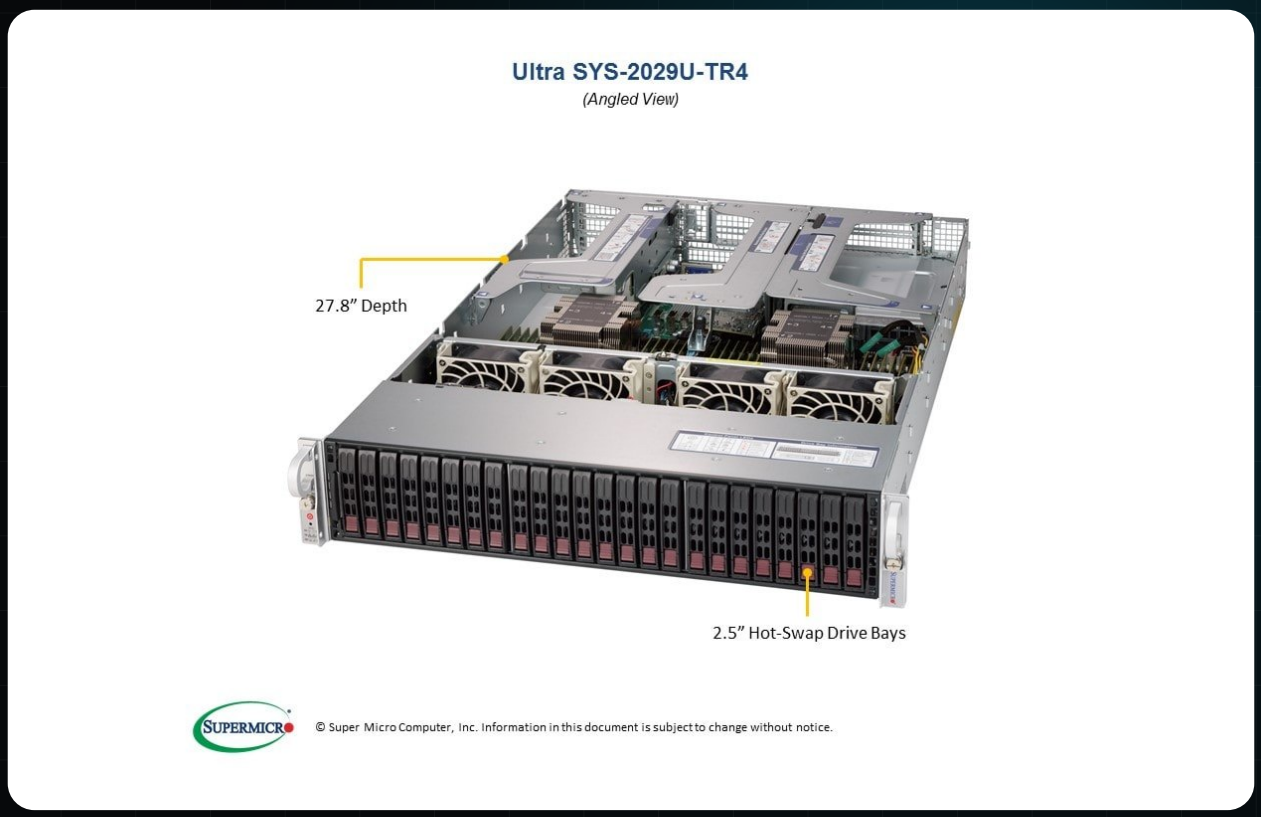
TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

# Supermicro Server SYS-2029U-TR4

SKU SYS-2029U-TR4 | 2U | Supermicro




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

ISO 9001 · ISO 14001 · ISO 27001 · cisco · tp-link · Omada by tp-link

REQUEST A QUOTATION ONLINE
serverinvest.com/product/sys-2029u-tr4

## 01 Product overview

The Supermicro SYS-2029U-TR4 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.

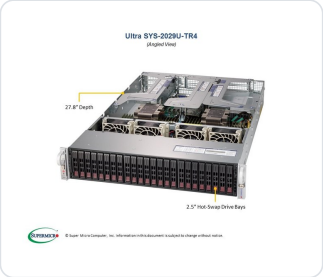
ServerInvest configures every SYS-2029U-TR4 to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

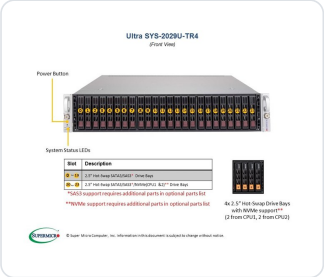
### HIGHLIGHTS

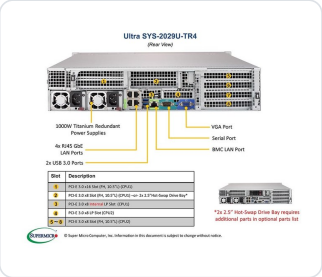
- Dual Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process
- Up to 6 TB memory · 24 DIMM slots
- 24 Hot-swap 2.5" drive bays;
- Power: 800W: 100 – 127Vac
- Networking: 4x 1GbE LAN ports via Intel i350 (AOC-2UR68-i4G)

### KEY SPECIFICATIONS

| | |
|---|---|
| Form factor | 2U |
| Processor | 2× Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process |
| Memory | 24 DIMM slots, up to 6 TB |
| Drive bays | 24 (24 NVMe) |
| Power supply | 1× 800 W |
| Typical power draw | 750 W |
| Networking | 4x 1GbE LAN ports via Intel i350 (AOC-2UR68-i4G) |
| 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

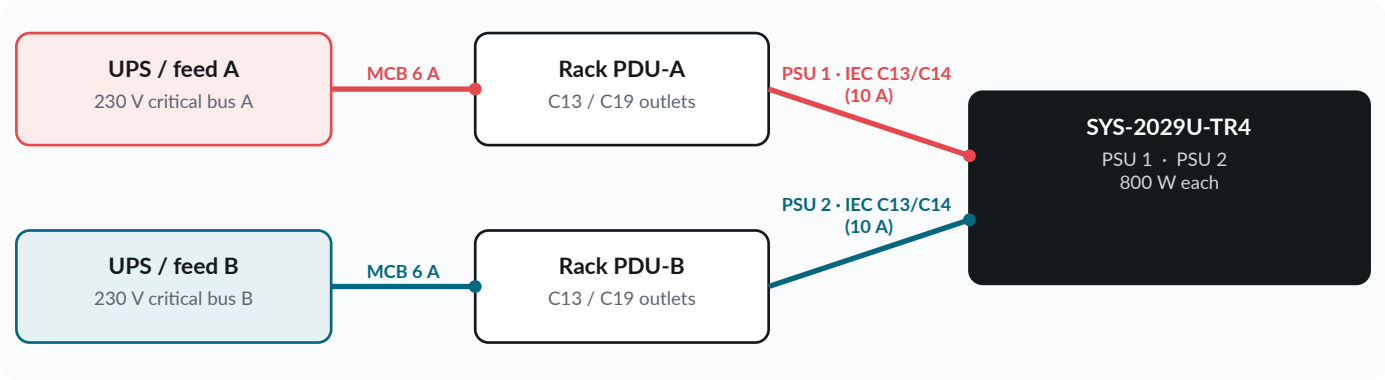
| | |
|---|---|
| Annual IT energy (24/7) | 2,379 kWh |
| Annual facility energy (PUE 1.5) | 3,569 kWh |
| Annual energy cost | €476 IT · €714 incl. cooling (at 0.20 €/kWh) |
| $CO_2$ emissions / year | 0.93 t (grid factor 0.26 kg/kWh) |
| Power supplies | 1× 800 W |

| 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)<br>2nd Gen Intel Xeon Scalable Processors and Intel Xeon Scalable Processors ‡ ,<br>Dual UPI up to 10.4GT/s<br>Support CPU TDP 70-205W |
| Cores | Up to 28 Cores |
| Note | ‡<br>BIOS version 3.2<br>or above is required to support 2nd Gen Intel Xeon Scalable processors (codenamed Cascade Lake-R) |

| SYSTEM MEMORY | |
|---|---|
| Memory Capacity | 24 DIMM slots<br>Up to 6TB 3DS ECC DDR4-2933MHz † RDIMM/LRDIMM<br>Supports Intel Optane DCPMM †† |
| Memory Type | 2933 † /2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM<br>2666 ECC DDR4 NVDIMM |
| Note | † 2933MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro<br>†† Cascade Lake only. Contact your Supermicro sales rep for more info. |

| ON-BOARD DEVICES | |
|---|---|
| Chipset | Intel C621 chipset |
| SATA | SATA3 (6Gbps); RAID 0, 1, 5, 10 |
| Network Connectivity | 4x 1GbE LAN ports via Intel i350 (AOC-2UR68-i4G) |
| IPMI | Support for Intelligent Platform Management Interface v.2.0<br>IPMI 2.0 with virtual media over LAN and KVM-over-LAN support |
| Graphics | ASPEED AST2500 BMC |

## INPUT / OUTPUT

| | |
|---|---|
| SATA | 14 SATA3 (6Gbps) ports |
| LAN | 4 RJ45 1GbE LAN ports<br>1 RJ45 Dedicated IPMI LAN port |
| USB | 5 USB 3.0 ports<br>(2 rear, 2 onboard header, 1 Type A) |
| Video | 1 VGA Connector |
| Serial Header | 1 Serial header |
| DOM | 2 Super DOM (Disk on Module) ports |

## SYSTEM BIOS

| | |
|---|---|
| BIOS Type | AMI 32Mb SPI Flash ROM |

## MANAGEMENT

| | |
|---|---|
| Software | Intel Node Manager<br>Redfish API<br>IPMI 2.0<br>KVM with dedicated LAN<br>NMI<br>SSM , SPM , SUM<br>SuperDoctor 5 |
| Power Configurations | ACPI Power Management |

## PC HEALTH MONITORING

| | |
|---|---|
| CPU | Monitors for CPU Cores, Chipset Voltages, Memory.<br>4+1 Phase-switching voltage regulator |
| FAN | Fans with tachometer monitoring<br>Status monitor for speed control<br>Pulse Width Modulated (PWM) fan connectors |
| Temperature | Monitoring for CPU and chassis environment<br>Thermal Control for fan connectors |

## CHASSIS

| | |
|---|---|
| Form Factor | 2U Rackmount |
| Model | CSE-219U2TS-R1K02P-T |

## DIMENSIONS AND WEIGHT

| | |
|---|---|
| Width | 17.2" (437mm) |
| Height | 3.5" (89mm) |
| Depth | 27.76" (705.3mm) |
| Weight | Net Weight: 36 lbs (16.4 kg)<br>Gross Weight: 72 lbs (32.7 kg) |
| Available Colors | Black |

## FRONT PANEL

| | |
|---|---|
| Buttons | Power On/Off button<br>System Reset button |

| | |
|---|---|
| LEDs | Power status LED<br>HDD activity LED<br>Network activity LEDs<br>System information (overheat/UID) LED |

## EXPANSION SLOTS

| | |
|---|---|
| PCI-Express | 1 PCI-E 3.0 x16 (FH, 10.5" L)<br>5 PCI-E 3.0 x8 (FH, 10.5" L)<br>1 PCI-E 3.0 x8 (LP)<br>1 PCI-E 3.0 x8 (internal LP)<br>(Both CPUs need to be installed for full access to PCI-E slots and onboard controllers. See manual block diagram and AOC Support for details.) |

## DRIVE BAYS / STORAGE

| | |
|---|---|
| Hot-swap | 24 Hot-swap 2.5" drive bays;<br>14 SATA3 (optional 20 SAS3 + 4 NVMe/SAS3) |
| M.2 | 1 M.2 PCI-E 3.0 x4 M-Key NVMe or 1 M.2 M-Key SATA3 (2240/2260/2280/22110) via optional riser card (see optional parts list)<br>2 M.2 PCI-E 3.0 x4 M-Key NVMe (2260/2280/22110) via optional add-on card AOC-SLG3-2M2 |

## SYSTEM COOLING

| | |
|---|---|
| Fans | 4 Heavy duty 8cm PWM fans |

## POWER SUPPLY

| | |
|---|---|
| Total Output Power | 800W: 100 – 127Vac<br>1000W: 200 – 240Vac<br>1000W: 200 – 240Vdc (for CCC only) |
| Dimension (W x H x L) | 73.5 x 40 x 203 mm |
| Input | 100-127Vac / 9.8 - 7A / 50-60Hz<br>200-240Vac / 7 - 5A / 50-60Hz<br>200-240Vdc / 7 - 5A (for CCC only) |
| +12V | Max: 66.7A / Min: 0A (100-127Vac)<br>Max: 83A / Min: 0A (200-240Vac)<br>Max: 83A / Min: 0A (200-240Vdc) |
| 12Vsb | Max: 2.1A / Min: 0A |
| Output Type | 25 Pairs Gold Finger Connector |
| Certification | Titanium Level<br>[ Test Report ] |

## OPERATING ENVIRONMENT

| | |
|---|---|
| RoHS | RoHS Compliant |
| Environmental Spec. | Operating Temperature:<br>10°C ~ 35°C (50°F ~ 95°F)<br>Non-operating Temperature:<br>-40°C to 70°C (-40°F to 158°F)<br>Operating Relative Humidity:<br>8% to 90% (non-condensing)<br>Non-operating Relative Humidity:<br>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