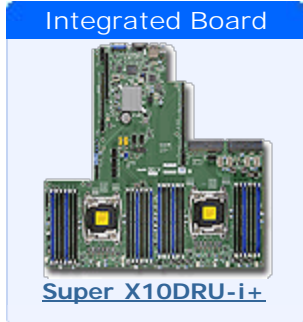


# SuperServer 6028U-TRT+ (Complete System Only)



## Key Features

### • Flexible Connectivity Options

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 slots
3. 1x PCI-E 3.0 x16 slot (FH, 10.5" L), 7x PCI-E 3.0 x8 slots (5x FH, 10.5" L, 1x LP, 1x Internal LP)
4. 2x 10GBase-T ports
5. 12x Hot-swap 3.5" Drive Bays: 10x SATA3 ports by default; Optional drive support: 12x SAS3
6. 4x heavy duty fans w/ optimal fan speed control
7. 1000W High efficiency (96%) Redundant PSU; Titanium Level

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-6028U-TRT+ ■ SuperServer 6028U-TRT+ (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 Supermicro Technical Support for additional information about frequency optimized CPUs and specialized system optimization.

### System Memory

### Chassis

Form Factor ■ 2U Rackmount

Model ■ CSE-829UAC-R1K02

### Dimensions and Weight

Width ■ 17.2" (437mm)

Height ■ 3.5" (89mm)

Depth ■ 25.5" (647mm)

Gross Weight ■ 36 lbs (16.4kg)

Available Colors ■ Black

### Front Panel

Buttons ■ Power On/Off button  
 ■ System Reset button

LEDs ■ Power status LED  
 ■ HDD activity LED  
 ■ 2x Network activity LEDs  
 ■ System information (overheat/UID) LED

Memory Capacity	<ul style="list-style-type: none"> <li>24x 288-pin DDR4 DIMM slots</li> <li>Up to 1.5TB ECC LRDIMM, 768GB ECC RDIMM</li> </ul>
Memory Type	<ul style="list-style-type: none"> <li>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> </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 Express chipset</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>
Network Connectivity	<ul style="list-style-type: none"> <li>2x 10GBase-T ports via <a href="#">AOC-2UR68-i2XT</a></li> </ul>
Graphics	<ul style="list-style-type: none"> <li>ASPEED AST2400 BMC</li> </ul>

#### Input / Output

SATA	<ul style="list-style-type: none"> <li>10x SATA3 (6Gbps) ports</li> </ul>
SAS	<ul style="list-style-type: none"> <li>12x SAS3 ports support via optional Add-on Card</li> </ul>
LAN	<ul style="list-style-type: none"> <li>2x RJ45 10GBase-T LAN 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 onboard 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 Serial header</li> </ul>
DOM	<ul style="list-style-type: none"> <li>2x SuperDOM (Disk on Module) ports</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>

#### Management

Software	<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>SMCUBU and SMM</li> <li>Optional IPMI 1.5 / 2.0</li> </ul>
Power Configurations	<ul style="list-style-type: none"> <li>ACPI Power Management</li> <li>Power-on mode for AC power recovery</li> </ul>

#### Expansion Slots

- 1x PCI-E 3.0 x16 slot (FH, 10.5" L)
- 7x PCI-E 3.0 x8 slots (5x FH, 10.5" L, 1x LP, 1x Internal LP)

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

- 12x Hot-swap 3.5" Drive Bays: 10x SATA3 ports by default
- Optional drive support: 12x SAS3

Hot-swap

Note: optional storage card is required to support more than 10 drives.

#### Backplane

2U SAS/SATA backplane

#### System Cooling

- Fans
- 4x 8cm heavy duty PWM fans

#### Power Supply with Digital Switching Control

1000W Titanium Level (96%) High-efficiency Redundant Single Output Power Supplies

AC Input	<ul style="list-style-type: none"> <li>100-127 V, 50-60 Hz</li> <li>200-240 V, 50-60 Hz</li> </ul>
+12V	<ul style="list-style-type: none"> <li>Max: 62.5A &amp; Min: 0A (100Vac-127Vac)</li> <li>Max: 83A (200Vac-240Vac)</li> </ul>
12V SB	<ul style="list-style-type: none"> <li>Max: 2.1A</li> </ul>

Certification



Titanium Level [ [Test Report](#) ]

#### PC Health Monitoring

Voltage	<ul style="list-style-type: none"> <li>Monitors for CPU Cores, +1.8V, +3.3V, +5V, +12V, +3.3V Standby, +5V Standby, VBAT, Memory Voltages.</li> <li>5+1 Phase-switching voltage regulator</li> </ul>
FAN	<ul style="list-style-type: none"> <li>8x 4-pin fan headers</li> <li>Status monitor for speed control</li> <li>Pulse Width Modulated (PWM) fan connectors</li> </ul>
Temperature	<ul style="list-style-type: none"> <li>Support to monitor Supermicro AOC temperatures from IPMI or SD 5</li> <li>Monitoring for CPU and chassis environment</li> <li>CPU thermal trip support</li> <li>Thermal Control for 8x Fan Connectors</li> <li>Thermal Monitor 2 (TM2) support</li> <li>PECI</li> </ul>
LED	<ul style="list-style-type: none"> <li>Memory DIMM ECC error LEDs</li> <li>CPU / System Overheat LED</li> <li>Suspend static indicator LED</li> <li>UID/Remote UID</li> </ul>
Other Features	<ul style="list-style-type: none"> <li>4x 8-pin GPU power connectors</li> <li>Chassis intrusion detection</li> <li>Chassis intrusion header</li> <li>SDDC Support</li> <li>RoHS</li> </ul>

#### 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)
- Non-operating Relative Humidity: 5% to 95% (non-condensing)

## Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X10DRU-i+	1	Super X10DRU-i+ Motherboard
	CSE-829UAC-R1K02	1	2U Chassis
Backplane	BPN-SAS3-826A	1	BPN-SAS3-826A,HF,RoHS/REACH
Cable 1	CBL-PWEX-0652	1	8 pin female to 2x RA(Right Angle) big 4 pin female power, 60/65CM, 18AWG,RoHS/REACH
Cable 2	CBL-PWEX-0673	1	8 pin female to 2x big 4 pin female power, 65/70CM, 18AWG,RoHS/REACH
Cable 3	CBL-SAST-0655	1	Internal RA side exit (right) miniSAS to miniSAS HD 47cm w/ SB, 30AWG,RoHS/REACH
Cable 4	CBL-SAST-0631	1	cross-over mini SAS HD to 4 SATA w/SB, S. 55cm. 30AWG,RoHS/REACH
Cable 5	CBL-SAST-0657	1	Internal RA side exit (right) miniSAS to miniSAS HD 55cm w/ SB, 30AWG,RoHS/REACH
Riser Card	RSC-R2UW-4E8-O-P	1	RSC-R2UW-4E8-O-P
Riser Card	RSC-R1UW-E8R-O-P	1	RSC-R1UW-E8R-O-P
Heatsink / Retention	SNK-P0058PSU	2	2U Passive CPU Heat Sink for X10 2U 24-DIMM Ultra Series Servers,RoHS/REACH
Power Supply	PWS-1K02A-1R	2	1U 1000W Redundant Power Supply 73.5mm width Titanium Level,RoHS/REACH
Drive Tray(s)	MCP-220-00075-0B	12	Black gen 5.5 hot-swap 3.5" HDD tray
Add-on Card	AOC-2UR6-i4XT	1	AOC for 4x 10GBase-T ports

## Optional Parts List

	Part Number	Qty	Description
Storage Control Card and Cable(s)	AOC-S3008L-L8e & 2x CBL-SAST-0593	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA; Internal Mini-SAS HD to Mini-SAS HD 60cm,30AWG,12Gb/s
	AOC-S3008L-L8i & 2x CBL-SAST-0593	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E; Internal Mini-SAS HD to Mini-SAS HD 60cm,30AWG,12Gb/s
	AOC-S3108L-H8iR & 2x CBL-SAST-0593	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60; Internal Mini-SAS HD to Mini-SAS HD 60cm,30AWG,12Gb/s
Network Card(s)	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	-	Standard 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
CachVault(s)	BTR-TFM8G-LSICVM02	-	CacheVault for LSI 3108 (LSICVM02)
CacheVault Installation Kits	MCP-240-00127-0N	-	SuperCap installation kit for thick 2.5" HDD location
	BKT-BBU-BRACKET-05	-	SuperCap installation kit for PCI-E location
Hot-swap 3.5" to 2.5" Hard Disk Drive Tray	MCP-220-00043-0N	-	Black hot-swap 3.5" to 2.5" HDD tray
Onsite Service Program	<a href="#">QS4HR3/2/1</a>	-	3/2/1-year onsite 24x7x4 service
Onsite Service Program	<a href="#">QSNBD3/2/1</a>	-	3/2/1-year onsite NBD service
Software	SFT-OOB-LIC	1	OOB Management Package (per node license)
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)