

SuperServer 2028R-C1R



Integrated Board



X10DRH-C

Available Colors:

Black



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Note: Image above may show a varied configuration of 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 **2TB[†]** ECC 3DS LRDIMM , up to DDR4- **2400[†]**MHz ; 16 DIMM slots
3. 1 PCI-E 3.0 x16, 6 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: 2 SuperDOM, 1 VGA, 2 COM, 2 USB 3.0, 4 USB 2.0
8. 3 high-performance 8cm PWM fans
9. 920W Redundant Power Supplies **Platinum Level** (94%)

Specifications

Product SKUs

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

Motherboard

Super X10DRH-C

Processor/Cache

CPU ■ 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.

System Memory

Memory Capacity ■ 16x 288-pin DDR4 DIMM slots
■ Up to 2TB[†] ECC 3DS LRDIMM, 512GB ECC RDIMM

Memory Type ■ **2400**[†]/2133/1866/1600MHz ECC DDR4 SDRAM 72-bit

DIMM Sizes ■ RDIMM: 32GB, 16GB, 8GB, 4GB
■ LRDIMM: 64GB, 32GB
■ 3DS LRDIMM: 128GB

Memory Voltage ■ 1.2 V

Error Detection ■ Corrects single-bit errors

On-Board Devices

Chipset ■ Intel® C612 chipset

SATA ■ SATA3 (6Gbps); RAID 0, 1, 5, 10

SAS ■ Broadcom 3108 SAS3 (12Gbps) controller;
HW RAID 0, 1, 5, 6, 10, 50, 60

IPMI ■ 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 ■ Intel® i350 Gigabit Ethernet
■ Virtual Machine Device Queues reduce I/O overhead
■ Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output

Graphics ■ ASPEED AST2400 BMC

Input / Output

SATA ■ 8 SATA3 (6Gbps) ports

SAS ■ 8 SAS3 (12Gbps) ports

LAN ■ 2 RJ45 Gigabit Ethernet LAN ports
■ 1 RJ45 Dedicated IPMI LAN port

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
■ 2 Network activity LEDs
■ System Overheat LED / Fan fail LED / UID LED

Expansion Slots

PCI-Express ■ 1 PCI-E 3.0 x16
■ 6 PCI-E 3.0 x8 (Low-profile AOC)

Drive Bays

Hot-swap ■ 8x 2.5" SAS3 and 8x 2.5" SATA3 Hot-swap drive bays

Peripheral ■ Optional DVD-ROM drive supports 1x slim or 1x 5.25" DVD drive

System Cooling

Fans ■ 3 heavy duty 8cm 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 ■ 100-240 V, 50-60 Hz, 11-4.5 Amp

DC Output ■ 4 Amp @ +5V standby
■ 75 Amp @ +12V

Certification



Platinum Certified
[[Test Report](#)]

PC Health Monitoring

CPU ■ 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

USB	<ul style="list-style-type: none"> ■ 2 USB 3.0 ports (2 rear) ■ 4 USB 2.0 ports (2 rear, 2 front) ■ 1 USB Type A
Video	<ul style="list-style-type: none"> ■ 1 VGA Connector
Serial Port / Header	<ul style="list-style-type: none"> ■ 2 Fast UART 16550 serial ■ 2 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

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)

Список деталей

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X10DRH-C	1	Super X10DRH-C Motherboard
	CSE-213AC-R920LPB	1	2U Black SC213AC Chassis
Backplane	BPN-SAS3-213A	1	16-port 2U SAS3 12Gbps direct-attached backplane, support up to 16x 2.5-inch SAS3/SATA3 HDD/SSD
Cable 1	CBL-SAST-0508-01	1	MINI SAS HD-MINI SAS,6G,INT,50CM,SB,30AWG
Cable 2	CBL-SAST-0568	2	MINI SAS HD,12G,INT,35CM,30AWG
Cable 3	CBL-SAST-0591	1	MINI SAS HD-4 SATA,6G,INT,RF,Cross Over,75CM,75CM SB,30AWG
Cable 4	CBL-SAST-0631	1	MINI SAS HD-4 SATA,6G,INT,RF,Cross Over,55CM,55CM SB,30AWG
Label	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
Manual	MNL-1638-QRG	1	2028R-C1R & 2028R-C1RT, QRG,HF,RoHS/REACH
Parts	MCP-260-00042-0N	1	STD I/O shield for X9 socket R server MB with Gasket.
Heatsink / Retention	SNK-P0048PS	2	2U Passive CPU Heat Sink for X9, X10 Generation Systems Equipped w/ a Narrow ILM MB
Drive Tray(s)	MCP-220-00007-01	1	Black USB/COM port tray for SC825, 836
Power Supply	PWS-920P-1R	2	1U REDUNDANT 920W PMBus 94% EFFICIENCY

Optional Parts List

	Part Number	Qty	Description
Storage Controller Card(s) & Cables(s)	AOC-S3008L-L8i & 2x CBL-SAST-0531-01	-	Standard LP, 8 internal ports (12Gb/s) Gen-3, 63HDD; RAID 0, 1, 10
	AOC-S3008L-L8e & 2x CBL-SAST-0531-01	-	Standard LP, 8 internal ports (12Gb/s) Gen-3, 122HDD; HBA
	AOC-S3108L-H8IR & 2x CBL-SAST-0531-01	-	Standard LP, 8 internal ports (12Gb/s) 8x Gen3; RAID 0, 1, 5, 6, 10, 50, 60
	AOC-S3108L-H8IR-16DD & 2x CBL-SAST-0531-01	-	Standard LP, 8 internal ports (12Gb/s) Gen-3, 16HDD; RAID 0, 1, 5, 6, 10, 50, 60
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	<u>SFT-OOB-LIC</u> • eStore	1	OOB Management Package (per node license)
Software	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)