

TECHNICAL DATASHEET

SUPERMICRO • GPU & AI SERVERS

Supermicro 8U GPU Server AS-8126GS-NB3RT

DP AMD 8U System with NVIDIA HGX B300 8-GPU

SKU AS-8126GS-NB3RT

8U

SP5

Supermicro



FORM FACTOR

8U

MAX POWER (BASE)

509 W

HEAT OUTPUT

1,737 BTU/h

PRICE

On request

CONFIGURE & QUOTE ONLINE

serverinvest.com/product/as-8126gs-nb3rt

01 **Product overview**

The Supermicro AS-8126GS-NB3RT is a 8U GPU Server built on AMD EPYC 9005 with up to 6 TB of memory in 24 DIMM slots.

DP AMD 8U System with NVIDIA HGX B300 8-GPU.

ServerInvest configures every Gold Series AS -8126GS-NB3RT 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 9005
- Up to 6 TB memory · 24 DIMM slots
- Total 8 bays 8 front hot-swap E1.S NVMe drive bays
- Power: 6x 6600W
- Networking: 8 OSFP 800GbE

KEY SPECIFICATIONS

Form factor	8U
Processor	AMD EPYC 9005
Socket	SP5
Memory	24 DIMM slots, up to 6 TB
Memory type	DDR5-6400 ECC RDIMM
Drive bays	8 (8 NVMe)
Power supply	6× 6600 W
Typical power draw	450 W
Networking	8 OSFP 800GbE
Dimensions (W×H×D)	437 × 356 mm



02 **Base configuration**

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

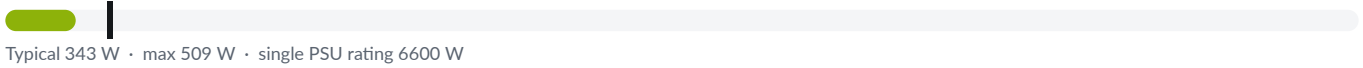
COMPONENT	DESCRIPTION	QTY
Base system	Supermicro 8U GPU Server AS-8126GS-NB3RT	1
Processor	AMD EPYC 9135 - 16 Cores, 3.65/4.30GHz, 64MB Cache (200 Watt)	1
Memory	16GB 6400MT/s DDR5 ECC Registered DIMM Module	2
Warranty & support	3-year return-to-base warranty (included)	1

Price on request — contact us for a tailored quotation

03 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
163 W	343 W	509 W	1,737 BTU/h	0.5 kW	8%



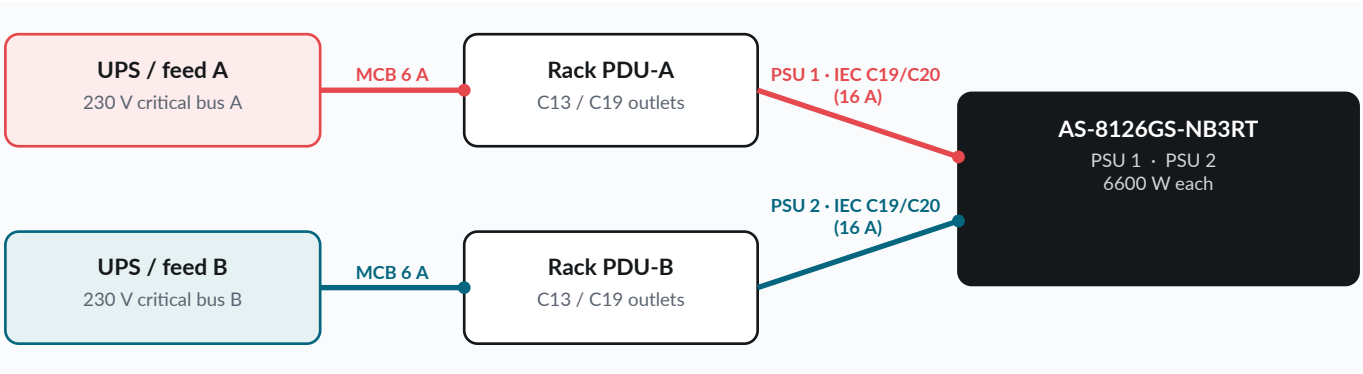
Annual IT energy (24/7)	2,532 kWh
Annual facility energy (PUE 1.5)	3,798 kWh
Annual energy cost	€506 IT · €760 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.99 t (grid factor 0.26 kg/kWh)
Power supplies	6× 6600 W redundant (N+1)

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	117 W	182 W	260 W
CPU — AMD EPYC 9135 - 16 Cores	30 W	130 W	200 W
2× Memory 16 GB DIMM	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.

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 C19/C20 (16 A) power cords.
- Maximum current per feed: 2.3 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: 509 W = 1,737 BTU/h (0.5 kW).

05 Full specifications

MOTHERBOARD	
	Super H14DSG-OM
PROCESSOR	
CPU	Dual processor(s) AMD EPYC 9005 Series Processors
Core Count	Up to 384C/768T

Note Supports up to 500W TDP CPUs (Air Cooled)

GPU

Max GPU Count	8 onboard GPUs
Supported GPU	NVIDIA SXM: HGX B300 8-GPU (288GB) View GPU Options
CPU-GPU Interconnect	PCIe 5.0 x16 CPU-to-GPU Interconnect
GPU-GPU Interconnect	NVIDIA NVLink with NVSwitch

SYSTEM MEMORY

Memory	Slot Count: 24 DIMM slots Max Memory (1DPC): Up to 6TB 4800MT/s ECC DDR5 RDIMM Max Memory (1DPC): Up to 6TB 6400MT/s ECC DDR5 RDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

Network Connectivity	8 OSFP 800GbE 2 RJ45 10GbE View AOC Options
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INPUT / OUTPUT

USB	1 USB 3.0 Type-A port (Front) 1 USB 2.0 Type-A port (Front)
Video	1 VGA port 1 mini-DP port

SYSTEM BIOS

BIOS Type	AMI 64MB UEFI
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MANAGEMENT

Software	SuperCloud Composer (SCC) Supermicro Server Manager (SSM) Super Diagnostics Offline (SDO) Supermicro Thin-Agent Service (TAS) SuperServer Automation Assistant (SAA) New! SFT-DCMS-SINGLE
Power configurations	Power-on mode for AC power recovery ACPI Power Management

SECURITY

Hardware	Trusted Platform Module (TPM) 2.0 Silicon Root of Trust (RoT) – NIST 800-193 Compliant
Features	Cryptographically Signed Firmware Secure Boot Secure Firmware Updates Automatic Firmware Recovery Supply Chain Security: Remote Attestation Runtime BMC Protections System Lockdown

PC HEALTH MONITORING

CPU	8+4 Phase-switching voltage regulator Monitors for CPU Cores, Chipset Voltages, Memory
Fan	Fans with tachometer monitoring Pulse Width Modulated (PWM) fan connectors Status monitor for speed control
Temperature	Monitoring for CPU and chassis environment Thermal Control for fan connectors

CERTIFICATIONS

Operating Systems	ESXi 8.0U3, ESXi 9.0, Oracle Linux 9.6, RHEL 10.0 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	8U Rackmount
Model	CSE-GP807TS-R000NP

DIMENSIONS AND WEIGHT

Height	13.8" (356 mm)
Width	17.6" (449 mm)
Depth	37.4" (950 mm)
Package	26.38" (H) x 28.74" (W) x 50.39" (D)
Weight	Gross Weight: 302 lbs (137 kg) Net Weight: 263 lbs (119 kg)
Available Color	Silver

FRONT PANEL

Buttons	Power On/Off UID
LED	HDD activity LAN1 activity LAN2 activity Power Fail Power status System information (overheat/UID)

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 2 PCIe 5.0 x16 FHHL slots Option A* 2 PCIe 5.0 x16 FHHL slots (*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 8 bays 8 front hot-swap E1.S NVMe drive bays View NVMe Options
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M.2	2 M.2 NVMe slots (M-key) View M.2 Options
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SYSTEM COOLING

Fans	Up to 12 heavy duty fans with optimal fan speed control
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POWER SUPPLY

6x 6600W
6x 6600W Redundant (3 + 3) Titanium Level (96%) power supplies
Dimension (WxHxL)
106.5 x 82.1 x 245.3 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)
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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.



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/as-8126gs-nb3rt/datasheet/manufacture

