

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-5049A-TR

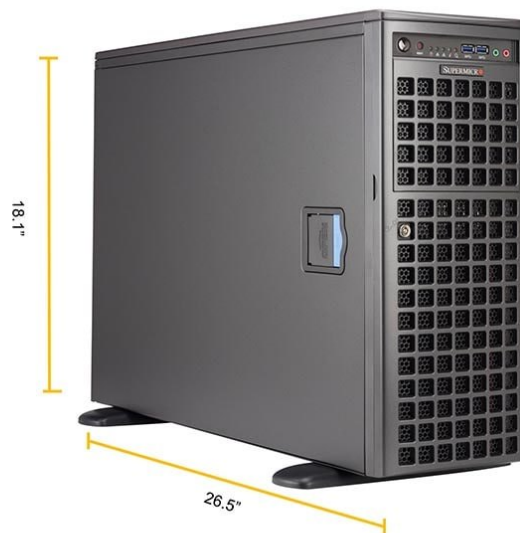
SKU SYS-5049A-TR

4U

Supermicro

SuperWorkstation SYS-5049A-TR

(Angled View – System)

Optional: Rackmount rails
PN: MCP-290-00059-0B

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FORM FACTOR

4U

MAX POWER (BASE)

386 W

HEAT OUTPUT

1,317 BTU/h

PRICE

On request

REQUEST A QUOTATION ONLINE

serverinvest.com/product/sys-5049a-tr

01 Product overview

The Supermicro SYS-5049A-TR is a server built on Single Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Proce with up to 3 TB of memory in 12 DIMM slots.

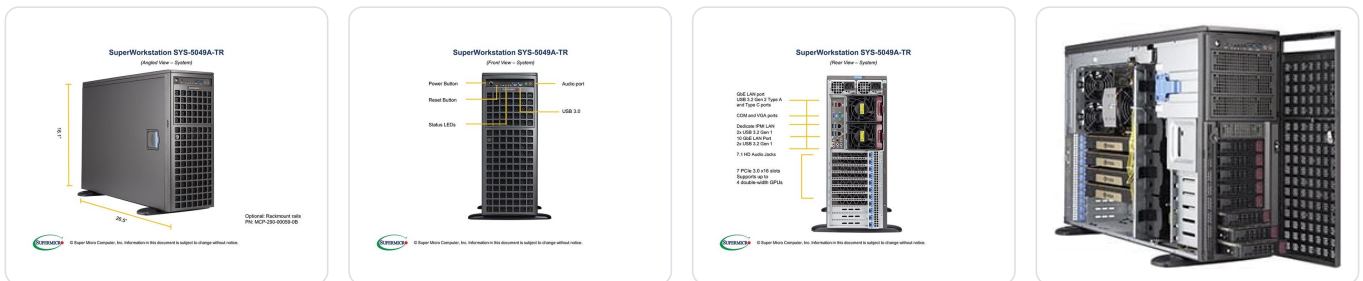
ServerInvest configures every SYS-5049A-TR to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Single Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Proce
- Up to 3 TB memory · 12 DIMM slots
- 8 Hot-swap 3.5" SAS2/SATA3 drive bays (SATA3 default)
- Power: 1200W with Input 100-127Vac
- Networking: Single LAN with Intel Ethernet Controller I210-AT

KEY SPECIFICATIONS

Form factor	4U
Processor	Single Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Proce
Memory	12 DIMM slots, up to 3 TB
Drive bays	8
Power supply	1× 1200 W
Typical power draw	450 W
Networking	Single LAN with Intel Ethernet Controller I210-AT
Dimensions (W×H×D)	437 × 178 mm



02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
110 W	247 W	386 W	1,317 BTU/h	0.4 kW	32%

Typical 247 W · max 386 W · single PSU rating 1200 W

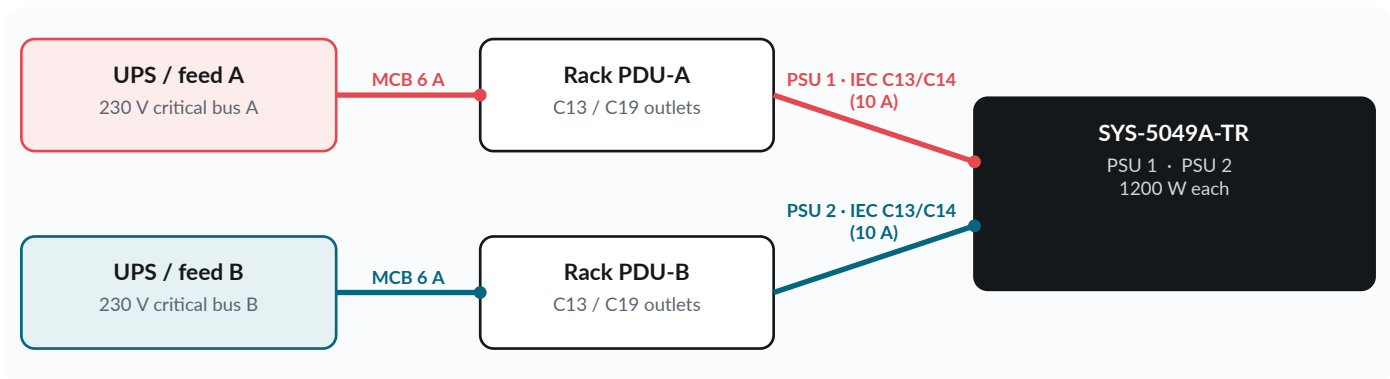
Annual IT energy (24/7)	1,804 kWh
Annual facility energy (PUE 1.5)	2,706 kWh
Annual energy cost	€361 IT · €541 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.70 t (grid factor 0.26 kg/kWh)
Power supplies	1× 1200 W

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	72 W	112 W	160 W
CPU (base configuration)	25 W	110 W	185 W
2× Memory (base configuration)	6 W	10 W	18 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: 1.8 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: 386 W = 1,317 BTU/h (0.4 kW).

04 Full specifications

PROCESSOR/CACHE

CPU	Single Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Processors and Intel Xeon Scalable Processors ‡ Intel Xeon W-32xx Processors Support CPU TDP up to 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)
Cores	Up to 28 Cores

SYSTEM MEMORY

Memory Capacity	12 DIMM slots Intel Xeon Scalable Processors: Support up to 3TB 3DS ECC RDIMM, DDR4-2933MHz; up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz; or 3TB DCPMM, DDR4-2666MHz, in 12 DIMM slots. Intel Xeon W-3200 Processors: Support up to 2TB 3DS ECC RDIMM/LRDIMM; up to 1TB 3DS RDIMM/LRDIMM.
Note	This system doesn't support DCPMM

ON-BOARD DEVICES

Chipset	Intel C621 chipset
SATA	SATA3 (6Gbps); RAID 0, 1, 5, 10
Network Controllers	Single LAN with Intel Ethernet Controller I210-AT Single LAN with Aquantia AQC107 10G Ethernet Controller Single LAN with Realtek RTL8211E PHY (dedicated IPMI)
Audio	7.1 channel HD Audio by Realtek ALC888S

INPUT / OUTPUT

SATA	8 SATA3 (6Gbps) ports
LAN	1 RJ45 Gigabit Ethernet LAN port 1 RJ45 10GBase-T Ethernet LAN port 1 RJ45 Dedicated IPMI LAN port
USB	6 USB 3.1 Gen1 ports (4 rear, 2 headers) 4 USB 3.1 Gen2 ports (1 rear Type A + 1 Rear Type C) 2 USB 2.0 ports (2 headers, Type A)
Video	1 VGA port
Audio	7.1 HD Audio with optical S/PDIF
Serial Port / Header	1 COM port (header)
DOM	2 SuperDOM (Disk on Module) ports
TPM	1 TPM 2.0 Header

SYSTEM BIOS

BIOS Type	256Mb SPI Flash with AMI BIOS
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MANAGEMENT

Software	Intel Node Manager IPMI 2.0 SSM , SPM , SUM SuperDoctor 5 Watchdog
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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	4U Rackmountable / Tower Optional Rackmount Kit
Model	CSE-747BTS-R2K20BP

DIMENSIONS AND WEIGHT

Height	18.1" (460mm)
Width	7.0" (178mm)
Depth	26.5" (673mm)
Weight	Gross Weight: 72 lbs (32.66 kg) Net Weight: 57 lbs (25.85 kg)
Available Colors	Black

FRONT PANEL

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

EXPANSION SLOTS

PCI-Express	4 PCI-E 3.0 x16 slots 3 PCI-E 3.0 x8 (in x16 slot) PCI-E x16 Slot#1 shares with M.2, Slot#2 shares with Slot#3 (NA/16,8/8), Slot#4 shares with Slot#5 (NA/16,8/8), Slot#6 shares with Slot#7 (NA/16,8/8) (16/NA/16/NA/16/NA/16 or 16/8/8/8/8/8/8)
M.2	M.2 Interface: PCI-E 3.0 x4 Form Factor: 2260, 2280, 22110 Key: M-Key M.2 shares PCI-E lanes with PCI-Ex16 slot#1, VROC key is required for RAID

DRIVE BAYS

Hot-swap	8 Hot-swap 3.5" SAS2/SATA3 drive bays (SATA3 default)
Peripheral Bay(s) [90° Rotatable]	3x 5.25" drive bays

SYSTEM COOLING

Fans	4x 92mm hot-swap fan(s) 2x 80mm rear hot-swap exhaust PWM fan(s)
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POWER SUPPLY

Total Output Power and Input	1200W with Input 100-127Vac 1800W with Input 200-220Vac 1980W with Input 220-230Vac 2090W with Input 230-240Vac 2200W with Input 220-240Vac (for UL/cUL use only) 2090W with Input 230-240Vdc (for CCC only)
AC Input Frequency	50-60Hz
Dimension (W x H x L)	76 x 40 x 336 mm
+12V	Max: 100A / Min: 0A (100-127Vac) Max: 150A / Min: 0A (200-220Vac) Max: 165A / Min: 0A (220-230Vac) Max: 174.17A / Min: 0A (230-240Vac) Max: 183.3A / Min: 0A (220-240Vac)
5VSB	Max: 1A / Min: 0A
Output Type	Backplanes (gold finger)
Certification	Titanium Level [Test Report]

OPERATING ENVIRONMENT

RoHS	RoHS Compliant
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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

