

# SuperServer 1028GQ-TXR (Complete System Only)



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

[▶ Drivers & Utilities](#) ▶ [BIOS](#) ▶ [IPMI](#) ▶ [Tested Memory](#) ▶ [Drive Options](#)

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

## Key Features

- Up to 4 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 2TB† ECC 3DS LRDIMM , up to DDR4- 2400†MHz ; 16x DIMM slots
3. 3 PCI-E 3.0 x16 slots, 1 PCI-E 3.0 x8 Low-profile slot
4. Intel i350 Dual port GbE LAN
5. 2x 2.5" Hot-swap drive bays, 2x 2.5" internal drive bays
6. 7x 4cm heavy duty counter-rotating fans with air shroud & optimal fan speed control
7. 2000W Redundant Power Supplies Titanium Level (96%)

## Specifications

### Product SKUs

SYS-1028GQ-TXR ■ SuperServer 1028GQ-TXR (Black)

### Motherboard

Super X10DGO

### 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.

### Chassis

Form Factor ■ 1U Rackmount

Model ■ CSE-118GQP-R2K05B

### Dimensions and Weight

Height ■ 1.7" (43mm)

Width ■ 17.2" (437mm)

Depth ■ 35.2" (894mm)  
 ■ 39.3" (997mm) with rails

Package ■ 24" (H) x 8" (W) x 46" (D)

Weight ■ Net Weight: 45 lbs (15.9 kg)  
 ■ Gross Weight: 58 lbs (21.8 kg)

Available Color ■ Black

### Front Panel

Buttons ■ Power On/Off button  
 ■ System Reset button

LEDs ■ Power LED  
 ■ Hard drive activity LED  
 ■ 2 Network activity LEDs

<b>GPU</b>	<ul style="list-style-type: none"> <li>4 Nvidia Tesla P100 SXM2</li> <li>NVLink up to 80GB/s</li> </ul>
<b>System Memory</b>	
Memory Capacity	<ul style="list-style-type: none"> <li>16x 288-pin DDR4 DIMM slots</li> <li>Up to 2TB<sup>†</sup> ECC 3DS LRDIMM, 1TB 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>

<b>On-Board Devices</b>	
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>Intel® i350 Dual Port Gigabit Ethernet</li> <li>Virtual Machine Device Queues reduce I/O overhead</li> <li>Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output</li> </ul>
Graphics	<ul style="list-style-type: none"> <li>ASPEED AST2400 BMC</li> </ul>

<b>Input / Output</b>	
SATA	<ul style="list-style-type: none"> <li>6 SATA3 (6Gbps) ports</li> </ul>
LAN	<ul style="list-style-type: none"> <li>2 RJ45 Gigabit Ethernet ports</li> <li>1 RJ45 Dedicated IPMI LAN port</li> </ul>
USB	<ul style="list-style-type: none"> <li>2 USB 3.0 ports (2 via headers)</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>

<b>System BIOS</b>	
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>

<ul style="list-style-type: none"> <li>System Overheat LED / Fan fail LED / UID LED</li> </ul>
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<b>Expansion Slots</b>	
PCI-Express	<ul style="list-style-type: none"> <li>3 PCI-E 3.0 x16 slots</li> <li>1 PCI-E 3.0 x8 low-profile slot</li> </ul>

<b>Drive Bays</b>	
Hot-swap	<ul style="list-style-type: none"> <li>2x 2.5" Hot-swap drive bays</li> </ul>
Fixed	<ul style="list-style-type: none"> <li>2x 2.5" internal drive bays</li> </ul>

<b>System Cooling</b>	
Fans	<ul style="list-style-type: none"> <li>7x 4cm heavy duty counter-rotating fans with air shroud &amp; optimal fan speed control</li> </ul>

<b>Power Supply</b>	
2000W Redundant Power Supplies with PMBus	
Total Output Power	<ul style="list-style-type: none"> <li>1000W/1800W/1980W/2000W</li> </ul>
Dimension (W x H x L)	<ul style="list-style-type: none"> <li>73.5 x 40 x 265 mm</li> </ul>
Input	<ul style="list-style-type: none"> <li>100-120Vac / 12-9.5A / 50-60Hz</li> <li>200-220Vac / 10-9.5A / 50-60Hz</li> <li>220-230Vac / 10-9.8A / 50-60Hz</li> <li>230-240Vac / 10-9.8A / 50-60Hz</li> <li>200-240Vac / 11.8-9.8A / 50-60Hz (UL/cUL only)</li> </ul>
+12V	<ul style="list-style-type: none"> <li>Max: 83.3A / Min: 0A (100-120Vac)</li> <li>Max: 150A / Min: 0A (200-220Vac)</li> <li>Max: 165A / Min: 0A (220-230Vac)</li> <li>Max: 166.7A / Min: 0A (230-240Vac)</li> <li>Max: 166.7A / Min: 0A (200-240Vac) (UL/cUL only)</li> </ul>
12Vsb	<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	  <ul style="list-style-type: none"> <li>UL/cUL/CB/BSMI/CE/CCC Titanium Level [ <a href="#">Test Report</a> ]</li> </ul>
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<b>PC Health Monitoring</b>	
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>5 Phase-switching voltage regulator</li> </ul>
FAN	<ul style="list-style-type: none"> <li>Total of seven 4-pin PWM fans</li> <li>7 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 8 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

RoHS Compliant

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	<a href="#">MBD-X10DGQ</a>	1	Super X10DGQ Motherboard
	<a href="#">CSE-118GQP-R2K05B</a>	1	CSE-118GQP-R2K05B Chassis
Add-on Card / Module	<a href="#">AOM-PIO-I2G</a>	1	AOM-PIO-I2G
Backplane	<a href="#">BPN-SAS3-118GQE</a>	1	2-port 1U SAS3 12Gbps backplane, support up to 2x 2.5-inch SAS3/SATA3 HDD/SSD
Cable 1	<a href="#">CBL-PWEX-0953</a>	1	GPU,2x4F/RA/PCIe to 2x4F/CPU, P4.2, 42CM,17AWG
Cable 2	<a href="#">CBL-SAST-0934</a>	4	Oculink-Oculink 8 lanes Pascal Cable 50cm 34AWG
Cable 3	<a href="#">CBL-0484L</a>	4	55cm 30AWG SATA S-S cable
Cable 4	<a href="#">CBL-PWEX-0665</a>	1	PCIe 8 pin female(black) to CPU 8 pin female(white), K80/M60/M40 GPU power cable, 30cm, 18AWG,RoHS/REACH
Cable 5	<a href="#">CBL-PWEX-0954</a>	2	GPU,2x4F/RA/PCIe to 2x4F/RA/CPU, P4.2, 5.5CM,17AWG
Label	<a href="#">LBL-0108</a>	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
Manual	<a href="#">MNL-1810-QRG</a>	1	SYS-1028GQ-TR(T) Quick Reference Guide,HF,RoHS/REACH
Riser Card	<a href="#">RSC-G-68</a>	1	[NR]RSC-G-68
Riser Card	<a href="#">RSC-G-66</a>	1	[NR]RSC-G-66
Heatsink / Retention	<a href="#">SNK-P0057P</a>	2	1U High Performance Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Square ILM MB
Heatsink / Retention	<a href="#">SNK-P4000V</a>	4	1U Passive GPU Heat Sink for NVIDIA SXM2 Module in SYS-1028GQ-TXR(T) Series Servers
Power Supply	<a href="#">PWS-2K05A-1R</a>	2	1U 2000W Redundant Titanium Power Supply W/PMbus 73.5x40x265mm,RoHS/REACH
Fans	<a href="#">FAN-0163L4</a>	7	40x40x56 mm 23.3K-20.3K RPM Counter-rotating Fan

### 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	<a href="#">SFT-OOB-LIC</a>	1	OOB Management Package (per node license)
Software	<a href="#">SFT-DCMS-Single</a>	1	DataCenter Management Package (per node license)