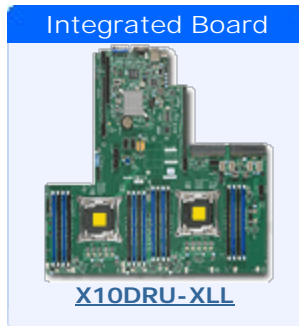


# SuperServer 1028UX-CR-LL2 (Complete System Only)



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

## Key Features

- Support [Hyper-Speed](#)

1. Dual Intel® Xeon® processor E5-2687W 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%+)

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](#)

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-LL2	▪ SuperServer 1028UX-CR-LL2 (Black)
Motherboard	
<u>Super X10DRU-XLL</u>	
Processor/Cache	
CPU	▪ Intel® Xeon® processor E5-2687W v3 ▪ Dual Socket R3 (LGA 2011)
Cores / Cache	▪ Up to 10 Cores / Up to 25MB 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-PWEX-0653	1	8 pin female to 4 pin female power, 37cm, 18AWG,RoHS/REACH
Cable 2	CBL-SAST-0671	1	Internal RA side exit (left) dual miniSAS HD to 2x miniSAS HD 50cm,30AWG,12Gb/s,RoHS/REACH
Cable 3	CBL-0484L	2	55cm 30AWG SATA S-S cable
Cable 4	CBL-PWEX-0650	1	8 pin female to 2x RA(Right Angle) big 4 pin female power, 47/62CM, 18AWG,RoHS/REACH
Cable 5	CBL-0157L-01	1	8 pin to 8 pin ribbon SGPIO cable with tube, 60cm, PBF
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-2E16	1	RSC-R1UW-2E16-O-P
Riser Card	RSC-R1UW-E8R	1	RSC-R1UW-E8R-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-DPE52687WV3-SR1Y6	2	HSW-EP R3 10C/20T E5-2687WV3 3.1G 25M 9.6GT 160W 2011
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	<a href="#">QS4HR3/2/1</a>	-	3/2/1-year onsite 24x7x4 service
	<a href="#">QSNBD3/2/1</a>	-	3/2/1-year onsite NBD service
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)