

# SuperServer 4028GR-TXRT (Complete System Only)



Due to the complexity of integration, this product is sold as completely assembled systems only (with minimum 2 CPU, 4 DIMMs, 4 GPUs installed). Please contact your Supermicro sales rep for special requirements.

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## Key Features

- Up to 8 Tesla P100 SXM2
- Up to 80 GB/s GPU-to-GPU NVLINK
- Supports GPUDirect RDMA

1. Dual socket R3 (LGA 2011) supports Intel® Xeon® processor E5-2600 v4†/ v3 family; QPI up to 9.6GT/s
2. Up to 3TB† ECC 3DS LRDIMM , up to DDR4- 2400†MHz ; 24x DIMM slots
3. 4 PCI-E 3.0 x16 (low-profile) slots  
2 PCI-E 3.0 x8 slots
4. Dual 10GBase-T LAN with Intel® X540
5. 16 Hot-swap 2.5" SATA/SAS drives; Supports 8 NVMe drives
6. 8x 92mm cooling fans
7. 2200W Redundant (2+2) Power Supplies; Titanium Level (96%+)

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

## Specifications

Product SKUs	
SYS-4028GR-TXRT	▪ SuperServer 4028GR-TXRT (Black)
Motherboard	
Super X10DGO-T	
Processor/Cache	
CPU	▪ Intel® Xeon® processor E5-2600 v4†/ v3 family (up to 145W TDP) * ▪ Dual Socket R3 (LGA 2011)
Cores / Cache	▪ Up to 22 Cores† / Up to 55MB† Cache
System Bus	▪ QPI up to 9.6 GT/s
Note	† BIOS version 2.0 or above is required
Note	* Please contact Supermicro Technical Support for additional information about frequency optimized CPUs and specialized system optimization.
GPU	▪ 8 Nvidia Tesla P100 SXM2 ▪ NVLINK up to 80GB/s

Chassis	
Form Factor	▪ 4U Rackmountable
Model	▪ Rackmount Kit (MCP-290-00057-0N) ▪ CSE-R422BG
Dimensions	
Height	▪ 7.0" (178mm)
Width	▪ 17.6" (447mm)
Depth	▪ 31.7" (805mm)
Weight	▪ Net Weight: 80 lbs (36.2 kg) ▪ Gross Weight: 135 lbs (61.2 kg)
Available Colors	▪ Black
Drive Bays	
Hot-swap	▪ 16 Hot-swap 2.5" SATA/SAS drive bays
Expansion Slots	
PCI-Express	▪ 4 PCI-E 3.0 x16 (low-profile) slots ▪ 2 PCI-E 3.0 x8 slots
System Cooling	
Fans	▪ 8x 92mm Cooling Fans
Shrouds	▪ 1 Air Shroud (MCP-310-41808-0B)

System Memory	
Memory Capacity	<ul style="list-style-type: none"> <li>24x 288-pin DDR4 DIMM slots</li> <li>Up to 3TB<sup>†</sup> ECC 3DS LRDIMM, 2TB 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: 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>
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 Controllers	<ul style="list-style-type: none"> <li>Dual Port 10GbE with Intel X540 Ethernet Controller</li> <li>Virtual Machine Device Queues reduce I/O overhead</li> <li>Supports 10GBASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output</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>10 SATA3 (6Gbps) ports</li> </ul>
LAN	<ul style="list-style-type: none"> <li>2 RJ45 10GBase-T LAN ports</li> <li>1 RJ45 Dedicated IPMI LAN port</li> </ul>
USB	<ul style="list-style-type: none"> <li>4 USB 3.0 ports</li> </ul>
Video	<ul style="list-style-type: none"> <li>1 VGA Connector</li> </ul>
Serial Port	<ul style="list-style-type: none"> <li>1 Serial header</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>DMI 2.3</li> <li>PCI 2.3</li> <li>ACPI 1.0 / 2.0 / 3.0</li> <li>USB Keyboard support</li> <li>SMBIOS 2.7.1</li> <li>UEFI</li> </ul>

#### Power Supply

##### 2200W Redundant Titanium Level Power Supplies with PMBus

Total Output	<ul style="list-style-type: none"> <li>1200W / 100-127Vac / 50-60Hz</li> <li>1800W / 200-220Vac / 50-60Hz</li> </ul>
Power and Input	<ul style="list-style-type: none"> <li>1980W / 220-230Vac / 50-60Hz</li> <li>2090W / 230-240Vac / 50-60Hz</li> </ul>
Dimension (W x H x L)	<ul style="list-style-type: none"> <li>106.5 x 82.4 x 203.5 mm</li> </ul>
+12V	<ul style="list-style-type: none"> <li>Max: 100A / Min: 0A (100Vac-127Vac)</li> <li>Max: 150A / Min: 0A (200Vac-220Vac)</li> <li>Max: 165A / Min: 0A (220Vac-230Vac)</li> <li>Max: 174.17A / Min: 0A (230Vac-240Vac)</li> <li>Max: 183.3A / Min: 0A (220Vac-240Vac)</li> <li>Max: 174.17A / Min: 0A (180Vac-220Vac)</li> <li>Max: 183.3A / Min: 0A (-)</li> <li>Max: 174.17A / Min: 0A (-)</li> </ul>
12Vsb	<ul style="list-style-type: none"> <li>Max: 2A / Min: 0A</li> </ul>
Output Type	<ul style="list-style-type: none"> <li>Backplanes (connector)</li> </ul>

#### Certification



UL/cUL/CE/CCC  
Titanium Level  
[ Cert. in progress ]

#### PC Health Monitoring

CPU	<ul style="list-style-type: none"> <li>Monitors for CPU Cores, +1.2V, 1.5V, +3.3V, +12V, (+3V, 1.0V, 1.2V, 1.8V, 1.1V) Standby, VBAT, Memory, Chipset Voltages.</li> <li>4-Phase-switching voltage regulator with auto-sense from 0.6V-1.35V</li> </ul>
FAN	<ul style="list-style-type: none"> <li>4-pin fan headers with tachometer status monitoring</li> <li>Low noise fan speed control mode</li> </ul>
Temperature	<ul style="list-style-type: none"> <li>Monitoring for CPU and system environment</li> <li>Thermal Control for 8 fan connectors</li> </ul>
Other Features	<ul style="list-style-type: none"> <li>Chassis intrusion detection</li> </ul>

#### Operating Environment / Compliance

RoHS	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>
Environmental Spec.	<ul style="list-style-type: none"> <li>Operating Temperature: 10°C to 35°C (50°F to 95°F)</li> <li>Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)</li> <li>Operating Relative Humidity: 8% to 90% (non-condensing)</li> <li>Non-operating Relative Humidity: 5% to 95% (non-condensing)</li> </ul>

### Parts List

#### Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X10DGO-T	1	Super X10DGO-T Motherboard
	CSE-R422BG	1	CSE-R422BG Chassis
Backplane	BPN-MB-R422	1	Pascal 4U midplane, 2U Pascal node on top, and 2U CPU node on bottom. Support 8x fan/power module at rear side.,RoHS
Backplane	BPN-SAS3-213A-N8	1	16-port 2U SAS3 12Gbps hybrid backplane, support up to 8x 2.5-inch SAS3/SATA3 HDD/SSD and 8x SAS3/SATA3/NVMe Storage Devices

Cable 1	CBL-PWEX-0979	3	2X4F/GPU-White/P4.2 to TWO 1X4F/P5.08, (5,12V),48/51CM,18AWG
Cable 2	CBL-SAST-0550	2	Internal Mini-SAS HD to Mini-SAS HD 25cm,30AWG,12Gb/s,HF,RoHS/REACH,PBF
Cable 3	CBL-SAST-0819	2	OCuLink v.91,INT,PCIe NVMe SSD, 65CM,34AWG
Cable 4	CBL-SAST-0974-1	2	OCuLink v.1.0,INT,x4,PCIe,37 CM
Power Supply	PWS-2K21A-2R	4	2U 2200W 90-264VAC/47-63Hz, or wide DC input 180Vdc~300Vdc,
Power Supply	PWS-DF004-1F	4	12Vdc input redundant FAN module power supports I2C function
Heatsink / Retention	SNK-P0048AP4	2	2U Active CPU Heat Sink for Intel R2/R3/B2/B3 and AMD C32
Heatsink / Retention	SNK-P4001P	8	2U Passive GPU Heat Sink for NVIDIA SXM2 Module in SYS-4028GR-TXR/TXRT Series Servers

#### Optional Parts List

	Part Number	Qty	Description
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	SFT-OOB-LIC	1	OOB Management Package (per node license)
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)