SERVERINVEST

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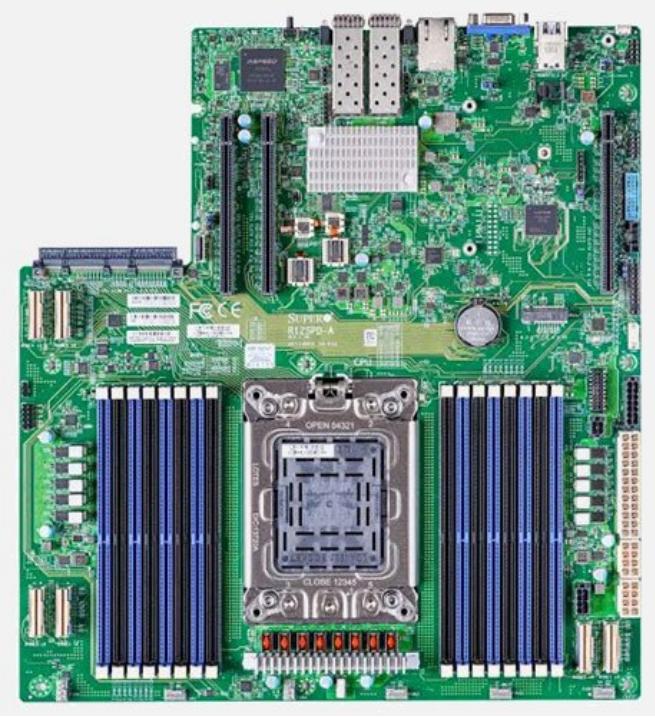
TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro MegaDC Server ARS-520M-NRL

2U · Ampere Altra · 12x 3.5"/2.5" hot-swap NVMe bays · up to 2 TB RAM

SKU ARS-520M-NRL | 2U | Supermicro



FORM FACTOR	MAX POWER (BASE)	HEAT OUTPUT	PRICE
2U	333 W	1,136 BTU/h	from €6,270

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

CONFIGURE & QUOTE ONLINE
serverinvest.com/product/ars-520m-nrl

01 Product overview

The Supermicro MegaDC Server ARS-520M-NRL is a 2U single-socket platform built on Ampere Altra, supporting up to 2 TB of DDR5 memory.

It is designed for database processing, hyperscale data centre, object storage.

Storage is provided by 12x 3.5"/2.5" hot-swap NVMe drive bays.

Every ServerInvest build is assembled to order, updated to the latest firmware and burn-in tested before shipping, and comes with a 3-year warranty.

KEY SPECIFICATIONS

Form factor	**2U**
Processor	**Ampere Altra**
Memory	**8 DIMM slots, up to 2 TB**
Drive bays	**12 (12 NVMe)**
Power supply	**2× 1600 W**
Typical power draw	**530 W**
Networking	**Dual 10GbE Lan with SFP+**
Dimensions (W×H×D)	**437 × 89 mm**

HIGHLIGHTS

- Ampere Altra (on-board)
- Up to 2 TB DDR5 memory in 8 DIMM slots
- 12x 3.5"/2.5" hot-swap NVMe drive bays
- On-board networking: Dual 10GbE Lan with SFP+
- Dual Redundant 1600W power supplies

02 Base configuration

Components included in the listed base price — every part can be changed in the online configurator

COMPONENT	DESCRIPTION	QTY
Base system	**Supermicro MegaDC Server ARS-520M-NRL**	1
Memory	16GB 5600MT/s DDR5 ECC Registered DIMM Module	2
Warranty & support	3-year return-to-base warranty (included)	1

Base configuration from **€6,270** excl. VAT

03 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
86 W	210 W	333 W	1,136 BTU/h	0.3 kW	21%

Typical 210 W · max 333 W · single PSU rating 1600 W

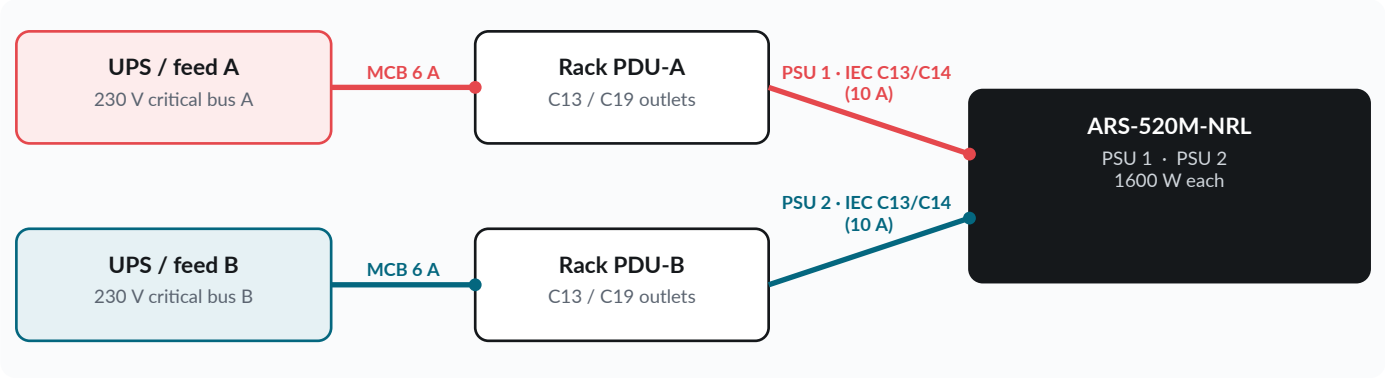
Annual IT energy (24/7)	1,514 kWh
Annual facility energy (PUE 1.5)	2,271 kWh
Annual energy cost	€303 IT · €454 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	0.59 t (grid factor 0.26 kg/kWh)
Power supplies	2× 1600 W redundant (N+1)

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	50 W	77 W	**110 W**
2× Memory 16 GB DIMM	6 W	10 W	**18 W**
CPU (base configuration)	25 W	110 W	**185 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.

04 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: 1.5 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: 333 W = 1,136 BTU/h (0.3 kW).

05 Full specifications

PROCESSOR & MEMORY	
Processor family	Ampere Altra
Sockets	1
Max memory	2 TB

STORAGE	
Drive bays	12x 3.5"/2.5" hot-swap NVMe drive bays
Drive size	3.5" Drives
Bay type	Hot-Swap Drives

CHASSIS & POWER	
Form factor	2U
Power supply	Dual Redundant 1600W

NETWORKING	
On-board	Dual 10GbE Lan with SFP+

OPTIMISED FOR	
Workload 1	Database Processing

Workload 2	Hyperscale Data Centre
Workload 3	Object Storage

06 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.

ISO 9001 · ISO 14001 · ISO 27001

Ready to order or need changes?

Configure this system online or talk to a solutions engineer — we reply within one business day.

office@serverinvest.com

Official manufacturer datasheet: serverinvest.com/product/ars-520m-nrl/datasheet/manufacturer