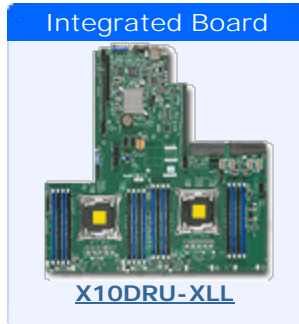


# SuperServer 1028UX-LL3-B8 (Complete System Only)



Due to the complexity of integration, this product is sold as completely assembled systems only (including but not limited to CPUs, memory, and SSD). 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](#)
[▶ Low latency/jitter optimization guide](#)
[▶ NVMe Options](#)
[▶ Manuals](#)
[▶ OS Certification Matrix](#)
[▶ Quick-References Guide](#)
[▶ Drive Options](#)

- Qualified low latency NICs [here](#)

## Key Features

- Support [Hyper-Speed](#)

1. Dual Intel® Xeon® processor E5-2689 v4 (Broadwell)
2. 8x 8GB DDR4-2400MHz (Default), 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 AOC-URN2-I2XT (with 2x 10GBase-T ports)
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-LL3-B8 ■ SuperServer 1028UX-LL3-B8 (Black)

### Motherboard

Super X10DRU-XLL

### Processor/Cache

CPU ■ Intel® Xeon® processor E5-2689 v4 (Included) \*  
■ 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 † BIOS version 2.0 or above is required

\* Please contact Supermicro Technical Support for additional information about

### 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  
■ Hard drive activity LED

Note **frequency optimized CPUs and specialized system optimization.**

## System Memory

Memory Capacity	<ul style="list-style-type: none"><li>8x 8GB DDR4-2400MHz (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
  - 2x Network activity LEDs
  - System Overheat LED / Fan fail LED / UID LED

## 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>
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## 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>
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## 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>2x 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 eight 4-pin PWM fans</li><li>8x 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 8x 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>
	<ul style="list-style-type: none"><li>Operating Temperature: 10°C to 20°C (50°F to 68°F)</li></ul>

Environmental Spec.

- 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	<a href="#">MBD-X10DRU-XLL</a>	1	Super X10DRU-XLL Motherboard
	<a href="#">CSE-119UTS-R751P-T</a>	1	CSE-119UTS-R751P-T Chassis
Fan	<a href="#">FAN-0141L4</a>	8	40x40x56 mm 20.5K RPM / 17.6K RPM Counter-rotating Fan
Air Shroud	<a href="#">MCP-310-81907-0N</a>	2	SC819UT PLASTIC AIR SHROUD 16 DIMM
Add-on Card	<a href="#">AOC-S3108L-H8IR-16DD</a>	1	SAS-3, GEN-3 RAID card. Supports 12Gb and R0,1,5,6,10,50 and 60. Includes 2GB memory
Add-on Card	<a href="#">AOC-UR-I4G-O-P</a>	1	1U Ultra Riser based on Intel i350AM4 controller with 4 GbE RJ45 ports and 1 internal PCI-E x8 3.0 slot
CPU	<a href="#">P4X-DP2689V4L3</a>	2	BDW-EP E5-2689 v4 3.1G 9.6GT 165W R3 2011 M0
Memory	<a href="#">MEM-DR480L-SL01-ER24</a>	8	8GB DDR4-2400 1Rx4 LP ECC REG DIMM
Software	<a href="#">SFT-OOB-LIC</a>	1	License key for enabling OOB BIOS management

### Optional Parts List

	Part Number	Qty	Description
CachVault(s)	<a href="#">BTR-CV3108-1U1</a>	-	CacheVault for LSI 3108 with Supercap mounting in 1U 40x56 fan tray
	<a href="#">BTR-TFM8G-LSICVM02 &amp; BKT-BBU-BRACKET-05</a>	-	CacheVault for LSI 3108; Supercap mounting bracket for PCI-E location
	<a href="#">BTR-TFM8G-LSICVM02 &amp; MCP-240-00127-0N</a>	-	CacheVault for LSI 3108; Supercap mounting bracket for 2.5" HDD location
Global Services & Support	<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
Software	<a href="#">SFT-DCMS-Single</a>	1	DataCenter Management Package (per node license)