

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-7048GR-TR

SKU SYS-7048GR-TR

4U

Supermicro

SuperWorkstation SYS-7048GR-TR

(Angled View)



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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-7048gr-tr



01 Product overview

The Supermicro SYS-7048GR-TR is a server built on dual Intel Xeon processor E5-2600 v4 † / v3 family (up to 160W TD processors with up to 2 TB of memory in 4 DIMM slots.

ServerInvest configures every SYS-7048GR-TR 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 Intel Xeon processor E5-2600 v4 † / v3 family (up to 160W TD)
- Up to 2 TB memory · 4 DIMM slots
- 8 Hot-swap 3.5" SAS/SATA Drive Trays
- Power: 1000W: 100 – 127Vac
- Networking: Intel i350 Dual Port Gigabit Ethernet

KEY SPECIFICATIONS

Form factor	4U
Processor	2× Intel Xeon processor E5-2600 v4 † / v3 family (up to 160W TD)
Memory	4 DIMM slots, up to 2 TB
Power supply	1× 1000 W
Typical power draw	750 W
Networking	Intel i350 Dual Port Gigabit Ethernet
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	60%

Typical 374 W · max 602 W · single PSU rating 1000 W

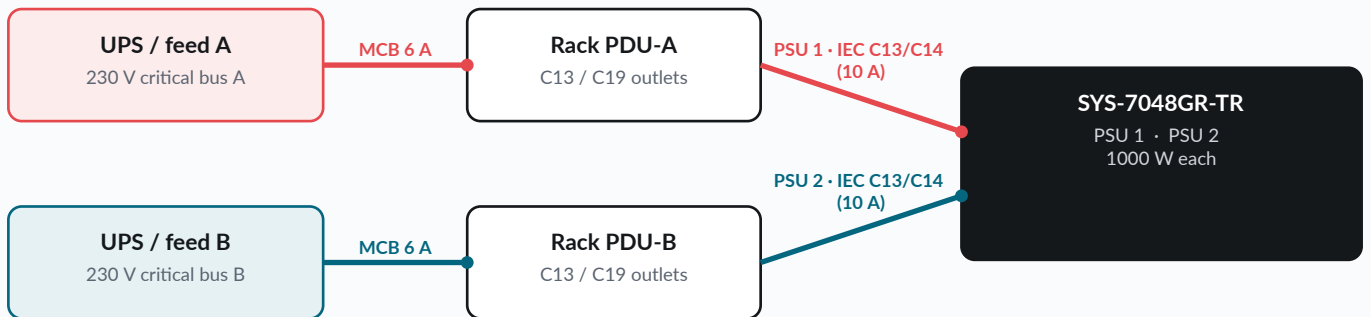
Annual IT energy (24/7)	2,669 kWh
Annual facility energy (PUE 1.5)	4,004 kWh
Annual energy cost	€534 IT · €801 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	1.04 t (grid factor 0.26 kg/kWh)
Power supplies	1× 1000 W

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/CACHE

CPU	Intel Xeon processor E5-2600 v4 † / v3 family (up to 160W 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.

SYSTEM MEMORY

Memory Capacity	16x 288-pin DDR4 DIMM slots Up to 2TB † ECC 3DS LRDIMM, 1TB ECC RDIMM
Memory Type	2400 † /2133/1866/1600MHz ECC DDR4 SDRAM 72-bit
DIMM Sizes	RDIMM: 64GB, 32GB, 16GB, 8GB, 4GB LRDIMM: 64GB, 32GB 3DS LRDIMM: 128GB
Memory Voltage	1.2 V
Error Detection	Corrects single-bit errors

ON-BOARD DEVICES

Chipset	Intel C612 chipset
SATA	SATA3 (6Gbps); RAID 0, 1, 5, 10

IPMI	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	Intel i350 Dual Port Gigabit Ethernet Virtual Machine Device Queues reduce I/O overhead Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output 1 Realtek RTL8211E PHY (dedicated IPMI)
Video	ASPEED AST2400 BMC

INPUT / OUTPUT

SATA	10 SATA3 (6Gbps) ports
LAN	2 RJ45 Gigabit Ethernet LAN ports 1 RJ45 Dedicated IPMI LAN port
USB	5 USB 3.0 ports (2 rear, 2 via header, 1 Type A) 4 USB 2.0 ports (2 rear, 2 via headers)
Audio	HD Audio
Video	1 VGA port
Serial Port / Header	2 COM ports (1 rear, 1 Header)
Thunderbolt	Thunderbolt AOC Header

EXPANSION SLOTS

PCI-Express	4 PCI-E 3.0 x16 (double-width) 2 PCI-E 3.0 x8 (1 in x16 slot) support Thunderbolt 2.0 AOC 1 PCI-E 2.0 x4 (in x8)
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SYSTEM BIOS

BIOS Type	128Mb SPI Flash EEPROM with AMI BIOS
BIOS Features	Plug and Play (PnP) APM 1.2 DMI 2.2 ACPI 1.0 / 2.0 USB Keyboard support SMBIOS 2.3 UEFI

CHASSIS

Form Factor	4U Rackmountable / Tower Optional Rackmount Kit
Model	CSE-747BTQ-R2K04B

DIMENSIONS AND WEIGHT

Height	18.2" (462mm)
Width	7.0" (178mm)
Depth	26.5" (673mm)
Package	27" (H) x 13" (W) x 38" (D)
Weight	Net Weight: 46 lbs (20.9 kg) Gross Weight: 62 lbs (28.1 kg)
Available Colors	Dark Gray

FRONT PANEL

Buttons	Power On/Off button System Reset button
LEDs	Power status LED Hard drive activity LED 2 Network activity LEDs System Overheat & Power Fail LED
Ports	2 Front USB 3.0 Ports

DRIVE BAYS

Hot-swap	8 Hot-swap 3.5" SAS/SATA Drive Trays
Peripheral Bay(s)	3x 5.25" drive bays in storage module - rotates 90° for Rackmount 1x 3.5" fixed drive bay

SYSTEM COOLING

Fans	4x 92x38mm 4-pin PWM Middle Cooling Fans 2 Rear exhaust fans 2 Optional Rear fans (required for Passive GPUs)
Heatsink	2 Active Heatsink with Optimal Fan Speed Control

POWER SUPPLY (76MM WIDTH)

Total Output Power	1000W: 100 – 127Vac 1800W: 200 – 220Vac 1980W: 220 – 230Vac 2000W: 230 – 240Vac 2000W: 200 – 240Vdc (UL/cUL only)
Dimension (W x H x L)	76 x 40 x 336 mm
Input	1000W: 100-127 Vac / 12-9.5 A / 50-60 Hz 1800W: 200-220 Vac / 10-9.5 A / 50-60 Hz 1980W: 220-230 Vac / 10-9.8 A / 50-60 Hz 2000W: 230-240 Vac / 10-9.8 A / 50-60 Hz 2000W: 200-240 Vac / 11.8-9.8 A / 50-60 Hz (UL/cUL only)
+12V	Max: 83.3A / Min: 0A (100-127 Vac) Max: 150A / Min: 0A (200-220 Vac) Max: 165A / Min: 0A (220-230 Vac) Max: 166.7A / Min: 0A (230-240 Vac) Max: 166.7A / Min: 0A (200-240 Vac) (UL/cUL only)
+5Vsb	Max: 1A / Min: 0A
Output Type	27 Pairs Gold Finger Connector
Certification	Titanium Level [Test Report]

PC HEALTH MONITORING

CPU	Monitors for CPU Cores, +1.8V, +3.3V, +5V, +12V, +3.3V Standby, +5V Standby, VBAT, Memory, Chipset Voltages. 6-Phase-switching voltage regulator
FAN	Total of eight fan headers supporting up to 8 fans 8x fans with tachometer status monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors

Temperature	Monitoring for CPU and chassis environment CPU thermal trip support Thermal Control for 8x fan connectors Thermal Monitor 2 (TM2) support PECI
LED	CPU / System Overheat LED Suspend static indicator LED UID/Remote LED
Other Features	Chassis intrusion detection Chassis intrusion header

OPERATING ENVIRONMENT / COMPLIANCE

RoHS	RoHS Compliant
Environmental Spec.	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)

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.
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