

## TECHNICAL DATASHEET

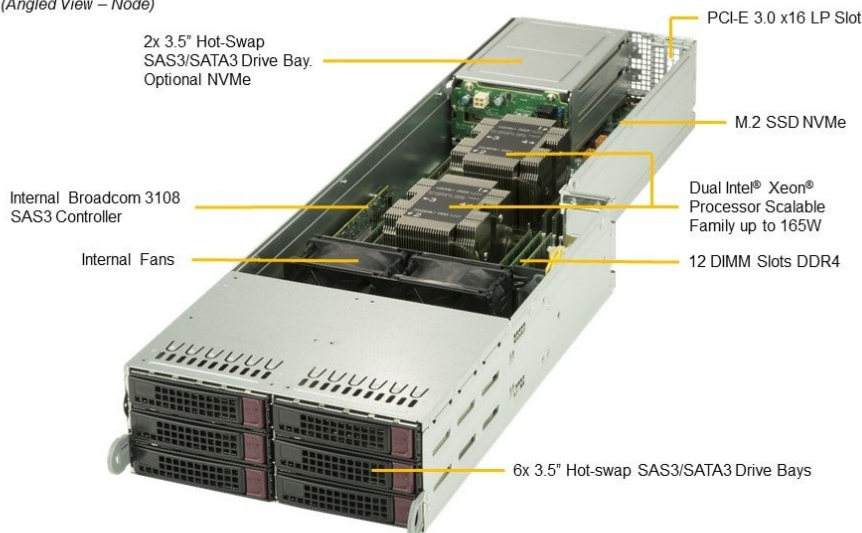
SUPERMICRO · RACKMOUNT SERVERS

# Supermicro Server SYS-F629P3-RC1B

SKU SYS-F629P3-RC1B

4U

Supermicro

**FatTwin™ SYS-F629P3-RC1B***(Angled View – Node)*

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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-f629p3-rc1b](https://serverinvest.com/product/sys-f629p3-rc1b)

## 01 Product overview

The Supermicro SYS-F629P3-RC1B 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-F629P3-RC1B 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
- 8 Hot-swap 3.5" SAS3/SATA3 or 6 Hot-swap 3.5" SAS3/SATA3 + 2 optional NVMe U.2
- Power: 1000W/1200W
- Networking: Flexible networking via

### KEY SPECIFICATIONS

|                    |                                                                 |
|--------------------|-----------------------------------------------------------------|
| Form factor        | 4U                                                              |
| Processor          | 2× Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process |
| Memory             | 12 DIMM slots, up to 3 TB                                       |
| Power supply       | 1× 1000 W                                                       |
| Typical power draw | 750 W                                                           |
| Networking         | Flexible networking via                                         |
| 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 <sub>2</sub> emissions / year | 1.04 t (grid factor 0.26 kg/kWh)             |
| Power supplies                   | 1× 1000 W                                    |

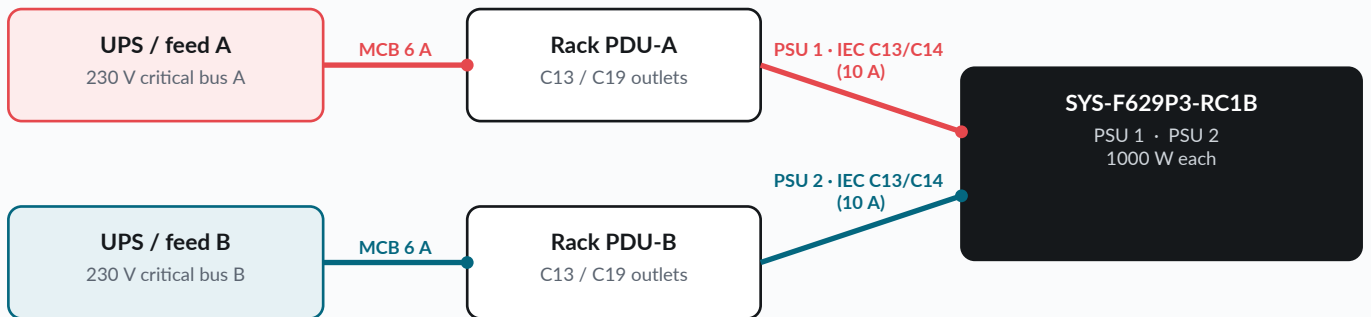
### POWER BY COMPONENT

|                                 | 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 (PER NODE)

|       |                                                                                                                                                                                                                                                                                         |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 70-165W with IVR                                                                                                                 |
| 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).<br>Extended thermal solutions may be required to support CPUs higher than 165W TDP, please contact Supermicro Technical Support for additional information. |

#### SYSTEM MEMORY (PER NODE)

|                 |                                                                                                                                                                        |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Memory Capacity | 12 DIMM slots<br>Up to 3TB 3DS ECC DDR4-2933MHz † RDIMM/LRDIMM<br>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<br>†† Cascade Lake only. Contact your Supermicro sales rep for more info. |

#### ON-BOARD DEVICES

|                     |                                                                 |
|---------------------|-----------------------------------------------------------------|
| Chipset             | Intel C621 chipset                                              |
| SAS                 | SAS3 (12Gbps) via Broadcom 3108<br>HW RAID<br>Firmware Download |
| Network Controllers | Flexible networking via SIOM                                    |

|          |                                                                                                                              |
|----------|------------------------------------------------------------------------------------------------------------------------------|
| 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 (PER NODE)

|      |                                                              |
|------|--------------------------------------------------------------|
| SAS  | 8 SAS3 (12Gbps) ports                                        |
| NVMe | 2 NVMe U.2 optional                                          |
| LAN  | SIOM flexible Network card<br>1 RJ45 Dedicated IPMI LAN port |
| USB  | 2 USB 3.0 ports (rear)                                       |
| VGA  | 1 VGA port                                                   |

## SYSTEM BIOS

|           |                                      |
|-----------|--------------------------------------|
| BIOS Type | 128Mb SPI Flash EEPROM with AMI BIOS |
|-----------|--------------------------------------|

## MANAGEMENT

|                      |                                                                                        |
|----------------------|----------------------------------------------------------------------------------------|
| Software             | Intel Node Manager<br>IPMI 2.0<br>KVM with dedicated LAN<br>SuperDoctor 5<br>Watch Dog |
| 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 | 4U Rackmount        |
| Model       | CSE-F424AS2-R1K23BP |

## DIMENSIONS AND WEIGHT

|                  |                                                                    |
|------------------|--------------------------------------------------------------------|
| Width            | 17.63" (448mm)                                                     |
| Height           | 6.96" (177mm)                                                      |
| Depth            | 29" (737mm)                                                        |
| Package          | 28.3" (W) x 15.0" (H) x 42.4" (D)                                  |
| Weight           | Net Weight: 150 lbs (68.04 kg)<br>Gross Weight: 200 lbs (90.71 kg) |
| Available Colors | Black                                                              |

## FRONT PANEL

|         |                                                                                                                      |
|---------|----------------------------------------------------------------------------------------------------------------------|
| Buttons | Power On/Off button<br>UID button                                                                                    |
| LEDs    | Power status LED<br>Hard drive activity LED<br>Network activity LEDs<br>Information LED (UID, Fan failure, Overheat) |

## EXPANSION SLOTS (PER NODE)

|             |                                                         |
|-------------|---------------------------------------------------------|
| PCI-Express | 1 PCI-E 3.0 x16 (Low-profile)<br>1 PCI-E 3.0 x16 (SIOM) |
|-------------|---------------------------------------------------------|

## DRIVE BAYS (PER NODE)

|          |                                                                                     |
|----------|-------------------------------------------------------------------------------------|
| Hot-swap | 8 Hot-swap 3.5" SAS3/SATA3 or 6 Hot-swap 3.5" SAS3/SATA3 + 2 optional NVMe U.2      |
| M.2      | M.2 Interface: PCI-E 3.0 x4<br>M.2 Form Factor: 2260, 2280, 22110<br>M.2 Key: M-Key |

## SYSTEM COOLING (PER NODE)

|      |                           |
|------|---------------------------|
| Fans | 2x 8cm 14 RPM middle fans |
|------|---------------------------|

## POWER SUPPLY (76MM WIDTH)

|                       |                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------|
| Total Output Power    | 1000W/1200W                                                                                             |
| Dimension (W x H x L) | 76 x 40 x 336 mm                                                                                        |
| Input                 | 100-127Vac / 15-12A / 50-60Hz<br>200-240Vac / 8.5-7A / 50-60Hz<br>200-240Vdc / 8.5-7A (for CCC only)    |
| +12V                  | Max: 83A / Min: 0A (100-127Vac)<br>Max: 100A / Min: 0A (200-240Vac)<br>Max: 100A / Min: 0A (200-240Vdc) |
| +5Vsb                 | Max: 4A / Min: 0A                                                                                       |
| Output Type           | 19 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 60°C (-40°F to 140°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.



## Interested in this solution?

Request a quotation online or talk to a solutions engineer — we reply within one business day.  
[office@serverinvest.com](mailto:office@serverinvest.com)

