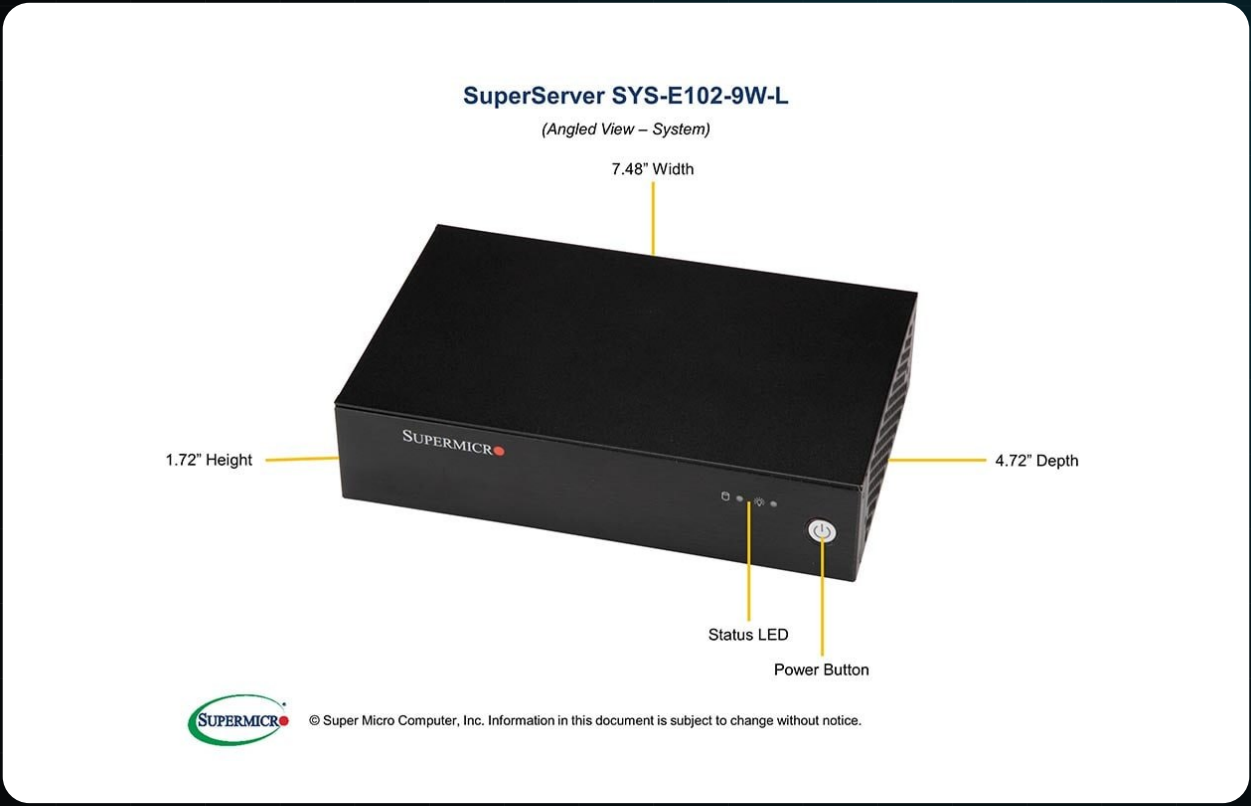
TECHNICAL DATASHEET

SUPERMICRO · EDGE & EMBEDDED

Supermicro Server SYS-E102-9W-L

SKU SYS-E102-9W-L | Compact | Supermicro



FORM FACTOR	MAX POWER (BASE)	HEAT OUTPUT	PRICE
Compact	306 W	1,044 BTU/h	On request

REQUEST A QUOTATION ONLINE
serverinvest.com/product/sys-e102-9w-l

01 Product overview

The Supermicro SYS-E102-9W-L is a server built on Intel Core with up to 64 GB of memory in 2 DIMM slots.

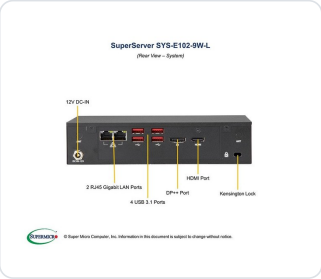
ServerInvest configures every SYS-E102-9W-L to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

KEY SPECIFICATIONS

Form factor	**Compact**
Processor	**Intel Core**
Memory	**2 DIMM slots, up to 64 GB**
Typical power draw	**450 W**
Networking	**Single LAN with Intel I210IT**

HIGHLIGHTS

- Intel Core
- Up to 64 GB memory · 2 DIMM slots
- 1 M.2 2242/2280 B-Key SATA
- Networking: Single LAN with Intel I210IT



02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
73 W	**190 W**	**306 W**	**1,044 BTU/h**	**0.3 kW**	**—**

Typical 190 W · max 306 W

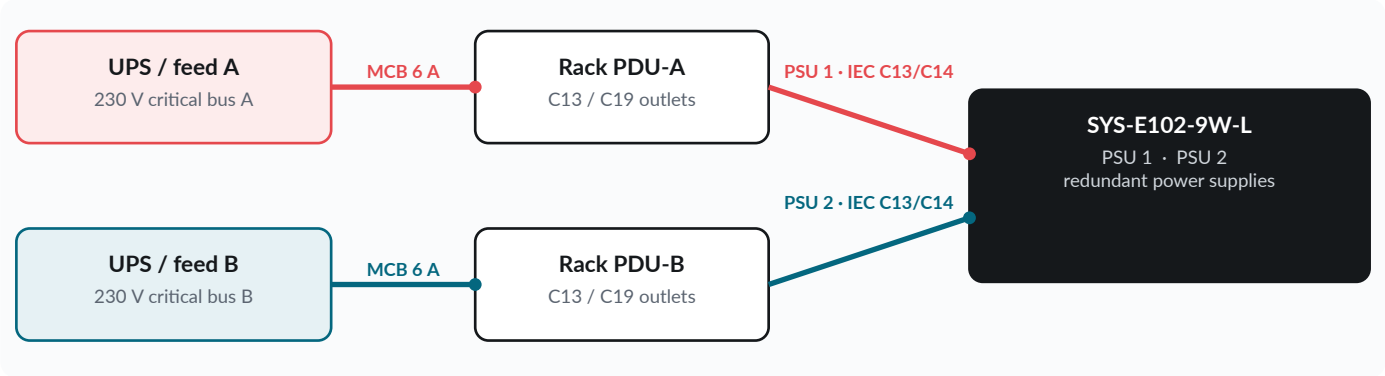
Annual IT energy (24/7)	1,357 kWh
Annual facility energy (PUE 1.5)	2,036 kWh
Annual energy cost	€271 IT · €407 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	0.53 t (grid factor 0.26 kg/kWh)
Power supplies	Redundant hot-swap PSUs — rating depends on the final configuration

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	38 W	59 W	**85 W**
CPU (base configuration)	25 W	110 W	**185 W**
2× Memory (base configuration)	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.

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 power cords.
- Maximum current per feed: 1.4 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: 306 W = 1,044 BTU/h (0.3 kW).

04 Full specifications

PROCESSOR/CACHE	
CPU	8th Gen. Intel Core i3-8145UE Processor Single Socket FCBGA-1528 System-on-Chip CPU TDP support 15W
Note	BIOS version 2.0 or above is required

SYSTEM MEMORY	
Memory Capacity	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
Memory Type	DDR4 up to 2400MHz
DIMM Sizes	32GB, 16GB, 8GB, 4GB
Memory Voltage	1.2V

ON-BOARD DEVICES	
Chipset	System on Chip
Network Controllers	Single LAN with Intel I210IT Single LAN with Intel PHY I219LM
Audio	ALC 888S HD Audio
Video	Intel UHD Graphics 620

INPUT / OUTPUT	
USB	4 USB 3.1 Gen2 ports (Type A)
Video Output	1 HDMI and 1 Display Port
COM Port	4 COM ports: 2 RS232, 2 RS232/422/485, RS-485 supports auto flow control (option)
Audio	1 HD Audio header (Mic-in/Line-Out) (option)

Others	TPM onboard

CHASSIS

Form Factor	3.5" SBC
Model	CSE-E102

DIMENSIONS

Width	7.48" (190mm) / 11.81" (300mm) - pkg.
Height	1.72" (44mm) / 5.12" (130mm) - pkg.
Depth	4.72" (120mm) / 11" (279mm) - pkg.
Weight	Gross Weight: 4.5 lbs (2.04 kg) Net Weight: 2.65 lbs (1.2 kg)
Available Colors	Black

FRONT PANEL

Buttons	Power On/Off button
LEDs	Power LED and Hard drive activity LED

EXPANSION SLOTS

M.2	Key: B-Key, M-Key, E-Key M.2 2242/3042/2280 B-Key (1 USB 3.0/2.0, 1 SATA Gen3) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support

DRIVE BAYS

Internal	1 M.2 2242/2280 B-Key SATA 1 M.2 2242/2280 M-Key (NVMe Support) 1 SATA 2.5” 7mm SSD/HDD

SYSTEM COOLING

Fans	Passive CPU Heat Sink and 1x 40mm Chassis Fan

SYSTEM BIOS

BIOS Type	AMI UEFI

MANAGEMENT

Software	SuperDoctor 5 Watch Dog
Power Configurations	+12V ~ +24V DC Wide power range input ACPI Power Management Control of power-on for recovery from AC power loss Force Power On by Jumper CPU thermal trip support for processor protection

OPERATING ENVIRONMENT / COMPLIANCE

RoHS	RoHS Compliant

Environmental Spec.	Operating Temperature: 0°C ~ 50°C (32°F ~ 122°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)

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