

TECHNICAL DATASHEET

SUPERMICRO • STORAGE SERVERS

Supermicro 4U Storage Server SSG-542B-E1CR36L

4U UP front/rear-loading storage server with 36 hot-swap 3.5" SAS/SATA bays (SAS HBA) and PCIe 5.0

SKU SSG-542B-E1CR36L

4U

LGA4710

Supermicro



FORM FACTOR

4U

MAX POWER (BASE)

349 W

HEAT OUTPUT

1,191 BTU/h

PRICE

On request



CONFIGURE & QUOTE ONLINE

serverinvest.com/product/ssg-542b-e1cr36l

01 Product overview

The Supermicro SSG-542B-E1CR36L is a 4U Storage Server built on Intel Xeon 6 with up to 2 TB of memory in 8 DIMM slots.

4U UP front/rear-loading storage server with 36 hot-swap 3.5" SAS/SATA bays (SAS HBA) and PCIe 5.0.

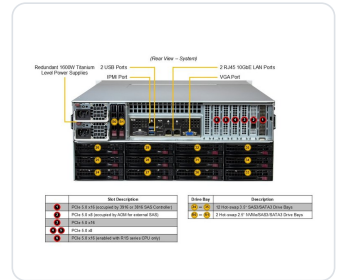
ServerInvest configures every SSG-542B-E1CR36L to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Intel Xeon 6
- Up to 2 TB memory · 8 DIMM slots
- Total 38 bays 24 front hot-swap 3.5" SAS/SATA drive bays
- Power: 2x 1600W
- Networking: 2 RJ45 10GbE with Intel X550

KEY SPECIFICATIONS

Form factor	4U
Processor	Intel Xeon 6
Socket	LGA4710
Memory	8 DIMM slots, up to 2 TB
Memory type	DDR5-6400 ECC RDIMM
Drive bays	64 (64 NVMe)
Power supply	2× 1600 W
Typical power draw	450 W
Networking	2 RJ45 10GbE with Intel X550
Dimensions (W×H×D)	437 × 178 mm



02 Base configuration

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

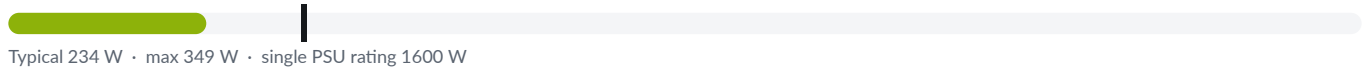
COMPONENT	DESCRIPTION	QTY
Base system	Supermicro 4U Storage Server SSG-542B-E1CR36L	1
Processor	Intel Xeon 6505P Processor 12 Cores (48M Cache, 2.20Ghz) 150W	1
Memory	16GB 6400MT/s DDR5 ECC Registered DIMM Module	2
Warranty & support	3-year return-to-base warranty (included)	1

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
107 W	234 W	349 W	1,191 BTU/h	0.3 kW	22%



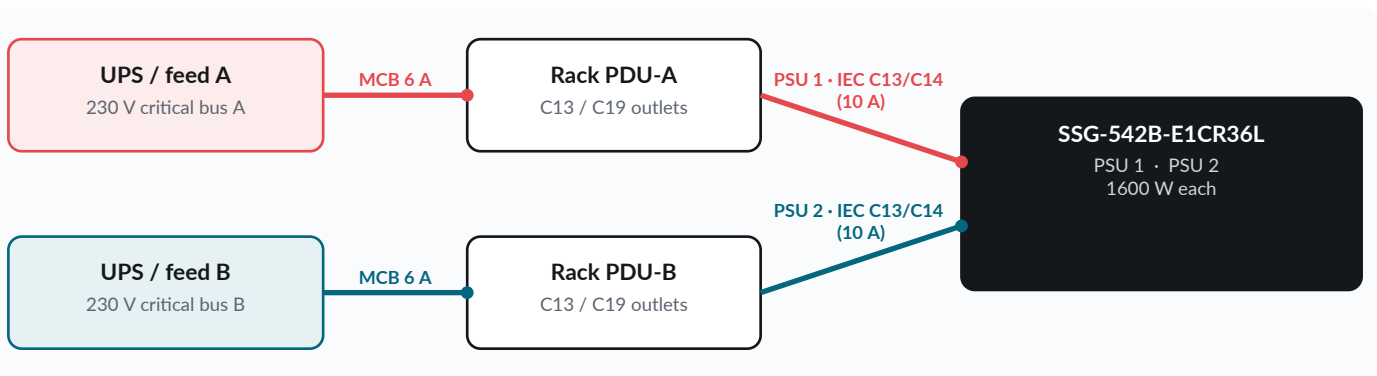
Annual IT energy (24/7)	1,716 kWh
Annual facility energy (PUE 1.5)	2,574 kWh
Annual energy cost	€343 IT · €515 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.67 t (grid factor 0.26 kg/kWh)
Power supplies	2× 1600 W redundant (N+1)

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	72 W	112 W	160 W
CPU — Intel Xeon 6505P Processor 12 Cores	23 W	98 W	150 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: 1.6 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: 349 W = 1,191 BTU/h (0.3 kW).

05 Full specifications

MOTHERBOARD

Super X14SBI-TF

PROCESSOR

CPU Single Socket E2 (LGA-4710)
 Intel Xeon 6700/6500 series processors with P-cores or 6700 series processors with E-cores

Core Count	P-cores: Up to 86C/172T; Up to 336MB Cache E-cores: Up to 144C/144T; Up to 108MB Cache
Note	Supports up to 350W TDP CPUs (Air Cooled)

SYSTEM MEMORY

Memory	Slot Count: 8 DIMM slots/8 Channels Max Memory (1DPC): Up to 2TB 6400MT/s ECC DDR5 RDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

SATA	4 x SlimSAS
SAS	SAS (12Gbps) via Broadcom 3916; RAID 0/1/5/6/10/50/60 support
NVMe	NVMe; RAID 0/1 support(Intel VROC RAID key required) View NVMe Options
Network Connectivity	2 RJ45 10GbE with Intel X550 View AOC Options

INPUT / OUTPUT

LAN	2 RJ45 10 GbE LAN ports (Intel X550) 1 RJ45 1 GbE Dedicated BMC LAN port (IPMI shared on LAN port 1)
USB	2 USB 3.2 Gen1 ports (Header) 2 USB 3.2 Gen1 ports (Rear)
Video	1 VGA port
Serial	1 COM port (header)
TPM	1 TPM header

SYSTEM BIOS

BIOS Type	AMI 64MB UEFI
BIOS Features	ACPI 6.5 SMBIOS 3.7 or later UEFI 2.9

MANAGEMENT

Software	SuperCloud Composer (SCC) Supermicro Server Manager (SSM) 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 System Lockdown Runtime BMC Protections Supply Chain Security: Remote Attestation
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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	CPU thermal trip support, Monitoring for CPU and chassis environment, PECI

CERTIFICATIONS

Operating Systems	RHEL 10.0, Windows Server 2022, Windows Server 2025 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	4U Rackmount
Model	CSE-847BTS-R1K68LPBP5

DIMENSIONS AND WEIGHT

Height	7"
Width	17.2"
Depth	27.5"
Package	15" (H) x 27" (W) x 39" (D)
Weight	Gross Weight: 102.5 lbs (46.4 kg) Net Weight: 65.5 lbs (29.7 kg)
Available Color	Silver

FRONT PANEL

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

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 3 PCIe 5.0 x8 (in x8) LP slots 3 PCIe 5.0 x16 (in x16) LP slots View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration

Default: Total 38 bays 24 front hot-swap 3.5" SAS/SATA drive bays
 12 rear hot-swap 3.5" SAS/SATA drive bays
 2 rear hot-swap 2.5" SAS/SATA drive bays
 Option A: Total 10 bays 8 front hot-swap 3.5" PCIe 5.0 x4 NVMe* drive bays
 2 rear hot-swap 2.5" PCIe 5.0 x4 NVMe* drive bays
 (*NVMe 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 x2 NVMe slots (M-key 22110(default))
[View M.2 Options](#)

SYSTEM COOLING

Fans 7 Heavy Duty PWM 80x80x38mm Fan(s)

Air Shroud 1 Air Shroud

POWER SUPPLY

2x 1600W
 2x 1600W Redundant (1 + 1) Titanium Level (96%) power supplies
 Dimension (WxHxL)
 76 x 40 x 336 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 70°C (-40°F to 158°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-542b-e1cr36l/datasheet/manufacture

