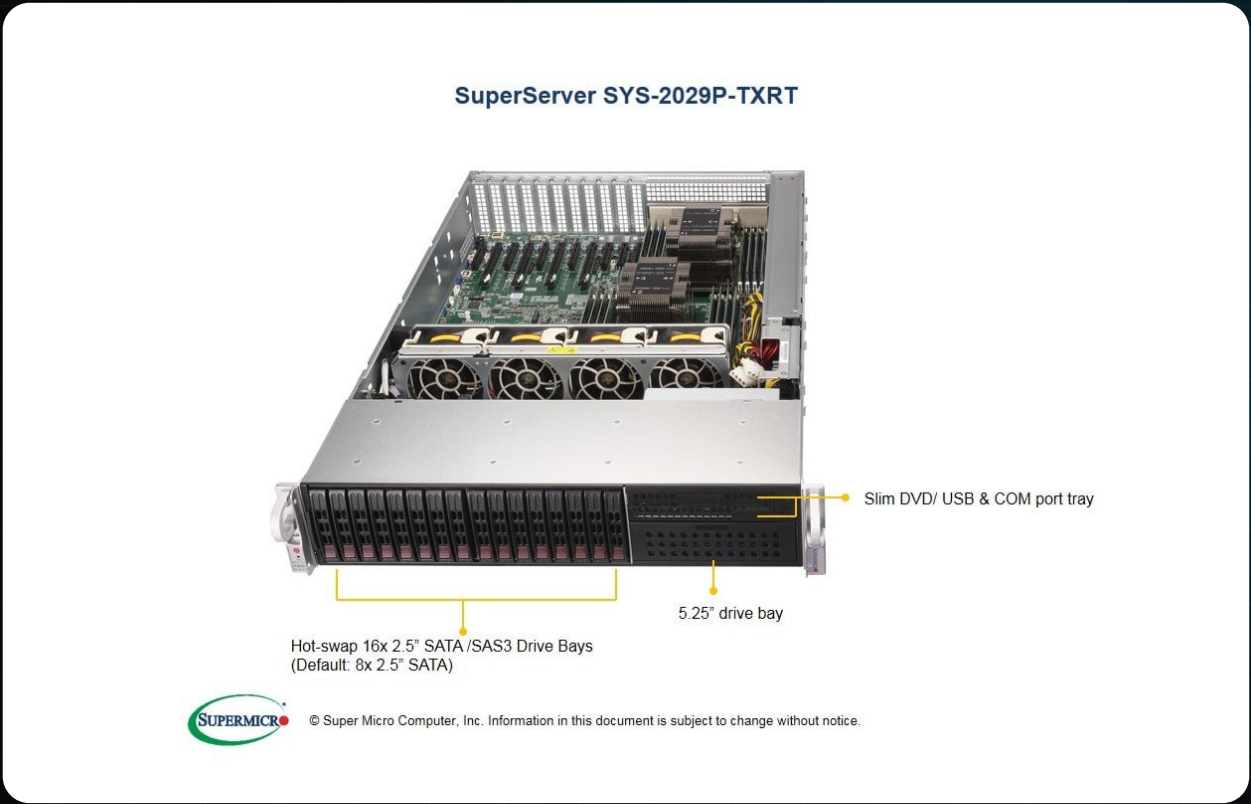
TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-2029P-TXRT

SKU SYS-2029P-TXRT | 2U | Supermicro



FORM FACTOR	MAX POWER (BASE)	HEAT OUTPUT	PRICE
2U	549 W	1,873 BTU/h	On request

REQUEST A QUOTATION ONLINE
serverinvest.com/product/sys-2029p-txrt

01 Product overview

The Supermicro SYS-2029P-TXRT is a server built on dual Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process processors with up to 4 TB of memory in 16 DIMM slots.

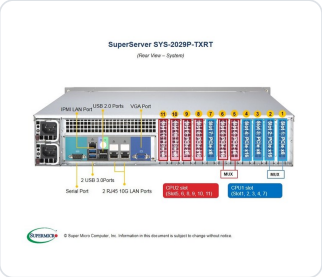
ServerInvest configures every SYS-2029P-TXRT to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

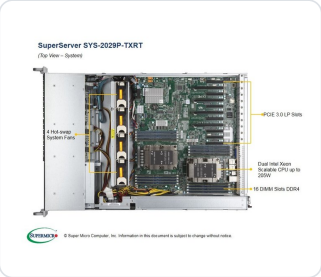
HIGHLIGHTS

- Dual Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process
- Up to 4 TB memory · 16 DIMM slots
- 16 Hot-swap 2.5" drive bays
- Power: 800W: 100 – 127Vac
- Networking: Intel X550-AT2 Dual Port 10GBase-T

KEY SPECIFICATIONS

Form factor	2U
Processor	2× Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process
Memory	16 DIMM slots, up to 4 TB
Drive bays	16
Power supply	1× 800 W
Typical power draw	750 W
Networking	Intel X550-AT2 Dual Port 10GBase-T
Dimensions (W×H×D)	437 × 89 mm





02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
119 W	337 W	549 W	1,873 BTU/h	0.5 kW	69%

Typical 337 W · max 549 W · single PSU rating 800 W

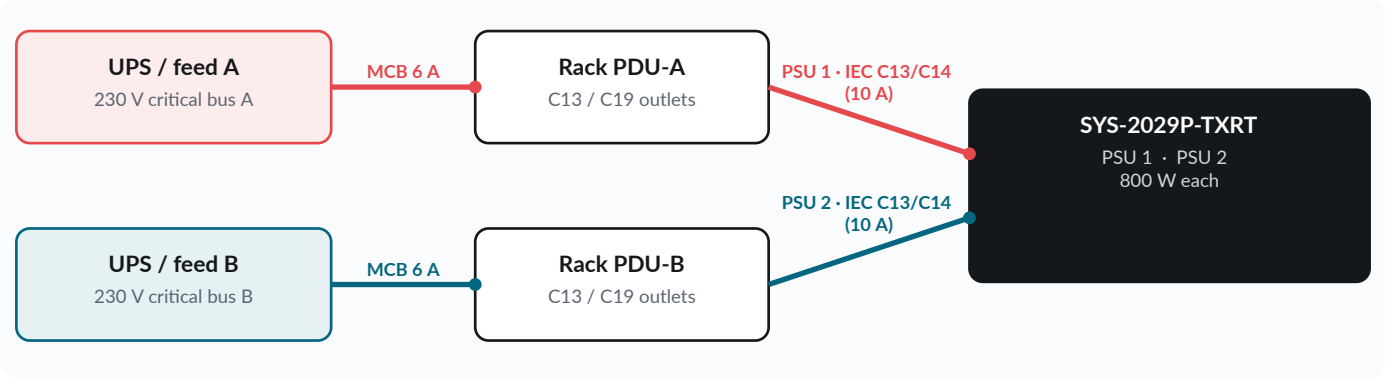
Annual IT energy (24/7)	2,379 kWh
Annual facility energy (PUE 1.5)	3,569 kWh
Annual energy cost	€476 IT · €714 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	0.93 t (grid factor 0.26 kg/kWh)
Power supplies	1× 800 W

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	50 W	77 W	**110 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: 2.5 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: 549 W = 1,873 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 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)

SYSTEM MEMORY	
Memory Capacity	16 DIMM slots Up to 4TB 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	Intel X550-AT2 Dual Port 10GBase-T
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

Serial ATA	8 SATA3 (6Gbps) ports
LAN	2 RJ45 10GBase-T ports 1 RJ45 Dedicated IPMI LAN port
USB	2 USB 3.0 ports (rear) 2 USB 2.0 ports (rear)
Serial Port / Header	1 COM port (rear)
VGA	1 VGA port
DOM	2 Super DOM (Disk on Module) ports
TPM	1 TPM 2.0 Header

SYSTEM BIOS

BIOS Type	AMI UEFI

MANAGEMENT

Software	Intel Node Manager IPMI 2.0 KVM with dedicated LAN NMI SSM , SPM , SUM SuperDoctor 5
Power Configurations	ACPI 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	2U Rackmount
Model	CSE-213XAC-R1K05LP

DIMENSIONS

Width	17.2" (437mm)
Height	3.5" (89mm)
Depth	25.6" (650mm)
Package	14.8" (H) x 27" (W) x 37.3" (D)
Weight	Net Weight: 36 lbs (16.4 kg) Gross Weight: 72 lbs (32.7 kg)
Available Colors	Black

FRONT PANEL

Buttons	Power On/Off button System Reset button
LEDs	Power status LED Hard drive activity LED Network activity LEDs System information (overheat/UID) LED Power fail LED

EXPANSION SLOTS

PCI-Express	2 PCI-E 3.0 x16 slots 2 PCI-E 3.0 x16 slots (or 4 PCI-E 3.0 x8 by MUX) 4 PCI-E 3.0 x8 slots 1 PCI-E 3.0 x4 (in x8 slot) Support total of 11 Low-profile AOC

DRIVE BAYS

Hot-swap	16 Hot-swap 2.5" drive bays 10 SATA3 ports by default Optional drive support: 16 SAS3 Note: optional storage card is required to support more than 10 drives

PERIPHERAL BAY

Peripheral	1 slim DVD-ROM drive

SYSTEM COOLING

Fans	4 Middle fans

POWERSTICK POWER SUPPLY

Total Output Power	800W: 100 – 127Vac 1000W: 200 – 240Vac
Dimension (W x H x L)	38 x 40 x 360 mm
Input	100-127Vac / 9-7.5A / 50-60Hz 200-240Vac / 6-5A / 50-60Hz
+12V	Max: 66.7A / Min: 0A (100-127Vac) Max: 83A / Min: 0A (200-240Vac)
+5Vsb	Max: 4A / Min: 0A
Output Type	Gold Finger Connector (16 Power Pin, 14 Signal Pin)
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.

ISO 9001 · ISO 14001 · ISO 27001

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