

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-5019D-FN8TP

SKU SYS-5019D-FN8TP

1U

Supermicro

SuperServer SYS-5019D-FN8TP

(Angled View – System)



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FORM FACTOR

1U

MAX POWER (BASE)

306 W

HEAT OUTPUT

1,044 BTU/h

PRICE

On request



REQUEST A QUOTATION ONLINE

serverinvest.com/product/sys-5019d-fn8tp



01 Product overview

The Supermicro SYS-5019D-FN8TP is a server built on Intel Xeon D with up to 512 GB of memory in 4 DIMM slots.

ServerInvest configures every SYS-5019D-FN8TP 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

- Intel Xeon D
- Up to 512 GB memory · 4 DIMM slots
- 1 Internal 3.5" or 4 Internal 2.5" drive bays
- Power: 100 - 240V, 50-60Hz, 2.6 Amp Max
- Networking: Dual 10G SFP+ via SoC

KEY SPECIFICATIONS

Form factor	1U
Processor	Intel Xeon D
Memory	4 DIMM slots, up to 512 GB
Drive bays	1
Typical power draw	450 W
Networking	Dual 10G SFP+ via SoC
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

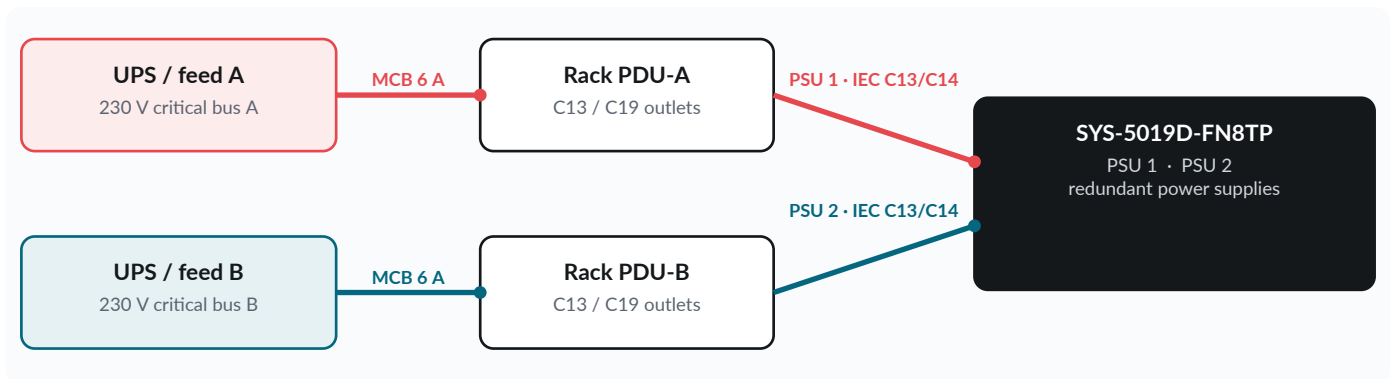
Annual IT energy (24/7)	1,357 kWh
Annual facility energy (PUE 1.5)	2,036 kWh
Annual energy cost	€271 IT · €407 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.53 t (grid factor 0.26 kg/kWh)
Power supplies	Redundant hot-swap PSUs — rating depends on the final configuration

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	Intel Xeon processor D-2146NT , CPU TDP support 80W
Cores / Cache	8 Cores, 16 Threads

SYSTEM MEMORY

Memory Capacity	Up to 512GB DDR4 ECC LRDIMM Up to 256GB DDR4 ECC RDIMM 4 DIMM slots
Memory Type	2666/2400/2133MHz ECC DDR4 ECC LRDIMM and ECC RDIMM
DIMM Sizes	128GB, 64GB, 32GB, 16GB
Memory Voltage	1.2 V
Error Detection	Corrects single-bit errors Detects double-bit errors (using ECC memory)

ON-BOARD DEVICES

SATA	SATA3 (6Gbps) ports via SoC controller
Network Controllers	Dual 10G SFP+ via SoC Quad 1GbE with Intel I350-AM4 Dual 10GBase-T with Intel X557
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

SATA	4 SATA3 (6Gbps) ports (SATA/SAS HDD/SSD)
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LAN	2 10G SFP+ ports 4 RJ45 1GbE LAN ports 2 RJ45 10GBase-T LAN ports 1 RJ45 Dedicated IPMI LAN port
USB	2 USB 3.0 ports (rear)
VGA	1 VGA port
Others	TPM 2.0 header

CHASSIS

Form Factor	1U Rackmount
Model	CSE-505-203B

DIMENSIONS AND WEIGHT

Height	1.7" (43mm) / 6.1" (155mm) - pkg.
Width	17.2" (437mm) / 25.8" (655mm) - pkg.
Depth	9.8" (249mm) / 18.3" (465mm) - pkg.
Weight	Net Weight: 8 lbs (3.63 kg) Gross Weight: 12 lbs (5.44 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 Information LED (temp., status)

EXPANSION SLOTS

PCI-E	1 PCI-E 3.0 x8 slot 1 Mini-PCI-E with mSATA Support
M.2	1 M.2 slot M key for SSD, 2242/8 1 M.2 B Key for SSD/ WAN card

DRIVE BAYS

Internal	1 Internal 3.5" or 4 Internal 2.5" drive bays
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SYSTEM COOLING

Fans	3x 40x28mm 4-PIN PWM fans
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POWER SUPPLY

AC Voltage	100 - 240V, 50-60Hz, 2.6 Amp Max
+5V	8.0 Amp (max.)
+5V standby	2.0 Amp (max.)
+12V	16 Amp (max.)

-12V	0.5 Amp (max.)
+3.3V	8.0 Amp (max.)
Certification	Gold Certified

SYSTEM BIOS

BIOS Type	128Mb SPI Flash with AMI BIOS
BIOS Features	PCI 3.0 ACPI 5.0 USB Keyboard support Hardware BIOS Virus protection SMBIOS 2.8 UEFI 2.4 RTC (Real Time Clock) Wakeup

OPERATING ENVIRONMENT / COMPLIANCE

RoHS	RoHS Compliant
Environmental Spec.	Operating Temperature: 0°C to 40°C (32°F to 104°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.



Interested in this solution?

Request a quotation online or talk to a solutions engineer — we reply within one business day.
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