

TECHNICAL DATASHEET

SUPERMICRO · GPU & AI SERVERS

Supermicro 4U GPU Server AS-4124GS-TNR+

DP AMD, Dual-Root System with 8 GPUs

SKU AS-4124GS-TNR+

4U

Supermicro



FORM FACTOR

4U

MAX POWER (BASE)

602 W

HEAT OUTPUT

2,054 BTU/h

PRICE

On request

REQUEST A QUOTATION ONLINE

serverinvest.com/product/as-4124gs-tnr

01 Product overview

The Supermicro AS-4124GS-TNR+ is a 4U GPU Server built on dual Dual Socket SP3 AMD EPYC 7002/7003 Series Processors processors with up to 8 TB of memory in 32 DIMM slots.

DP AMD, Dual-Root System with 8 GPUs.

The chassis accepts up to 8 GPU accelerators for AI, rendering and HPC workloads.

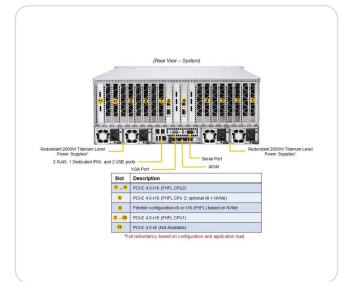
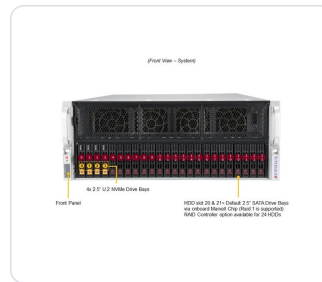
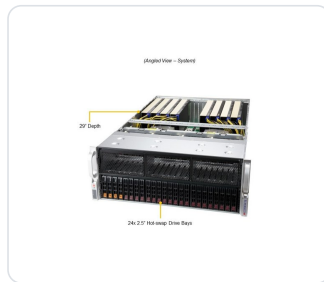
ServerInvest configures every AS -4124GS-TNR+ to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Dual Dual Socket SP3 AMD EPYC 7002/7003 Series Processors
- Up to 8 TB memory · 32 DIMM slots
- Total 24 bays 20 front hot-swap 2.5" SATA drive bays
- Up to 8 GPUs
- Power: 4x 2000W
- Networking: 2 RJ45 1GbE

KEY SPECIFICATIONS

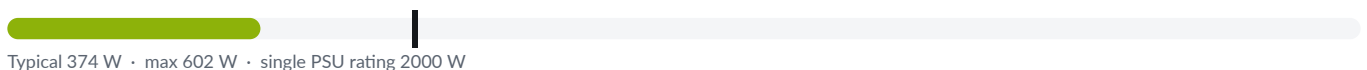
Form factor	4U
Processor	2× Dual Socket SP3 AMD EPYC 7002/7003 Series Processors
Memory	32 DIMM slots, up to 8 TB
Drive bays	52 (52 NVMe)
GPU	Up to 8 GPUs
Power supply	4× 2000 W
Typical power draw	4350 W
Networking	2 RJ45 1GbE
Dimensions (W×H×D)	437 × 178 mm



02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
143 W	374 W	602 W	2,054 BTU/h	0.6 kW	30%



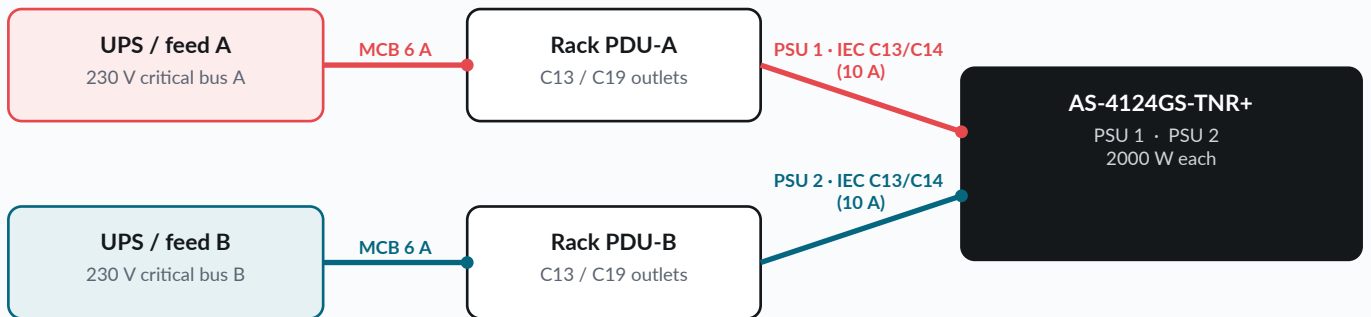
Annual IT energy (24/7)	2,669 kWh
Annual facility energy (PUE 1.5)	4,004 kWh
Annual energy cost	€534 IT · €801 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	1.04 t (grid factor 0.26 kg/kWh)
Power supplies	4× 2000 W redundant (N+1)

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	72 W	112 W	160 W
2× CPU (base configuration)	50 W	220 W	370 W
4× Memory (base configuration)	12 W	20 W	36 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: 2.8 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: 602 W = 2,054 BTU/h (0.6 kW).

04 Full specifications

MOTHERBOARD

Super H12DSG-O-CPU

PROCESSOR

CPU	Dual Socket SP3 AMD EPYC 7002/7003 Series Processors
Note	Supports up to 280W TDP CPUs (Air Cooled)

GPU

Max GPU Count	Up to 8 double-width or 8 single-width GPUs
Supported GPU	NVIDIA PCIe: H100, A10, A100, A16, A2, A30, A40, L40, L40S, RTX 4000, RTX 6000, RTX 6000 Ada Generation, RTX A4500, RTX A6000, T4, V100 AMD PCIe: Instinct MI150 View GPU Options
CPU-GPU Interconnect	PCIe 4.0 x16 CPU-to-GPU Interconnect
GPU-GPU Interconnect	NVIDIA NVLink with NVSwitch

SYSTEM MEMORY

Memory	Slot Count: 32 DIMM slots Max Memory (2DPC): Up to 8TB 3200MT/s ECC DDR4 RDIMM/LRDIMM View Memory Options
Memory Voltage	1.2V

ON-BOARD DEVICES

Network Connectivity	2 RJ45 1GbE View AOC Options
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INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port 2 RJ45 1 GbE LAN ports
USB	2 USB 3.0 ports (front)
Video	1 VGA port

SYSTEM BIOS

BIOS Type	AMI 32MB SPI FLASH ROM
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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!
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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 System Lockdown

PC HEALTH MONITORING

CPU	4+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

CHASSIS

Form Factor	4U
Model	CSE-418GTS-R4016BP

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

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 9 PCIe 4.0 x16 FHFL slots Option A 10 PCIe 4.0 x16 FHFL slots View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 24 bays 20 front hot-swap 2.5" SATA drive bays 4 front hot-swap 2.5" NVMe drive bays Option A: Total 24 bays 24 front hot-swap 2.5" SATA drive bays View NVMe Options View Drive Options
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SYSTEM COOLING

Fans	Up to 8x 11.5K RPM 92mm Fan(s)
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POWER SUPPLY

4x 2000W
4x 2000W Redundant (2 + 2) Titanium Level (96%) power supplies
Dimension (WxHxL)
73.5 x 40 x 203 mm

OPERATING ENVIRONMENT

RoHS	RoHS Compliant
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)

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-4124gs-tnr/datasheet/manufacturere

