TECHNICAL DATASHEET

SUPERMICRO · TOWER SERVERS & WORKSTATIONS

Supermicro Compact Mini-Tower Client System Server AS-C521D-31101U

SKU AS-C521D-31101U | Tower | AM5 | Supermicro

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

REQUEST A QUOTATION ONLINE

serverinvest.com/product/as-c521d-31101u

01 Product overview

The Supermicro AS-C521D-31101U is a Compact Mini-Tower Client System Server built on AMD EPYC 4004/4005.

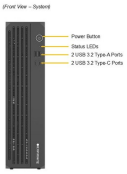
ServerInvest configures every Gold Series AS -C521D-31101U to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

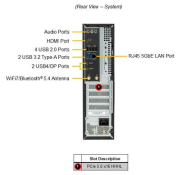
HIGHLIGHTS

- AMD EPYC 4004/4005
- Total 2 bays 1 internal fixed 2.5" SATA drive bay
- Power: 1x 300W
- Networking: View AOC Options

KEY SPECIFICATIONS

Form factor	**Tower**
Processor	**AMD EPYC 4004/4005**
Socket	**AM5**
Memory	**2 DIMM slots**
Drive bays	**3**
Power supply	**1× 300 W**
Typical power draw	**450 W**
Networking	**View AOC Options**





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**	**102%**

Typical 190 W · max 306 W · single PSU rating 300 W

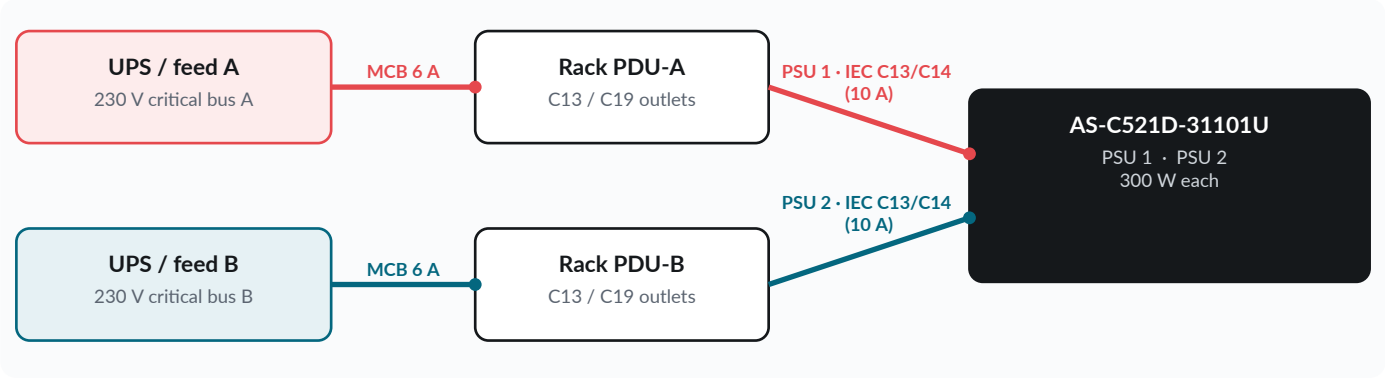
Annual IT energy (24/7)	1,357 kWh
Annual facility energy (PUE 1.5)	2,036 kWh
Annual energy cost	€271 IT · €407 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	0.53 t (grid factor 0.26 kg/kWh)
Power supplies	1× 300 W

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 CARAM5-M

PROCESSOR	
CPU	Single Socket AM5 (LGA-1718) AMD EPYC 4005/4004 Series Processor
Core Count	4C/8T; 16MB Cache
Note	Supports up to 65W TDP CPUs (Air Cooled)

SYSTEM MEMORY	
Memory	Slot Count: 2 DIMM slots/2 Channels Max Memory (1DPC): 16GB 5600MT/s non-ECC DDR5 UDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES	
SATA	SATA (6Gbps) ; RAID 0/1 support
Chipset	AMD B850
Network Connectivity	View AOC Options

INPUT / OUTPUT	
LAN	1 RJ45 5 GbE LAN port (5G Realtek Ethernet RTL8126)
USB	2 USB 3.2 Gen2 Type-A ports (Rear) 4 USB 2.0 Type-A ports (Rear) 2 USB 4.0 Type-C ports (Rear) 2 USB 3.2 Gen1 Type-A ports (Header) 2 USB 3.2 Gen2 Type-C ports (Header)

Video	2 USB 4.0 (DP 2.0 Alt Mode) ports (Rear) 1 port(s) supporting 4K@60Hz as specified in HDMI 2.1 (Rear)
Audio	ALC 888S HD Audio
Others	2 Wi-Fi 7 + Bluetooth 5.4 Antenna(s) ports

SYSTEM BIOS

BIOS Type	AMI 32MB SPI Flash EEPROM
BIOS Features	Plug and Play (PnP) USB Keyboard support ACPI 6.0 or later SMBIOS 3.0 or later

MANAGEMENT

Software	Supermicro SuperDoctor 5 (SD5) Super Diagnostics Offline (SDO) SuperServer Automation Assistant (SAA) New! SuperO Booster
Power configurations	Power-on mode for AC power recovery ACPI Power Management

SECURITY

Hardware	Trusted Platform Module (TPM) 2.0
Features	Cryptographically Signed Firmware Secure Boot Secure Firmware Updates

CHASSIS

Form Factor	Compact Mini-Tower
Model	CSE-GS2B-000NBP

DIMENSIONS AND WEIGHT

Height	13.43" (341 mm)
Width	3.62" (92 mm)
Depth	11.42" (290 mm)
Package	17.95" (H) x 7.32" (W) x 15.08" (D)
Weight	Gross Weight: 8.38 lbs (3.8 kg) Net Weight: 6.17 lbs (2.8 kg)
Available Color	Black

FRONT PANEL

Buttons	Power On/Off
LED	HDD activity Power status LED
Port	USB Type-A Ports-USB 3.2 Gen 1X1 ports (5G) USB Type-C-USB 3.2 Gen 1X2 port (10G)

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 1 PCIe 5.0 x16 HHHL slot View AOC Options
M.2	1 M.2 PCIe 4.0 x4 slot (M-key 2280/22110) 1 M.2 PCIe 5.0 x4 slot (M-key 2280/22110)

DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 2 bays 1 internal fixed 2.5" SATA drive bay 1 internal fixed 3.5" SATA drive bay
M.2	1 M.2 PCIe 4.0 x4 NVMe slot (M-key 2280(default)/22110) 1 M.2 PCIe 5.0 x4 NVMe slot (M-key 2280(default)/22110) View M.2 Options

SYSTEM COOLING

Fans	1 CPU Fan(s)

POWER SUPPLY

1x 300W
1x 300W Gold Level (90%) power supply
Dimension (WxHxL)
65 x 86 x 175 mm

OPERATING ENVIRONMENT

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)

ENVIRONMENTAL / RECYCLING

Recycle	Return Server-End of Life Product

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-c521d-31101u/datasheet/manufacturer