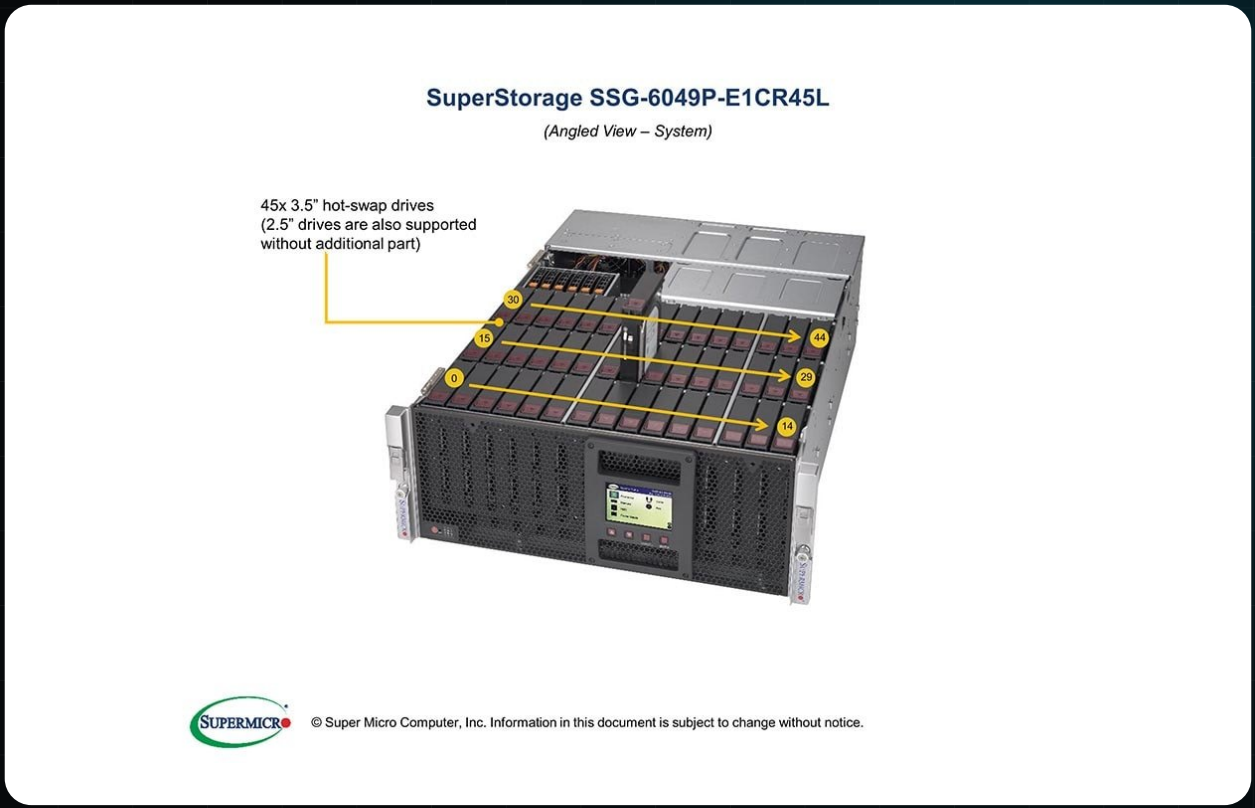
TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro Server SSG-6049P-E1CR45L

SKU SSG-6049P-E1CR45L | 4U | Supermicro



FORM FACTOR	MAX POWER (BASE)	HEAT OUTPUT	PRICE
4U	602 W	2,054 BTU/h	On request

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

REQUEST A QUOTATION ONLINE
serverinvest.com/product/ssg-6049p-e1cr45l

01 Product overview

The Supermicro SSG-6049P-E1CR45L is a server built on dual Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process processors with up to 6 TB of memory in 24 DIMM slots.

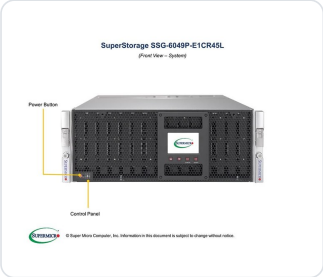
ServerInvest configures every SSG-6049P-E1CR45L to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

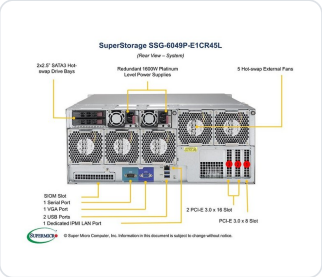
HIGHLIGHTS

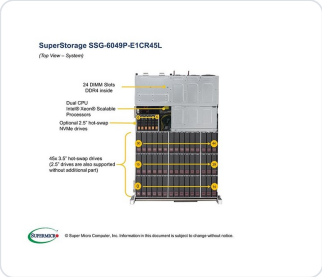
- Dual Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process
- Up to 6 TB memory · 24 DIMM slots
- 45 Hot-swap 3.5" SAS3/SATA3 drive bays
- Power: 1000W: 100 – 127Vac
- Networking: Intel C621 chipset

KEY SPECIFICATIONS

Form factor	4U
Processor	2× Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Process
Memory	24 DIMM slots, up to 6 TB
Drive bays	47
Power supply	1× 1000 W
Typical power draw	750 W
Networking	Intel C621 chipset
Dimensions (W×H×D)	437 × 178 mm







02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
143 W	374 W	602 W	2,054 BTU/h	0.6 kW	60%

Typical 374 W · max 602 W · single PSU rating 1000 W

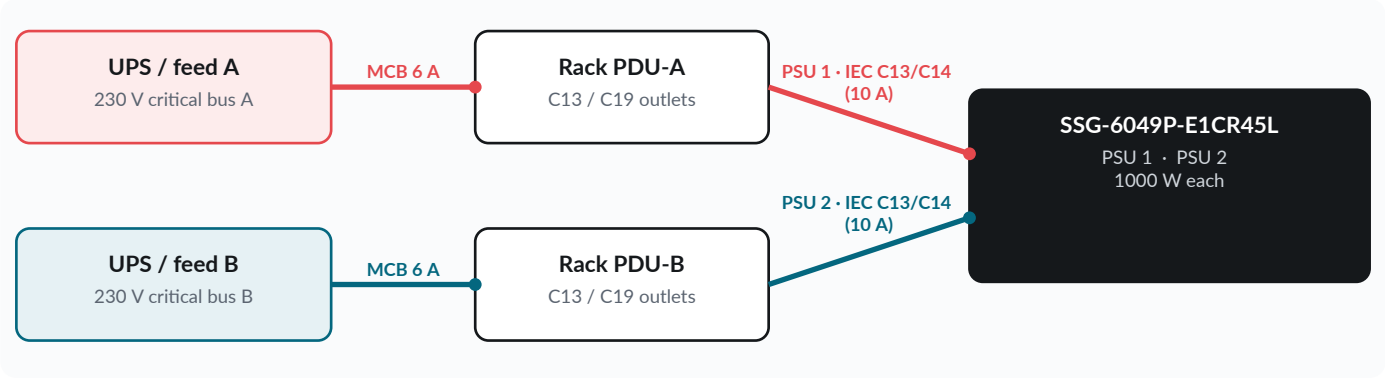
Annual IT energy (24/7)	2,669 kWh
Annual facility energy (PUE 1.5)	4,004 kWh
Annual energy cost	€534 IT · €801 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	1.04 t (grid factor 0.26 kg/kWh)
Power supplies	1× 1000 W

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	72 W	112 W	**160 W**
2× CPU (base configuration)	50 W	220 W	**370 W**
4× Memory (base configuration)	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.

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: 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

PROCESSOR/CACHE	
CPU	Dual Socket P (LGA 3647) 2nd Gen Intel Xeon Scalable Processors and Intel Xeon Scalable Processors ‡ , 3 UPI up to 10.4GT/s Support CPU TDP 70-205W
Cores	Up to 28 Cores
Note	‡ BIOS version 3.2 or above is required to support 2nd Gen Intel Xeon Scalable processors (codenamed Cascade Lake-R)

SYSTEM MEMORY	
Memory Capacity	24 DIMM slots Up to 6TB 3DS ECC DDR4-2933MHz † RDIMM/LRDIMM Supports Intel Optane DCPMM ††
Memory Type	2933 † /2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM
Note	† 2933MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro †† Cascade Lake only. Contact your Supermicro sales rep for more info.

ON-BOARD DEVICES	
Chipset	Intel C621 chipset
SAS	SAS3 (12Gbps) via Broadcom 3616 AOC; IT Mode, x16 SAS Controller
SATA	SATA3 (6Gbps) with RAID 0, 1, 5, 10
IPMI	Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
Graphics	ASPEED AST2500 BMC

INPUT / OUTPUT

Serial ATA	4 SATA3 (6Gbps) ports
LAN	1 RJ45 Dedicated IPMI LAN port
USB	2 USB 3.0 ports (rear) 1 Type A
VGA	1 VGA D-Sub connector port
Serial Port / Header	1 Fast UART 16550 port / 1 Header

SYSTEM BIOS

BIOS Type	AMI UEFI

MANAGEMENT

Software	Intel Node Manager IPMI 2.0 NMI SSM , SPM , SUM SuperDoctor 5 Watchdog

PC HEALTH MONITORING

CPU	Monitors for CPU Cores, Chipset Voltages, Memory. 4+1 Phase-switching voltage regulator
FAN	Fans with tachometer monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors
Temperature	Monitoring for CPU and chassis environment Thermal Control for fan connectors

CHASSIS

Form Factor	4U Rackmount
Model	CSE-946LTS-R1K66P

DIMENSIONS

Width	17.2" (437mm)
Height	7" (178mm)
Depth	26" (660mm)
Package	28" (W) x 23" (H) x 42.5" (D)
Weight	Gross Weight: 120 lbs (54.43 kg) Net Weight: 85 lbs (38.56 kg)
Available Colors	Black

FRONT PANEL

Buttons	Power On/Off button System Reset button

LEDs	Power status LED Hard drive activity LED Network activity LEDs System Information LED Power fail LED

EXPANSION SLOTS

PCI-Express	2 PCI-E 3.0 x16 slots 1 PCI-E 3.0 x8 slot 1 SIOM card support (must bundle with network card)

DRIVE BAYS

Hot-swap	45 Hot-swap 3.5" SAS3/SATA3 drive bays 2 Rear Hot-swap 2.5" SATA drive bays
Optional	6 NVMe bays (optional)

SYSTEM COOLING

Fans	5 Hot-swap 8cm rear exhaust PWM fans

POWER SUPPLY

Total Output Power	1000W: 100 – 127Vac 1600W: 200 – 240Vac
Dimension (W x H x L)	73.5 x 40 x 265 mm
Input	100-127Vac / 12.9A Max / 50-60Hz 200-240Vac / 9.5A Max / 50-60Hz
+12V	Max: 82A / Min: 0.1A (100-127Vac) Max: 132A / Min: 0.1A (200-240Vac)
12V SB	Max: 2A / Min: 0.2A
Output Type	25 Pairs Gold Finger Connector
Certification	Platinum Level [Test Report]

OPERATING ENVIRONMENT

RoHS	RoHS Compliant
Environmental Spec.	Operating Temperature: 10°C ~ 35°C (50°F ~ 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)

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.

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

Interested in this solution?
Request a quotation online or talk to a solutions engineer — we reply within one business day.
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