

TECHNICAL DATASHEET

SUPERMICRO • EDGE & EMBEDDED

Supermicro Fan-based Embedded IoT Server AS-E300-14GR

Mini-1U embedded system with AMD EPYC 4004/4005 Series Processor up to 65W TDP

SKU AS-E300-14GR

Compact

AM5

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/as-e300-14gr

01 Product overview

The Supermicro AS-E300-14GR is a Fan-based Embedded IoT Server built on AMD EPYC 4004/4005.

Mini-1U embedded system with AMD EPYC 4004/4005 Series Processor up to 65W TDP.

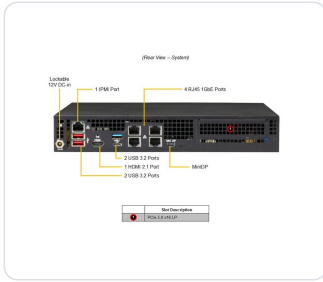
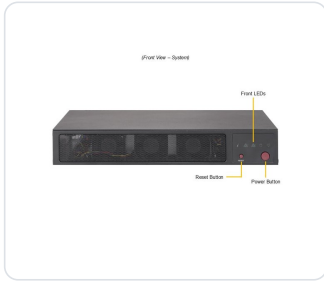
ServerInvest configures every Gold Series AS -E300-14GR to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- AMD EPYC 4004/4005
- Total 1 bay 1 internal fixed 2.5" SATA* drive bay
- Power: 1x 180W
- Networking: View AOC Options

KEY SPECIFICATIONS

Form factor	Compact
Processor	AMD EPYC 4004/4005
Socket	AM5
Memory	4 DIMM slots
Drive bays	1
Power supply	1× 180 W
Typical power draw	450 W
Networking	View AOC Options



02 Power & thermal

Calculated for the base configuration

IDLE 73 W	TYPICAL 190 W	MAXIMUM 306 W	HEAT (MAX) 1,044 BTU/h	COOLING 0.3 kW	PSU LOAD 170%
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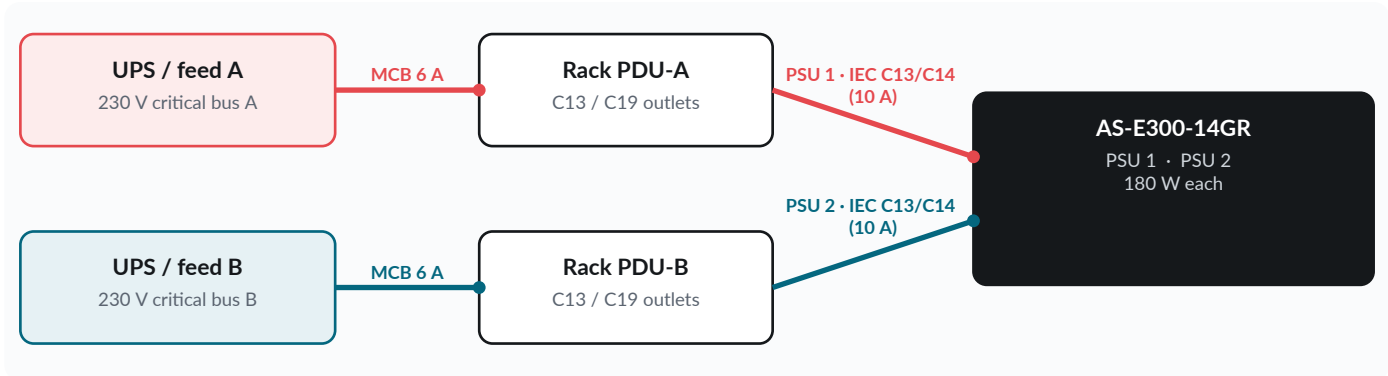
Annual IT energy (24/7)	1,357 kWh
Annual facility energy (PUE 1.5)	2,036 kWh
Annual energy cost	€271 IT · €407 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.53 t (grid factor 0.26 kg/kWh)
Power supplies	1× 180 W

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 (10 A) 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 H14SRV-HLN4F

PROCESSOR

CPU	Single Socket AM5 (LGA-1718) AMD EPYC 4005/4004 Series Processor
Core Count	16C/32T; 64MB Cache
Note	Supports up to 65W TDP CPUs (Air Cooled)

SYSTEM MEMORY

Memory	Slot Count: 4 DIMM slots Max Memory (1DPC): 192GB 5600MT/s ECC/non-ECC DDR5 UDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

Chipset	AMD B650
Network Connectivity	View AOC Options

INPUT / OUTPUT

LAN	4 RJ45 1 GbE LAN ports (Intel I350-AM4) 1 RJ45 1 GbE Dedicated BMC LAN port (ASPEED AST2600)
USB	1 USB 3.2 Gen2 Type-C port (Rear) 2 USB 3.2 Gen2 Type-A ports (Rear) 1 USB 3.2 Gen1 Type-A port (Rear)
Video	1 HDMI 2.1 port(s) (Rear) 1 Mini-DP port (Rear)

TPM	1 TPM header 1 TPM Onboard/port 80
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SYSTEM BIOS

BIOS Type	AMI 32MB UEFI
BIOS Features	ACPI 6.5 SMBIOS 3.7 or later UEFI 2.9

MANAGEMENT

Software	SuperCloud Composer (SCC) Supermicro Server Manager (SSM) Super Diagnostics Offline (SDO) Supermicro Thin-Agent Service (TAS) SuperServer Automation Assistant (SAA) New! Plug-ins for 3rd Party Software
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SECURITY

Hardware	Trusted Platform Module (TPM) 2.0
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PC HEALTH MONITORING

Fan	Status monitor for speed control
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CERTIFICATIONS

Operating Systems	Grado: RHEL 9.6, RHEL 10.0, Windows Server 2022, Windows Server 2025 Raphael: RHEL 9.6, RHEL 10.0, Windows Server 2022, Windows Server 2025 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	Fan-based Embedded
Model	CSE-E300

DIMENSIONS AND WEIGHT

Height	1.69" (43 mm)
Width	10.43" (264.8 mm)
Depth	8.89" (225.8 mm)
Package	10.87" (H) x 15" (W) x 5.59" (D)
Weight	Gross Weight: 7.5 lbs (3.4 kg) Net Weight: 3.7 lbs (1.6 kg)
Palletized Packing (W x H x L)	54.33" (1380 mm) x 78.5" (1993 mm) x 35" (890 mm)
Available Color	Black

FRONT PANEL

Buttons	Power On/Off
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LED	HDD Status LAN1 activity LAN2 activity Power status WIFI activity
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EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default* 1 PCIe 5.0 x16 (in x16) LP slot (*Requires additional parts, please see the optional parts list for details. For more details on PCIe slot configuration options, please refer to the system callout images above.) View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 1 bay 1 internal fixed 2.5" SATA* drive bay (*SATA support may require additional storage controller and/or cables, please see the optional parts list for details) View Drive Options
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M.2	1 M.2 PCIe 5.0 x4 NVMe slot (M-key 2280) 1 M.2 PCIe 5.0 x4 NVMe slot (M-key 22110) View M.2 Options
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SYSTEM COOLING

Fans	Up to 1 CPU heatsink with 70x70x15mm Fan(s) Up to 2x 4-PIN PWM 40x40x28mm Fan(s)
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POWER SUPPLY

1x 180W
1x 180W power supply
Dimension (WxHxL)
151.3 x 25.4 x 75.6 mm

OPERATING ENVIRONMENT

Environmental Spec.	Operating Temperature: 0°C to 40°C (32°F to 104°F) with 0.7 m/s airflow 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)
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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/as-e300-14gr/datasheet/manufactur

