

TECHNICAL DATASHEET

SUPERMICRO · EDGE & EMBEDDED

Supermicro UP SuperServer SYS-521E-WR

2U UP WIO with 8 hot-swap 3.5" SAS/SATA (4 NVMe hybrid) bays and up to 5 PCIe 5.0 slots

SKU SYS-521E-WR

2U

LGA4677

Supermicro



FORM FACTOR

2U

MAX POWER (BASE)

269 W

HEAT OUTPUT

918 BTU/h

PRICE

from €4,070**CONFIGURE & QUOTE ONLINE**serverinvest.com/product/sys-521e-wr

01 Product overview

The Supermicro SYS-521E-WR is a 2U UP Server built on Intel Xeon Scalable 4th/5th Gen with up to 2 TB of memory in 8 DIMM slots.

2U UP WIO with 8 hot-swap 3.5" SAS/SATA (4 NVMe hybrid) bays and up to 5 PCIe 5.0 slots.

The chassis accepts up to 1 GPU accelerators for AI, rendering and HPC workloads.

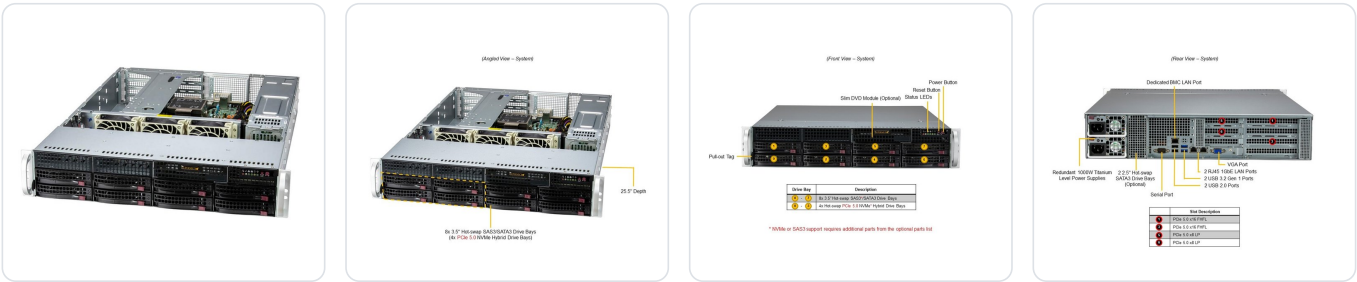
ServerInvest configures every SYS-521E-WR to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Intel Xeon Scalable 4th/5th Gen
- Up to 2 TB memory · 8 DIMM slots
- Total 8 bays 8 front hot-swap 3.5" SAS*/SATA drive bays
- Up to 1 GPUs
- Power: 2x 1000W
- Networking: 2 RJ45 1GbE with Intel I210

KEY SPECIFICATIONS

Form factor	2U
Processor	Intel Xeon Scalable 4th/5th Gen
Socket	LGA4677
Memory	8 DIMM slots, up to 2 TB
Memory type	DDR5-5600 ECC RDIMM
GPU	Up to 1 GPUs
Power supply	2× 1000 W
Typical power draw	530 W
Networking	2 RJ45 1GbE with Intel I210
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 UP SuperServer SYS-521E-WR	1
Processor	Intel Xeon Bronze 3408U Processor 8 Cores (22.5M Cache, 1.80/1.90 GHz) 125W	1
Memory	16GB 5600MT/s DDR5 ECC Registered DIMM Module	2
Warranty & support	3-year return-to-base warranty (included)	1

Base configuration from **€4,070**
excl. VAT

03 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
80 W	179 W	269 W	918 BTU/h	0.3 kW	27%

Typical 179 W · max 269 W · single PSU rating 1000 W

Annual IT energy (24/7)	1,308 kWh
Annual facility energy (PUE 1.5)	1,962 kWh
Annual energy cost	€262 IT · €392 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.51 t (grid factor 0.26 kg/kWh)
Power supplies	2× 1000 W redundant (N+1)

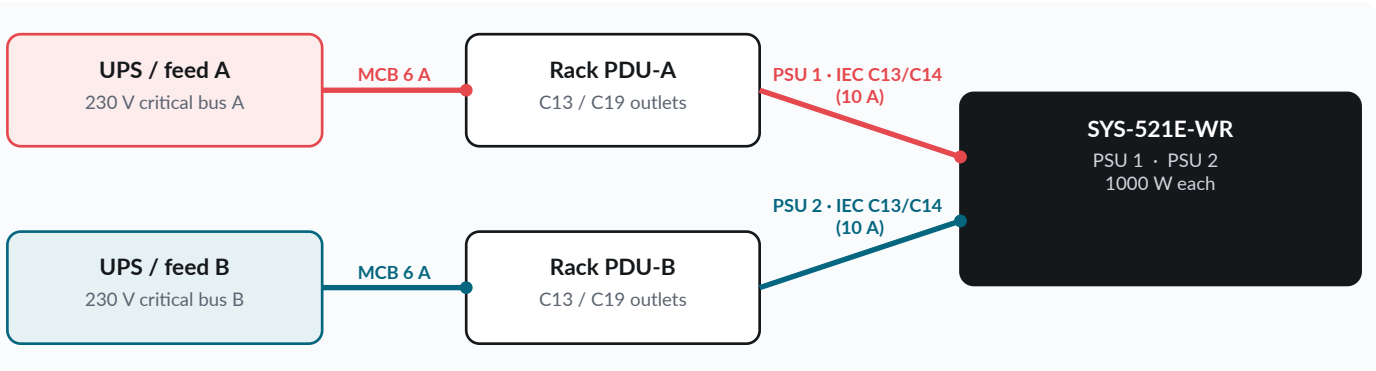
POWER BY COMPONENT

	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	50 W	77 W	110 W
CPU — Intel Xeon Bronze 3408U Processor 8 Cores	19 W	81 W	125 W
2× Memory 16 GB DIMM	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.

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: 1.2 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: 269 W = 918 BTU/h (0.3 kW).

05 Full specifications

MOTHERBOARD

Super X13SEW-F

PROCESSOR

CPU	Single Socket E (LGA-4677) 5th Gen Intel Xeon / 4th Gen Intel Xeon Scalable processors
Core Count	Up to 52C/104T; Up to 300MB Cache

Note Supports up to 300W TDP CPUs (Air Cooled)

GPU

Max GPU Count	Up to 1 double-width or 2 single-width GPUs
Supported GPU	NVIDIA PCIe: A1000, NVIDIA RTX PRO 2000 Blackwell, RTX 2000 Ada, RTX 4500 Ada, RTX 5000 Ada, RTX A2000, RTX A4000, RTX A4500, RTX A5000, RTX A6000, T400 View GPU Options
CPU-GPU Interconnect	PCIe 5.0 x16 CPU-to-GPU Interconnect

SYSTEM MEMORY

Memory	Slot Count: 8 DIMM slots/8 Channels Max Memory (1DPC): Up to 2TB 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(Intel VROC RAID key required) View NVMe Options
Network Connectivity	2 RJ45 1GbE with Intel I210 View AOC Options

INPUT / OUTPUT

LAN	2 RJ45 1 GbE LAN ports 1 RJ45 1 GbE Dedicated BMC LAN port (IPMI shared on LAN port 1)
USB	2 USB 3.2 Gen1 Type-A ports (rear) 2 USB 2.0 Type-A ports (rear) 2 USB 3.2 Gen1 ports (Header) 1 USB 2.0 Type-A port (Header)
Video	1 VGA port
Serial	1 COM port (header) 1 COM port (rear)
TPM	1 TPM header

SYSTEM BIOS

BIOS Type	AMI 32MB SPI Flash EEPROM
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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	Oracle Linux 9.0, RHEL 9.0, Windows Server 2022, Windows Server 2025 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	2U Rackmount
Model	CSE-825B2TS-R0WNP

DIMENSIONS AND WEIGHT

Height	3.5" (89 mm)
Width	17.2" (437 mm)
Depth	25.5" (647 mm)
Package	11" (H) x 26.5" (W) x 34" (D)
Weight	Gross Weight: 59 lbs (26.76 kg) Net Weight: 34 lbs (15.42 kg)
Available Color	Black

FRONT PANEL

Buttons	Power On/Off System Reset
LED	Device Activity LAN 1 Activity LAN 2 Activity Power Failure LED Power status System information

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 2 PCIe 5.0 x16 FHFL double-width slots 2 PCIe 5.0 x8 LP slots Option A* 1 PCIe 5.0 x16 FHFL double-width slot 2 PCIe 5.0 x8 FHFL slots 2 PCIe 5.0 x8 LP slots (*Requires additional parts, please see the optional parts list for details. For more details on PCIe slot configuration options, please refer to the system callout images above.) View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 8 bays 8 front hot-swap 3.5" SAS*/SATA drive bays Option A: Total 8 bays 4 front hot-swap 3.5" PCIe 5.0 x4 NVMe* drive bays 4 front hot-swap 3.5" SAS*/SATA drive bays (*NVMe/SAS 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	1 M.2 PCIe 3.0 x2 NVMe slot (M-key 2280/22110) View M.2 Options
Peripheral Bays	2 2.5" bays (optional)

SYSTEM COOLING

Fans	Up to 3 heavy duty PWM 80x80x38mm Fan(s)
Air Shroud	1 Air Shroud

POWER SUPPLY

2x 1000W

2x 1000W Redundant (1 + 1) Titanium Level (96%) power supplies

Dimension (WxHxL)

76 x 40 x 336 mm

OPERATING ENVIRONMENT

Environmental Spec.	Operating Temperature: 10°C to 35°C (50°F to 95°F) Non-operating Temperature: -30°C to 60°C (-22°F to 140°F) Operating Relative Humidity: 8% to 80% (non-condensing) Non-operating Relative Humidity: 8% to 90% (non-condensing)
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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-521e-wr/datasheet/manufacturerr

