

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro CloudDC SuperServer SYS-621C-TN12R

2U DP CloudDC with 12 hot-swap 3.5" NVMe/SAS/SATA bays and 4 PCIe 5.0 x16 slots + 2 PCIe 5.0 x16 AIOM slots

SKU SYS-621C-TN12R

2U

LGA4677

Supermicro



FORM FACTOR

2U

MAX POWER (BASE)

474 W

HEAT OUTPUT

1,617 BTU/h

PRICE

from €5,640**CONFIGURE & QUOTE ONLINE**serverinvest.com/product/sys-621c-tn12r

01 Product overview

The Supermicro SYS-621C-TN12R is a 2U CloudDC Server built on dual Intel Xeon Scalable 4th/5th Gen processors with up to 4 TB of memory in 16 DIMM slots.

2U DP CloudDC with 12 hot-swap 3.5" NVMe/SAS/SATA bays and 4 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.

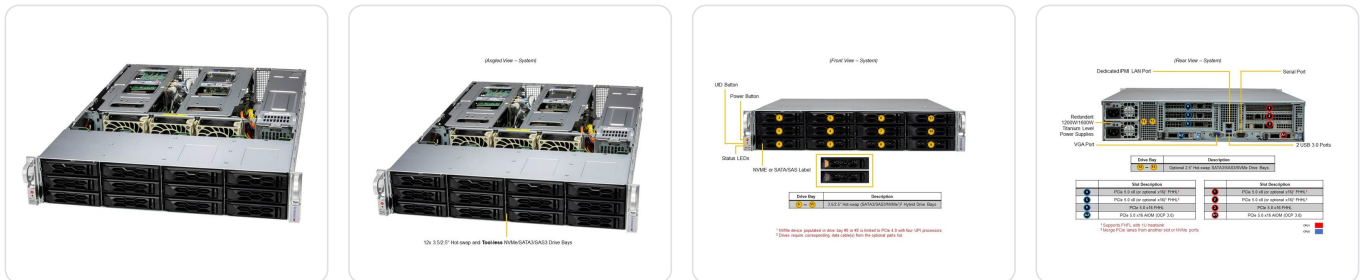
ServerInvest configures every SYS-621C-TN12R to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Dual Intel Xeon Scalable 4th/5th Gen
- Up to 4 TB memory · 16 DIMM slots
- Total 12 bays 12 front hot-swap 3.5" NVMe*/SAS*/SATA* drive bays
- Up to 2 GPUs
- Power: 2x 1200W
- Networking: Via AIOM

KEY SPECIFICATIONS

Form factor	2U
Processor	2× Intel Xeon Scalable 4th/5th Gen
Socket	LGA4677
Memory	16 DIMM slots, up to 4 TB
Memory type	DDR5-5600 ECC RDIMM
Drive bays	12 (24 NVMe)
GPU	Up to 2 GPUs
Power supply	2× 1200 W
Typical power draw	830 W
Networking	Via AIOM
Dimensions (W×H×D)	437 × 89 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 CloudDC SuperServer SYS-621C-TN12R	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

€5,640
excl. VAT

03 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
115 W	312 W	474 W	1,617 BTU/h	0.5 kW	40%

Typical 312 W · max 474 W · single PSU rating 1200 W

Annual IT energy (24/7)	2,215 kWh
Annual facility energy (PUE 1.5)	3,323 kWh
Annual energy cost	€443 IT · €665 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.86 t (grid factor 0.26 kg/kWh)
Power supplies	2× 1200 W redundant (N+1)

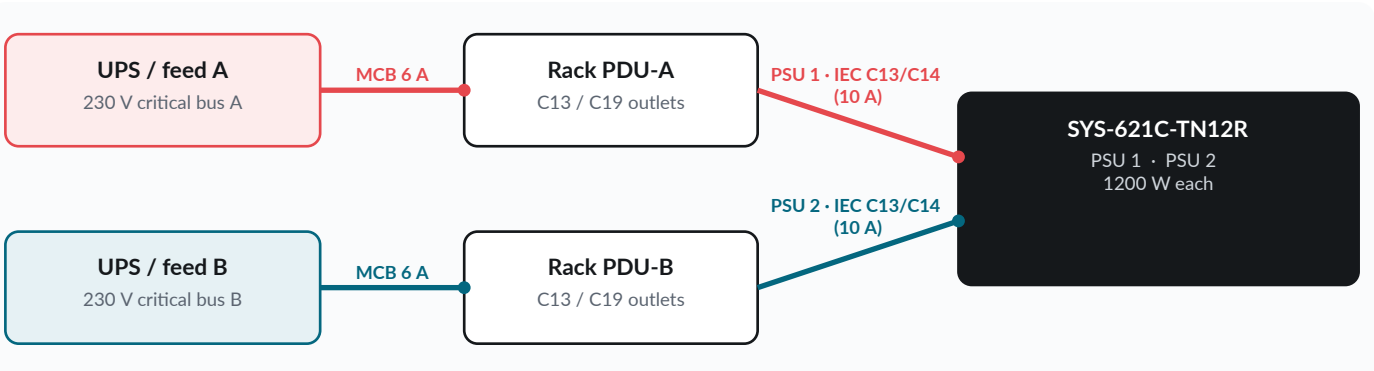
POWER BY COMPONENT

	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	50 W	77 W	110 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: 2.2 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: 474 W = 1,617 BTU/h (0.5 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 64C/128T; Up to 112.5MB Cache per CPU

Note

Supports up to 350W TDP CPUs (Air Cooled)*

*Air Cooled CPUs with TDP over 270W only supported under specific conditions. Contact a Supermicro representative for details.

GPU

Max GPU Count	Up to 2 double-width or 6 single-width GPUs
Supported GPU	NVIDIA PCIe: H100, H100 NVL, A2, L4, L40, L40S, NVIDIA RTX PRO 4000 Blackwell, NVIDIA RTX PRO 4500 Blackwell, NVIDIA RTX PRO 6000 Blackwell Max-Q Workstation Edition, RTX 4000 Ada Generation, RTX 4000 SFF Ada Generation, RTX A4000, RTX A4500, RTX A5000, RTX A6000 Intel PCIe: Intel Data Center GPU Flex 140, Intel Data Center GPU Flex 170 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
Chipset	Intel C741
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
Features	Cryptographically Signed Firmware Secure Boot Secure Firmware Updates Automatic Firmware Recovery Supply Chain Security: Remote Attestation Runtime BMC Protections System Lockdown

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, ESXi 9.0, Hypervisor 8.2.1, Oracle Linux 8.10, Oracle Linux 9.0, RHEL 8.7, RHEL 9.0, SAP HANA 2.0, SLES 12 SP5, SLES 15 SP4, Windows Server 2022, Windows Server 2025 View all OS Compatibility and Certification Matrix
Enterprise Solutions	VMWare vSAN SAP HANA

CHASSIS

Form Factor	2U Rackmount
Model	CSE-LA26TS-R1K23AWP1

DIMENSIONS AND WEIGHT

Height	3.5" (89 mm)
Width	17.2" (437 mm)
Depth	25.5" (648 mm)
Package	11.4" (H) x 26.7" (W) x 34.5" (D)
Weight	Gross Weight: 59 lbs (26.76 kg) Net Weight: 33 lbs (15 kg)
Available Color	Black front & sliver body

FRONT PANEL

Buttons	Power On/Off Universal Information (UID)
LED	Drive activity Network activity Power status Universal Information (UID)

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 4 PCIe 5.0 x8 (in x16) FHFL slots 2 PCIe 5.0 x16 (in x16) FHHL slots 2 PCIe 5.0 x16 (in x16) AIOM slots (OCP 3.0 compatible) Option A 2 PCIe 5.0 x16 (in x16) FHFL slots 2 PCIe 5.0 x16 (in x16) FHHL slots 2 PCIe 5.0 x16 (in x16) AIOM slots (OCP 3.0 compatible) Option B 4 PCIe 5.0 x16 (in x16) FHFL slots 2 PCIe 5.0 x16 (in x16) FHHL slots 2 PCIe 5.0 x16 (in x16) AIOM slots (OCP 3.0 compatible) Option C 2 PCIe 5.0 x16 (in x16) FHFL double-width slots 2 PCIe 5.0 x16 (in x16) FHHL slots 2 PCIe 5.0 x16 (in x16) AIOM slots (OCP 3.0 compatible) View AOC Options
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CXL Support	Up to 2 CXL 1.1 x16/x8 Type 2/Type 3 devices
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 12 bays 12 front hot-swap 3.5" NVMe*/SAS*/SATA* drive bays Option A: Total 12 bays 12 front hot-swap 2.5" NVMe*/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
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M.2	2 M.2 PCIe 5.0 x4 NVMe slots (M-key 2280(default); VROC required for RAID) View M.2 Options
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SYSTEM COOLING

Fans	Up to 3x 8cm heavy duty fans with optimal fan speed control
Air Shroud	1 Air Shroud

POWER SUPPLY

2x 1200W
2x 1200W Redundant Titanium Level (96%) Hot-plug power supplies
Dimension (WxHxL)
76 x 40 x 336 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-621c-tn12r/datasheet/manufacture

