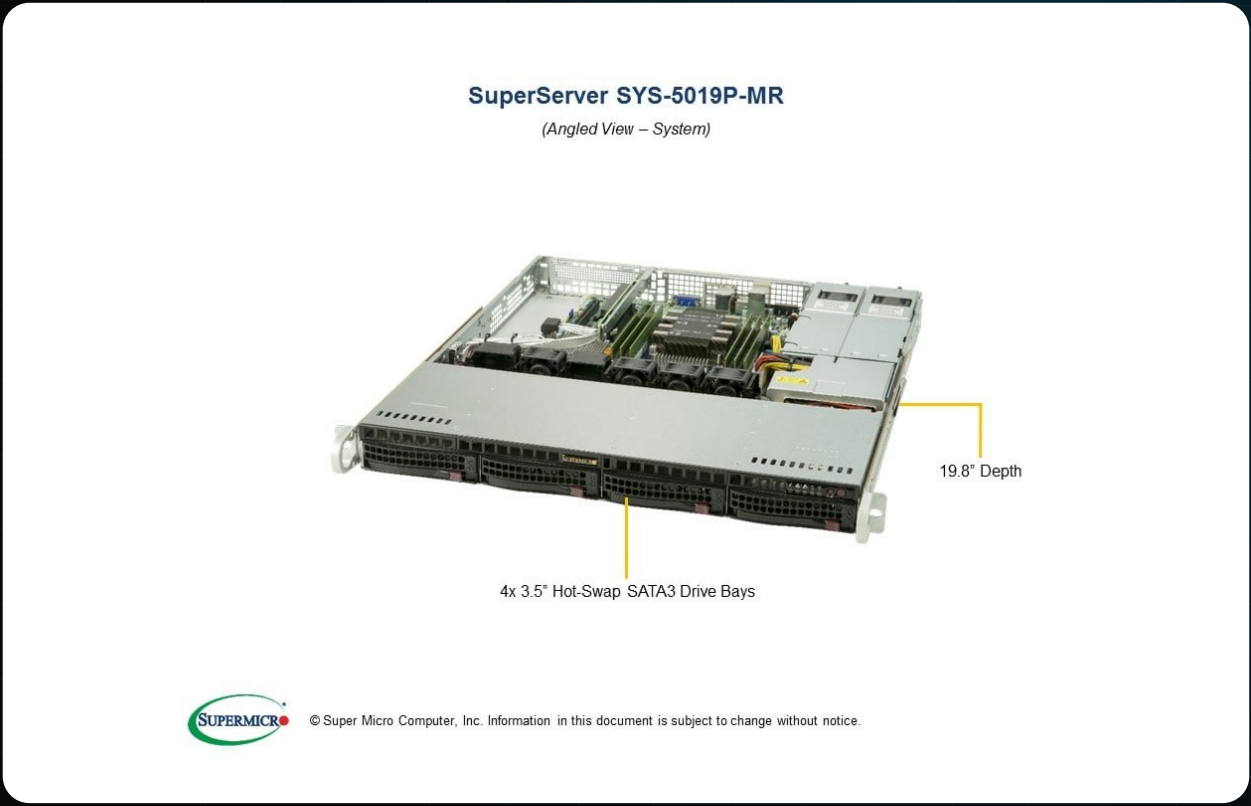
TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-5019P-MR

SKU SYS-5019P-MR | 1U | Supermicro



FORM FACTOR	MAX POWER (BASE)	HEAT OUTPUT	PRICE
1U	306 W	1,044 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-5019p-mr

01 Product overview

The Supermicro SYS-5019P-MR is a server built on Single Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Proce with up to 1.5 TB of memory in 6 DIMM slots.

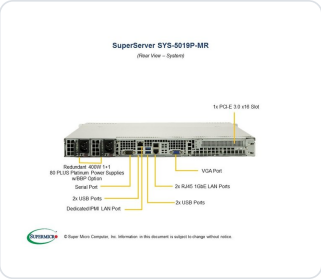
ServerInvest configures every SYS-5019P-MR to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

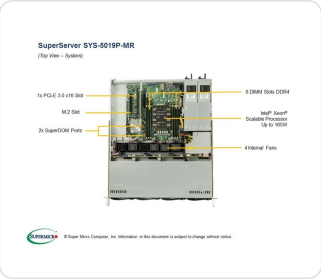
HIGHLIGHTS

- Single Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Proce
- Up to 1.5 TB memory · 6 DIMM slots
- 4 Hot-swap 3.5" SATA3 drive bays
- Networking: Dual Gigabit Ethernet LAN with Marvell 88E1512

KEY SPECIFICATIONS

Form factor	**1U**
Processor	**Single Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Proce**
Memory	**6 DIMM slots, up to 1.5 TB**
Drive bays	**4**
Typical power draw	**450 W**
Networking	**Dual Gigabit Ethernet LAN with Marvell 88E1512**
Dimensions (W×H×D)	**437 × 44 mm**





02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
73 W	**190 W**	**306 W**	**1,044 BTU/h**	**0.3 kW**	**—**

Typical 190 W · max 306 W

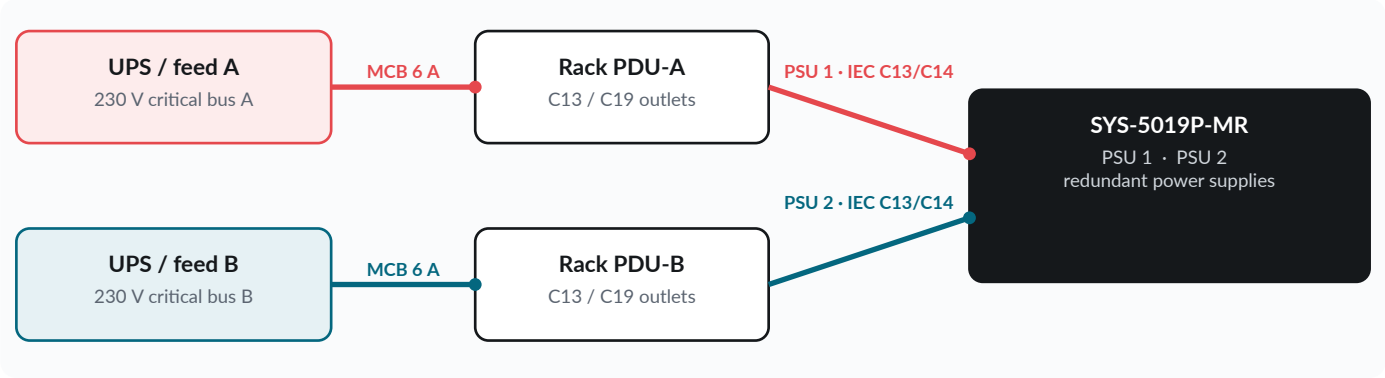
Annual IT energy (24/7)	1,357 kWh
Annual facility energy (PUE 1.5)	2,036 kWh
Annual energy cost	€271 IT · €407 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	0.53 t (grid factor 0.26 kg/kWh)
Power supplies	Redundant hot-swap PSUs — rating depends on the final configuration

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	38 W	59 W	**85 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 power cords.
- Maximum current per feed: 1.4 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: 306 W = 1,044 BTU/h (0.3 kW).

04 Full specifications

PROCESSOR	
CPU	Single Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Processors and Intel Xeon Scalable Processors ‡ Support CPU TDP 70-165W
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). Extended thermal solutions may be required to support CPUs higher than 165W TDP, please contact Supermicro Technical Support for additional information.

SYSTEM MEMORY	
Memory Capacity	6 DIMM slots Up to 1.5TB 3DS ECC DDR4-2933MHz † RDIMM/LRDIMM
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

ON-BOARD DEVICES	
Chipset	Intel C621 chipset
SATA	SATA3 (6Gbps) via C621 controller RAID 0, 1, 5, 10 support
Network Controllers	Dual Gigabit Ethernet LAN with Marvell 88E1512
IPMI	Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
Video	ASPEED AST2500 BMC

INPUT / OUTPUT

SATA	12 SATA3 (6Gbps) ports
LAN	2 RJ45 1GbE LAN ports 1 RJ45 Dedicated IPMI LAN port
USB	5 USB 3.0 ports (2 rear + 2 headers + 1 Type A) 6 USB 2.0 ports (2 rear + 4 headers)
Video	1 VGA port
Serial Port / Header	2 COM ports (1 rear, 1 header)
SuperDOM	2 SuperDOM (Disk on Module) ports with built-in power

SYSTEM BIOS

BIOS Type	AMI UEFI

MANAGEMENT

Software	Intel Node Manager IPMI 2.0 KVM with dedicated LAN NMI SPM , SUM SuperDoctor 5 Watch Dog
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	1U Rackmount
Model	CSE-813MFTQC-R407CB

DIMENSIONS AND WEIGHT

Height	1.7" (43mm)
Width	17.2" (437mm)
Depth	19.85" (503mm)
Package	8.5" (H) x 24" (W) x 29.5" (D)
Weight	Gross Weight: 30.4 lbs (13.8 kg) Net Weight: 17.6 lbs (8 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 Information LED

EXPANSION SLOTS

PCI-Express	1 PCI-E 3.0 x16 slot (FH, HL)
M.2	1x M.2 Interface: PCI-E 3.0 x4 Form Factor: 2242, 2280 Key: M-Key Double Height Connector

DRIVE BAYS

Hot-swap	4 Hot-swap 3.5" SATA3 drive bays

PERIPHERAL DRIVES

Optional	1 Slim DVD-ROM drive 1 USB + COM port tray

SYSTEM COOLING

Fans	4x 40x28mm PWM fans Optional 2 fans for AOC cooling

AC/DC240V INPUT REDUNDANT POWER SUPPLIES

Total Output Power	400W
Dimension (W x H x L)	54.5 x 40 x 220 mm
Input	100 - 240Vac / 6.0 - 3.0A / 50-60Hz 200 - 240Vdc / 3.4 - 3.2A (CCC Only)
+12V	Max: 33A / Min: 0.5A
+5V sb	Max: 3A / Min: 0A
Output Type	Gold Finger Connector Mating with Molex 45984-4343
Certification	Platinum Level Certified [Test Report]

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.

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

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