

TECHNICAL DATASHEET

SUPERMICRO • STORAGE SERVERS

Supermicro 4U UP Storage Server SSG-540P-E1CTR45L

4U UP top-loading storage server with 45 hot-swap 3.5" SAS/SATA bays and PCIe 4.0

SKU SSG-540P-E1CTR45L

4U

LGA4189

Supermicro



FORM FACTOR

4U

MAX POWER (BASE)

386 W

HEAT OUTPUT

1,317 BTU/h

PRICE

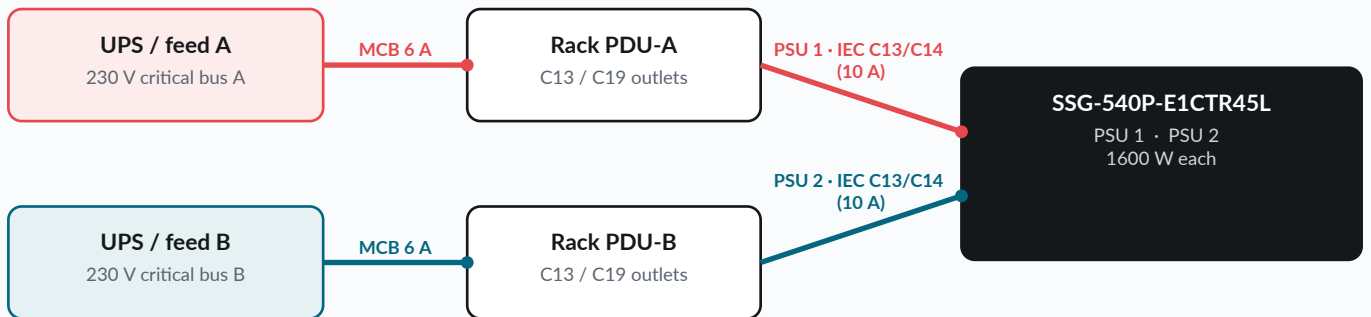
On request

REQUEST A QUOTATION ONLINE

serverinvest.com/product/ssg-540p-e1ctr45l

03 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: 1.8 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: 386 W = 1,317 BTU/h (0.4 kW).

04 Full specifications

MOTHERBOARD

Super X12SPi-TF

PROCESSOR

CPU	Single Socket P+ (LGA-4189) 3rd Gen Intel Xeon Scalable processors
Core Count	Up to 40C/80T; Up to 60MB Cache
Note	Supports up to 270W TDP CPUs (Air Cooled)

SYSTEM MEMORY

Memory	Slot Count: 8 DIMM slots Max Memory (2DPC): Up to 2TB 3200MT/s ECC DDR4 RDIMM/LRDIMM Supports Intel Optane persistent memory 200 series View Memory Options
Memory Voltage	1.2V

ON-BOARD DEVICES

SATA	SATA (6Gbps)
SAS	SAS (12Gbps) ; (IT mode)
NVMe	NVMe; RAID 0/1 support(Intel VROC RAID key required) View NVMe Options
Network Connectivity	2 RJ45 10GBASE-T with Intel X550 View AOC Options

INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port 2 RJ45 10 GbE LAN ports (Intel X550)
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USB	2 USB 2.0 ports (header) 2 USB 2.0 ports (rear) 1 Type-A port 2 ports (header) 2 ports (rear)
Video	1 VGA port
DOM	2 Super DOM (Disk on Module) ports with built-in power

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!
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Power configurations	ACPI/APM Power Management
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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
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PC HEALTH MONITORING

CPU	7+1 Phase-switching voltage regulator module (VRM) Monitors for CPU Cores, Chipset Voltages, Memory
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Fan	Fans with tachometer monitoring Pulse Width Modulated (PWM) fan connectors Status monitor for speed control
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Temperature	Monitoring for CPU and chassis environment Thermal Control for fan connectors
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CERTIFICATIONS

Operating Systems	Hypervisor 8.2, Oracle Linux 8.3, RHEL 8.2, Windows Server 2019, Windows Server 2022 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	4U Rackmount
Model	CSE-946LTS-R1K66P1

DIMENSIONS AND WEIGHT

Height	7" (178 mm)
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Width	17.2" (437 mm)
Depth	26" (660 mm)
Package	22" (H) x 28" (W) x 42" (D)
Weight	Gross Weight: 120 lbs (54.43 kg) Net Weight: 100 lbs (45.36 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 4.0 x8 LP slots 2 PCIe 4.0 x16 LP slots View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 47 bays 45 top-loading hot-swap 3.5" SAS/SATA drive bays 2 rear hot-swap 2.5" SATA drive bays View NVMe Options View Drive Options
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SYSTEM COOLING

Fans	Up to 5 Heavy Duty PWM 80x80x38mm Fan(s)
Air Shroud	1 Air Shroud

POWER SUPPLY

	1x 1600W 1x 1600W Redundant Platinum Level (94%) power supply Dimension (WxHxL) 73.5 x 40 x 265 mm
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OPERATING ENVIRONMENT

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)
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05 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.



Interested in this solution?

Request a quotation online or talk to a solutions engineer — we reply within one business day.
office@serverinvest.com

Official manufacturer datasheet: serverinvest.com/product/ssg-540p-e1ctr45l/datasheet/manufactur

