

# SuperServer 4029GP-TVRT (Complete System Only)



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

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## Key Features

- Artificial Intelligence
- Big Data Analytics
- High-performance Computing
- Research Lab/National Lab
- Astrophysics, Business Intelligence

1. Dual socket P (LGA 3647) supports Intel® Xeon® Scalable Processors, 3 UPI up to 10.4GT/s
2. Up to 3TB ECC 3DS LRDIMM, up to DDR4-2666MHz; 24 DIMM slots
3. 4 PCI-E 3.0 x16 (LP) (GPU tray for GPUDirect RDMA), 2 PCI-E 3.0 x16 (LP, CPU tray) or up to 8x 2.5" NVMe Storage Devices  
M.2 Interface: PCI-E 3.0 x4  
M.2 Form Factor: 2260, 2280, 22110
4. Support 8 Tesla V100 with 300GB/s NVLINK
5. Dual 10GBase-T LAN with Intel® X540
6. 16 Hot-swap 2.5" SAS/SATA drives; Supports 8 NVMe drives
7. 8x 92mm cooling fans
8. 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-4029GP-TVRT	■ SuperServer 4029GP-TVRT (Black)
Motherboard	
Super X11DGO-T	
Processor/Cache	
CPU	<ul style="list-style-type: none"> <li>■ Dual Socket P (LGA 3647)</li> <li>■ Intel® Xeon® Scalable Processors, 3 UPI up to 10.4GT/s</li> <li>■ Support CPU TDP 70-205W</li> </ul>
Cores	■ Up to 28 Cores with Intel® HT Technology
GPU Support	■ NVIDIA Tesla V100 SXM2 GPU

Chassis	
Form Factor	<ul style="list-style-type: none"> <li>■ 4U Rackmountable</li> <li>■ Rackmount Kit (MCP-290-00057-0N)</li> </ul>
Model	■ CSE-R422BG-1
Dimensions	
Height	■ 7.0" (178mm)
Width	■ 17.6" (447mm)
Depth	■ 31.7" (805mm)
Weight	<ul style="list-style-type: none"> <li>■ Net Weight: 80 lbs (36.2 kg)</li> <li>■ Gross Weight: 135 lbs (61.2 kg)</li> </ul>
Available Colors	■ Black
Drive Bays	
Hot-swap	■ 16 Hot-swap 2.5" SAS/SATA drive bays

## System Memory

Memory Capacity	<ul style="list-style-type: none"><li>24 DIMM slots</li><li>Up to 3TB ECC 3DS LRDIMM, 1TB ECC RDIMM, DDR4 up to 2666MHz</li></ul>
Memory Type	<ul style="list-style-type: none"><li>2666/2400/2133MHz ECC DDR4 SDRAM</li></ul>

## On-Board Devices

Chipset	<ul style="list-style-type: none"><li>Intel® C621 chipset</li></ul>
SATA	<ul style="list-style-type: none"><li>SATA3 (6Gbps) with RAID 0, 1, 5, 10</li></ul>
Network Controllers	<ul style="list-style-type: none"><li>Dual Port 10GBase-T from Intel X540 Ethernet Controller</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></ul>
Graphics	<ul style="list-style-type: none"><li>ASPEED AST2500 BMC</li></ul>

## Input / Output

SATA	<ul style="list-style-type: none"><li>8 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>2 USB 3.0 ports (front)</li></ul>
Video	<ul style="list-style-type: none"><li>1 VGA Connector</li></ul>
COM Port	<ul style="list-style-type: none"><li>1 COM port (header)</li></ul>

## System BIOS

BIOS Type	<ul style="list-style-type: none"><li>AMI 32Mb SPI Flash ROM</li></ul>
BIOS Features	<ul style="list-style-type: none"><li>Intel® Node Manager</li><li><a href="#">IPMI 2.0</a></li><li>KVM with dedicated LAN</li><li><a href="#">SSM</a>, <a href="#">SPM</a>, <a href="#">SUM</a></li><li><a href="#">SuperDoctor® 5</a></li><li>Watchdog</li></ul>

## Expansion Slots

PCI-Express	<ul style="list-style-type: none"><li>4 PCI-E 3.0 x16 (LP, GPU tray for GPUDirect RDMA) slots</li><li>2 PCI-E 3.0 x16 (LP, CPU tray) slots or up to 8x 2.5" NVMe Storage Devices</li></ul>
M.2	<ul style="list-style-type: none"><li>M.2 Interface: 2 PCI-E 3.0 x4</li><li>Form Factor: 2260, 2280, 22110</li></ul>

## Backplane



16-port 2U SAS3 12Gbps hybrid backplane, support up to 8x 2.5" SAS3/SATA3 HDD/SSD and 8x SAS3/SATA3/NVMe Storage Devices

## System Cooling

Fans	<ul style="list-style-type: none"><li>8x 92mm Cooling Fans</li><li>4x 80mm Cooling Fans</li></ul>
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## Power Supply

2200W Redundant Titanium Level Power Supplies with PMBus

Total Output Power	<ul style="list-style-type: none"><li>1200W/1800W/1980W/2090W/2200W (UL/cUL only)</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>
Input	<ul style="list-style-type: none"><li>1200W: 100-127 Vac / 14-11 A / 50-60 Hz</li><li>1800W: 200-220 Vac / 10-9.5 A / 50-60 Hz</li><li>1980W: 220-230 Vac / 10-9.5 A / 50-60 Hz</li><li>2090W: 230-240 Vac / 10-9.8 A / 50-60 Hz</li><li>2200W: 220-240 Vac / 12-11 A / 50-60 Hz (UL/cUL only)</li><li>2090W: 180-220 Vac / 14-11 A / 50-60 Hz (UL/cUL only)</li><li>2090W: 230-240 Vdc / 10-9.8 A (CCC only)</li></ul>
+12V	<ul style="list-style-type: none"><li>Max: 100A / Min: 0A (1200W)</li><li>Max: 150A / Min: 0A (1800W)</li><li>Max: 165A / Min: 0A (1980W)</li><li>Max: 174.17A / Min: 0A (2090W)</li><li>Max: 183.3A / Min: 0A (2200W)</li><li>Max: 174.17A / Min: 0A (2090W)</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>Gold Finger (connector on M/P)</li></ul>
Certification	  UL/cUL/CB/BSMI/CE/CCC Titanium Level [ <a href="#">Test Report</a> ]

## Operating Environment

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 ~ 35°C (50°F ~ 95°F)</li><li>Non-operating Temperature: -40°C to 60°C (-40°F to 140°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
<b>Motherboard / Chassis</b>	MBD-X11DGO-T	1	Super X11DGO-T Motherboard
	MBD-X10DGO-SXMV-P	1	V100 SXM2 GPU Board
	CSE-R422BG-1	1	CSE-R422BG-1 Chassis
<b>Backplane</b>	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
<b>Backplane</b>	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
<b>Cable 1</b>	CBL-0174L	4	PWCD,US,NEMA5-15P TO IEC60320 C13,6FT,14AWG,15A,125V,RoHS/REACH
<b>Cable 2</b>	CBL-PWEX-0979	3	2X4F/GPU-White/P4.2 to TWO 1X4F/P5.08, (5,12V),48/51CM,18AWG
<b>Cable 3</b>	CBL-SAST-0550	2	MINI SAS HD,12G,INT,25CM,30AWG
<b>Cable 4</b>	CBL-SAST-0935-1	4	Oculink-Oculink 8 lanes Pascal Cable 60cm 34AWG,RoHS
<b>Parts</b>	MCP-220-42204-0N-PACK	1	Single pack R422BG 2U GPU tray (2U, 8 Pascal / Volta GPU),Ro
<b>Power Supply</b>	PWS-2K21A-2R	4	2U 2200W 90-264VAC/47-63Hz, or wide DC input 180Vdc~300Vdc,
<b>Power Supply</b>	PWS-DF004-1F	4	12Vdc input redundant FAN module power supports I2C function
<b>Heatsink / Retention</b>	SNK-P0068APS4	2	2U Active CPU Heat Sink Supporting Narrow Bolster Plate Mounting Mechanism for X11 Purley Platform
<b>Heatsink / Retention</b>	SNK-P4003P	8	2U Passive GPU Heat Sink for NVIDIA Pascal and Volta GPUs in SYS-4028GR-TXR/TXRT Series Servers

Optional Parts List			
	Part Number	Qty	Description
<b>Global Services &amp; Support</b>	<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
<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)
Optional NVMe Kit			
	Part Number	Qty	Description
<b>Cable</b>	CBL-SAST-1021	1	Oculink-8 lanes to 2x Oculink 4 lanes, 30cm 34AW
<b>NVMe drive Tray</b>	MCP-220-00121-0B	2	Black Gen-3 2.5" NVMe drive tray, Orange tab with lock