TECHNICAL DATASHEET

SUPERMICRO · STORAGE SERVERS

Supermicro Storage SuperServer SSG-631E-E1CR16H

3U front-loading storage server with 16 hot-swap 3.5" SAS/SATA bays (SAS hardware RAID) and PCIe 5.0

SKU SSG-631E-E1CR16H | 3U | LGA4677 | Supermicro

FORM FACTOR	MAX POWER (BASE)	HEAT OUTPUT	PRICE
3U	528 W	1,802 BTU/h	from €7,710

ISO 9001 · ISO 14001 · ISO 27001 · cisco · tp-link · Omada by tp-link

CONFIGURE & QUOTE ONLINE
serverinvest.com/product/ssg-631e-e1cr16h

01 Product overview

The Supermicro SSG-631E-E1CR16H is a 3U Storage Server built on dual Intel Xeon Scalable 4th/5th Gen processors with up to 4 TB of memory in 16 DIMM slots.

3U front-loading storage server with 16 hot-swap 3.5" SAS/SATA bays (SAS hardware RAID) and PCIe 5.0.

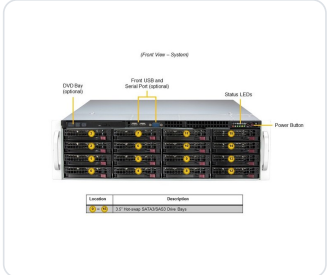
ServerInvest configures every SSG-631E-E1CR16H to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

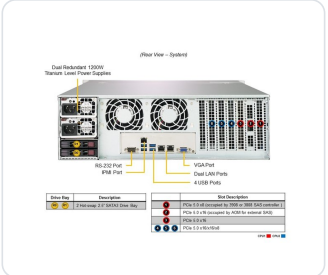
HIGHLIGHTS

- Dual Intel Xeon Scalable 4th/5th Gen
- Up to 4 TB memory · 16 DIMM slots
- Total 18 bays 16 front hot-swap 3.5" SAS/SATA drive bays
- Power: 2x 1200W
- Networking: 2 RJ45 10GbE with Broadcom BCM57416

KEY SPECIFICATIONS

Form factor	3U
Processor	2× Intel Xeon Scalable 4th/5th Gen
Socket	LGA4677
Memory	16 DIMM slots, up to 4 TB
Memory type	DDR5-5600 ECC RDIMM
Power supply	2× 1200 W
Typical power draw	870 W
Networking	2 RJ45 10GbE with Broadcom BCM57416
Dimensions (W×H×D)	437 × 133 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 Storage SuperServer SSG-631E-E1CR16H**	1
Processor	Intel Xeon Silver 4410Y Processor 12 Cores (30M Cache, 2.00/3.90 Ghz) 150W	2
Memory	16GB 5600MT/s DDR5 ECC Registered DIMM Module	4
Warranty & support	3-year return-to-base warranty (included)	1

Base configuration from **€7,710** excl. VAT

03 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
138 W	349 W	528 W	1,802 BTU/h	0.5 kW	44%

Typical 349 W · max 528 W · single PSU rating 1200 W

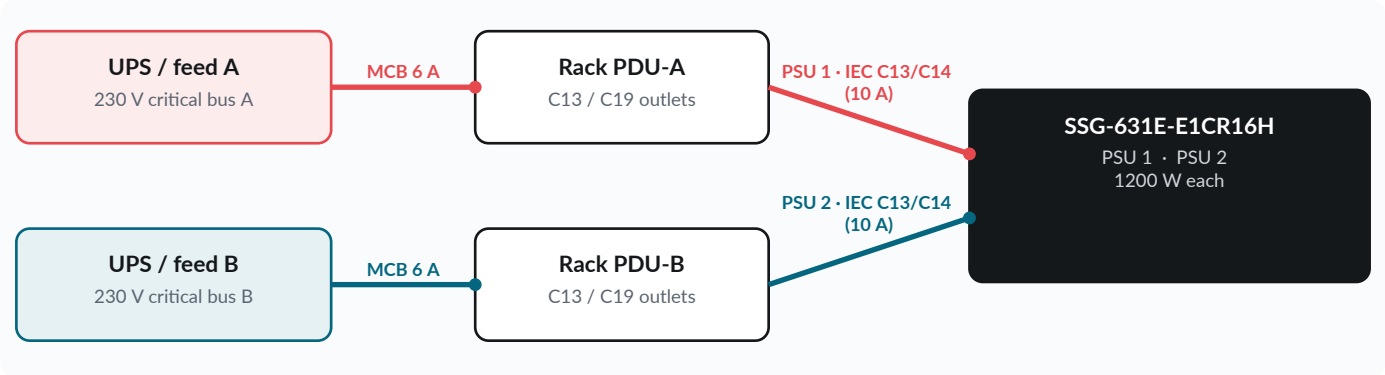
Annual IT energy (24/7)	2,503 kWh
Annual facility energy (PUE 1.5)	3,755 kWh
Annual energy cost	€501 IT · €751 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	0.98 t (grid factor 0.26 kg/kWh)
Power supplies	2× 1200 W redundant (N+1)

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	72 W	112 W	**160 W**
2× CPU — Intel Xeon Silver 4410Y Processor 12 Cores	46 W	196 W	**300 W**
4× Memory 16 GB DIMM	12 W	20 W	**36 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: 2.4 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: 528 W = 1,802 BTU/h (0.5 kW).

05 Full specifications

MOTHERBOARD

	Super X13DEI-T

PROCESSOR

CPU	Dual Socket E (LGA-4677) 5th Gen Intel Xeon / 4th Gen Intel Xeon Scalable processors
Note	Supports up to 270W TDP CPUs (Air Cooled)

SYSTEM MEMORY

Memory	Slot Count: 16 DIMM slots Max Memory (1DPC): Up to 4TB 5600MT/s ECC DDR5 RDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

Network Connectivity	2 RJ45 10GbE with Broadcom BCM57416 View AOC Options

INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port 2 RJ45 10 GbE LAN ports (Broadcom BCM57416) (IPMI shared on LAN port 1)
USB	4 USB 3.0 ports (rear)
Video	1 VGA port (Rear)
Serial	1 COM port (rear)
TPM	1 TPM header

SYSTEM BIOS

BIOS Type	AMI 32MB SPI Flash EEPROM

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+1 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	RHEL 9.0, Windows Server 2022, Windows Server 2025 View all OS Compatibility and Certification Matrix

CHASSIS

Form Factor	3U Rackmount
Model	CSE-836BTS-R1K23BP2

DIMENSIONS AND WEIGHT

Height	5.2"
Width	17.2"
Depth	25.5"
Package	13" (H) x 27" (W) x 35" (D)
Weight	Gross Weight: 79 lbs (48 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 4 PCIe 5.0 x16 (in x16) FHHL slots 2 PCIe 5.0 x8 (in x8) FH/10.5"L slots View AOC Options

DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 18 bays 16 front hot-swap 3.5" SAS/SATA drive bays 2 rear hot-swap 2.5" SATA drive bays View Drive Options
M.2	2 M.2 PCIe 4.0 x2 NVMe slots (M-key 2280/22110) View M.2 Options
Peripheral Bays	1 slim DVD bay (optional)

SYSTEM COOLING

Fans	Up to 5 Heavy Duty 8cm Fan(s)
Air Shroud	1 Air Shroud

POWER SUPPLY

	2x 1200W 2x 1200W Redundant Titanium Level (96%) Hot-plug 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 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.

NATCERT ISO 9001 · NATCERT ISO 14001 · NATCERT ISO 27001 · cisco · tp-link · Omada by tp-link

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-631e-e1cr16h/datasheet/manufacturer