

TECHNICAL DATASHEET

SUPERMICRO · GPU & AI SERVERS

Supermicro 2U GPU Server SYS-210GP-DNR

2U 2-Node System with UP Intel and Up to 3 GPUs per Node

SKU SYS-210GP-DNR

2U

LGA4189

Supermicro



FORM FACTOR

2U

MAX POWER (BASE)

333 W

HEAT OUTPUT

1,136 BTU/h

PRICE

On request

REQUEST A QUOTATION ONLINE

serverinvest.com/product/sys-210gp-dnr

01 Product overview

The Supermicro SYS-210GP-DNR is a 2U GPU Server built on Intel Xeon Scalable 3rd Gen with up to 1 TB of memory in 8 DIMM slots.

2U 2-Node System with UP Intel and Up to 3 GPUs per Node.

The chassis accepts up to 3 GPU accelerators for AI, rendering and HPC workloads.

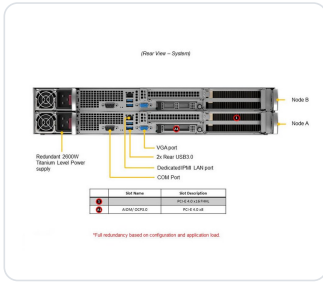
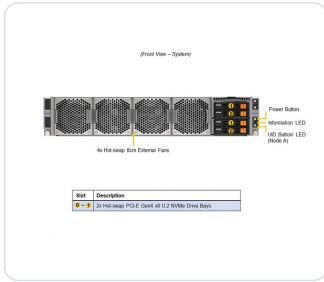
ServerInvest configures every SYS-210GP-DNR to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Intel Xeon Scalable 3rd Gen
- Up to 1 TB memory · 8 DIMM slots
- Total 2 bays 2 front hot-swap 2.5" NVMe drive bays
- Up to 3 GPUs
- Power: 1x 2600W
- Networking: Via AIOM

KEY SPECIFICATIONS

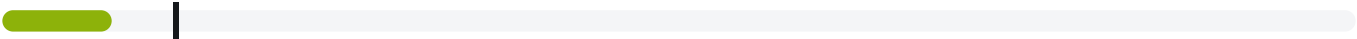
Form factor	2U
Processor	Intel Xeon Scalable 3rd Gen
Socket	LGA4189
Memory	8 DIMM slots, up to 1 TB
Drive bays	2 (2 NVMe)
GPU	Up to 3 GPUs
Power supply	1× 2600 W
Typical power draw	1800 W
Networking	Via AIOM
Dimensions (W×H×D)	437 × 89 mm



02 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	13%



Typical 210 W · max 333 W · single PSU rating 2600 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	1× 2600 W

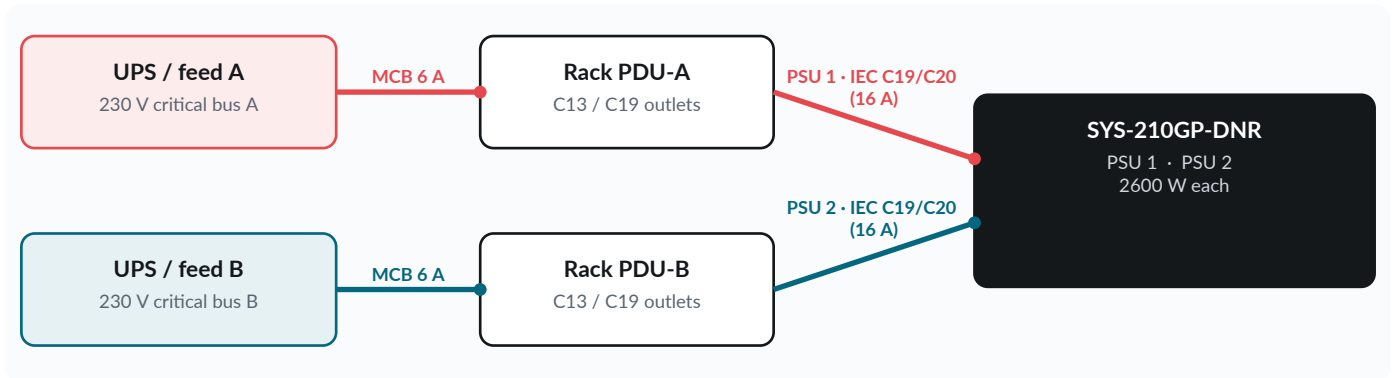
POWER BY COMPONENT

	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	50 W	77 W	110 W
CPU (base configuration)	25 W	110 W	185 W
2× Memory (base configuration)	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.

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 C19/C20 (16 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).

04 Full specifications

MOTHERBOARD

Super X12SPG-NF

PROCESSOR (PER NODE)

CPU	Single Socket P+ (LGA-4189) 3rd Gen Intel Xeon Scalable processors
Core Count	Up to 40C/80T; Up to 60MB Cache
Note	Supports up to 270W TDP CPUs (Air Cooled)

GPU (PER NODE)

Max GPU Count	Up to 3 double-width or 3 single-width GPUs
Supported GPU	NVIDIA PCIe: A10, A100, A30, A40, RTX A4000, RTX A4500 View GPU Options
CPU-GPU Interconnect	PCIe 4.0 x16 CPU-to-GPU Interconnect
GPU-GPU Interconnect	PCIe

SYSTEM MEMORY (PER NODE)

Memory	Slot Count: 8 DIMM slots Max Memory (2DPC): Up to 1TB 3200MT/s ECC DDR4 RDIMM/LRDIMM View Memory Options
Memory Voltage	1.2V

ON-BOARD DEVICES (PER NODE)

Network Connectivity	Via AIOM View AIOM Options View AOC Options
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INPUT / OUTPUT (PER NODE)

Video	1 VGA port
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SYSTEM BIOS

BIOS Type	AMI 32MB SPI Flash EEPROM
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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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Power configurations	Power-on mode for AC power recovery ACPI Power Management
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SECURITY

Hardware	Trusted Platform Module (TPM) 2.0 Silicon Root of Trust (RoT) – NIST 800-193 Compliant
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Features	Cryptographically Signed Firmware Secure Boot Secure Firmware Updates Automatic Firmware Recovery System Lockdown
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PC HEALTH MONITORING

CPU	7 +1 Phase-switching voltage regulator Monitors for CPU Cores, Chipset Voltages, Memory
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Fan	Fans with tachometer monitoring Pulse Width Modulated (PWM) fan connectors Status monitor for speed control
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Temperature	Monitoring for CPU and chassis environment Thermal Control for fan connectors
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CERTIFICATIONS

Operating Systems	Hypervisor 8.2.1, Oracle Linux 8.3, RHEL 8.4, Windows Server 2019, Windows Server 2022 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	2U Rackmount
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Model	CSE-227GTS-R2K63P
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DIMENSIONS AND WEIGHT

Height	3.47" (88 mm)
Width	17.6" (447 mm)
Depth	29.9" (760 mm)
Package	9.44" (H) x 23.62" (W) x 43.3" (D)

Weight	Gross Weight: 60 lbs (27.21 kg)
	Net Weight: 55 lbs (24.94 kg)

Available Color	Black Front & Silver Body
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FRONT PANEL

Buttons	Power On/Off button System UID button/LED
LED	Hard drive activity LED Information LED as manual description Network activity LEDs Power status LED

EXPANSION SLOTS (PER NODE)

PCI-Express (PCIe) Configuration	Default 3 PCIe 4.0 x16 FHFL double-width slots View AOC Options
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DRIVE BAYS / STORAGE (PER NODE)

Drive Bays Configuration	Default: Total 2 bays 2 front hot-swap 2.5" NVMe drive bays View NVMe Options
M.2	2 M.2 NVMe/SATA slots (M-key) View M.2 Options

SYSTEM COOLING

Fans	Up to 4 Removable heavy-duty Fan(s)
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POWER SUPPLY

1x 2600W
1x 2600W Redundant Titanium Level (96%) power supply
Dimension (WxHxL)
73.5 x 40 x 265 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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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/sys-210gp-dnr/datasheet/manufacturere

