

# SuperServer 2028R-C1R



Available Colors:

Black



## 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 1TB ECC, up to DDR4 2133MHz; 16x DIMM sockets
3. 1x PCI-E 3.0 x16, 6x PCI-E 3.0 x8 slots
4. 8x 2.5" SAS3 and 8x 2.5" SATA3 Hot-swap Drive Bays
5. Integrated IPMI 2.0 with KVM and Dedicated LAN
6. Intel® i350 Dual port GbE LAN
7. I/O ports: 2x SuperDOM, 1x VGA, 2x COM, 2x USB 3.0, 4x USB 2.0
8. 3x 8cm high-performance PWM fans
9. 920W 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

- SYS-2028R-C1R** ■ SuperServer 2028R-C1R (**Black**)

### Motherboard

#### Super X10DRH-C

### 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 your Supermicro sales representative for additional details.

### System Memory

- Memory Capacity** ■ 16x 288-pin DDR4 DIMM sockets
- Up to 1TB ECC LRDIMM, 512GB ECC RDIMM
- Memory Type** ■ 2133/1866/1600MHz ECC DDR4 SDRAM 72-bit
- DIMM Sizes** ■ RDIMM: 32GB, 16GB, 8GB, 4GB
- LRDIMM: 64GB, 32GB

### Chassis

- Form Factor** ■ 2U Rackmount

- Model** ■ **CSE-213AC-R920LPB**

### Dimensions and Weight

- Height** ■ 3.5" (89mm)
- Width** ■ 17.2" (437mm)
- Depth** ■ 24.8" (630mm)
- Package** ■ 10.5" (H) x 26.5" (W) x 38" (D)
- Weight** ■ Net Weight: 38 lbs (17.4 kg)
- Gross Weight: 63 lbs (28.8 kg)

- Available Color** ■ Black



### Front Panel

- Buttons** ■ Power On/Off button
- System Reset button
- LEDs** ■ Power LED
- Hard drive activity LED
  - 2x Network activity LEDs
  - System Overheat LED / Fan fail LED / UID LED

### Expansion Slots

- PCI-Express** ■ 1x PCI-E 3.0 x16

<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>
<b>On-Board Devices</b>	
<b>Chipset</b>	<ul style="list-style-type: none"> <li>Intel® C612 Express chipset</li> </ul>
<b>SATA</b>	<ul style="list-style-type: none"> <li>SATA3 (6Gbps); RAID 0, 1, 5, 10</li> </ul>
<b>SAS</b>	<ul style="list-style-type: none"> <li>LSI 3108 SAS3 (12Gbps) controller; HW RAID 0, 1, 5, 6, 10, 50, 60</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>Intel® i350 Gigabit Ethernet</li> <li>Virtual Machine Device Queues reduce I/O overhead</li> <li>Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output</li> </ul>
<b>Graphics</b>	<ul style="list-style-type: none"> <li>ASPEED AST2400 BMC</li> </ul>
<b>Input / Output</b>	
<b>SATA</b>	<ul style="list-style-type: none"> <li>8x SATA3 (6Gbps) ports</li> </ul>
<b>SAS</b>	<ul style="list-style-type: none"> <li>8x SAS3 (12Gbps) ports</li> </ul>
<b>LAN</b>	<ul style="list-style-type: none"> <li>2x RJ45 Gigabit Ethernet LAN ports</li> <li>1x RJ45 Dedicated IPMI LAN port</li> </ul>
<b>USB</b>	<ul style="list-style-type: none"> <li>2x USB 3.0 ports (2 rear)</li> <li>4x USB 2.0 ports (2 rear, 2 front)</li> <li>1x USB Type A</li> </ul>
<b>Video</b>	<ul style="list-style-type: none"> <li>1x VGA Connector</li> </ul>
<b>Serial Port / Header</b>	<ul style="list-style-type: none"> <li>2x Fast UART 16550 serial</li> <li>2x COM Ports (1 rear, 1 front)</li> </ul>
<b>System BIOS</b>	
<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>DMI 2.3</li> <li>PCI 2.2</li> <li>ACPI 1.0 / 2.0</li> <li>USB Keyboard support</li> <li>Hardware BIOS Virus protection</li> <li>SMBIOS 2.3</li> <li>UEFI</li> <li>RTC (Real Time Clock) Wakeup</li> </ul>

	<ul style="list-style-type: none"> <li>6x PCI-E 3.0 x8 (Low-profile AOC)</li> </ul>
<b>Drive Bays</b>	
<b>Hot-swap</b>	<ul style="list-style-type: none"> <li>8x 2.5" SAS3 and 8x 2.5" SATA3 Hot-swap drive bays</li> </ul>
<b>Peripheral</b>	<ul style="list-style-type: none"> <li>Optional DVD-ROM drive supports 1x slim or 1x 5.25" DVD drive</li> </ul>
<b>System Cooling</b>	
<b>Fans</b>	<ul style="list-style-type: none"> <li>3x 8cm heavy duty fans with optimal fan speed control</li> </ul>
<b>Power Supply with Power Distributor</b>	
920W high-efficiency (94%+) AC-DC Redundant power supplies with PMBus and I2C	
<b>AC Input</b>	<ul style="list-style-type: none"> <li>100-240 V, 50-60 Hz, 11-4.5 Amp</li> </ul>
<b>DC Output</b>	<ul style="list-style-type: none"> <li>4 Amp @ +5V standby</li> <li>75 Amp @ +12V</li> </ul>
<b>Certification</b>	  <b>Platinum Certified [ Test Report ]</b>
<b>PC Health Monitoring</b>	
<b>CPU</b>	<ul style="list-style-type: none"> <li>Monitors for CPU Cores, +1.5V, +3.3V, +5V, +12V, +5 Stdby, +3.3 Stdby, VBAT, Memory Voltages.</li> <li>CPU Core 6-Phase-switching voltage regulator</li> </ul>
<b>FAN</b>	<ul style="list-style-type: none"> <li>Total of five 4-pin PWM fans</li> <li>5x fans with tachometer monitoring</li> <li>Status monitor for speed control</li> <li>Status monitor for on/off control</li> <li>Low noise fan speed control</li> </ul>
<b>Temperature</b>	<ul style="list-style-type: none"> <li>Monitoring for CPU and chassis environment</li> <li>CPU thermal trip support</li> <li>Thermal Control for 10x Fan Connectors</li> <li>PSU I<sup>2</sup>C temperature sensing logic</li> <li>Thermal Monitor 2 (TM2) support</li> <li>PECI</li> </ul>
<b>LED</b>	<ul style="list-style-type: none"> <li>Power Fail / Overheat LED</li> <li>Suspend-state Indicator LED</li> <li>UID LED</li> </ul>
<b>Other Features</b>	<ul style="list-style-type: none"> <li>SDDC Support</li> </ul>
<b>Operating Environment / Compliance</b>	
<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-X10DRH-C	1	Super X10DRH-C Motherboard
	CSE-213AC-R920LPB	1	2U Black SC213AC Chassis
<b>Backplane</b>	BPN-SAS3-213A	1	SAS3 backplane with 16x 2.5" drive bays, for CSE-213AC chassis, support SGPIO SES2 management and have 4x Mini-SAS HD connectors,RoHS/REACH,PBF
<b>Cable 1</b>	CBL-SAST-0631	1	cross-over mini SAS HD to 4 SATA w/SB, S. 55cm. 30AWG,RoHS/REACH
<b>Cable 2</b>	CBL-SAST-0508-01	1	Internal Mini-SAS to Mini-SAS HD 50cm w/ SB, 30AWG,HF,RoHS/REACH,PBF
<b>Cable 3</b>	CBL-SAST-0568	2	Internal Mini-SAS HD to Mini-SAS HD 35cm,30AWG,12Gb/s,HF,RoHS/REACH,PBF
<b>Cable 4</b>	CBL-SAST-0591	1	cross-over mini SAS HD to 4 SATA w/SB, S. 75cm. 30AWG,HF,RoHS/REACH,PBF
<b>Heatsink / Retention</b>	SNK-P0048PS	2	2U Passive CPU Heat Sink for X9, X10 Generation Systems Equipped w/ a Narrow ILM MB
<b>Power Supply</b>	PWS-920P-1R	2	1U REDUNDANT 920W PMBus 94% EFFICIENCY
<b>Cable 5</b>	CBL-0088	3	10.5", 4 PIN MIDDLE FAN POWER EXTENSION (PWM)
<b>Cable 6</b>	CBL-0217L	1	16 pin control panel converter cable for SC826,846, 22cm, PBF
<b>Cable 7</b>	CBL-0071L	1	ROUND 16 pin TO 16 PIN RIBBON FP CABLE 30
<b>Fan 1</b>	FAN-0126L4	3	80x80x38 mm 7K RPM Chassis Middle Fan w/ Housing
<b>Drive Tray(s)</b>	MCP-220-00009-01	1	Black 5.25
<b>Drive Tray(s)</b>	MCP-220-00023-01	1	Black USB dummy tray support 1x 2.5" slim HDD for SC825, 836
<b>Drive Tray(s)</b>	MCP-220-00047-0B	16	Black gen 3rd hot-swap 2.5inch HDD tray
<b>Mounting Rails</b>	MCP-290-00053-0N	1	Rail set, quick/quick, default for 2,3U 17.2"W

Optional Parts List			
	Part Number	Qty	Description
<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)

Note: Different GPU/Xeon Phi cards require special brackets, for more information please refer to the user's manual