black 12AWG, 37cm for SC946,RoHS/REACH
Cable 6	CBL-PWEX-0750	1	Powerlug to 5.7 Radsok, black 12AWG, 63.2cm for SC946,RoHS/REACH
Cable 7	CBL-PWEX-0760	1	PWR EXT,2X4F/P4.2 TO 2X4F/P4.2,CPU 12V,13CM,16AWG,RoHS/REACH
Cable 8	CBL-0047L	1	Front ctrl cable 20 PIN TO 20 PIN, PB FREE, 28AWG, 50cm
Cable 9	CBL-PWEX-0752	1	Powerlug to 5.7 Radsok, yel 12AWG, 37cm for SC946,RoHS/REACH
Cable 10	CBL-0303L	1	4 pin to 4 pin power cable, S-RA, 40CM. 20AWG
Cable 11	CBL-0481L	2	81CM 30AWG SATA S-S cable
Cable 12	CBL-PWCD-0579	4	Power Cord Type IEC (C14 to C13) 6 ft (14AWG), 15A, 250V,HF,RoHS/REACH,PBF
Cable 13	CBL-PWEX-0754	1	Powerlug to 5.7 Radsok, yel 12AWG, 85.5cm for SC946,RoHS/REACH
Cable 14	CBL-CDAT-0899	1	I2C,1X4F/P2.5 TO 1X4F/P2.5, 65CM,26AWG,BRN/BLK-SHUNT/ORG
Cable 15	CBL-SAST-0924	1	SLIMLINE SAS CABLE KIT SC946MB, SET OF 15,RoHS/REACH
Label	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
Heatsink / Retention	SNK-P0058PSC	2	2U Passive CPU Heat Sink for SC946 90-bay Server
Power Supply	PWS-1K04A-1R	4	1U CRPS Redundant 1000W Titanium (185X73.5X40mm)

Optional Parts List

	Part Number	Qty	Description
Global Services & Support	<u>OS4HR3/2/1</u>	-	3/2/1-year onsite 24x7x4 service
	<u>OSNBD3/2/1</u>	-	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)	<u>AOC-MGP-I2M</u>	-	SIOM 2-port GbE, Intel i350-AM2
	<u>AOC-MGP-I4M</u>	-	SIOM 4-port GbE, Intel i350-AM4
	<u>AOC-MTGN-I2SM</u>	-	SIOM 2-port 10G SFP+, Intel 82599ES
	<u>AOC-MTG-I4SM</u>	-	SIOM 4-port 10G SFP+, Intel XL710