

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-4029GP-TVRT

SKU SYS-4029GP-TVRT

4U

Supermicro

SuperServer SYS-4029GP-TVRT*(Angled View – System)*

8x 2.5" Hot-swap SAS/SATA3 Drive Bays

8x 2.5" Hot-swap NVMe/SAS/SATA3 Drive Bays



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FORM FACTOR

4U

MAX POWER (BASE)

602 W

HEAT OUTPUT

2,054 BTU/h

PRICE

On request**REQUEST A QUOTATION ONLINE**serverinvest.com/product/sys-4029gp-tvrt

01 Product overview

The Supermicro SYS-4029GP-TVRT is a server built on dual Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process processors with up to 6 TB of memory in 24 DIMM slots.

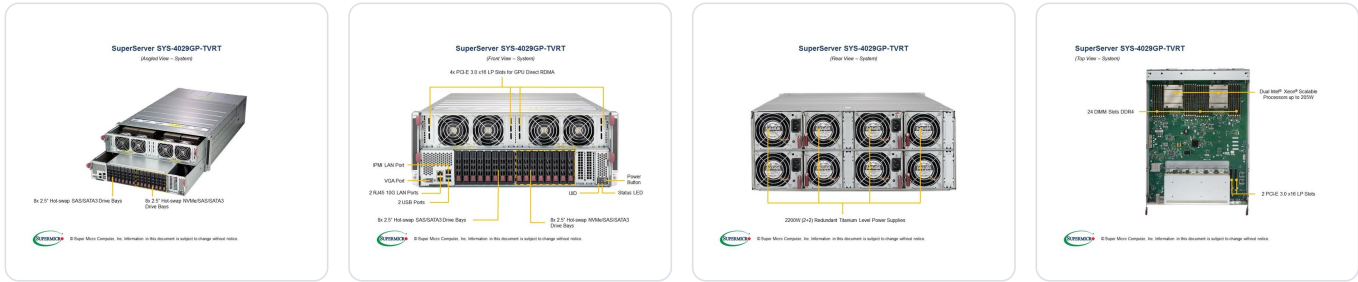
ServerInvest configures every SYS-4029GP-TVRT to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Dual Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process
- Up to 6 TB memory · 24 DIMM slots
- 16 Hot-swap 2.5" SAS/SATA drive bays
- Power: 1200W/1800W/1980W/2090W/2200W
- Networking: Dual Port 10GBase-T from Intel X540 Ethernet Controller

KEY SPECIFICATIONS

Form factor	4U
Processor	2× Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process
Memory	24 DIMM slots, up to 6 TB
Drive bays	16 (16 NVMe)
Power supply	1× 1200 W
Typical power draw	750 W
Networking	Dual Port 10GBase-T from Intel X540 Ethernet Controller
Dimensions (W×H×D)	437 × 178 mm



02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
143 W	374 W	602 W	2,054 BTU/h	0.6 kW	50%

Typical 374 W · max 602 W · single PSU rating 1200 W

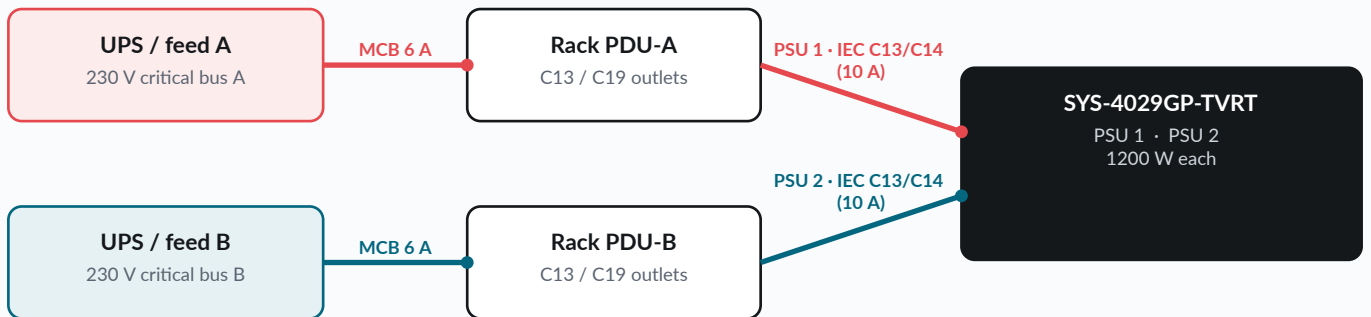
Annual IT energy (24/7)	2,669 kWh
Annual facility energy (PUE 1.5)	4,004 kWh
Annual energy cost	€534 IT · €801 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	1.04 t (grid factor 0.26 kg/kWh)
Power supplies	1× 1200 W

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	72 W	112 W	160 W
2× CPU (base configuration)	50 W	220 W	370 W
4× Memory (base configuration)	12 W	20 W	36 W

DC loads converted to wall power at 94% PSU efficiency; typical load assumed 70% of the time. Engineering estimates — confirm with the manufacturer's power calculator for critical designs.

03 Power connection diagram

Dual-feed (A/B) connection for redundant power supplies



- Connect PSU 1 to PDU-A and PSU 2 to PDU-B (independent feeds) using IEC C13/C14 (10 A) power cords.
- Maximum current per feed: 2.8 A at 230 V — each feed must be able to carry the full load if the other fails.
- Recommended protection per PDU circuit: MCB 6 A, curve C; RCD according to local regulations.
- Heat to remove at full load: 602 W = 2,054 BTU/h (0.6 kW).

04 Full specifications

PROCESSOR

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

Supported GPUs	8 SXM Socket Based NVIDIA V100 Supports both active and passive cooled GPUs Compatible GPU list --->
CPU-GPU Interconnect	PCI-E Gen 3 x16 Switch CPU-GPU Interconnect NVIDIA NVLink GPU-to-GPU Interconnect PCIe Root Architecture Chart

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 C621 chipset
SATA	SATA3 (6Gbps) with RAID 0, 1, 5, 10
Network Controllers	Dual Port 10GBase-T from Intel X540 Ethernet Controller
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	8 SATA3 (6Gbps) ports
LAN	2 RJ45 10GBase-T LAN ports 1 RJ45 Dedicated IPMI LAN port
USB	2 USB 3.0 ports (front)
Video	1 VGA Connector
COM Port	1 COM port (header)

SYSTEM BIOS

BIOS Type	AMI 32Mb SPI Flash ROM
BIOS Features	Intel Node Manager IPMI 2.0 KVM with dedicated LAN SSM , SPM , SUM SuperDoctor 5 Watchdog

CHASSIS

Form Factor	4U Rackmountable Rackmount Kit (MCP-290-31401-0N)
Model	CSE-R422BG-1

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 / STORAGE

Hot-swap	16 Hot-swap 2.5" SAS/SATA drive bays Optional 8x 2.5" NVMe supported
M.2	2 NVMe based M.2 SSD Form Factors: 2260, 2280, 22110

EXPANSION SLOTS

PCI-Express	6 PCI-E 3.0 x16 (LP) slots (Onboard GPUs do not use PCI-E slots) 4 PCI-E 3.0 x16 (LP, GPU tray for GPUDirect RDMA) slots 2 PCI-E 3.0 x16 (LP, CPU tray) slots or up to 8x 2.5" NVMe Storage Devices --->
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SYSTEM COOLING

Fans	8x 92mm Cooling Fans 4x 80mm Cooling Fans
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POWER SUPPLY

Total Output Power	1200W/1800W/1980W/2090W/2200W (UL/cUL only)
Dimension (W x H x L)	106.5 x 82.4 x 203.5 mm
Input	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	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	Max: 2A / Min: 0A
Output Type	Gold Finger (connector on M/P)
Certification	Titanium Level [Test Report]

OPERATING ENVIRONMENT

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)

05 Built, tested & supported by ServerInvest

Engineered configuration

Every option validated for socket, memory channels, PCIe lanes, power and cooling.

48-hour burn-in

Assembled, firmware-updated and stress-tested before it leaves our workshop.

3-year warranty

Standard on every system, with on-site next-business-day upgrades available.

Rack-ready delivery

Rails, cable management and labelling included — delivered across Europe.



Interested in this solution?

Request a quotation online or talk to a solutions engineer — we reply within one business day.
office@serverinvest.com

