

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro 8U AI Training Server SYS-822GA-NGR3

8U AI training platform with 8 Gaudi 3 accelerators

SKU SYS-822GA-NGR3

8U

LGA7529

Supermicro



FORM FACTOR

8U

MAX POWER (BASE)

751 W

HEAT OUTPUT

2,562 BTU/h

PRICE

On request

CONFIGURE & QUOTE ONLINE

serverinvest.com/product/sys-822ga-ngr3

03 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
203 W	498 W	751 W	2,562 BTU/h	0.8 kW	25%

Typical 498 W · max 751 W · single PSU rating 3000 W

Annual IT energy (24/7)	3,587 kWh
Annual facility energy (PUE 1.5)	5,381 kWh
Annual energy cost	€717 IT · €1,076 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	1.40 t (grid factor 0.26 kg/kWh)
Power supplies	8× 3000 W redundant (N+1)

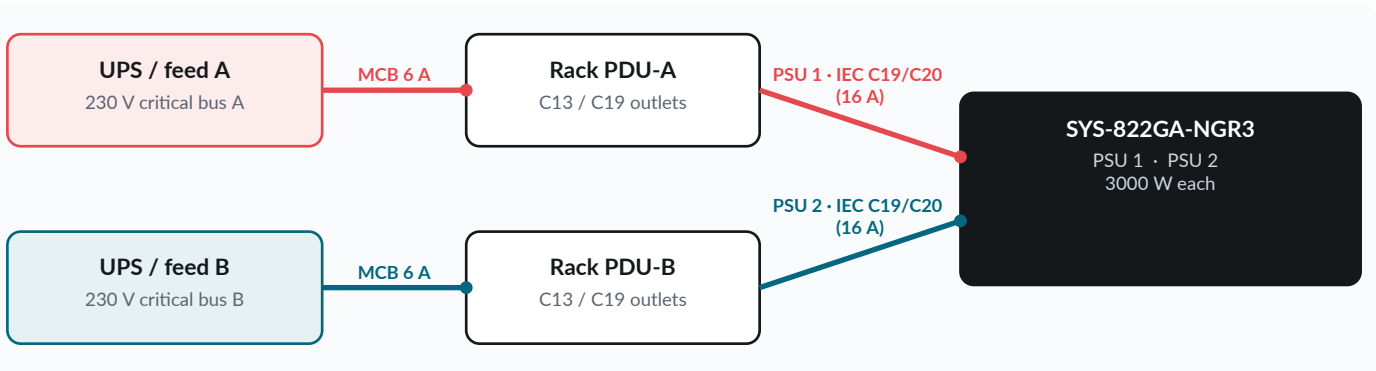
POWER BY COMPONENT

	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	117 W	182 W	260 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: 3.4 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: 751 W = 2,562 BTU/h (0.8 kW).

05 Full specifications

MOTHERBOARD	
	Super X14DBG-GD
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	8 onboard GPUs
Supported GPU	Intel OAM: Gaudi 3
CPU-GPU Interconnect	PCIe Gen5 x16
GPU-GPU Interconnect	24x 200Gbe (48 x 112Gbps) PAM4 SerDes links split

SYSTEM MEMORY

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

ON-BOARD DEVICES

Network Connectivity	6 OSFP 800GbE View AIOM Options View AOC Options
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INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port
USB	2 USB 3.0 Type-A ports
Video	1 VGA port

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
Features	Cryptographically Signed Firmware Secure Boot Secure Firmware Updates Automatic Firmware Recovery 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	RHEL 9.6, RHEL 9.7, RHEL 10.1 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	8U Rackmount
Model	CSE-GP806TS-R000NPF

DIMENSIONS AND WEIGHT

Height	13.8" (356 mm)
Width	17.6" (447 mm)
Depth	33.2" (800 mm)
Package	27.6" (H) x 29.5" (W) x 51" (D)
Weight	Gross Weight: 282 lbs (128 kg) Net Weight: 308 lbs (140 kg)
Available Color	Silver

FRONT PANEL

Buttons	Power On/Off
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EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 2 PCIe 5.0 x16 FHFL slots 2 PCIe 5.0 x8 FHFL slots 1 PCIe 5.0 x4 AIOM slot (OCP 3.0 compatible) View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 8 bays 8 front hot-swap 2.5" PCIe 5.0 NVMe drive bays View NVMe Options
M.2	2 M.2 PCIe 5.0 x2 NVMe slots (M-key 22110(default)) View M.2 Options

SYSTEM COOLING

Fans	Up to 10 Removable Heavy-Duty 80 x 80 x 80mm Fan(s)
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POWER SUPPLY

8x 3000W
8x 3000W Redundant Titanium Level (96%) power supplies
Dimension (WxHxL)
106.5 x 82.4 x 203.5 mm

OPERATING ENVIRONMENT

RoHS

RoHS Compliant

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% (non-condensing)
Non-operating Relative Humidity: 8% to 90% (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.



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-822ga-ngr3/datasheet/manufacturer

