

# SuperStorage 2028R-DE2CR24L (Complete System Only)



High Availability Storage Platform



Integrated Board

Super X10DRS-2U

Available Colors:

Black



Due to the complexity of integration, this product is sold as completely assembled systems only (including 4 CPU, 4 DIMMs, 1 SAS HDD). Please contact your Supermicro sales rep for special requirements.

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

## Key Features

Two **hot-pluggable** systems (nodes) in a 2U form factor. Each node supports the following:

1. Dual socket R3 (LGA 2011) supports Intel® Xeon® processor E5-2600 v4<sup>†</sup>/ v3 family; QPI up to 9.6GT/s
2. Up to 1TB<sup>†</sup> ECC 3DS LRDIMM , up to DDR4- 2400<sup>†</sup>MHz ; 8x DIMM slots
3. 3 PCI-E 3.0 x8 low-profile slots per controller
4. Dual 10GBase-T LAN w/ Intel® X540 per node, 100Mb private ethernet between controller nodes
5. Dedicated node to node connectivity featuring high performance PCI-E 3.0 x8 and IPMI for robust node fail-over support
6. 24x shared 2.5" hot-swap SAS drive bay with SES2
7. SAS3 via LSI 3008 controller
8. Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN
9. 8x 4cm PWM counter rotating cooling fans
10. 1200W Redundant Power Supplies Titanium Level (96%)

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

## Specifications

### Product SKUs

SSG-2028R-DE2CR24L ■ SuperServer 2028R-DE2CR24L (Black)

### Motherboard

[Super X10DRS-2U](#)

### Processor/Cache

CPU ■ Intel® Xeon® processor E5-2600 v4<sup>†</sup>/ v3 family (up to 145W TDP) \*  
 ■ Dual Socket R3 (LGA 2011)

Cores / Cache ■ Up to 22 Cores<sup>†</sup> / Up to 55MB<sup>†</sup> Cache

System Bus ■ QPI up to 9.6 GT/s

Note <sup>†</sup> BIOS version 2.0 or above is required

### Chassis

Form Factor ■ 2U Rackmount

Model ■ CSE-927ETS

### Dimensions

Width ■ 17.2" (437mm)

Height ■ 3.5" (89mm)

Depth ■ 25.25" (641mm)

Gross Weight ■ 67 lbs (30.4 kg)


Available Colors ■ Black

### Front Panel

Buttons ■ Power On/Off button

■ Power LED

Note	* Please contact Supermicro Technical Support for additional information about frequency optimized CPUs and specialized system optimization.
<b>System Memory</b>	
Memory Capacity	<ul style="list-style-type: none"> <li>8x 288-pin DDR4 DIMM slots</li> <li>Up to 1TB<sup>†</sup> ECC 3DS LRDIMM, 256GB ECC RDIMM</li> </ul>
Memory Type	<ul style="list-style-type: none"> <li>2400<sup>†</sup>/2133/1866/1600MHz ECC DDR4 SDRAM 72-bit</li> </ul>
DIMM Sizes	<ul style="list-style-type: none"> <li>RDIMM: 32GB, 16GB, 8GB, 4GB</li> <li>LRDIMM: 64GB, 32GB</li> <li>3DS LRDIMM: 128GB</li> </ul>
Memory Voltage	<ul style="list-style-type: none"> <li>1.2 V</li> </ul>
Error Detection	<ul style="list-style-type: none"> <li>Corrects single-bit errors</li> </ul>
NVDIMM	<ul style="list-style-type: none"> <li>NVDIMM support. (Not all vendor's NVDIMM are supported. Please contact your sales representative for details)</li> </ul>
<b>On-Board Devices</b>	
Chipset	<ul style="list-style-type: none"> <li>Intel® C612 chipset</li> </ul>
SAS	<ul style="list-style-type: none"> <li>SAS3 (12Gbps) via LSI 3008</li> </ul>
SATA	<ul style="list-style-type: none"> <li>SATA3 (6Gbps); RAID 0, 1, 5, 10</li> </ul>
IPMI	<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>
Network Controllers	<ul style="list-style-type: none"> <li>Intel® X540 Dual Port 10GBase-T</li> <li>100Mb private ethernet between controller nodes</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>
Video	<ul style="list-style-type: none"> <li>ASPEED AST2400 BMC</li> </ul>
Others	<ul style="list-style-type: none"> <li>PCI-E 3.0 x8 node to node/NTB connectivity</li> <li>PLX Technology PEX8717; PLX ExpressNIC SDK available from PLX. NDA required</li> </ul>
<b>Input / Output</b>	
SAS	<ul style="list-style-type: none"> <li>2x JBOD expansion ports per node (mini-SAS HD)</li> </ul>
LAN	<ul style="list-style-type: none"> <li>2x RJ45 10GBase-T LAN ports</li> <li>IPMI LAN shared port</li> </ul>
USB	<ul style="list-style-type: none"> <li>3x USB 3.0 ports (2 rear + 1 Type A)</li> </ul>
Video	<ul style="list-style-type: none"> <li>1x VGA port</li> </ul>
Serial Port / Header	<ul style="list-style-type: none"> <li>1x COM port (rear)</li> </ul>

LEDs	<ul style="list-style-type: none"> <li>Heartbeat LED</li> <li>2x Network activity LEDs</li> <li>Power Fail LED</li> <li>Overheat/Fan Fail LED</li> </ul>
<b>Expansion Slots</b>	
PCI-Express (per node)	<ul style="list-style-type: none"> <li>3x PCI-E 3.0 x8 low-profile slots</li> </ul>
<b>Drive Bays</b>	
Hot-swap	<ul style="list-style-type: none"> <li>24x 2.5" Hot-swap SAS3/SATA3 HDD bays</li> </ul>
<b>Backplane</b>	
SAS3 12Gbps passive backplane, redundant architecture with single expander on each motherboard. Motherboard also support 2x mini-SAS HD connectors for JBOD expansion	
<b>System Cooling</b>	
Fans	<ul style="list-style-type: none"> <li>4x 8cm Hot-swappable midplane fans, 2x 4cm counter-rotating fans per node</li> </ul>
<b>Power Supply</b>	
Redundant 1U 1200W/1000W Titanium Power Supply W/PMbus W76xL360xH40mm	
AC Input	<ul style="list-style-type: none"> <li>1000W Output @ 100-127V, 12-15A, 50-60Hz</li> <li>1200W Output @ 200-240V, 7-8.5A, 50-60Hz</li> </ul>
DC Output	<ul style="list-style-type: none"> <li>1000W: +12V/83A; +5Vsb/4A</li> <li>1200W: +12V/100A, +5Vsb/4A</li> </ul>
Certification	 Titanium Certified [ Test Report ]
System power redundancy provided at 240V only.	
<b>System BIOS</b>	
BIOS Type	<ul style="list-style-type: none"> <li>128Mb SPI Flash EEPROM with AMI BIOS</li> </ul>
BIOS Features	<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>
<b>Operating Environment / Compliance</b>	
RoHS	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>
Environmental Spec.	<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-X10DRS-2U	2	Super X10DRS-2U Motherboard
	CSE-927ETS	1	2U Chassis
<b>Backplane</b>	BPN-SAS3-927-N4	1	2U 24-Port SBB Backplane Supports 24x2.5" SAS3 HDD/SSD
<b>Add-on Card / Module</b>	AOM-S3008-L8-SB-P	2	AOM-S3008-L8-SB
<b>Air Shroud</b>	MCP-310-92702-0N	2	SC927 Air Shroud for X10DRS-F,HF,RoHS/REACH
<b>Cable 1</b>	CBL-0160L	2	NEMA5-15P to C13 US power cord 16AWG 6ft, PBF (default for high watt)
<b>Cable 2</b>	CBL-0218L	2	11.5CM KVM/SUVI 36 PIN TO 9 PIN/15 PIN 2USB, 30/28AWG
<b>Cable 3</b>	CBL-PWCD-0160-IS	2	PWCD,US,NEMA5-15P TO IEC60320 C13,6FT,16AWG,13A,125V,RoHS/REACH
<b>Label</b>	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
<b>Riser Card</b>	RSC-R2US-3E8R	2	RSC-R2US-3E8R
<b>Heatsink / Retention</b>	SNK-P0047PS	2	1U Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Narrow ILM MB
<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-1K23A-1R	2	AC-DC 1200W, Titanium Level, Redundancy, 1U, PMBUS 1.2, +12V/+5Vsb, 360x76x40 mm,HF,RoHS/REACH
<b>Drive Tray(s)</b>	MCP-220-92701-0N	24	SC927 SBB 2.5" SATA/SAS/SSD HDD tray

Optional Parts List			
	Part Number	Qty	Description
<b>Global Services &amp; Support</b>	<a href="#">OS4HR3/2/1</a>	-	3/2/1-year onsite 24x7x4 service
	<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)