

# SuperStorage Server 6048R-E1CR36N



HW SAS3 Controller Storage Expandable

## Integrated Board



Super X10DRi-T4+

## Key Features

1. Dual socket R3 (LGA 2011) supports Intel® Xeon® processor E5-2600 v3 family; QPI up to 9.6GT/s
2. Up to 1.5TB ECC DDR4 2133MHz; 24x DIMM slots
3. 2 PCI-E 3.0 x16, 3 PCI-E 3.0 x8. 1 PCI-E 2.0 x4 (in x8). Slot 3 & 4 occupied by controller and JBOD expansion port
4. Qual 10GBase-T LAN w/ Intel® X540
5. 36x 3.5" Hot-swap SAS3/SATA3 drive bays (24 front + 12 rear); 4x 2.5" internal fixed drive bays
6. SAS3 via LSI 3108 AOC (HW RAID)
7. Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN
8. 7x 80mm middle cooling fans
9. 1280W Redundant Power Supplies **Platinum Level (94%)**

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-E1CR36N** ■ SuperServer 6048R-E1CR36N (**Black**)

### Motherboard

**Super X10DRi-T4+**

### Processor/Cache

- CPU** ■ Intel® Xeon® processor E5-2600 v3 family (up to 145W TDP) \*  
■ Dual Socket R3 (LGA 2011)

- Cores / Cache** ■ Up to 18 Cores / Up to 45MB Cache

- System Bus** ■ QPI up to 9.6 GT/s

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

### System Memory

- Memory Capacity** ■ 24x 288-pin DDR4 DIMM slots  
■ Up to 1.5TB ECC LRDIMM, 768GB ECC RDIMM

### Chassis

- Form Factor** ■ 4U Rackmount

- Model** ■ **CSE-847BE1C-R1K28LPB**

### Dimensions and Weight

- Width** ■ 17.2" (437mm)

- Height** ■ 7" (178mm)

- Depth** ■ 27.5" (699mm)

- Weight** ■ Gross Weight: lbs ( kg)  
■ Net Weight: lbs ( kg)

- 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

### Expansion Slots

<b>Memory Type</b>	<ul style="list-style-type: none"> <li>2133/1866/1600MHz ECC DDR4 SDRAM 72-bit</li> </ul>
<b>DIMM Sizes</b>	<ul style="list-style-type: none"> <li>RDIMM: 32GB, 16GB, 8GB, 4GB</li> <li>LRDIMM: 64GB, 32GB</li> </ul>
<b>Memory Voltage</b>	<ul style="list-style-type: none"> <li>1.2 V</li> </ul>
<b>Error Detection</b>	<ul style="list-style-type: none"> <li>Corrects single-bit errors</li> </ul>

### On-Board Devices

<b>Chipset</b>	<ul style="list-style-type: none"> <li>Intel® C612 chipset</li> </ul>
<b>SAS</b>	<ul style="list-style-type: none"> <li>SAS3 (12Gbps) via LSI 3108 AOC; HW RAID</li> </ul>
<b>SATA</b>	<ul style="list-style-type: none"> <li>SATA3 (6Gbps) with RAID 0, 1, 5, 10</li> </ul>
<b>IPMI</b>	<ul style="list-style-type: none"> <li>Support for Intelligent Platform Management Interface v.2.0</li> <li>IPMI 2.0 with virtual media over LAN and KVM-over-LAN support</li> <li>ASPEED AST2400 BMC</li> </ul>
<b>Network Controllers</b>	<ul style="list-style-type: none"> <li>Quad 10GBase-T LAN with Intel® X540 Ethernet Controller</li> <li>Virtual Machine Device Queues reduce I/O overhead</li> <li>Supports 10GBASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output</li> <li>1x Realtek RTL8201N PHY (dedicated IPMI)</li> </ul>
<b>Graphics</b>	<ul style="list-style-type: none"> <li>ASPEED AST2400 BMC</li> </ul>

### Input / Output

<b>LAN</b>	<ul style="list-style-type: none"> <li>4x RJ45 10GBase-T LAN ports</li> <li>1x RJ45 Dedicated IPMI LAN port</li> </ul>
<b>USB</b>	<ul style="list-style-type: none"> <li>3x USB 3.0 ports (2 rear + 1 Type A)</li> <li>2x USB 2.0 ports (2 rear)</li> </ul>
<b>VGA</b>	<ul style="list-style-type: none"> <li>1x VGA port</li> </ul>
<b>Serial Port / Header</b>	<ul style="list-style-type: none"> <li>1x Fast UART 16550 port / 1 Header</li> </ul>

<b>PCI-Express</b>	<ul style="list-style-type: none"> <li>1x PCI-E 3.0 x16 slot</li> <li>6x PCI-E 3.0 x8 slots</li> <li>Slot 1 &amp; 2 occupied by controller and JBOD Expansion Port</li> </ul>
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### Drive Bays

<b>Hot-swap</b>	<ul style="list-style-type: none"> <li>36x 3.5" Hot-swap SAS3/SATA3 drive bays</li> <li>Double-sided: 24 front + 12 rear drive bays</li> </ul>
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### Backplane

SAS3/SATA3 single expander per backplane
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### System Cooling

<b>Fans</b>	<ul style="list-style-type: none"> <li>7x 80mm middle cooling fans</li> <li>Redundant cooling</li> </ul>
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### Power Supply with Digital Switching Control & PMBus 1.2

1280W High-Efficiency (95%+) power supply	
<b>AC Input</b>	<ul style="list-style-type: none"> <li>1000W Output @ 100-140V, 12-8A, 50-60Hz</li> <li>1280W Output @ 180-240V, 8-6A, 50-60Hz</li> </ul>
<b>DC Output</b>	<ul style="list-style-type: none"> <li>1000W: +12V/83A; +5Vsb/4A</li> <li>1280W: +12V/106.7A, +5Vsb/4A</li> </ul>

<b>Certification</b>	  <b>Platinum Certified [ Test Report ]</b>
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### System BIOS

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

### Operating Environment / Compliance

<b>RoHS</b>	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>
<b>Environmental Spec.</b>	<ul style="list-style-type: none"> <li>Operating Temperature: 10°C to 35°C (50°F to 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>

## Parts List

Parts List - (Items Included)			
	Part Number	Qty	Description
<b>Motherboard / Chassis</b>	MBD-X10DRi-T4+	1	Super X10DRi-T4+ Motherboard
	CSE-847BE1C-R1K28LPB	1	4U Chassis
<b>Backplane</b>	BPN-SAS3-826EL1	1	SAS 12G single expander backplane, with LSISAS3x28 expander, support 12x 3.5
<b>Backplane</b>	BPN-SAS3-846EL1	1	SAS 12G single expander backplane, with LSI SAS3 expander, support 24x 3.5
<b>Cable 1</b>	CBL-SAST-0531-01	4	Internal Mini-SAS HD to Mini-SAS HD 80cm,30AWG,12Gb/s [FCI],RoHS/REACH
<b>Cable 2</b>	CBL-SAST-0532	2	Internal Mini-SAS HD to Mini-SAS HD 50cm,30AWG,12Gb/s,HF,RoHS/REACH,PBF
<b>Cable 3</b>	CBL-0296L	3	4 pin to 4 pin fan extension cord, for PWM fan. 23cm. 24AWG
<b>Heatsink / Retention</b>	SNK-P0048P	1	2U Passive CPU Heat Sink for X9, X10 Generation Systems Equipped w/ a Square ILM MB
<b>Heatsink / Retention</b>	SNK-P0048AP4	1	2U Active CPU Heat Sink for Intel R2/R3/B2/B3 and AMD C32
<b>Power Supply</b>	PWS-1K28P-SQ	2	1U 1280W, redundant single output power supply
<b>Add On Card</b>	AOC-S3108L-H8IR-O-P	1	SAS-3, GEN-3 RAID card. Supports 12Gb and RAID 0, 1, 5, 6, 10, 50, and 60. Includes 2GB memory
<b>Add On Module</b>	AOM-SAS3-8I8E-LP	1	8-port Mini SAS HD Int-to-Ext cable adapter w/ LP bracket

Optional Parts List			
	Part Number	Qty	Description
<b>3108 Cache Protection</b>	BTR-TFM8G-LSICVM02 BKT-BBU-BRACKET-05	1 -	SuperCap Module Mounting PCIe Card
<b>Drive Tray</b>	MCP-220-84701-0N	1	Internal drive tray for one 3.5" HDD or two 2.5" HDD
	CBL-0179L	2	SATA cable 70cm
	CBL-0082L	1	Y split SATA power extension
<b>Onsite Service Program</b>	<a href="#">OS4HR3/2/1</a>	-	3/2/1-year onsite 24x7x4 service
<b>Onsite Service Program</b>	<a href="#">OSNBD3/2/1</a>	-	3/2/1-year onsite NBD service
<b>Software</b>	SFT-OOB-LIC	1	OOB Management Package (per node license)
<b>Software</b>	SFT-DCMS-Single	1	DataCenter Management Package (per node license)