

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-1029GQ-TVRT

SKU SYS-1029GQ-TVRT

1U

Supermicro

SuperServer SYS-1029GQ-TVRT*(Angled View – System)*2x 2.5" Hot-swap SAS3/SATA3
Drive Bays

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FORM FACTOR

1U

MAX POWER (BASE)

522 W

HEAT OUTPUT

1,781 BTU/h

PRICE

On request**REQUEST A QUOTATION ONLINE**serverinvest.com/product/sys-1029gq-tvrt

01 Product overview

The Supermicro SYS-1029GQ-TVRT is a server built on dual Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process processors with up to 3 TB of memory in 12 DIMM slots.

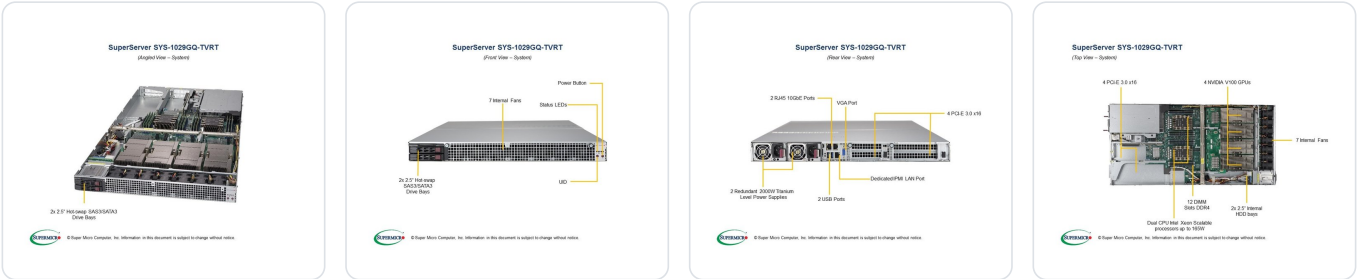
ServerInvest configures every SYS-1029GQ-TVRT to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Dual Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process
- Up to 3 TB memory · 12 DIMM slots
- 2 Hot-swap 2.5" SAS/SATA drive bays
- Power: 1000W: 100 – 120Vac
- Networking: Intel X540 Dual Port 10GBase-T

KEY SPECIFICATIONS

Form factor	1U
Processor	2× Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process
Memory	12 DIMM slots, up to 3 TB
Drive bays	2 (2 NVMe)
Power supply	1× 1000 W
Typical power draw	750 W
Networking	Intel X540 Dual Port 10GBase-T
Dimensions (W×H×D)	437 × 44 mm



02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
106 W	318 W	522 W	1,781 BTU/h	0.5 kW	52%

Typical 318 W · max 522 W · single PSU rating 1000 W

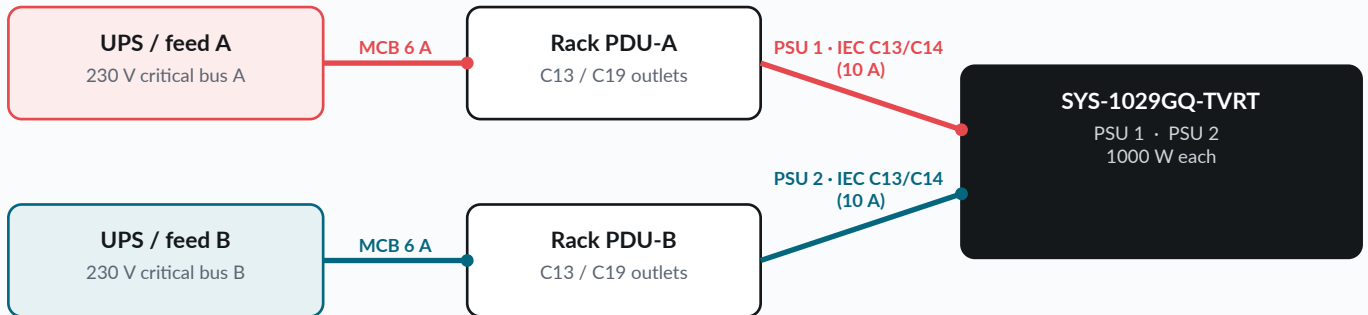
Annual IT energy (24/7)	2,229 kWh
Annual facility energy (PUE 1.5)	3,344 kWh
Annual energy cost	€446 IT · €669 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.87 t (grid factor 0.26 kg/kWh)
Power supplies	1× 1000 W

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	38 W	59 W	85 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: 2.4 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: 522 W = 1,781 BTU/h (0.5 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 up to 165W
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). Extended thermal solutions may be required to support CPUs higher than 165W TDP, please contact Supermicro Technical Support for additional information.

GPU

Supported GPUs	4 SXM Socket Based NVIDIA V100 Compatible GPU list
CPU-GPU Interconnect	PCI-E Gen 3 x16 Switch CPU-GPU Interconnect

SYSTEM MEMORY

Memory Capacity	12 DIMM slots Up to 3TB 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 Connectivity	Intel X540 Dual Port 10GBase-T Virtual Machine Device Queues reduce I/O overhead Supports 10GBASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output
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	4 SATA3 (6Gbps) ports
LAN	2 RJ45 10GBase-T ports 1 RJ45 Dedicated IPMI LAN port
USB	2 USB 3.0 ports (rear)
Video	1 VGA port
Serial Header	1 Fast UART 16550 header

SYSTEM BIOS

BIOS Type	AMI 32Mb SPI Flash ROM
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MANAGEMENT

Software	Intel Node Manager IPMI 2.0 KVM with dedicated LAN SSM , SPM , SUM SuperDoctor 5 Watch Dog
Power Configurations	ACPI / APM Power Management

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

CHASSIS

Form Factor	1U Rackmount
Model	CSE-118GQPTS-R2K05P2

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 (20.41 kg) Gross Weight: 58 lbs (26.31 kg)
Available Color	Black

FRONT PANEL

Buttons	Power On/Off button UID button
LEDs	Power LED Hard drive activity LED Network activity LEDs System Overheat LED / Fan fail LED / UID LED

EXPANSION SLOTS

PCI-Express	4 PCI-E 3.0 x16 slots - supporting 4 NICs which includes 2x GPUDirect RDMA
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DRIVE BAYS

Hot-swap	2 Hot-swap 2.5" SAS/SATA drive bays Note: Can be upgraded to 2 U.2 NVMe drives by addition of optional NVMe kit (please see details in optional parts list below).
Fixed	2 Internal 2.5" SATA drive bays
M.2	Support 1x M.2 2242/2260/2280 Support M.2 SATA and NVMe

SYSTEM COOLING

Fans	7 Heavy duty 4cm counter-rotating fans with air shroud & optimal fan speed control
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POWER SUPPLY

Total Output Power	1000W: 100 – 120Vac 1800W: 200 – 220Vac 1980W: 220 – 230Vac 2000W: 230 – 240Vac 2000W: 200 – 240Vac (UL/CUL only)
Dimension (W x H x L)	73.5 x 40 x 265 mm
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)
+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)
12Vsb	Max: 2.1A / Min: 0A
Output Type	25 Pairs Gold Finger Connector

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

