

TECHNICAL DATASHEET

SUPERMICRO • STORAGE SERVERS

Supermicro 2U Storage Server SSG-521E-E1CR24H

2U front/top-loading storage server with 24 hot-swap 3.5" SAS/SATA bays (SAS hardware RAID) and PCIe 5.0

SKU SSG-521E-E1CR24H

2U

LGA4677

Supermicro



FORM FACTOR

2U

MAX POWER (BASE)

269 W

HEAT OUTPUT

918 BTU/h

PRICE

On request

CONFIGURE & QUOTE ONLINE

serverinvest.com/product/ssg-521e-e1cr24h

01 Product overview

The Supermicro SSG-521E-E1CR24H is a 2U Storage Server built on Intel Xeon Scalable 4th/5th Gen with up to 4 TB of memory in 16 DIMM slots.

2U front/top-loading storage server with 24 hot-swap 3.5" SAS/SATA bays (SAS hardware RAID) and PCIe 5.0.

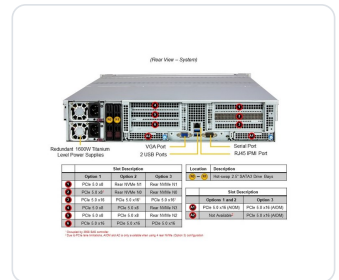
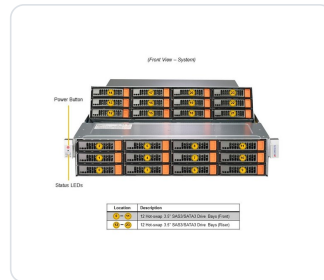
ServerInvest configures every SSG-521E-E1CR24H to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Intel Xeon Scalable 4th/5th Gen
- Up to 4 TB memory · 16 DIMM slots
- Total 26 bays 12 front hot-swap 3.5" SAS/SATA drive bays
- Power: 2x 1600W
- Networking: Via AIOM

KEY SPECIFICATIONS

Form factor	2U
Processor	Intel Xeon Scalable 4th/5th Gen
Socket	LGA4677
Memory	16 DIMM slots, up to 4 TB
Memory type	DDR5-5600 ECC RDIMM
Drive bays	132 (132 NVMe)
Power supply	2x 1600 W
Typical power draw	450 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

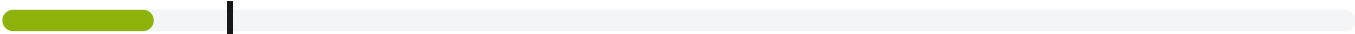
COMPONENT	DESCRIPTION	QTY
Base system	Supermicro 2U Storage Server SSG-521E-E1CR24H	1
Processor	Intel Xeon Bronze 3408U Processor 8 Cores (22.5M Cache, 1.80/1.90 GHz) 125W	1
Memory	16GB 5600MT/s DDR5 ECC Registered DIMM Module	2
Warranty & support	3-year return-to-base warranty (included)	1

Price on request — contact us for a tailored quotation

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	17%



Typical 179 W · max 269 W · single PSU rating 1600 W

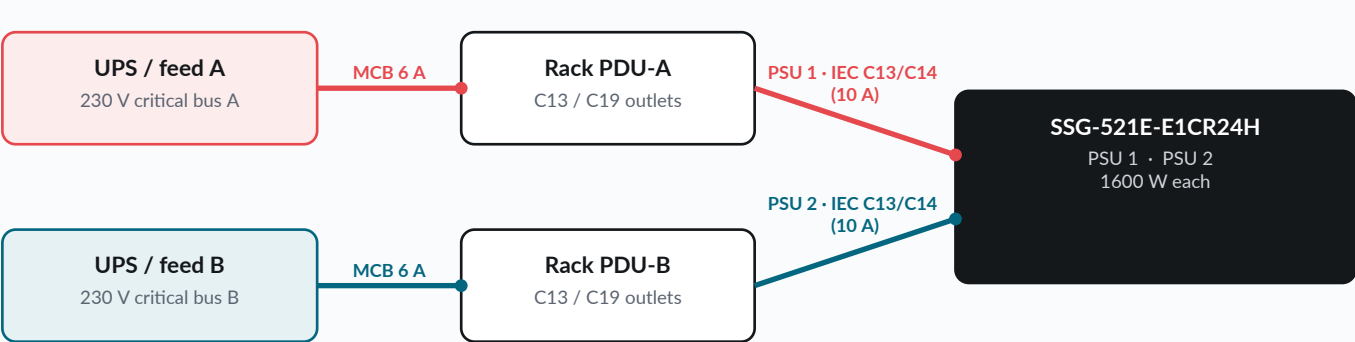
Annual IT energy (24/7)	1,308 kWh
Annual facility energy (PUE 1.5)	1,962 kWh
Annual energy cost	€262 IT · €392 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.51 t (grid factor 0.26 kg/kWh)
Power supplies	2× 1600 W redundant (N+1)

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 X13SEDW-F
PROCESSOR	
CPU	Single Socket E (LGA-4677) 5th Gen Intel Xeon / 4th Gen Intel Xeon Scalable processors
Core Count	Up to 36C/72T; Up to 180MB Cache

Note Supports 120W - 300W TDP CPUs (Air Cooled)

SYSTEM MEMORY

Memory	Slot Count: 16 DIMM slots Max Memory (2DPC): Up to 4TB 5600MT/s ECC DDR5 RDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

Network Connectivity	Via AIOM View AIOM Options View AOC Options
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INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port
USB	2 USB 3.0 ports (rear)
Video	1 VGA port
DOM	2 Super DOM (Disk on Module) ports

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	Power-on mode for AC power recovery ACPI 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	7 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
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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-826S3TS-R1K62P1

DIMENSIONS AND WEIGHT

Height	3.5"
Width	17.2"
Depth	34"
Package	12" (H) x 29" (W) x 52" (D)
Weight	Gross Weight: 74.5 lbs (33.79 kg) Net Weight: 52 lbs (23.59 kg)
Available Color	Silver

FRONT PANEL

Buttons	Power On/Off
LED	Network activity Power status SSD activity System information (overheat/UID)

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 4 PCIe 5.0 x8 FHHL slots 2 PCIe 5.0 x16 FHHL slots 1 PCIe 5.0 x16 AIOM slot (OCP 3.0 compatible) Option A 2 PCIe 5.0 x8 FHHL slots 2 PCIe 5.0 x16 FHHL slots 1 PCIe 5.0 x16 AIOM slot (OCP 3.0 compatible) Option B 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 26 bays 12 front hot-swap 3.5" SAS/SATA drive bays
 12 top-loading hot-swap 3.5" SAS/SATA drive bays
 2 rear hot-swap 2.5" SATA drive bays
 Option A: Total 28 bays 12 front hot-swap 3.5" SAS/SATA drive bays
 12 top-loading hot-swap 3.5" SAS/SATA drive bays
 2 rear hot-swap 2.5" SATA drive bays
 2 rear hot-swap 2.5" NVMe drive bays
 Option B: Total 30 bays 12 front hot-swap 3.5" SAS/SATA drive bays
 12 top-loading hot-swap 3.5" SAS/SATA drive bays
 4 rear hot-swap 2.5" NVMe drive bays
 2 rear hot-swap 2.5" SATA drive bays
[View NVMe Options](#)
[View Drive Options](#)

M.2

2 M.2 NVMe/SATA slots (M-key 2280/22110)
[View M.2 Options](#)

SYSTEM COOLING

Fans Up to 4 Heavy Duty 8cm Fan(s)
 Air Shroud 1 Air Shroud

POWER SUPPLY

2x 1600W
 2x 1600W Redundant Titanium Level (96%) Hot-plug power supplies
 Dimension (WxHxL)
 73.5 x 40 x 203 mm

OPERATING ENVIRONMENT

RoHS RoHS Compliant
 Environmental Spec. Operating Temperature: 10°C to 35°C (50°F to 95°F)
 Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)
 Operating Relative Humidity: 8% to 90% (Non-Condensing)
 Non-operating Relative Humidity: 5% to 95% (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/ssg-521e-e1cr24h/datasheet/manufacture

