

TECHNICAL DATASHEET

SUPERMICRO · GPU & AI SERVERS

Supermicro 2U GPU Server SYS-212GB-FNR

UP Intel 2U PCIe GPU System with up to 4 NVIDIA RTX PRO 6000 Blackwell Server Edition or NVIDIA H200

SKU SYS-212GB-FNR

2U

LGA4710

Supermicro



FORM FACTOR

2U

MAX POWER (BASE)

296 W

HEAT OUTPUT

1,010 BTU/h

PRICE

from €22,300

CONFIGURE & QUOTE ONLINE

serverinvest.com/product/sys-212gb-fnr

01 Product overview

The Supermicro SYS-212GB-FNR is a 2U GPU Server built on Intel Xeon 6 with up to 2 TB of memory in 16 DIMM slots.

UP Intel 2U PCIe GPU System with up to 4 NVIDIA RTX PRO 6000 Blackwell Server Edition or NVIDIA H200.

The chassis accepts up to 4 GPU accelerators for AI, rendering and HPC workloads.

ServerInvest configures every Gold Series SYS-212GB-FNR 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

- Intel Xeon 6
- Up to 2 TB memory · 16 DIMM slots
- Total 4 bays 4 rear hot-swap E1.S PCIe 5.0 x4 NVMe drive bays
- Up to 4 GPUs
- Power: 2x 2700W
- Networking: View AOC Options

KEY SPECIFICATIONS

Form factor	2U
Processor	Intel Xeon 6
Socket	LGA4710
Memory	16 DIMM slots, up to 2 TB
Memory type	DDR5-6400 ECC RDIMM
Drive bays	4 (4 NVMe)
GPU	Up to 4 GPUs
Power supply	2× 2700 W
Typical power draw	2250 W
Networking	View AOC Options
Dimensions (W×H×D)	437 × 89 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 2U GPU Server SYS-212GB-FNR	1
Processor	Intel Xeon 6505P Processor 12 Cores (48M Cache, 2.20Ghz) 150W	1
Memory	16GB 6400MT/s DDR5 ECC Registered DIMM Module	2
Warranty & support	3-year return-to-base warranty (included)	1

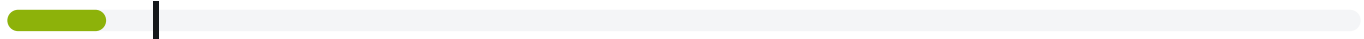
Base configuration from

€22,300
excl. VAT

03 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
84 W	197 W	296 W	1,010 BTU/h	0.3 kW	11%



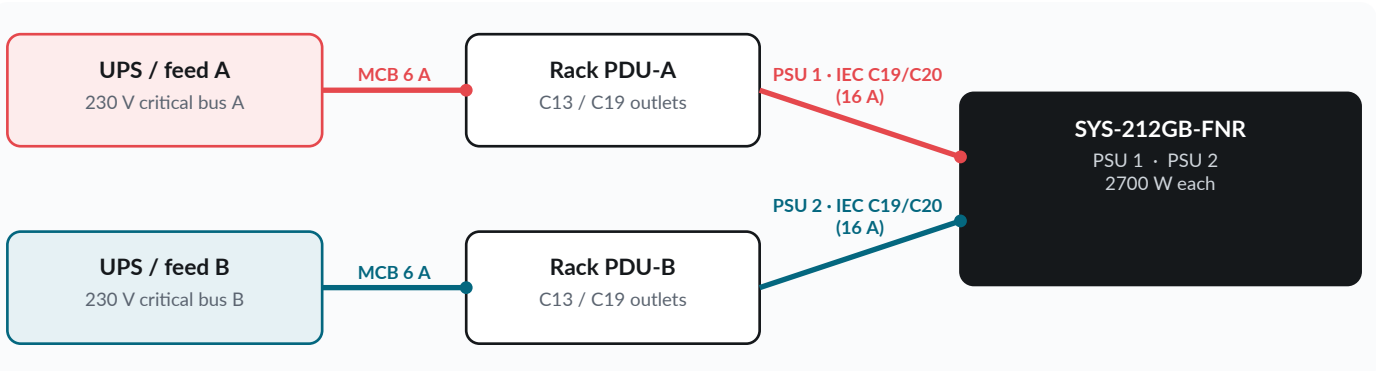
Annual IT energy (24/7)	1,429 kWh
Annual facility energy (PUE 1.5)	2,144 kWh
Annual energy cost	€286 IT · €429 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.56 t (grid factor 0.26 kg/kWh)
Power supplies	2× 2700 W redundant (N+1)

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	50 W	77 W	110 W
CPU — Intel Xeon 6505P Processor 12 Cores	23 W	98 W	150 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: 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: 296 W = 1,010 BTU/h (0.3 kW).

05 Full specifications

MOTHERBOARD	
	Super X14SBGM
PROCESSOR	
CPU	Single Socket E2 (LGA-4710) Intel Xeon 6700/6500 series processors with P-cores
Core Count	Up to 80C/160T

Note Supports up to 350W TDP CPUs (Air Cooled)

GPU

Max GPU Count	Up to 4 double-width GPUs
Supported GPU	NVIDIA PCIe: H200 NVL (141GB), NVIDIA RTX PRO 6000 Blackwell Server Edition View GPU Options
CPU-GPU Interconnect	PCIe 5.0 x16 CPU-to-GPU Interconnect
GPU-GPU Interconnect	NVIDIA NVLink Bridge (optional)

SYSTEM MEMORY

Memory	Slot Count: 16 DIMM slots/8 Channels Max Memory (1DPC): Up to 1TB 6400MT/s ECC DDR5 RDIMM Max Memory (1DPC): Up to 512GB 8000MT/s ECC DDR5 MRDIMM Max Memory (2DPC): Up to 2TB 5200MT/s ECC DDR5 RDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

Network Connectivity	View AOC Options
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INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port
USB	1 USB 3.0 Type-A port (Rear)
Video	1 mini-DP port

SYSTEM BIOS

BIOS Type	AMI 64MB SPI Flash EEPROM
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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! Plug-ins for 3rd Party Software 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	RHEL 10.0, Windows Server 2022, Windows Server 2025 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	2U Rackmount
Model	CSE-MG204-R000NDFP

DIMENSIONS AND WEIGHT

Height	3.43" (87 mm)
Width	17.3" (438.4 mm)
Depth	35.43" (900 mm)
Package	11.02" (H) x 27.56" (W) x 47.24" (D)
Weight	Gross Weight: 84 lbs (38 kg) Net Weight: 66 lbs (30 kg)
Available Color	Silver

FRONT PANEL

Buttons	Power On/Off
LED	HDD activity

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default* 4 PCIe 5.0 x16 FHFL double-width slots 3 PCIe 5.0 x16 FHFL 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
M.2	2 M.2 PCIe 5.0 x2 NVMe slots (M-key 2280/22110)

DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 4 bays 4 rear hot-swap E1.S PCIe 5.0 x4 NVMe drive bays
M.2	2 M.2 PCIe 5.0 x2 NVMe slots (M-key 2280/22110) View M.2 Options

SYSTEM COOLING

Fans	5x 8cm heavy duty fans with optimal fan speed control
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POWER SUPPLY

2x 2700W
2x 2700W Redundant Titanium Level (96%) power supplies
Dimension (WxHxL)
73.5 x 40 x 185 mm

OPERATING ENVIRONMENT

Environmental Spec. Operating Temperature: 10°C to 35°C (50°F to 95°F)
Non-operating Temperature: -30°C to 60°C (-22°F to 140°F)
Operating Relative Humidity: 8% to 80% (max 21° DP; non-condensing)
Non-operating Relative Humidity: 8% to 90% (max 38° DP; non-condensing)

ENVIRONMENTAL / RECYCLING

Recycle Return Server-End of Life Product

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/sys-212gb-fnr/datasheet/manufacture

