

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-5039MP-H8TNR

SKU SYS-5039MP-H8TNR

3U

Supermicro

MicroCloud SYS-5039MP-H8TNR*(Angled View – System)*16x 3.5" Hot-swap SATA3 Drive Bays
or 2.5" Hybrid SATA3/NVMe (2 per node)

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FORM FACTOR

3U

MAX POWER (BASE)

386 W

HEAT OUTPUT

1,317 BTU/h

PRICE

On request

REQUEST A QUOTATION ONLINE

serverinvest.com/product/sys-5039mp-h8tnr

01 Product overview

The Supermicro SYS-5039MP-H8TNR is a server built on Single Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Proce with up to 1 TB of memory in 4 DIMM slots.

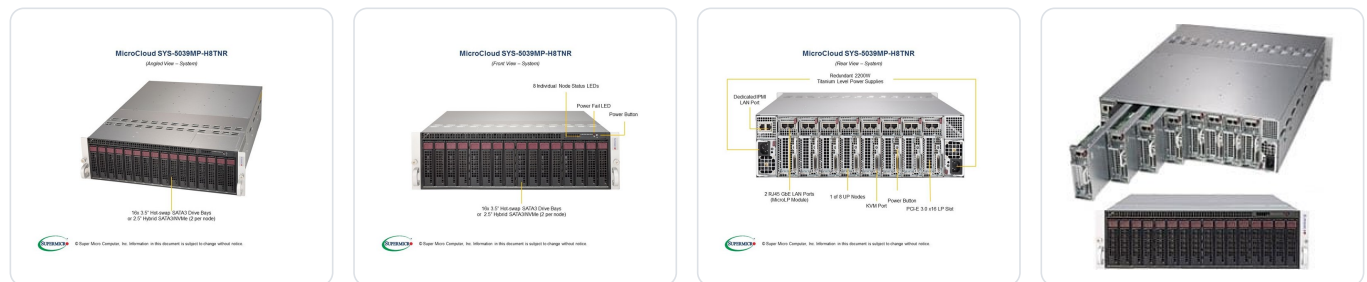
ServerInvest configures every SYS-5039MP-H8TNR to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Single Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Proce
- Up to 1 TB memory · 4 DIMM slots
- 2x 3.5" SATA3 (6Gbps) HDDs per node (or 2x 2.5" Hybrid SATA3/ NVMe with optional kits); up to 16 HDDs total
- Power: 1200W with Input 100-127Vac
- Networking: Intel C621 chipset

KEY SPECIFICATIONS

Form factor	3U
Processor	Single Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Proce
Memory	4 DIMM slots, up to 1 TB
Power supply	1× 1200 W
Typical power draw	450 W
Networking	Intel C621 chipset
Dimensions (W×H×D)	437 × 133 mm



02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
110 W	247 W	386 W	1,317 BTU/h	0.4 kW	32%

Typical 247 W · max 386 W · single PSU rating 1200 W

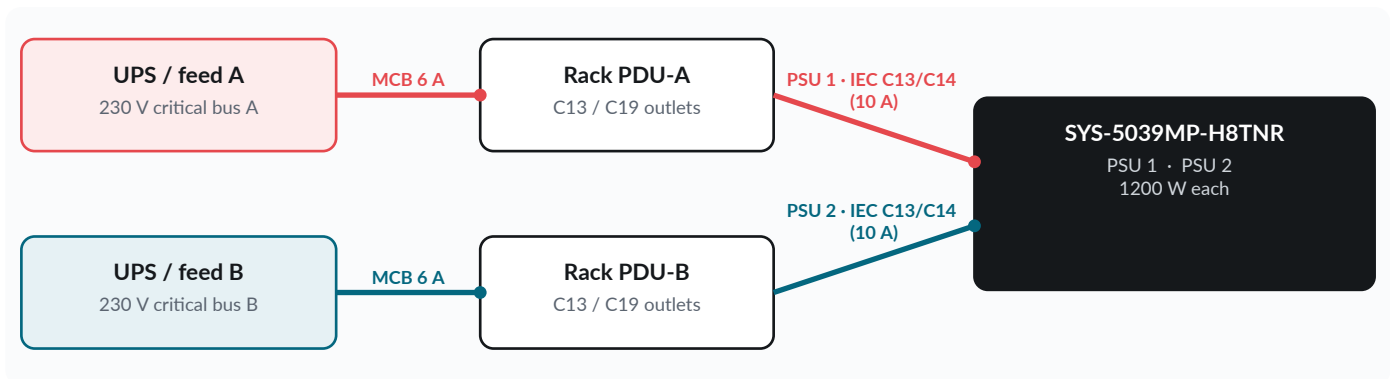
Annual IT energy (24/7)	1,804 kWh
Annual facility energy (PUE 1.5)	2,706 kWh
Annual energy cost	€361 IT · €541 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.70 t (grid factor 0.26 kg/kWh)
Power supplies	1× 1200 W

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	72 W	112 W	160 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 (10 A) power cords.
- Maximum current per feed: 1.8 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: 386 W = 1,317 BTU/h (0.4 kW).

04 Full specifications

PROCESSOR/CACHE (PER NODE)

CPU	Single Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Processors and Intel Xeon Scalable Processors ‡ Support CPU TDP 165W *
Cores	Up to 28 Cores
Note	* Low TCASE CPUs may require additional configuration. Please contact Supermicro Sales contact for additional information.
Note	‡ BIOS version 3.2 or above is required to support 2nd Gen Intel Xeon Scalable processors (codenamed Cascade Lake-R)

SYSTEM MEMORY (PER NODE)

Memory Capacity	4 DIMM slots Up to 1TB 3DS ECC DDR4-2933MHz † RDIMM/LRDIMM 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 †† Cascade Lake only. Contact your Supermicro sales rep for more info.

NETWORK DEVICES (PER NODE)

Micro-LP NIC	Intel i350 GbE LAN controller Dual RJ-45 connectors MicroLP Adapter Matrix (Networking options)
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ON-BOARD DEVICES (PER NODE)

Chipset	Intel C621 chipset
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SATA	SATA3 (6Gbps) via C621 controller
IPMI	Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM over LAN support ASPEED AST2500 BMC
Graphics	ASPEED AST2500 Graphics (BMC with Graphic controller)

INPUT / OUTPUT (PER NODE)

SATA	2 SATA3 (6Gbps) ports
LAN	2 RJ45 Gigabit Ethernet LAN ports
KVM	1 VGA, 1 COM and 2 USB 2.0 (with KVM dongle)

SYSTEM BIOS

BIOS Type	128Mb SPI Flash EEPROM with AMI BIOS
BIOS Features	DMI 2.3 ACPI 1.0 / 2.0 USB Keyboard support SMBIOS 2.3

MANAGEMENT

Software	Intel Node Manager IPMI 2.0 KVM with dedicated LAN SSM , SPM , SUM SuperDoctor 5 Watchdog
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REAR WINDOW (EACH NODE)

Switch	Power / UID
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CHASSIS

Form Factor	3U
Model	CSE-938NH-R2K20BP

DIMENSIONS AND WEIGHT

Height	5.21" (132 mm)
Width	17.26" (438 mm)
Depth	23.2" (589 mm)
Package	11.65" (H) x 26.26" (W) x 34" (D)
Weight	Net Weight: 62.2 lbs (28.21 kg) Gross Weight: 88 lbs (39.92 kg)
Color	Black

FRONT PANEL

Buttons	Power On/Off button
LEDs	Power LED Node status LED

EXPANSION SLOTS (PER NODE)

PCI-Express	1 PCI-E 3.0 x16 (Low-profile) slot 1 Micro-LP PCI-E 3.0 x8 slot
M.2	M.2 Interface: 2 SATA/PCI-E 3.0 x4 M.2 Form Factor: 2280 M.2 Key: M-Key

DRIVE BAYS (PER NODE)

Internal	2x 3.5" SATA3 (6Gbps) HDDs per node (or 2x 2.5" Hybrid SATA3/NVMe with optional kits); up to 16 HDDs total Enterprise SATA HDD only recommended
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SYSTEM COOLING

Fans	4 Hot-swap 8cm cooling fans fan speed control
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POWER SUPPLY

Total Output Power and Input	1200W with Input 100-127Vac 1800W with Input 200-220Vac 1980W with Input 220-230Vac 2090W with Input 230-240Vac 2200W with Input 220-240Vac (for UL/cUL use only) 2090W with Input 230-240Vdc (for CCC only)
AC Input Frequency	50-60Hz
Dimension (W x H x L)	76 x 40 x 336 mm
+12V	Max: 100A / Min: 0A (100-127Vac) Max: 150A / Min: 0A (200-220Vac) Max: 165A / Min: 0A (220-230Vac) Max: 174.17A / Min: 0A (230-240Vac) Max: 183.3A / Min: 0A (220-240Vac)
5VSB	Max: 1A / Min: 0A
Output Type	Backplanes (gold finger)
Certification	Titanium Level [Test Report]

PC HEALTH MONITORING

CPU	Monitors for CPU Cores, +3.3V, +5V, +12V, +3.3V Standby, +5V Standby, VBAT, Memory, Chipset Voltages. 5 Phase-switching voltage regulator with auto-sense from 0.8375V-1.60V
FAN	Cooling zone
Temperature	Monitoring for CPU and chassis environment

OPERATING ENVIRONMENT / COMPLIANCE

RoHS	RoHS Compliant
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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.



Interested in this solution?

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