TECHNICAL DATASHEET

SUPERMICRO · GPU & AI SERVERS

Supermicro GPU A+ Server AS-4125GS-TNRT1

DP AMD 4U Single-Root PCIe GPU System with up to 10 PCIe GPUs

SKU AS-4125GS-TNRT1 | 4U | SP5 | Supermicro

FORM FACTOR	MAX POWER (BASE)	HEAT OUTPUT	PRICE
4U	402 W	1,372 BTU/h	from €15,400

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

CONFIGURE & QUOTE ONLINE

serverinvest.com/product/as-4125gs-tnrt1

01 Product overview

The Supermicro AS-4125GS-TNRT1 is a 4U GPU Server built on AMD EPYC 9005 with up to 3 TB of memory in 12 DIMM slots.

DP AMD 4U Single-Root PCIe GPU System with up to 10 PCIe GPUs.

The chassis accepts up to 10 GPU accelerators for AI, rendering and HPC workloads.

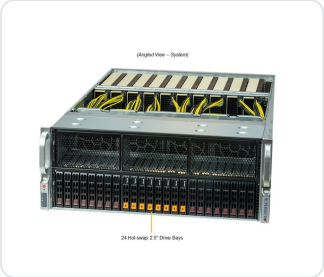
ServerInvest configures every AS -4125GS-TNRT1 to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

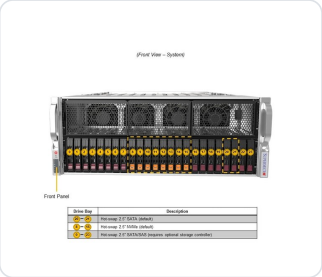
HIGHLIGHTS

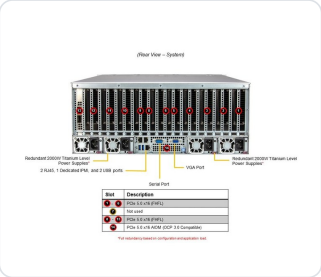
- AMD EPYC 9005
- Up to 3 TB memory · 12 DIMM slots
- Total 10 bays 2 front hot-swap 2.5" SATA drive bays
- Up to 10 GPUs
- Power: 4x 2000W
- Networking: 2 RJ45 10GbE

KEY SPECIFICATIONS

Form factor	**4U**
Processor	**AMD EPYC 9004**
Socket	**SP5**
Memory	**12 DIMM slots, up to 3 TB**
Memory type	**DDR5-6400 ECC RDIMM**
Drive bays	**24 (18 NVMe)**
GPU	**Up to 10 GPUs**
Power supply	**4× 2000 W**
Typical power draw	**4210 W**
Networking	**2 RJ45 10GbE**
Dimensions (W×H×D)	**437 × 178 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 GPU A+ Server AS-4125GS-TNRT1**	1
Processor	AMD EPYC 9124 - 16 Cores, 3.00/3.70GHz, 64MB Cache (200 Watt)	1
Memory	16GB 5600MT/s DDR5 ECC Registered DIMM Module	2
Warranty & support	3-year return-to-base warranty (included)	1

Base configuration from **€15,400** excl. VAT

03 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
115 W	268 W	402 W	1,372 BTU/h	0.4 kW	20%

Typical 268 W · max 402 W · single PSU rating 2000 W

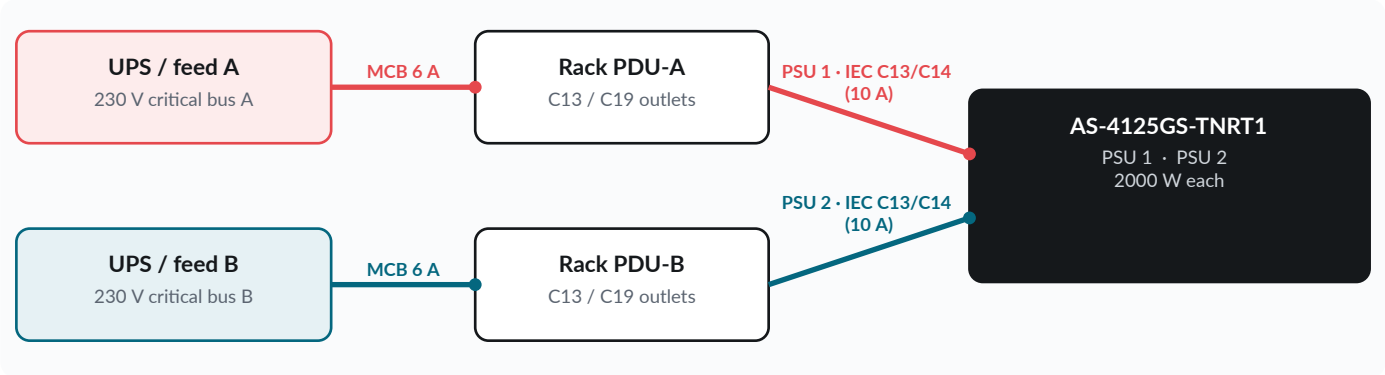
Annual IT energy (24/7)	1,946 kWh
Annual facility energy (PUE 1.5)	2,919 kWh
Annual energy cost	€389 IT · €584 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	0.76 t (grid factor 0.26 kg/kWh)
Power supplies	4× 2000 W redundant (N+1)

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	72 W	112 W	**160 W**
CPU — AMD EPYC 9124 - 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 C13/C14 (10 A) power cords.
- Maximum current per feed: 1.8 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: 402 W = 1,372 BTU/h (0.4 kW).

05 Full specifications

MOTHERBOARD

	Super H13DSG-O-CPU

PROCESSOR

CPU	Single processor(s) AMD EPYC 9004/9005 Series Processors (* AMD EPYC 9005 Series drop-in support requires board revision 2.x)

Core Count	Up to 160C/320T
Note	Supports up to 400W TDP CPUs

GPU

Max GPU Count	Up to 10 double-width or 10 single-width GPUs
Supported GPU	NVIDIA PCIe: H100, H100 NVL, A100, L4, L40, L40S, NVIDIA RTX PRO 5000 Blackwell, NVIDIA RTX PRO 6000 Blackwell Max-Q Workstation Edition, RTX 4000 Ada Generation, RTX 5000 Ada, RTX 6000 Ada Generation, RTX A6000 AMD PCIe: Instinct MI210 View GPU Options
CPU-GPU Interconnect	PCIe 5.0 x16 Switch Single-Root
GPU-GPU Interconnect	NVIDIA NVLink Bridge (optional), AMD Infinity Fabric Link (optional)

SYSTEM MEMORY

Memory	Slot Count: 12 DIMM slots Max Memory (1DPC): Up to 3TB 4800MT/s ECC DDR5 RDIMM (AMD EPYC 9004 Series Processor) Max Memory (1DPC): Up to 3TB 6000MT/s ECC DDR5 RDIMM (AMD EPYC 9005 Series Processor) View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

SATA	SATA (6Gbps)
Chipset	AMD SP5
Network Connectivity	2 RJ45 10GbE View AIOM Options View AOC Options

INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port 2 RJ45 10 GBASE-T LAN ports
USB	2 ports (rear)
Video	1 VGA port
Serial	1 COM port (rear)

SYSTEM BIOS

BIOS Type	AMI 32MB SPI Flash EEPROM

MANAGEMENT

Software	SuperCloud Composer (SCC) Supermicro Server Manager (SSM) Supermicro Update Manager (SUM) Supermicro SuperDoctor 5 (SD5) Super Diagnostics Offline (SDO) Supermicro Thin-Agent Service (TAS) SuperServer Automation Assistant (SAA) New!
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	7 +1 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	Genoa: Hypervisor 8.2.1, Oracle Linux 9.0, RHEL 9.0, Windows Server 2022 View all OS Compatibility and Certification Matrix

CHASSIS

Form Factor	4U Rackmount
Model	CSE-418G2TS

DIMENSIONS AND WEIGHT

Height	7" (178 mm)
Width	17.2" (437 mm)
Depth	29" (737 mm)
Package	26.57" (H) x 27" (W) x 41" (D)
Weight	Gross Weight: 100 lbs (45.3 kg) Net Weight: 65.5 lbs (29.7 kg)
Available Color	Black Front & Silver Body

FRONT PANEL

Buttons	Power On/Off button System Reset button
LED	Hard drive activity LED Network activity LEDs Power status LED System Overheat & Power Fail LED

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 11 PCIe 5.0 x16 (in x16) FHFL slots Option A 12 PCIe 5.0 x16 (in x16) FHFL slots View AOC Options

DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 10 bays 2 front hot-swap 2.5" SATA drive bays 8 front fixed 2.5" NVMe drive bays View NVMe Options View Drive Options

SYSTEM COOLING

Fans	Up to 8 heavy duty fans with optimal fan speed control

POWER SUPPLY

	4x 2000W 4x 2000W Redundant (3 + 1) Titanium Level (96%) power supplies Dimension (WxHxL) 73.5 x 40 x 203 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)

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.

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

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-4125gs-tnrt1/datasheet/manufacturer