

TECHNICAL DATASHEET

SUPERMICRO • GPU & AI SERVERS

Supermicro 4U GPU Server SYS-422GA-NRT

DP Intel 4U Dual-Root PCIe GPU System with up to 8 GPUs

SKU SYS-422GA-NRT

4U

LGA7529

Supermicro



FORM FACTOR

4U

MAX POWER (BASE)

645 W

HEAT OUTPUT

2,201 BTU/h

PRICE

On request

CONFIGURE & QUOTE ONLINE

serverinvest.com/product/sys-422ga-nrt

01 **Product overview**

The Supermicro SYS-422GA-NRT is a 4U GPU Server built on dual Intel Xeon 6 processors with up to 6 TB of memory in 24 DIMM slots.

DP Intel 4U Dual-Root PCIe GPU System with up to 8 GPUs.

The chassis accepts up to 2 GPU accelerators for AI, rendering and HPC workloads.

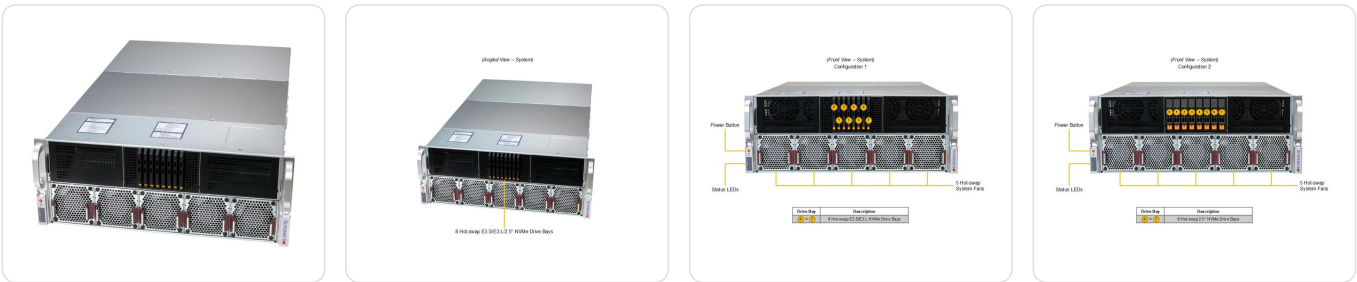
ServerInvest configures every Gold Series SYS-422GA-NRT to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Dual Intel Xeon 6
- Up to 6 TB memory · 24 DIMM slots
- Total 8 bays 8 front hot-swap E3.S 1T PCIe 5.0 x4 NVMe drive bays
- Up to 2 GPUs
- Power: 4x 3200W
- Networking: 2 RJ45 10GbE with Intel X710-AT2

KEY SPECIFICATIONS

Form factor	4U
Processor	2× Intel Xeon 6
Socket	LGA7529
Memory	24 DIMM slots, up to 6 TB
Memory type	DDR5-6400 ECC RDIMM
Drive bays	16 (16 NVMe)
GPU	Up to 2 GPUs
Power supply	4× 3200 W
Typical power draw	1650 W
Networking	2 RJ45 10GbE with Intel X710-AT2
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 4U GPU Server SYS-422GA-NRT	1
Processor	Intel Xeon 6710E Processor 64 Cores (96M Cache, 2.40Ghz) 205W	2
Memory	16GB 6400MT/s DDR5 ECC Registered DIMM Module	4
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
155 W	423 W	645 W	2,201 BTU/h	0.6 kW	20%

Typical 423 W · max 645 W · single PSU rating 3200 W

Annual IT energy (24/7)	3,001 kWh
Annual facility energy (PUE 1.5)	4,502 kWh
Annual energy cost	€600 IT · €900 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	1.17 t (grid factor 0.26 kg/kWh)
Power supplies	4× 3200 W redundant (N+1)

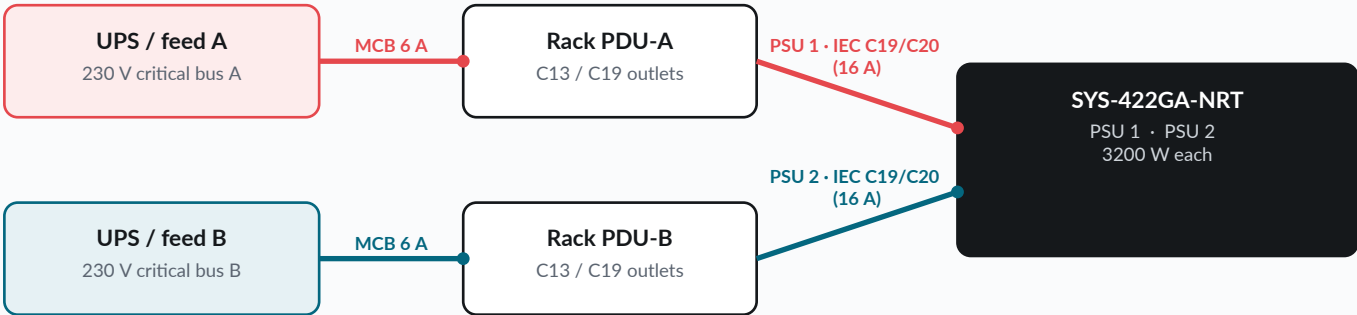
POWER BY COMPONENT

	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	72 W	112 W	160 W
2× CPU — Intel Xeon 6710E Processor 64 Cores	62 W	266 W	410 W
4× Memory 16 GB DIMM	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.

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: 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: 645 W = 2,201 BTU/h (0.6 kW).

05 Full specifications

MOTHERBOARD	
	Super X14DBG-AP
PROCESSOR	
CPU	Dual Socket BR (LGA-7529) Intel Xeon 6900 series processors with P-cores
Core Count	Up to 128C/256T; Up to 504MB Cache per CPU

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

GPU

Max GPU Count	Up to 2 quad-width or 2 triple-width or 8 double-width or 10 single-width GPUs
Supported GPU	NVIDIA PCIe: H200 NVL (141GB), NVIDIA RTX PRO 4500 Blackwell Server Edition, NVIDIA RTX PRO 6000 Blackwell Max-Q Workstation Edition, NVIDIA RTX PRO 6000 Blackwell Server Edition View GPU Options
CPU-GPU Interconnect	PCIe 5.0 x16 Switch Dual-Root
GPU-GPU Interconnect	NVIDIA NVLink Bridge (optional)

SYSTEM MEMORY

Memory	Slot Count: 24 DIMM slots Max Memory (1DPC): Up to 6TB 6400MT/s ECC DDR5 RDIMM Max Memory (1DPC): Up to 6TB 8800MT/s ECC DDR5 MRDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

Network Connectivity	2 RJ45 10GbE with Intel X710-AT2 View AIOM Options View AOC Options
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INPUT / OUTPUT

LAN	2 RJ45 10 GbE LAN ports (Intel X710)
USB	2 USB 3.0 Type-A ports (Rear)
Video	1 VGA port
TPM	1 TPM header

SYSTEM BIOS

BIOS Type	AMI 32MB 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!
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
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Features	Cryptographically Signed Firmware Secure Boot Secure Firmware Updates Automatic Firmware Recovery Supply Chain Security: Remote Attestation Runtime BMC Protections System Lockdown
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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	Oracle Linux 10.0, RHEL 9.6, RHEL 10.0, RHEL AI 3.3, SLES 16.0, Ubuntu 24.04 LTS, Windows Server 2025 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	4U Rackmount
Model	CSE-418G3TS-R6K40P

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

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 13 PCIe 5.0 x16 FHFL slots View AOC Options
M.2	2 M.2 PCIe 5.0 x4 NVMe slots (B+M-key)

DRIVE BAYS / STORAGE

Drive Bays Configuration	Option A: Total 8 bays 8 front hot-swap E3.S 1T PCIe 5.0 x4 NVMe drive bays Option B: Total 8 bays 8 front hot-swap E3.L 1T PCIe 5.0 x4 NVMe drive bays Option C: Total 8 bays 8 front hot-swap 2.5" PCIe 5.0 x4 NVMe drive bays View NVMe Options
M.2	2 M.2 NVMe slots (M-key) View M.2 Options

SYSTEM COOLING

Fans	10x 8cm heavy duty fans with optimal fan speed control
Air Shroud	1 Air Shroud

POWER SUPPLY

4x 3200W
4x 3200W 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)
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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/sys-422ga-nrt/datasheet/manufacturerr

