

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SYS-5039MC-H12TRF

SKU SYS-5039MC-H12TRF

3U

Supermicro

MicroCloud SYS-5039MC-H12TRF*(Angled View – System)*

1 of 12 UP Nodes



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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-5039mc-h12trf

01 Product overview

The Supermicro SYS-5039MC-H12TRF is a server built on Intel Core with up to 128 GB of memory in 4 DIMM slots.

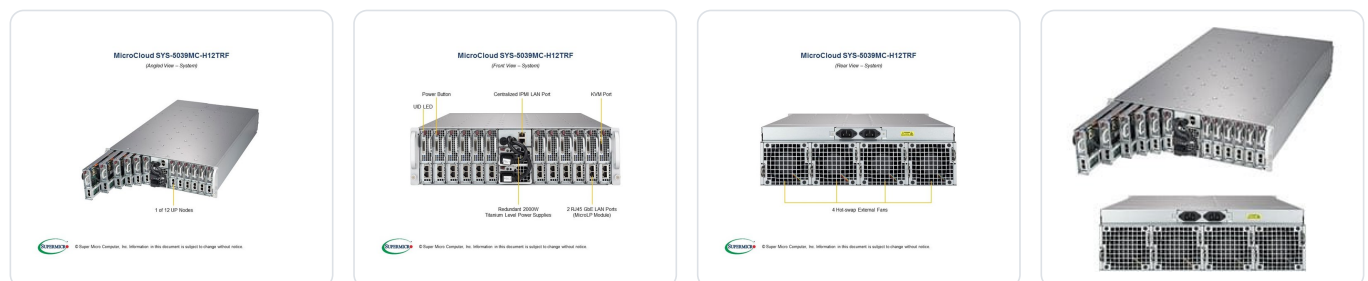
ServerInvest configures every SYS-5039MC-H12TRF to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Intel Core
- Up to 128 GB memory · 4 DIMM slots
- 2x 3.5" SATA3 drives or
- Power: 1000W: 100 – 127Vac
- Networking: Dual LAN with Intel i350

KEY SPECIFICATIONS

Form factor	3U
Processor	Intel Core
Memory	4 DIMM slots, up to 128 GB
Power supply	1× 1000 W
Typical power draw	450 W
Networking	Dual LAN with Intel i350
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	39%

Typical 247 W · max 386 W · single PSU rating 1000 W

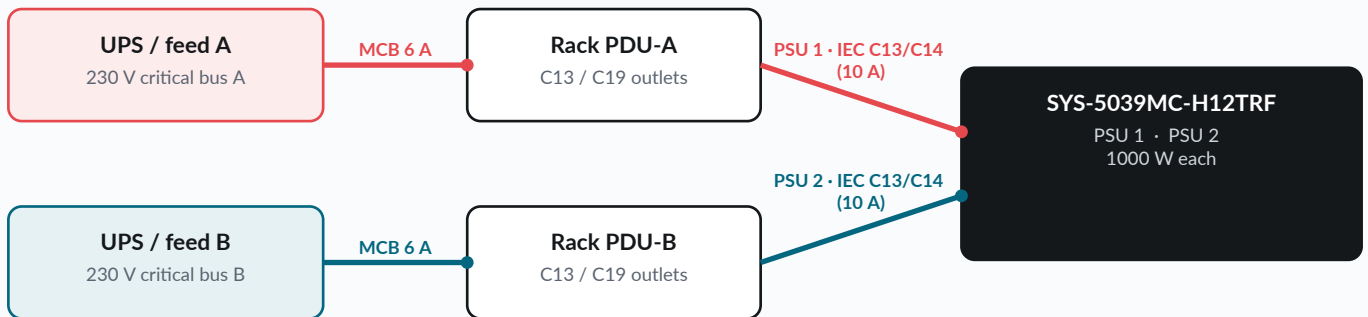
Annual IT energy (24/7)	1,804 kWh
Annual facility energy (PUE 1.5)	2,706 kWh
Annual energy cost	€361 IT · €541 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.70 t (grid factor 0.26 kg/kWh)
Power supplies	1× 1000 W

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 (PER NODE)

CPU	Single Socket H4 (LGA 1151), CPU TDP support up to 95W Support Intel Xeon processor E-2100 / E-2200 series, 8th Gen. Intel Core i3 / Pentium / Celeron Processors
Cores	8 cores max.
Note	BIOS 1.0b or above is required to support Intel Xeon processor E-2200 series

SYSTEM MEMORY (PER NODE)

Memory Capacity	4 DIMM slots Up to 128GB Unbuffered ECC Up to DDR4-2666MHz
Memory Type	2666/2400/2133MHz ECC DDR4 SDRAM
DIMM Sizes	32GB, 16GB, 8GB, 4GB

ON-BOARD DEVICES (PER NODE)

Chipset	Intel C246 chipset
SATA	SATA3 (6Gbps) via Intel C246 controller; RAID 0, 1, 5, 10
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
Network Controllers	Dual LAN with Intel i350
Graphics	Aspeed AST2500 graphics

INPUT / OUTPUT (PER NODE)

SATA	2 SATA3 (6Gbps) ports
LAN	2 RJ45 Gigabit Ethernet LAN ports

SYSTEM BIOS

BIOS Type	UEFI 128Mb
BIOS Features	ACPI 1.0 / 2.0 / 3.0 / 4.0 APM 1.2 DMI 2.3 Hardware BIOS Virus protection PCI 2.3 Plug and Play (PnP) RTC (Real Time Clock) Wakeup SMBIOS 2.7.1 UEFI 2.3.1 USB Keyboard support

FRONT WINDOW (EACH NODE)

Switch	Power / UID
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CHASSIS

Form Factor	3U
Model	CSE-939HN-R2K04BP

DIMENSIONS AND WEIGHT

Height	5.21" (132.5 mm)
Width	17.5" (444.5 mm)
Depth	29.5" (749.3 mm)
Package	16.1" (H) x 28.35" (W) x 42.36" (D)
Weight	Net Weight: 132lbs (59.87kg) Gross Weight: 125lbs (56.70kg)
Color	Black

EXPANSION SLOTS (PER NODE)

Micro-LP	1 Micro-LP slot (MicroLP upgradable)
M.2	M.2 Interface: 1 PCI-E 3.0 x4 and SATA M.2 Form Factor: 2280, 22110 M.2 Key: M-Key

DRIVE BAYS (PER NODE)

Internal	2x 3.5" SATA3 drives or 4x 2.5" SATA3 drives or 2x 2.5" NVMe + 2x 2.5" SATA3 drives or 2x 2.5" NVMe + 1x 3.5" SATA3 drive
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SYSTEM COOLING

Fans	4x 9cm Heavy duty fans with optimal cooling zone
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POWER SUPPLY (76MM WIDTH)

Total Output Power	1000W: 100 – 127Vac 1800W: 200 – 220Vac 1980W: 220 – 230Vac 2000W: 230 – 240Vac 2000W: 200 – 240Vac (UL/CUL only)
Dimension (W x H x L)	76 x 40 x 336 mm
Input	1000W: 100-127 Vac / 12.5-9.5 A / 50-60 Hz 1800W: 200-220 Vac / 10-9.5 A / 50-60 Hz 1980W: 220-230 Vac / 10-9.8 A / 50-60 Hz 2000W: 230-240 Vac / 10-9.8 A / 50-60 Hz 2000W: 200-240 Vac / 11.8-9.8 A / 50-60 Hz (UL/cUL only)
+12V	Max: 83.3A / Min: 0A (100Vac-127Vac) Max: 150A / Min: 0A (200Vac-220Vac) Max: 165A / Min: 0A (220Vac-230Vac) Max: 166.7A / Min: 0A (230Vac-240Vac) Max: 166.7A / Min: 0A (200-240 Vac) (UL/cUL only)
+5Vsb	Max: 1A / Min: 0A
Output Type	27 Pairs Gold Finger Connector
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. 3-Phase-switching voltage regulator with auto-sense from 0.5V-2.3V
FAN	Cooling zone
Temperature	Monitoring for CPU and chassis environment

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.



Interested in this solution?

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

