

TECHNICAL DATASHEET

SUPERMICRO • STORAGE SERVERS

Supermicro 2U Storage Server SSG-221E-DN2R24R

2U all-flash SBB with 24 U.2 NVMe drives and PCIe 5.0

SKU SSG-221E-DN2R24R

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-221e-dn2r24r

01 Product overview

The Supermicro SSG-221E-DN2R24R is a 2U Storage Server built on Intel Xeon Scalable 4th/5th Gen with up to 2 TB of memory in 8 DIMM slots.

2U all-flash SBB with 24 U.2 NVMe drives and PCIe 5.0.

ServerInvest configures every SSG-221E-DN2R24R 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 24 bays 24 front hot-swap 2.5" PCIe 5.0 NVMe drive bays
- Power: 2x 2000W
- Networking: 2 RJ45 10GbE with Intel X710

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
Drive bays	24 (24 NVMe)
Power supply	2× 2000 W
Typical power draw	450 W
Networking	2 RJ45 10GbE with Intel X710
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

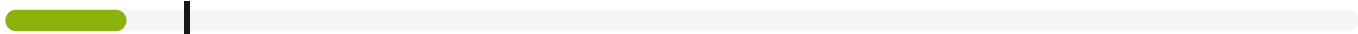
COMPONENT	DESCRIPTION	QTY
Base system	Supermicro 2U Storage Server SSG-221E-DN2R24R	1
Processor	Intel Xeon Bronze 3408U Processor 8 Cores (22.5M Cache, 1.80/1.90 GHz) 125W	1
Memory	16GB 5600MT/s DDR5 ECC Registered DIMM Module	2
Warranty & support	3-year return-to-base warranty (included)	1

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	13%



Typical 179 W · max 269 W · single PSU rating 2000 W

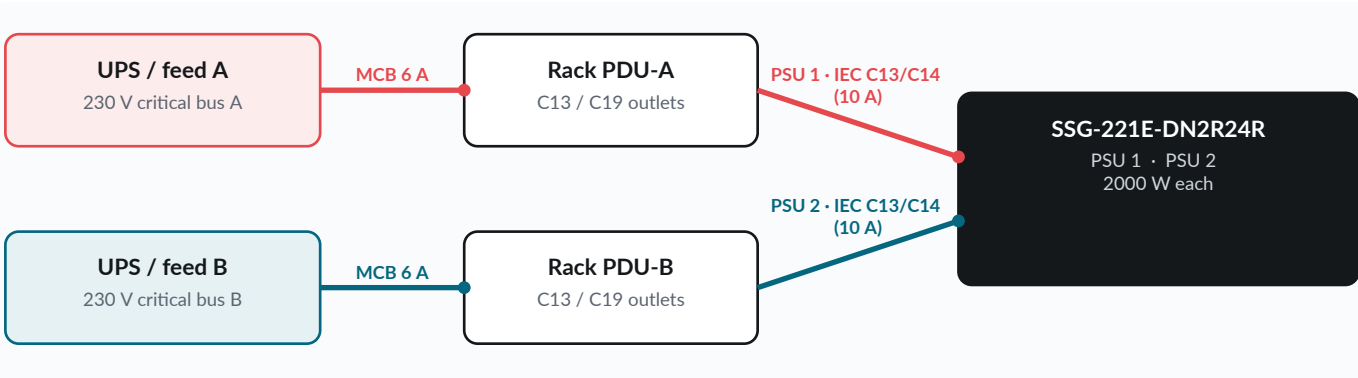
Annual IT energy (24/7)	1,308 kWh
Annual facility energy (PUE 1.5)	1,962 kWh
Annual energy cost	€262 IT · €392 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.51 t (grid factor 0.26 kg/kWh)
Power supplies	2× 2000 W redundant (N+1)

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 X13SEB-TF
PROCESSOR (PER NODE)	
CPU	Single Socket E (LGA-4677) 5th Gen Intel Xeon / 4th Gen Intel Xeon Scalable processors
Note	Supports 150W - 350W TDP CPUs (Air Cooled)

SYSTEM MEMORY (PER NODE)

Memory	Slot Count: 8 DIMM slots/8 Channels Max Memory (1DPC): Up to 2TB 5600MT/s ECC DDR5 RDIMM/LRDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES (PER NODE)

Network Connectivity	2 RJ45 10GbE with Intel X710 View AOC Options
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INPUT / OUTPUT (PER NODE)

LAN	1 RJ45 1 GbE Dedicated BMC LAN port 2 RJ45 10 GbE LAN ports
USB	2 USB 3.0 ports (rear)
Video	1 VGA port
Serial	1 COM port (Rear)

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

CERTIFICATIONS

Operating Systems	Oracle Linux 9.4, RHEL 9.4 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	2U Rackmount
Model	CSE-229TS-R000NP

DIMENSIONS AND WEIGHT

Height	3.47" (88 mm)
Width	17.7" (449.4 mm)
Depth	30" (762 mm)
Package	9.64" (H) x 26.37" (W) x 43.3" (D)
Weight	Gross Weight: 89.63 lbs (40.66 kg) Net Weight: 66.82 lbs (30.31 kg)
Available Color	Silver

FRONT PANEL

Buttons	Power On/Off button UID button
LED	HDD activity LAN1 activity LAN2 activity Power Fail Power status System information (overheat/UID)

EXPANSION SLOTS (PER NODE)

PCI-Express (PCIe) Configuration	Default 2 PCIe 5.0 x16 HHHL slots 2 PCIe 5.0 x8 HHHL slots View AOC Options
M.2	2 M.2 PCIe 3.0 x4 NVMe slots (M-key)

DRIVE BAYS / STORAGE (PER NODE)

Drive Bays Configuration	Default: Total 24 bays 24 front hot-swap 2.5" PCIe 5.0 NVMe drive bays View NVMe Options
M.2	2 M.2 NVMe slots (M-key 2280/22110) View M.2 Options

SYSTEM COOLING

Fans	Up to 6 Heavy Duty 6cm Fan(s)
Air Shroud	2 Air Shrouds

POWER SUPPLY

2x 2000W
2x 2000W Redundant Titanium Level (96%) 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-operating Relative Humidity: 5% to 95% ()

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-221e-dn2r24r/datasheet/manufacturerr

