

TECHNICAL DATASHEET

SUPERMICRO • STORAGE SERVERS

Supermicro 4U Storage Server SSG-640SP-E1CR90

4U top-loading storage server with 90 hot-swap 3.5" SAS/SATA bays and PCIe 4.0

SKU SSG-640SP-E1CR90

4U

LGA4189

Supermicro



FORM FACTOR

4U

MAX POWER (BASE)

602 W

HEAT OUTPUT

2,054 BTU/h

PRICE

On request

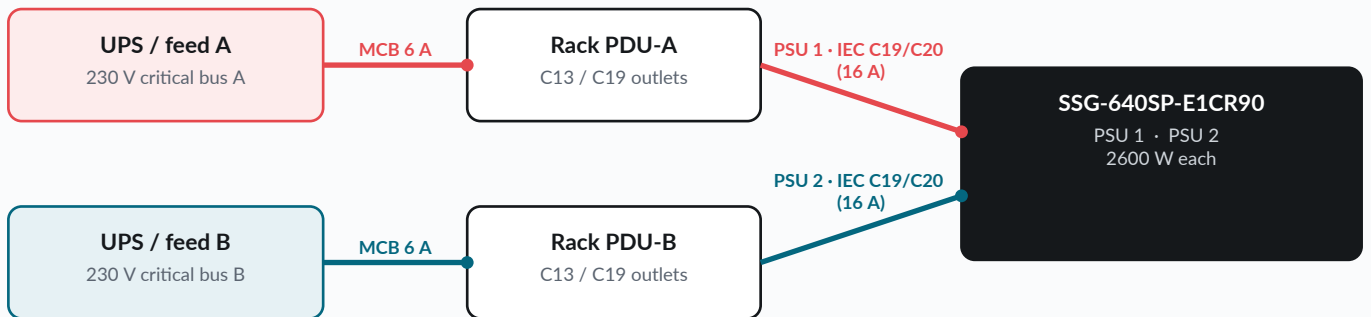
REQUEST A QUOTATION ONLINE

serverinvest.com/product/ssg-640sp-e1cr90

Calculated for the base configuration

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 C19/C20 (16 A) power cords.
- Maximum current per feed: 2.8 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: 602 W = 2,054 BTU/h (0.6 kW).

04 Full specifications

MOTHERBOARD

Super X12DSC-6

PROCESSOR

CPU	Dual Socket P+ (LGA-4189) 3rd Gen Intel Xeon Scalable processors
Core Count	Up to 36C/72T; Up to 54MB Cache per CPU
Note	Supports 120W - 205W TDP CPUs (Air Cooled)

SYSTEM MEMORY

Memory	Slot Count: 16 DIMM slots Max Memory (2DPC): Up to 4TB 3200MT/s ECC DDR4 RDIMM/LRDIMM View Memory Options
Memory Voltage	1.2V

ON-BOARD DEVICES

Network Connectivity	2 RJ45 10GBASE-T View AOC Options
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INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port 2 RJ45 10 GBASE-T LAN ports
USB	2 USB 3.0 ports (rear)
Video	1 VGA port
DOM	2 Super DOM (Disk on Module) ports

SYSTEM BIOS

BIOS Type	AMI 128MB 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	Power-on mode for AC power recovery ACPI 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	4+1 Phase-switching voltage regulator 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	Oracle Linux 8.3, RHEL 8.3, Windows Server 2019, Windows Server 2022 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	4U Rackmount
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Model	CSE-947HTS-R2K63P
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DIMENSIONS AND WEIGHT

Height	6.96" (177 mm)
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Width	17.6" (447 mm)
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Depth	43.3" (1099 mm)
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Package	N/A
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Weight	Gross Weight: 225 lbs (102.06 kg) Net Weight: 130 lbs (58.97 kg)
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Palletized Packing (W x H x L)	35.82" (910 mm) x 29.92" (755 mm) x 53.15" (1345 mm)
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Available Color	N/A
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EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 3 PCIe 4.0 x16 LP slots View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 96 bays 2 rear hot-swap 2.5" SATA drive bays 4 rear hot-swap 2.5" NVMe* drive bays 90 top-loading hot-swap 3.5"/2.5" SAS/SATA 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
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M.2	2 M.2 NVMe slots (M-key) View M.2 Options
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SYSTEM COOLING

Fans	Up to 6 Heavy Duty 8cm Fan(s)
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Air Shroud	1 Air Shroud
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POWER SUPPLY

2x 2600W
2x 2600W Redundant Titanium Level (96%) Hot-plug power supplies
Dimension (WxHxL)
73.5 x 40 x 265 mm

OPERATING ENVIRONMENT

RoHS	RoHS Compliant
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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)
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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-640sp-e1cr90/datasheet/manufacturerr

