

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-E301-9D-8CN8TP

SKU SYS-E301-9D-8CN8TP

Compact

Supermicro

SuperServer SYS-E301-9D-8CN8TP

(Angled View – System)



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FORM FACTOR

Compact

MAX POWER (BASE)

306 W

HEAT OUTPUT

1,044 BTU/h

PRICE

On request



REQUEST A QUOTATION ONLINE

serverinvest.com/product/sys-e301-9d-8cn8tp



01 **Product overview**

The Supermicro SYS-E301-9D-8CN8TP is a server built on Intel Xeon D with up to 512 GB of memory in 4 DIMM slots.

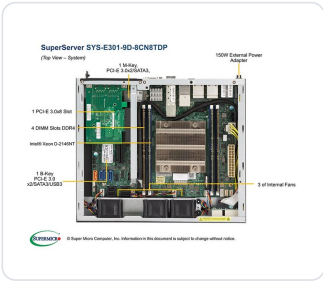
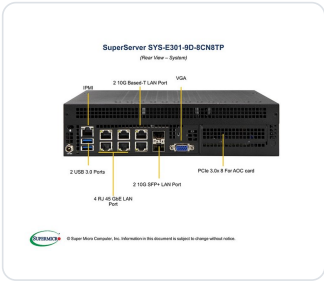
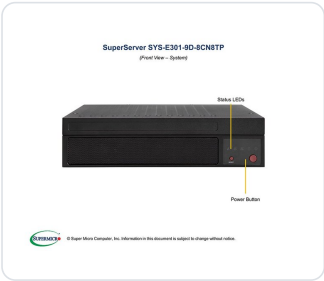
ServerInvest configures every SYS-E301-9D-8CN8TP to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Intel Xeon D
- Up to 512 GB memory · 4 DIMM slots
- 4x 7mm SSD
- Networking: Quad 1GbE with Intel I350-AM4

KEY SPECIFICATIONS

Form factor	Compact
Processor	Intel Xeon D
Memory	4 DIMM slots, up to 512 GB
Typical power draw	450 W
Networking	Quad 1GbE with Intel I350-AM4



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

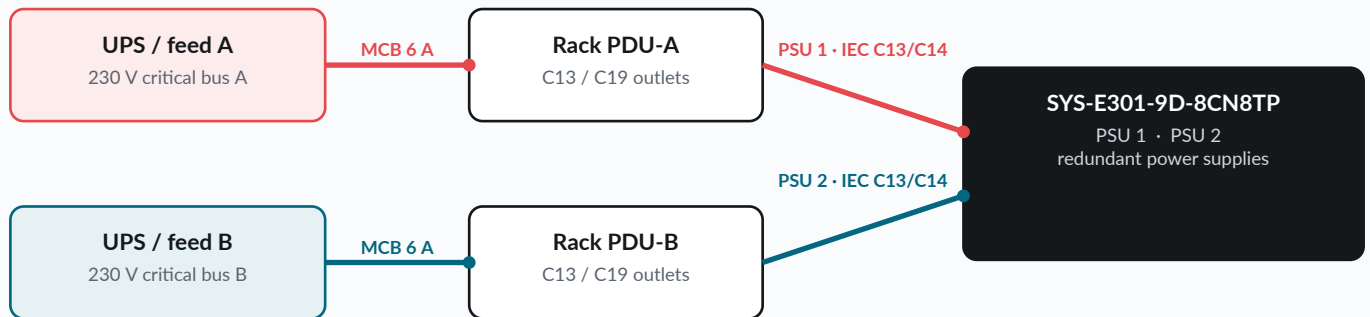
Annual IT energy (24/7)	1,357 kWh
Annual facility energy (PUE 1.5)	2,036 kWh
Annual energy cost	€271 IT · €407 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.53 t (grid factor 0.26 kg/kWh)
Power supplies	Redundant hot-swap PSUs — rating depends on the final configuration

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
2x 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/CACHE

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/non-ECC RDIMM 4 DIMM slots
Memory Type	2666/2400/2133MHz ECC DDR4 ECC LRDIMM and ECC/Non-ECC RDIMM Operating speed up to 2400MHz
DIMM Sizes	RDIMM: 4GB, 8GB, 16GB, 32GB, 64GB LRDIMM: 16GB, 32GB, 64GB, 128GB
Memory Voltage	1.2 V
Error Detection	Corrects single-bit errors Detects double-bit errors (using ECC memory)

ON-BOARD DEVICES

Chipset	System on Chip
SATA	SATA3 (6Gbps) ports via SoC controller
Network Controllers	Quad 1GbE with Intel I350-AM4 Dual 10GBase-T with Intel X557 Dual 10G SFP+ via SoC
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	SoC controller for 4 SATA3 (6Gbps) ports
LAN	2x 10G SFP+ ports 2x 10GBase-T LAN ports 4x 1GbE LAN ports 1 Dedicated IPMI LAN port
USB	2 USB 3.0 ports (rear)
Display	1 VGA port
TPM	1 TPM 2.0 header

CHASSIS

Form Factor	Compact
Model	--->CSE-E301

DIMENSIONS

Width	10.43" (264.8mm) / 15" (381mm) - pkg.
Height	2.6" (66mm) / 10.87" (276mm) - pkg.
Depth	8.9" (226mm) / 5.59" (142mm) - pkg.
Weight	Gross Weight: 7.5 lbs (3.4 kg) Net Weight: 3.45 lbs (1.56 kg)
Available Colors	Black

FRONT PANEL

Buttons	Power On/Off button
LEDs	Power LED (Hard drive activity LED)

EXPANSION SLOTS

PCI-Express	1 PCI-E 3.0 x8 slot
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DRIVE BAYS

Internal	4x 7mm SSD
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SYSTEM COOLING

Fans	3x 40x28mm 4-PIN PWM Fan
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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

MANAGEMENT

Software	Intel Node Manager IPMI 2.0 KVM with dedicated LAN NMI SUM SuperDoctor 5 Watch Dog
Power Configurations	ACPI Power Management +12V DC Power Input Control of power-on for recovery from AC power loss CPU thermal trip support for processor protection M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL
Fan	Fans with tachometer status monitoring Status monitor for speed control Low noise fan speed control Pulse Width Modulated (PWM) fan connectors

OPERATING ENVIRONMENT / COMPLIANCE

RoHS	RoHS Compliant
Environmental Spec.	Operating Temperature: 0°C to 35°C (32°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.



Interested in this solution?

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

