

SuperServer 4028GR-TVRT (Complete System Only)



Integrated Board

X10DGO-T

Key Features

- Up to 8 Tesla V100 SXM2 GPUs
- Up to 300 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 (low-profile) slots
M.2 Interface: PCI-E 3.0 x4
M.2 Form Factor: 2260, 2280, 22110
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%+)

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

[▶ Drivers & Utilities](#) ▶ [BIOS](#) ▶ [IPMI](#) ▶ [Tested Memory](#) ▶ [Manuals](#) ▶ [OS Certification Matrix](#) ▶ [Compatible GPU List](#) ▶ [Drive Options](#)

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-TVRT	▪ SuperServer 4028GR-TVRT (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.

Chassis	
Form Factor	▪ 4U Rackmountable ▪ Rackmount Kit (MCP-290-00057-0N)
Model	▪ CSE-R422BG-2
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
M.2	▪ M.2 Interface: PCI-E 3.0 x4

GPU	<ul style="list-style-type: none"> Up to 8 Tesla V100 SXM2 Up to 300GB/s GPU-to-GPU NVLINK
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System Memory

Memory Capacity	<ul style="list-style-type: none"> 24x 288-pin DDR4 DIMM slots Up to 3TB[†] ECC 3DS LRDIMM, 2TB ECC RDIMM
Memory Type	<ul style="list-style-type: none"> 2400[†]/2133/1866/1600MHz ECC DDR4 SDRAM 72-bit
DIMM Sizes	<ul style="list-style-type: none"> RDIMM: 32GB, 16GB, 8GB, 4GB LRDIMM: 64GB, 32GB 3DS LRDIMM: 128GB
Memory Voltage	<ul style="list-style-type: none"> 1.2 V
Error Detection	<ul style="list-style-type: none"> Corrects single-bit errors

On-Board Devices

Chipset	<ul style="list-style-type: none"> Intel® C612 chipset
SATA	<ul style="list-style-type: none"> SATA3 (6Gbps) with RAID 0, 1, 5, 10
IPMI	<ul style="list-style-type: none"> Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support ASPEED AST2400 BMC
Network Controllers	<ul style="list-style-type: none"> Dual Port 10GbE with Intel X540 Ethernet Controller Virtual Machine Device Queues reduce I/O overhead Supports 10GBASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output
Graphics	<ul style="list-style-type: none"> ASPEED AST2400 BMC

Input / Output

SATA	<ul style="list-style-type: none"> 10 SATA3 (6Gbps) ports
LAN	<ul style="list-style-type: none"> 2 RJ45 10GBase-T LAN ports 1 RJ45 Dedicated IPMI LAN port
USB	<ul style="list-style-type: none"> 2 USB 3.0 ports
Video	<ul style="list-style-type: none"> 1 VGA Connector
Serial Port	<ul style="list-style-type: none"> 1 Serial header

System BIOS

BIOS Type	<ul style="list-style-type: none"> 128Mb SPI Flash EEPROM with AMI® BIOS
BIOS Features	<ul style="list-style-type: none"> Plug and Play (PnP) APM 1.2 DMI 2.3 PCI 2.3 ACPI 1.0 / 2.0 / 3.0 USB Keyboard support SMBIOS 2.7.1 UEFI

<ul style="list-style-type: none"> Form Factor: 2260, 2280, 22110
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System Cooling

Fans	<ul style="list-style-type: none"> 8x 92mm Cooling Fans
Shrouds	<ul style="list-style-type: none"> 1 Air Shroud (MCP-310-41808-0B)

Power Supply

2200W Redundant Titanium Level Power Supplies with PMBus

Total Output Power	<ul style="list-style-type: none"> 1200W/1800W/1980W/2090W/2200W (UL/cUL only)
Dimension (W x H x L)	<ul style="list-style-type: none"> 106.5 x 82.4 x 203.5 mm
Input	<ul style="list-style-type: none"> 1200W: 100-127 Vac / 14-11 A / 50-60 Hz 1800W: 200-220 Vac / 10-9.5 A / 50-60 Hz 1980W: 220-230 Vac / 10-9.5 A / 50-60 Hz 2090W: 230-240 Vac / 10-9.8 A / 50-60 Hz 2200W: 220-240 Vac / 12-11 A / 50-60 Hz (UL/cUL only) 2090W: 180-220 Vac / 14-11 A / 50-60 Hz (UL/cUL only) 2090W: 230-240 Vdc / 10-9.8 A (CCC only)
+12V	<ul style="list-style-type: none"> Max: 100A / Min: 0A (1200W) Max: 150A / Min: 0A (1800W) Max: 165A / Min: 0A (1980W) Max: 174.17A / Min: 0A (2090W) Max: 183.3A / Min: 0A (2200W) Max: 174.17A / Min: 0A (2090W)
12Vsb	<ul style="list-style-type: none"> Max: 2A / Min: 0A
Output Type	<ul style="list-style-type: none"> Gold Finger (connector on M/P)

Certification	  <ul style="list-style-type: none"> UL/cUL/CB/BSMI/CE/CCC Titanium Level [Test Report]
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PC Health Monitoring

CPU	<ul style="list-style-type: none"> 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. 4-Phase-switching voltage regulator with auto-sense from 0.6V-1.35V
FAN	<ul style="list-style-type: none"> 4-pin fan headers with tachometer status monitoring Low noise fan speed control mode
Temperature	<ul style="list-style-type: none"> Monitoring for CPU and system environment Thermal Control for 8 fan connectors
Other Features	<ul style="list-style-type: none"> Chassis intrusion detection

Operating Environment / Compliance

RoHS	<ul style="list-style-type: none"> RoHS Compliant
Environmental Spec.	<ul style="list-style-type: none"> Operating Temperature: 10°C to 35°C (50°F to 95°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	MBD-X10DGO-T	1	Super X10DGO-T Motherboard
	MBD-X10DGO-SXMV-P	1	V100 SXM2 GPU Board
	CSE-R422BG-2	1	CSE-R422BG-2 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-0174L	4	PWCD,US,NEMA5-15P TO IEC60320 C13,6FT,14AWG,15A,125V,RoHS/REACH
Cable 2	CBL-0449L	2	HDD power extension for X8OBN, special 8 pin to 4 HDD. 45cm. 18AWG
Cable 3	CBL-PWEX-0979	3	2X4F/GPU-White/P4.2 to TWO 1X4F/P5.08, (5,12V),48/51CM,18AWG
Cable 4	CBL-SAST-0550	2	MINI SAS HD,12G,INT,25CM,30AWG
Cable 5	CBL-SAST-0819	2	OCuLink v 1.0,INT,PCIe NVMe SSD, 65CM,34AWG,RoHS/REACH
Cable 6	CBL-SAST-0974-1	2	OcuLink v 1.0,INT,PCIe NVMe SSD, 37CM,34AWG
Parts	MCP-220-42204-0N-PACK	1	Single pack R422BG 2U GPU tray (2U, 8 Pascal / Volta GPU),Ro
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
Heatsink / Retention	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
Global Services & Support	OS4HR3/2/1	-	3/2/1-year onsite 24x7x4 service
	OSNBD3/2/1	-	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)

Optional NVMe Kit

NVMe AOC	AOC-SLG3-4E2P-O	1	4 port PLX NVMe PCIe x8 card,HF,RoHS. Support up to 4 NVMe drives
Cable	CBL-SAST-0974-1	4	OCuLink v.1.0,INT,x4,PCIe,37 CM,RoHS
NVMe drive Tray	MCP-220-00121-0B	4	Black Gen-3 2.5" NVMe drive tray, Orange tab with lock