

# SuperServer 1028UX-CR-LL1 (Complete System Only)



Due to the complexity of integration, this product is sold as completely assembled systems only (including but not limited to CPUs, memory, and HDDs). At least one low-latency NIC from this [list](#) must be selected and installed into the system. Please contact your Supermicro sales rep for special requirements.

[▶ Drivers & Utilities](#) ▶ [BIOS](#) ▶ [IPMI](#) ▶ [Tested Memory at Hyper-Speed](#) ▶ [Tested Memory](#) ▶ [Low latency/jitter optimization guide](#) ▶ [NVMe Options](#) ▶ [Manuals](#) ▶ [OS Certification Matrix](#) ▶ [Quick-References Guide](#) ▶ [Drive Options](#)

- [World Record Benchmark for Low Latency - STAC Report™](#)
- [Qualified low latency NICs here](#)

## Key Features

- Support [Hyper-Speed](#)

1. Dual Intel® Xeon® processor E5-2643 v3 (Haswell)
2. Default: 8x 8GB 2133MHz DDR4, up to DDR4- 2400<sup>†</sup>MHz ; 16x DIMM slots
3. Expansion slots via riser card:  
2x PCI-E 3.0 x16, Full-height Full-length  
1x PCI-E 3.0 x8, Low-profile  
1x PCI-E 3.0 x8 SAS3 integrated
4. 4x Gigabit Ethernet LAN ports
5. Integrated IPMI 2.0 with KVM and Dedicated LAN
6. 10x 2.5" Hot-swap Drive Bays:  
8x SAS3 (LSI 3108), 2x SATA3,  
2x NVMe ports support via optional Ultra Riser card
7. 8x heavy duty fans w/ optimal fan speed control
8. 750W 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-1028UX-CR-LL1 ■ SuperServer 1028UX-CR-LL1 (Black)

### Motherboard

Super X10DRU-XLL

### Processor/Cache

CPU ■ Intel® Xeon® processor E5-2643 v3  
■ Dual Socket R3 (LGA 2011)

Cores / Cache ■ Up to 6 Cores / Up to 20MB Cache

System Bus ■ QPI up to 9.6 GT/s

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

### Chassis

Form Factor ■ 1U Rackmount

Model ■ CSE-119UTS-R751P-T

### Dimensions and Weight

Height ■ 1.7" (43mm)

Width ■ 17.2" (437mm)

Depth ■ 27.8" (706mm)

Gross Weight ■ 48 lbs (21.8 kg)

Available Color ■ Black

### Front Panel

Buttons ■ Power On/Off button  
■ System Reset button

■ Power LED

System Memory	
Memory Capacity	<ul style="list-style-type: none"> <li>8x 8GB DDR4 2133MHz (Default)</li> <li>16x 288-pin DDR4 DIMM slots</li> <li>Up to 2TB<sup>†</sup> ECC 3DS LRDIMM, 768GB 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: 64GB, 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>

On-Board Devices	
Chipset	<ul style="list-style-type: none"> <li>Intel® C612 chipset</li> </ul>
SAS	<ul style="list-style-type: none"> <li>LSI 3108 SAS3 (12Gbps) controllers; RAID 0, 1, 5, 6, 10, 50 support</li> </ul>
SATA	<ul style="list-style-type: none"> <li>SATA3 (6Gbps) with 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>
Graphics	<ul style="list-style-type: none"> <li>ASPEED AST2400 BMC</li> </ul>

Input / Output	
SAS	<ul style="list-style-type: none"> <li>8x SAS3 (12Gbps) ports</li> </ul>
SATA	<ul style="list-style-type: none"> <li>2x SATA3 (6Gbps) ports</li> </ul>
NVMe	<ul style="list-style-type: none"> <li>2x NVMe ports support via optional Ultra Riser card (AOC-URN2-i2XT)</li> </ul>
LAN	<ul style="list-style-type: none"> <li>4x RJ45 Gigabit Ethernet ports</li> <li>1x RJ45 Dedicated IPMI LAN port</li> </ul>
USB	<ul style="list-style-type: none"> <li>5x USB 3.0 ports (2 rear, 2 via header, 1 Type A)</li> </ul>
Video	<ul style="list-style-type: none"> <li>1x VGA Connector</li> </ul>
Serial Port / Header	<ul style="list-style-type: none"> <li>1x Fast UART 16550 serial</li> <li>1x COM port (rear)</li> </ul>


System BIOS	
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 2.3</li> <li>ACPI 1.0 / 2.0 / 3.0 / 4.0</li> <li>USB Keyboard support</li> <li>SMBIOS 2.7.1</li> <li>UEFI 2.3.1</li> </ul>

LEDs	<ul style="list-style-type: none"> <li>Hard drive activity LED</li> <li>2x Network activity LEDs</li> <li>System Overheat LED / Fan fail LED / UID LED</li> </ul>
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Expansion Slots	
PCI-Express	<p>Expansion slots via riser card:</p> <ul style="list-style-type: none"> <li>2x PCI-E 3.0 x16, Full-height Full-length, up to 10.5"</li> <li>1x PCI-E 3.0 x8, Low-profile</li> <li>1x PCI-E 3.0 x8 SAS3 integrated</li> </ul>

Drive Bays	
Hot-swap	<ul style="list-style-type: none"> <li>8x 2.5" Hot-swap SAS3 drive bays</li> <li>2x 2.5" Hot-swap SATA3 drive bays</li> <li>Optional NVMe support: 2x NVMe via AOC-URN2-I2XT (w/ 2x 10GBase-T ports)</li> </ul>

System Cooling	
Fans	<ul style="list-style-type: none"> <li>8x heavy duty fans with optimal fan speed control</li> </ul>
Air Shroud	<ul style="list-style-type: none"> <li>1x Air Shroud</li> </ul>

Power Supply	
750W Redundant Power Supplies with PMBus	
Total Output Power	<ul style="list-style-type: none"> <li>750W</li> </ul>
Dimension (W x H x L)	<ul style="list-style-type: none"> <li>73.5 x 40 x 203 mm</li> </ul>
Input	<ul style="list-style-type: none"> <li>100-127Vac / 9.5A Max / 47-63Hz</li> <li>200-240Vac / 4.5A Max / 47-63Hz</li> </ul>
+12V	<ul style="list-style-type: none"> <li>Max: 62.5A / Min: 0A</li> </ul>
12V SB	<ul style="list-style-type: none"> <li>Max: 2.1A / Min: 0A</li> </ul>
Output Type	<ul style="list-style-type: none"> <li>25 Pairs Gold Finger Connector</li> </ul>
Certification	  Platinum Level <a href="#">[ Test Report ]</a>

PC Health Monitoring	
CPU	<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>
FAN	<ul style="list-style-type: none"> <li>Total of ten 4-pin PWM fans</li> <li>10x 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>
Temperature	<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>
LED	<ul style="list-style-type: none"> <li>Power Fail / Overheat LED</li> <li>Suspend-state Indicator LED</li> <li>UID LED</li> </ul>
Other Features	<ul style="list-style-type: none"> <li>SDDC Support</li> </ul>

Operating Environment / Compliance	
RoHS	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>

Environmental Spec.

- Operating Temperature: 10°C to 30°C (50°F to 86°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-X10DRU-XLL	1	Super X10DRU-XLL Motherboard
	CSE-119UTS-R751P-T	1	CSE-119UTS-R751P-T Chassis
Backplane	BPN-SAS3-116A-N2	1	10-port 1U SAS3 12Gbps Hybrid backplane, support up to 8x 2.5-inch SAS3/SATA3 HDD/SSD and 2x SAS3/SATA3/NVMe Storage Devices
Cable 1	CBL-SAST-0671	1	Internal RA side exit (left) dual miniSAS HD to 2x miniSAS HD 50cm,30AWG,12Gb/s,RoHS/REACH
Cable 2	CBL-0157L-01	1	8 pin to 8 pin ribbon SGPIO cable with tube, 60cm, PBF
Cable 3	CBL-PWEX-0653	1	8 pin female to 4 pin female power, 37cm, 18AWG,RoHS/REACH
Cable 4	CBL-0484L	2	55cm 30AWG SATA S-S cable
Cable 5	CBL-PWEX-0650	1	8 pin female to 2x RA(Right Angle) big 4 pin female power, 47/62CM, 18AWG,RoHS/REACH
Label	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
Manual	MNL-1702-QRG	1	SYS-1028UX-Series,HF,RoHS/REACH
Riser Card	RSC-R1UW-E8R	1	RSC-R1UW-E8R-O-P
Riser Card	RSC-R1UW-2E16	1	RSC-R1UW-2E16-O-P
Heatsink / Retention	SNK-P0057PU	2	1U 104-mm Wide Passive CPU Heat Sink for X10 HFT Systems,RoHS/REACH
Power Supply	PWS-751P-1R	2	1U 750W Redundant Platinum Single Output Power Supply w/Pmbus W73.5xH40xL203mm,RoHS/REACH
Fan	FAN-0101L4	8	40x56, 4 Pin PWM
Air Shroud	MCP-310-11901-0B	1	Mylar air shroud set for SC819U,119U (X10DRU-X)
Add-on Card	AOC-S3108L-H8IR-O-P	1	SAS-3, GEN-3 RAID card. Supports 12Gb and R0,1,5,6,10,50 and 60. Includes 2GB memory
Add-on Card	AOC-UR-I4G-O-P	1	1U Ultra Riser based on Intel i350AM4 controller with 4 GbE RJ45 ports and 1 internal PCI-E x8 3.0 slot
CPU	P4X-DPE52643V3-SR204	2	HSW-EP R3 6C/12T E5-2643V3 3.4G 20M 9.6GT 135W 2011 R2
Memory	MEM-DR480L-SL01-ER21	8	8GB DDR4-2133 1Rx4 LP ECC REG DIMM
Software	SFT-OOB-LIC	1	License key for enabling OOB BIOS management

Optional Parts List

	Part Number	Qty	Description
CachVault(s)	BTR-CV3108-1U1	-	CacheVault for LSI 3108 with Supercap mounting in 1U 40x56 fan tray
	BTR-TFM8G-LSICVM02 & BKT-BBU-BRACKET-05	-	CacheVault for LSI 3108; Supercap mounting bracket for PCI-E location
	BTR-TFM8G-LSICVM02 & MCP-240-00127-0N	-	CacheVault for LSI 3108; Supercap mounting bracket for 2.5" HDD location
Global Services & Support	OS4HR3/2/1	-	3/2/1-year onsite 24x7x4 service
	OSNBD3/2/1	-	3/2/1-year onsite NBD service
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)