

TECHNICAL DATASHEET

SUPERMICRO · EDGE & EMBEDDED

Supermicro Fan-based Embedded IoT Server SYS-E102-9AP-LN4-E

Box PC with Intel Atom E3940 and supports 4x GbE LAN ports, 1 HDMI port, and 3 M.2 B key wireless modules

SKU SYS-E102-9AP-LN4-E

Compact

Supermicro



FORM FACTOR

Compact

MAX POWER (BASE)

306 W

HEAT OUTPUT

1,044 BTU/h

PRICE

On request

REQUEST A QUOTATION ONLINE

serverinvest.com/product/sys-e102-9ap-ln4-e

01 Product overview

The Supermicro SYS-E102-9AP-LN4-E is a Fan-based Embedded IoT Server built on Intel Atom with up to 8 GB of memory in 1 DIMM slots.

Box PC with Intel Atom E3940 and supports 4x GbE LAN ports, 1 HDMI port, and 3 M.2 B key wireless modules.

ServerInvest configures every SYS-E102-9AP-LN4-E 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 Atom
Memory	1 DIMM slots, up to 8 GB
Drive bays	1
Typical power draw	450 W
Networking	4 RJ45 1GbE

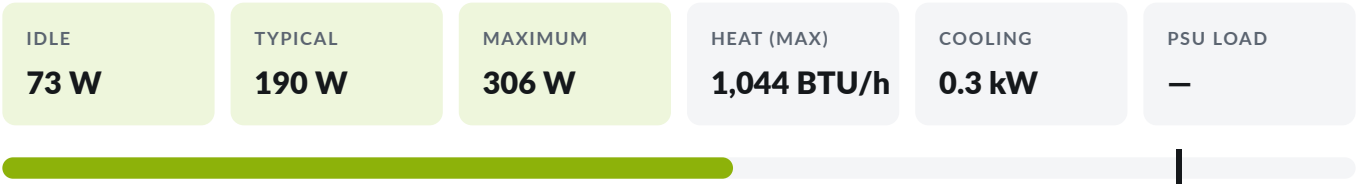
HIGHLIGHTS

- Intel Atom
- Up to 8 GB memory · 1 DIMM slots
- Total 1 bay 1 internal fixed 2.5" SATA drive bay
- Power: 1x 60W
- Networking: 4 RJ45 1GbE



02 Power & thermal

Calculated for the base configuration



Typical 190 W · max 306 W

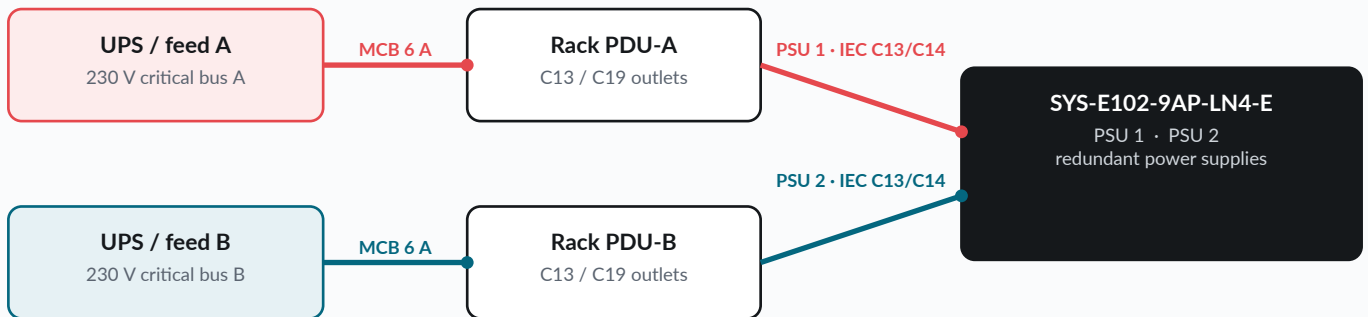
Annual IT energy (24/7)	1,357 kWh
Annual facility energy (PUE 1.5)	2,036 kWh
Annual energy cost	€271 IT · €407 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.53 t (grid factor 0.26 kg/kWh)
Power supplies	Redundant hot-swap PSUs — rating depends on the final configuration

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

MOTHERBOARD

Super A2SAN-LN4-E

PROCESSOR

CPU	Single processor(s) Intel Atom Processor E3940
Core Count	Up to 4C/4T; Up to 2MB Cache
Note	Supports up to 10W TDP CPUs (Air Cooled)

SYSTEM MEMORY

Memory	Slot Count: 1 DIMM slots Max Memory (2DPC): Up to 8GB 1866MT/s non-ECC UDIMM View Memory Options
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ON-BOARD DEVICES

SATA	SATA (6Gbps)
Network Connectivity	4 RJ45 1GbE

INPUT / OUTPUT

LAN	4 RJ45 1 GbE LAN ports
Video	1 HDMI 1.4 port(s)

SYSTEM BIOS

BIOS Type	AMiUEFI
BIOS Features	UEFI 2.5 SMBIOS 3.0

MANAGEMENT

Software Supermicro SuperDoctor 5 (SD5)

Power configurations
 DeepSx Power Policies
 Watch Dog Function
 Power Button Function
 Restore on AC Power Loss

CERTIFICATIONS

Operating Systems RHEL 7.6
[View all OS Compatibility and Certification Matrix](#)

CHASSIS

Form Factor Fan-based Embedded

Model CSE-E102TF

DIMENSIONS AND WEIGHT

Height 1.72" (44 mm)

Width 7.48" (190 mm)

Depth 4.72" (120 mm)

Package 5.12" (H) x 11.81" (W) x 11.02" (D)

Weight
 Gross Weight: 4.5 lbs (2 kg)
 Net Weight: 2.65 lbs (1.2 kg)

Palletized Packing (W x H x L) 46.5" (1180 mm) x 39.4" (1000 mm) x 37.4" (950 mm)

Available Color Black

FRONT PANEL

Buttons Power On/Off

LED
 HDD Status
 LAN1 activity
 LAN2 activity
 LAN3 activity
 LAN4 activity
 LTE1 activity
 LTE2 activity
 LTE3 activity
 Power status
 WIFI activity

EXPANSION SLOTS

M.2
 1 M.2 NVMe slot (E-key 2230)
 2 M.2 NVMe slots (B-key 2242/3042)
 1 M.2 NVMe/SATA slot (B-key 2242/3042)

DRIVE BAYS / STORAGE

Drive Bays Configuration Default: Total 1 bay 1 internal fixed 2.5" SATA drive bay
[View Drive Options](#)

M.2
 1 M.2 SATA slot (M-key 2242)
[View M.2 Options](#)

SYSTEM COOLING

Fans Up to 1x 40mmcm heavy duty fans with optimal fan speed control

POWER SUPPLY

1x 60W
1x 60W power supply
Dimension (WxHxL)
110 x 31.5 x 62 mm

OPERATING ENVIRONMENT

Environmental Spec. Operating Temperature: 0°C to 40°C (32°F to 104°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

Official manufacturer datasheet: serverinvest.com/product/sys-e102-9ap-ln4-e/datasheet/manufacture

