

SuperServer 4029GP-TRT2



Key Features

- Artificial Intelligence
- Big Data Analytics
- High-performance Computing
- Research Lab/National Lab
- Astrophysics, Business Intelligence
- Single Root System for excellent GPU peer to peer communication with sufficient CPU to GPU throughput

1. Dual Socket P (LGA 3647) support
2nd Gen Intel® Xeon® Scalable
processors (Cascade Lake/Skylake)[‡]

2. 24 DIMMs; up to 6TB 3DS ECC
DDR4-2933MHz[†] RDIMM/LRDIMM,
Supports Intel® Optane™ DCPMM^{††}

3. 11 PCI-E 3.0 x16 (FH, FL) slots
1 PCI-E 3.0 x8 (FH, FL in x16 slot)

4. Up to 24 Hot-swap 2.5" drive bays;
8x 2.5" SATA drives supported
with included H/W, 2x 2.5" NVMe
drives supported with included H/W,
1 NVMe based M.2 SSD

5. 2x 10GBase-T LAN ports via Intel C622

6. 8 Hot-swap 92mm RPM cooling fans

7. 2000W (2+2) Redundant Power
Supplies **Titanium Level (96%+)**

Integrated Board



X11DPG-OT-CPU



X10DRG-O-PCIE

Views: | [Angled View](#) | [Top View](#) |
| [Front View](#) | [Rear View](#) |

► [Drivers & Utilities](#) ► [BIOS](#) ► [IPMI](#) ► [Tested Memory](#) ► [Tested M.2 List](#) ► [NVMe Options](#) ► [Manuals](#) ► [OS Certification Matrix](#)
► [Compatible GPU List](#) ► [Drive Options](#) ► [4U PCIe Root Architectures](#)

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

Specifications

Product SKUs

SYS-4029GP-TRT2	■ SuperServer 4029GP-TRT2 (Black)
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Motherboard

Super X11DPG-OT-CPU

Processor/Cache

CPU	■ Dual Socket P (LGA 3647) ■ 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors[†], 3 UPI up to 10.4GT/s ■ Support CPU TDP 70-205W
Cores	■ Up to 28 Cores
Note	[†] BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R)
GPU Support	■ Please refer to: Compatible GPU list

System Memory

Memory Capacity	■ 24 DIMM slots ■ Up to 6TB 3DS ECC DDR4-2933MHz[†] RDIMM/LRDIMM ■ Supports Intel® Optane™ DCPMM^{††}
Memory Type	■ 2933 [†] /2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM
Note	[†] 2933MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro ^{††} Cascade Lake only. Contact your Supermicro sales rep for more info.

On-Board Devices

Chipset	■ Intel® C622 chipset
SATA	■ SATA3 (6Gbps) with RAID 0, 1, 5, 10
Network Controllers	■ Dual Port 10GbE from C622
IPMI	■ Support for Intelligent Platform Management Interface v.2.0 ■ IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
Graphics	■ ASPEED AST2500 BMC

Input / Output

SATA	■ 10 SATA3 (6Gbps) ports
LAN	■ 2 RJ45 10GBase-T LAN ports ■ 1 RJ45 Dedicated IPMI LAN port
USB	■ 4 USB 3.0 ports (rear)
Video	■ 1 VGA Connector
COM Port	■ 1 COM port (header)

System BIOS

BIOS Type	■ AMI 32Mb SPI Flash ROM
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Chassis

Form Factor	■ 4U Rackmountable ■ Rackmount Kit (MCP-290-00057-0N)
Model	■ CSE-418GTS-R4000BP2

Dimensions

Height	■ 7.0" (178mm)
Width	■ 17.2" (437mm)
Depth	■ 29" (737mm)
Weight	■ Net Weight: 65.5 lbs (29.7 kg) ■ Gross Weight: 100 lbs (45.3 kg)
Available Colors	■ Black

Drive Bays / Storage

Hot-swap	■ Up to 24x 2.5" SAS/SATA drive bays ■ 8x 2.5" SATA supported natively ■ 2x 2.5" NVMe supported natively
M.2	■ 1 NVMe based M.2 SSD ■ Form Factors: 2260, 2280, 22110

Expansion Slots

PCI-Express	■ 11 PCI-E 3.0 x16 (FH, FL) slots ■ 1 PCI-E 3.0 x8 (FH, FL, in x16) slot
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System Cooling

Fans	■ 8 Hot-swap 92mm cooling fans
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Power Supply

2000W Redundant Power Supplies with PMBus

Total Output Power	■ 1000W: 100 – 120Vac ■ 1800W: 200 – 220Vac ■ 1980W: 220 – 230Vac ■ 2000W: 230 – 240Vac ■ 2000W: 200 – 240Vac (UL/CUL only)
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Dimension (W x H x L)	■ 73.5 x 40 x 265 mm
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Input	■ 100-120Vac / 12.5-9.5A / 50-60Hz ■ 200-220Vac / 10-9.5A / 50-60Hz ■ 220-230Vac / 10-9.8A / 50-60Hz ■ 230-240Vac / 10-9.8A / 50-60Hz ■ 200-240Vac / 11.8-9.8A / 50-60Hz (UL/cUL only)
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+12V	■ Max: 83.3A / Min: 0A (100-120Vac) ■ Max: 150A / Min: 0A (200-220Vac) ■ Max: 165A / Min: 0A (220-230Vac) ■ Max: 166.7A / Min: 0A (230-240Vac) ■ Max: 166.7A / Min: 0A (200-240Vac) (UL/cUL only)
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12Vsb	■ Max: 2.1A / Min: 0A
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Output Type	■ 25 Pairs Gold Finger Connector
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Certification	  Titanium Level [Test Report]
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Operating Environment

Management

Software

- Intel® Node Manager
- IPMI 2.0
- KVM with dedicated LAN
- SSM, SPM, SUM
- SuperDoctor® 5
- Watchdog

RoHS

- RoHS Compliant

Environmental Spec.

- Operating Temperature:
10°C ~ 35°C (50°F ~ 95°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)

PC Health Monitoring

CPU

- Monitors for CPU Cores, Chipset Voltages, Memory.
- 4+1 Phase-switching voltage regulator

FAN

- Fans with tachometer monitoring
- Status monitor for speed control
- Pulse Width Modulated (PWM) fan connectors

Temperature

- Monitoring for CPU and chassis environment
- Thermal Control for fan connectors

Parts List

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X11DPG-OT-CPU	1	Super X11DPG-OT-CPU Motherboard
	MBD-X10DRG-O-PCIE	1	Super X10DRG-O-PCIE Motherboard
	CSE-418GTS-R4000BP2	1	CSE-418GTS-R4000BP2 Chassis
Backplane	BPN-SAS3-216A-N4	1	24-port 2U SAS3 12Gbps hybrid backplane, support up to 20x 2.5-inch SAS3/SATA3 HDD/SSD and 4x SAS3/SATA3/NVMe Storage Devices
Cable 1	CBL-0449L	2	HDD power extension for X8OBN, special 8 pin to 4 HDD. 45cm. 18AWG
Cable 2	CBL-PWEX-1028	8	GPU,2x4F/CPU to 2x4F/CPU,P4.2, 30CM,16AWG, 10A/pin, -40~105C
Cable 3	CBL-SAST-0507-01	2	MINI SAS HD-MINI SAS,6G,INT,80CM,SB,28AWG
Cable 4	CBL-SAST-0972	2	OcuLink V. 1.0 source to MiniSAS HD,INT,PCIe, 70CM,34AWG,RoH
Parts	MCP-130-41802-0B	1	Black plastic palm cover for X10DRG-O-PCIE
Riser Card	RSC-X9DRG-O	4	RSC-X9DRG-O
Heatsink / Retention	SNK-P0068APS4	2	2U Active CPU Heat Sink Supporting Narrow Bolster Plate Mounting Mechanism for X11 Purley Platform
Power Supply	PWS-2K05A-1R	4	1U 2000W Redundant Titanium Power Supply W/PMbus 73.5x40x265mm,RoHS/REACH
FAN 1	FAN-0151L4	8	92x92x38 mm, 11.5K RPM, SC418G Middle Fan w/ Housing,RoHS/REACH,PBF
Rear Window	MCP-240-84802-0N	1	21 slot rear window for SC418X

Optional Parts List

	Part Number	Qty	Description
NVIDIA Quadro & Generic GPU Cables	CBL-PWEX-1040	1 per GPU	GPU,2x4M/CPU to two (2x3F+2x1F)/PCIe,P4.2, 5CM,16/20AWG, 10.5A/pin(16AWG), 8A/pin(20AWG), -25~85C,RoHS
Storage Control Card and Cable for 2x Hybrid NVMe/SAS Drive Bays	1x AOC-S3008L-L8e & 2x CBL-SAST-0531	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122 HDD, HBA
	1x AOC-S3008L-L8i & 2x CBL-SAST-0531		Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63 HDD, RAID 0,1,1E
	1x AOC-S3108L-H8iR & 2x CBL-SAST-0531		Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240 HDD, RAID 0,1,5,6,10,50,60
2.5" NVMe Drive Trays	MCP-220-00121-0B	1-2	Black Gen-3 2.5" NVMe drive tray, Orange tab with lock
	MCP-220-00167-0B		Tool-less black hot-swap 2.5" NVMe drive tray (Orange tab, w/ key lock, clip design)
Super Cap for LSI 3108	BKT-BBU-BRACKET-05	1	Mounting Bracket for LSI BBUs
	BTR-TFM8G-LSICVM02	1	LSI Super Cap
Global Services & Support	QS4HR3/2/1	-	3/2/1-year onsite 24x7x4 service
	QSNBD3/2/1	-	3/2/1-year onsite NBD service
Software	SFT-OOB-LIC • eStore	1	OOB Management Package (per node license)
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)