

# SuperServer 1028U-TR4+ (Complete System Only)



## Integrated Board



X10DRU-i+



## Key Features

1. Dual socket R3 (LGA 2011) supports Intel® Xeon® processor E5-2600 v3 family; QPI up to 9.6GT/s
2. Up to 1.5TB ECC, up to DDR4 2133MHz; 24x DIMM sockets
3. 2x PCI-E 3.0 x16 slots (FH, 10.5" L), 2x PCI-E 3.0 x8 slots (LP, 1 internal)
4. 4x Gigabit Ethernet ports
5. 10x Hot-swap 2.5" Drive Bays: 10x SATA3 ports by default; optional 8x SAS3 ports
6. 4x heavy duty fans w/ optimal fan speed control
7. 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). Please contact your Supermicro sales rep for special requirements.

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

## Specifications

### Product SKUs

- SYS-1028U-TR4+** ■ SuperServer 1028U-TR4+ (Black)

### Motherboard

#### Super X10DRU-i+

### Processor/Cache

- CPU** ■ Intel® Xeon® processor E5-2600 v3 family (up to 160W TDP \*\*)  
■ Dual Socket R3 (LGA 2011)

- Cores / Cache** ■ Up to 18 Cores / Up to 45MB Cache

- System Bus** ■ QPI up to 9.6 GT/s

- Note** \*\* Please contact your Supermicro sales representative for additional details.

### System Memory

- Memory Capacity** ■ 24x 288-pin DDR4 DIMM slots  
■ Up to 1.5TB ECC LRDIMM, 768GB ECC RDIMM

- Memory Type** ■ 1333/1866/1600MHz ECC DDR4 SDRAM 72-bit

### Chassis

- Form Factor** ■ 1U Rackmount

- Model** ■ CSE-119UAC-R750

### Dimensions and Weight

- Height** ■ 1.7" (43mm)

- Width** ■ 17.2" (437mm)

- Depth** ■ 30.6" (777mm)

- Gross Weight** ■ 48 lbs (21.8 kg)

- Available Color** ■ Black

### Front Panel

- Buttons** ■ Power On/Off button  
■ System Reset button

- LEDs** ■ Power LED  
■ Hard drive activity LED  
■ 2x Network activity LEDs  
■ System Overheat LED / Fan fail LED / UID LED

### Expansion Slots

<b>DIMM Sizes</b>	<ul style="list-style-type: none"> <li>RDIMM: 32GB, 16GB, 8GB, 4GB</li> <li>LRDIMM: 64GB, 32GB</li> </ul>
<b>Memory Voltage</b>	<ul style="list-style-type: none"> <li>1.2 V</li> </ul>
<b>Error Detection</b>	<ul style="list-style-type: none"> <li>Corrects single-bit errors</li> </ul>

### On-Board Devices

<b>Chipset</b>	<ul style="list-style-type: none"> <li>Intel® C612 Express chipset</li> </ul>
<b>SATA</b>	<ul style="list-style-type: none"> <li>SATA3 (6Gbps) with RAID 0, 1, 5, 10</li> </ul>
<b>IPMI</b>	<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>
<b>Network Connectivity</b>	<ul style="list-style-type: none"> <li>4x Gigabit Ethernet ports via <a href="#">AOC-UR-i4G</a></li> </ul>
<b>Graphics</b>	<ul style="list-style-type: none"> <li>ASPEED AST2400 BMC</li> </ul>

### Input / Output

<b>SATA</b>	<ul style="list-style-type: none"> <li>10x SATA3 (6Gbps) ports</li> </ul>
<b>SAS</b>	<ul style="list-style-type: none"> <li>8x SAS3 ports support via optional Add-on Card</li> </ul>
<b>LAN</b>	<ul style="list-style-type: none"> <li>4x RJ45 Gigabit Ethernet ports</li> <li>1x RJ45 Dedicated IPMI LAN port</li> </ul>
<b>USB</b>	<ul style="list-style-type: none"> <li>5x USB 3.0 ports (2 rear, 2 onboard header, 1 Type A)</li> </ul>
<b>Video</b>	<ul style="list-style-type: none"> <li>1x VGA Connector</li> </ul>
<b>Serial Port</b>	<ul style="list-style-type: none"> <li>1x Serial header</li> </ul>

### System BIOS

<b>BIOS Type</b>	<ul style="list-style-type: none"> <li>128Mb SPI Flash EEPROM with AMI BIOS</li> </ul>
<b>BIOS Features</b>	<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>

### Management

<b>Software</b>	<ul style="list-style-type: none"> <li><a href="#">SuperDoctor® 5</a></li> <li>Intel® Node Manager 3.0</li> <li>Watch Dog</li> <li>NMI</li> <li>SMCBU and SMM</li> <li>Optional IPMI 1.5 / 2.0</li> </ul>
<b>Power Configurations</b>	<ul style="list-style-type: none"> <li>ACPI Power Management</li> <li>Power-on mode for AC power recovery</li> </ul>

- 2x PCI-E 3.0 x16 slots (Full-height, 10.5" L)
- 2x PCI-E 3.0 x8 slots (Low-profile, 1 internal)

### PCI-Express

**(Both CPUs need to be installed for full access to PCI-E slots and onboard controllers. See manual block diagram and [AOC Support for details.](#))**

### Drive Bays

- Hot-swap**
  - 10x 2.5" Hot-swap drive bays

### System Cooling

- Fans**
  - 4x heavy duty fans with optimal fan speed control
  - 4x additional fans optional
- Air Shroud**
  - 1x Air Shroud

### Power Supply

750W Redundant AC-DC Power Supplies, +12V/+12Vsb output

- AC Input**
  - 100-127Vac, 50-60Hz
  - 200-240Vac, 50-60Hz
- +12V**
  - Max: 62.5A & Min: 0A (100Vac-127Vac)
  - Max: 62.5A & Min: 0A (200Vac-240Vac)
- 12V SB**
  - Max: 2.1A
  - Min: 0A

**Certification**   **Platinum Level**  
**[ Test Report ]**

### PC Health Monitoring

- Voltage**
  - Monitors for CPU Cores, +1.8V, +3.3V, +5V, +12V, +3.3V Standby, +5V Standby, VBAT, Memory Voltages.
  - 5+1 Phase-switching voltage regulator
- FAN**
  - 8x 4-pin fan headers
  - Status monitor for speed control
  - Pulse Width Modulated (PWM) fan connectors
- Temperature**
  - Support to monitor Supermicro AOC temperatures from IPMI or SD 5
  - Monitoring for CPU and chassis environment
  - CPU thermal trip support
  - Thermal Control for 8x Fan Connectors
  - Thermal Monitor 2 (TM2) support
  - PECI
- LED**
  - Memory DIMM ECC error LEDs
  - CPU / System Overheat LED
  - Suspend static indicator LED
  - UID/Remote UID
- Other Features**
  - 4x 8-pin GPU power connectors
  - Chassis intrusion detection
  - Chassis intrusion header
  - SDDC Support
  - RoHS

### Operating Environment / Compliance

- RoHS**
  - RoHS Compliant
- Environmental Spec.**
  - Operating Temperature: 5°C to 40°C (41°F to 104°F)
  - Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)
  - Operating Relative Humidity: 8% to 90% (non-condensing)

**Parts List - (Items Included)**

	<b>Part Number</b>	<b>Qty</b>	<b>Description</b>
<b>Motherboard / Chassis</b>	MBD-X10DRU-i+	1	Super X10DRU-i+ Motherboard
	CSE-119UAC-R750	1	CSE-119UAC-R750 Chassis
<b>Air Shroud</b>	MCP-310-11803-0N	1	Air Shroud for Air X9DRG/X10DRG boards in CSE-118GH-R1K66B
<b>Backplane</b>	BPN-SAS3-116A	1	1U SAS3 12Gbps 10x 2.5" HDD backplane for 1U Storage Chassis,RoHS/REACH,PBF
<b>Cable 1</b>	CBL-0484L	2	55cm 30AWG SATA S-S cable
<b>Cable 2</b>	CBL-CDAT-0662	1	8 pin to 8 pin round SGPIO cable, 61.5cm, 28AWG, pinout 1-1,RoHS/REACH
<b>Cable 3</b>	CBL-PWEX-0650	1	8 pin female to 2x RA(Right Angle) big 4 pin female power, 47/62CM, 18AWG,RoHS/REACH
<b>Cable 4</b>	CBL-SAST-0655	1	Internal RA side exit (right) miniSAS to miniSAS HD 47cm w/ SB, 30AWG,RoHS/REACH
<b>Cable 5</b>	CBL-SAST-0656	1	Internal RA side exit (right) miniSAS to miniSAS HD 39cm w/ SB, 30AWG,RoHS/REACH
<b>Riser Card</b>	RSC-R1UW-E8R	1	RSC-R1UW-E8R-O-P
<b>Riser Card</b>	RSC-R1UW-2E16	1	RSC-R1UW-2E16-O-P
<b>Heatsink / Retention</b>	SNK-P0047PS	2	1U Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Narrow ILM MB
<b>Power Supply</b>	PWS-750P-1R	2	1U 750W CRPS, +12V/+12Vsb output, 80-plus Platinum AC-DC Power Supply Module (185x74x40mm),RoHS/REACH,PBF
<b>Cable 6</b>	CBL-0160L	2	NEMA5-15P to C13 US power cord 16AWG 6ft, PBF (default for high watt)
<b>Cable 7</b>	CBL-0335L	1	FRONT CTL CABLE 20 PIN TO 20 PIN W/TUBE,73CM,PBF. 28AWG
<b>Drive Tray(s)</b>	MCP-220-00047-0B	10	Black gen 3rd hot-swap 2.5inch HDD tray
<b>Fan 1</b>	FAN-0101L4	4	40x56,4 Pin PWM,Primary for SC809,111, Sec.for SC816,819,808
<b>Add-on Card</b>	AOC-UR-i4G	1	AOC for 4x GbE ports

**Optional Parts List**

	<b>Part Number</b>	<b>Qty</b>	<b>Description</b>
<b>Storage Control Card and Cable(s)</b>	AOC-S3008L-L8e & 1x CBL-SAST-0671	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA; Internal RA side exit (left) dual miniSAS HD to 2x miniSAS HD 50cm,30AWG,12Gb/s
	AOC-S3008L-L8i & 1x CBL-SAST-0671	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E; Internal RA side exit (left) dual miniSAS HD to 2x miniSAS HD 50cm,30AWG,12Gb/s
	AOC-S3108L-H8iR & 1x CBL-SAST-0671	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60; Internal RA side exit (left) dual miniSAS HD to 2x miniSAS HD 50cm,30AWG,12Gb/s
<b>Network Card(s)</b>	AOC-S40G-i2Q	-	Standard LP 2-port 40GbE controller, based on Intel Fortville XL710
	AOC-SGP-i2	-	Standard LP, 2x GbE RJ45, PCI-E x4, Intel® i350AM2
	AOC-SGP-i4	-	Standard LP, 4x GbE RJ45, PCI-E x4, Intel® i350
	AOC-STG-b4S	-	Standard LP, 4x 10GbE SFP+, PCI-E x8, Broadcom® BCM57840S
	AOC-STGN-i2S	-	Standard LP, 2x 10GbE SFP+, PCI-E x8, Intel® 82599ES
	AOC-STGN-i1S	-	SStandard LP, 1x 10GbE SFP+, PCI-E x8, Intel® 82599EN
	AOC-STG-i2T	-	Standard LP, 2x 10GbE RJ45, PCI-E x8, Intel® X540
	AOC-STG-i2	-	Standard LP, 2x 10GbE CX4, PCI-E x8, Intel® 82598EB
<b>CacheVault(s)</b>	BTR-TFM8G-LSICVM02	-	CacheVault for LSI 3108 (LSICVM02)
	BTR-CV3108-1U1	-	LSI 3108 CacheVault 1U dummy fan kit
<b>CacheVault Installation Kits</b>	MCP-240-00127-0N	-	SuperCap installation kit for thick 2.5" HDD location
	BKT-BBU-BRACKET-05	-	SuperCap installation kit for PCI-E location
<b>Fan</b>	FAN-0101L4	Up to 4	40x40x56 mm, 14.4K-10.7K RPM Counter-rotating Cooling Fan
<b>Onsite Service Program</b>	<a href="#">OS4HR3/2/1</a>	-	3/2/1-year onsite 24x7x4 service
<b>Onsite Service Program</b>	<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)
<b>Software</b>	SFT-DCMS-Single	1	DataCenter Management Package (per node license)