

SuperServer 2028R-C1RT



Integrated Board



X10DRH-CT

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® X540 Dual port 10GBase-T
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-C1RT** ■ SuperServer 2028R-C1RT (**Black**)

Motherboard

Super X10DRH-CT

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-it
- DIMM Sizes** ■ DIMM: 32GB, 16GB, 8GB, 4GB

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

DIMM Sizes	<ul style="list-style-type: none"> ▪ LRDIMM: 64GB, 32GB
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 Express chipset
SATA	<ul style="list-style-type: none"> ▪ SATA3 (6Gbps); RAID 0, 1, 5, 10
SAS	<ul style="list-style-type: none"> ▪ LSI 3108 SAS3 (12Gbps) controller; 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"> ▪ Intel® X540 10GBase-T ▪ Virtual Machine Device Queues reduce I/O overhead ▪ Supports 10GBASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output
Graphics	<ul style="list-style-type: none"> ▪ ASPEED AST2400 BMC
Input / Output	
SATA	<ul style="list-style-type: none"> ▪ 8x SATA3 (6Gbps) ports
SAS	<ul style="list-style-type: none"> ▪ 8x SAS3 (12Gbps) ports
LAN	<ul style="list-style-type: none"> ▪ 2x RJ45 10GBase-T ports ▪ 1x RJ45 Dedicated IPMI LAN port
USB	<ul style="list-style-type: none"> ▪ 2x USB 3.0 ports (2 rear) ▪ 4x USB 2.0 ports (2 rear, 2 front) ▪ 1x USB Type A
Video	<ul style="list-style-type: none"> ▪ 1x VGA Connector
Serial Port / Header	<ul style="list-style-type: none"> ▪ 2x Fast UART 16550 serial ▪ 2x COM Ports (1 rear, 1 front)
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 ▪ DMI 2.3 ▪ PCI 2.2 ▪ ACPI 1.0 / 2.0 ▪ USB Keyboard support ▪ Hardware BIOS Virus protection ▪ SMBIOS 2.3 ▪ UEFI ▪ RTC (Real Time Clock) Wakeup

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

Optional Parts List			
	Part Number	Qty	Description
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)

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