

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Cloud DC SuperServer SYS-121C-TN2R

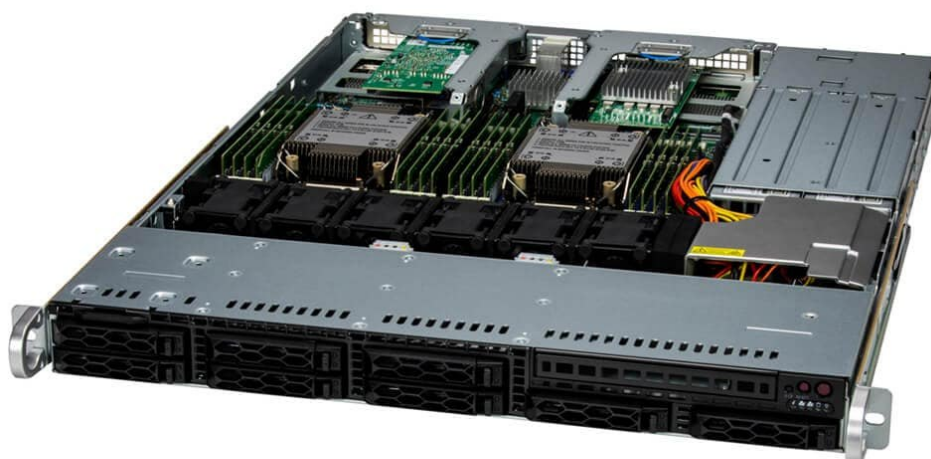
1U DP CloudDC with 8 hot-swap 2.5" SATA (2 NVMe hybrid) bays and 2 PCIe 5.0 x16 slots + 2 PCIe 5.0 x16 AIOM slots

SKU SYS-121C-TN2R

1U

LGA4677

Supermicro



FORM FACTOR

1U

MAX POWER (BASE)

448 W

HEAT OUTPUT

1,529 BTU/h

PRICE

from €7,120

CONFIGURE & QUOTE ONLINE

serverinvest.com/product/sys-121c-tn2r

01 Product overview

The Supermicro SYS-121C-TN2R is a 1U CloudDC Server built on dual Intel Xeon Scalable 4th/5th Gen processors with up to 4 TB of memory in 16 DIMM slots.

1U DP CloudDC with 8 hot-swap 2.5" SATA (2 NVMe hybrid) bays and 2 PCIe 5.0 x16 slots + 2 PCIe 5.0 x16 AIOM slots.

The chassis accepts up to 2 GPU accelerators for AI, rendering and HPC workloads.

ServerInvest configures every SYS-121C-TN2R 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

- Dual Intel Xeon Scalable 4th/5th Gen
- Up to 4 TB memory · 16 DIMM slots
- Total 8 bays 2 front hot-swap 2.5" NVMe*/SAS*/SATA* drive bays
- Up to 2 GPUs
- Power: 2x 860W
- Networking: Via AIOM

KEY SPECIFICATIONS

Form factor	1U
Processor	2× Intel Xeon Scalable 4th/5th Gen
Socket	LGA4677
Memory	16 DIMM slots, up to 4 TB
Memory type	DDR5-5600 ECC RDIMM
GPU	Up to 2 GPUs
Power supply	2× 860 W
Typical power draw	790 W
Networking	Via AIOM
Dimensions (W×H×D)	437 × 44 mm



02 Base configuration

Components included in the listed base price — every part can be changed in the online configurator

COMPONENT	DESCRIPTION	QTY
Base system	Supermicro Cloud DC SuperServer SYS-121C-TN2R	1
Processor	Intel Xeon Silver 4410Y Processor 12 Cores (30M Cache, 2.00/3.90 Ghz) 150W	2
Memory	16GB 5600MT/s DDR5 ECC Registered DIMM Module	4
Warranty & support	3-year return-to-base warranty (included)	1

Base configuration from

€7,120
excl. VAT

03 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
102 W	293 W	448 W	1,529 BTU/h	0.4 kW	52%

Typical 293 W · max 448 W · single PSU rating 860 W

Annual IT energy (24/7)	2,065 kWh
Annual facility energy (PUE 1.5)	3,098 kWh
Annual energy cost	€413 IT · €620 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.81 t (grid factor 0.26 kg/kWh)
Power supplies	2× 860 W redundant (N+1)

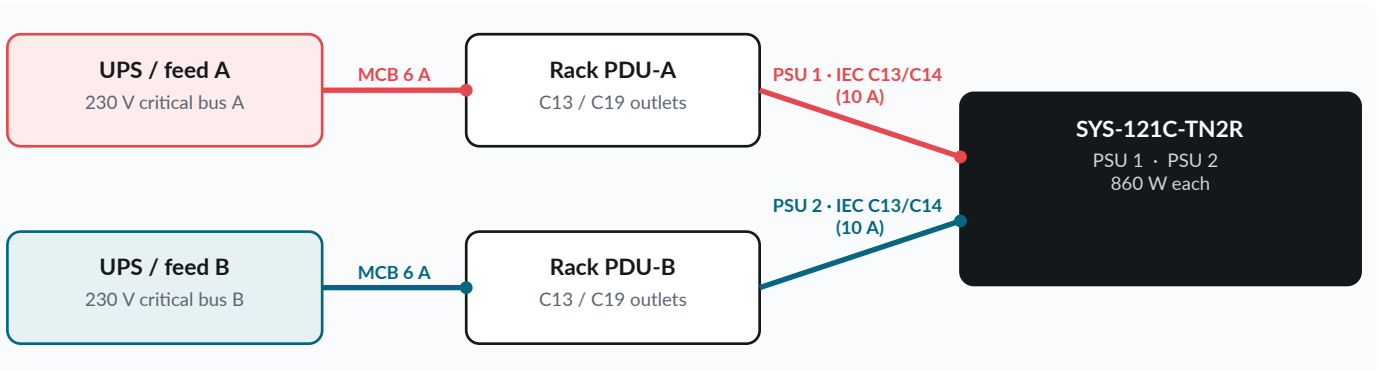
POWER BY COMPONENT

	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	38 W	59 W	85 W
2× CPU — Intel Xeon Silver 4410Y Processor 12 Cores	46 W	196 W	300 W
4× Memory 16 GB DIMM	12 W	20 W	36 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.

04 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: 2.1 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: 448 W = 1,529 BTU/h (0.4 kW).

05 Full specifications

MOTHERBOARD

Super X13DDW-A

PROCESSOR

CPU	Dual Socket E (LGA-4677) 5th Gen Intel Xeon / 4th Gen Intel Xeon Scalable processors
Core Count	Up to 36C/72T; Up to 82.5MB Cache per CPU

Note

Supports up to 270W TDP CPUs (Air Cooled)*
 *Air Cooled CPUs with TDP over 250W only supported under specific conditions. Contact a Supermicro representative for details.

GPU

Max GPU Count	Up to 2 single-width GPUs
Supported GPU	NVIDIA PCIe: A2, L4 Intel PCIe: Intel Data Center GPU Flex 140 View GPU Options

SYSTEM MEMORY

Memory	Slot Count: 16 DIMM slots Max Memory (1DPC): Up to 4TB 5600MT/s ECC DDR5 RDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

SATA	SATA (6Gbps) ; RAID 0/1/5/10 support
NVMe	NVMe; RAID 0/1/5/10 support(VROC HW key required) View NVMe Options
Network Connectivity	Via AIOM View AIOM Options View AOC Options

INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port
USB	2 USB 3.2 Gen1 Type-A ports (rear)
Video	1 VGA port
Serial	1 COM port (Rear)
TPM	1 TPM header

SYSTEM BIOS

BIOS Type	AMI 32MB SPI FLASH ROM
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MANAGEMENT

Software	SuperCloud Composer (SCC) Supermicro Server Manager (SSM) Supermicro Update Manager (SUM) Supermicro SuperDoctor 5 (SD5) Super Diagnostics Offline (SDO) Supermicro Thin-Agent Service (TAS) SuperServer Automation Assistant (SAA) New!
Power configurations	ACPI/APM Power Management

SECURITY

Hardware	Trusted Platform Module (TPM) 2.0 Silicon Root of Trust (RoT) – NIST 800-193 Compliant
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Features	Cryptographically Signed Firmware Secure Boot Secure Firmware Updates Automatic Firmware Recovery Supply Chain Security: Remote Attestation Runtime BMC Protections System Lockdown
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PC HEALTH MONITORING

CPU	8 Phase-switching voltage regulator Monitors for CPU Cores, Chipset Voltages, Memory.
Fan	Fans with tachometer monitoring Pulse Width Modulated (PWM) fan connectors Status monitor for speed control
Temperature	Monitoring for CPU and chassis environment Thermal Control for fan connectors

CERTIFICATIONS

Operating Systems	ESXi 7.0 U3, ESXi 8.0, Hypervisor 8.2.1, Oracle Linux 8.10, Oracle Linux 9.0, RHEL 8.7, RHEL 9.0, SLES 12 SP5, SLES 15 SP4, Windows Server 2022, Windows Server 2025 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	1U Rackmount
Model	CSE-LB13TS-ROAWN2P

DIMENSIONS AND WEIGHT

Height	1.7" (43 mm)
Width	17.2" (437 mm)
Depth	23.5" (597 mm)
Package	7.8" (H) x 23.8" (W) x 32.4" (D)
Weight	Gross Weight: 40 lbs (18.1 kg) Net Weight: 25 lbs (11.3 kg)
Available Color	Black front & silver body

FRONT PANEL

Buttons	Power On/Off Reset button Unit Identifier (UID)
LED	Drive activity Network activity Power status Universal Information

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 2 PCIe 5.0 x16 FHHL slots 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible) View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 8 bays 2 front hot-swap 2.5" NVMe*/SAS*/SATA* drive bays 6 front hot-swap 2.5" SAS*/SATA* drive bays (*NVMe/SAS/SATA support may require additional storage controller and/or cables, please see the optional parts list for details) View NVMe Options View Drive Options
M.2	2 M.2 PCIe 5.0 x4 NVMe slots (M-key 2280(default); VROC required for RAID) View M.2 Options
Peripheral Bays	1 slim DVD bay (optional)

SYSTEM COOLING

Fans	Up to 6x 4cm heavy duty fans with optimal fan speed control
Air Shroud	2 Air Shrouds

POWER SUPPLY

2x 860W
2x 860W Redundant (1 + 1) Titanium Level (96%) Hot-plug power supplies
Dimension (WxHxL)
54.5 x 40.25 x 322 mm

OPERATING ENVIRONMENT

RoHS	RoHS Compliant
Environmental Spec.	Name: A2 Operating Temperature: 10°C to 35°C (50°F to 95°F) Non-operating Temperature: -30°C to 60°C (-40°F to 140°F) Operating Relative Humidity: 8% to 80% (max 21° DP; non-condensing) Non-operating Relative Humidity: 8% to 90% (max 38° DP; non-condensing)

06 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.



Ready to order or need changes?

Configure this system online or talk to a solutions engineer — we reply within one business day.

office@serverinvest.com

Official manufacturer datasheet: serverinvest.com/product/sys-121c-tn2r/datasheet/manufacture

