

TECHNICAL DATASHEET

SUPERMICRO · MULTI-NODE & TWIN

Supermicro 2U GrandTwin Server SYS-212GT-DNAF

The Supermicro SYS-212GT-DNAF is a 2U 2-node GrandTwin server with a single Intel Xeon 6900 processor with P-cores or Intel Xeon 6+ processor and up to 3TB DDR5 memory per node, as well as double-width GPU and CXL 2.0 support – purpose-built for HPC, deep learning/AI/ML development, telco edge, multi-purpose CDN, VDI, IoT gateway, scale-out object storage, cloud gaming, MEC, cluster node, and HPC cluster computer node workloads.

SKU SYS-212GT-DNAF

2U

LGA7529

Supermicro



FORM FACTOR



MAX POWER (BASE)



HEAT OUTPUT



PRICE

BTU/h **On request**
serverinvest.com/product/sys-212gt-dnaf



01 **Product overview**

The Supermicro SYS-212GT-DNAF is a 2U GrandTwin Server built on Intel Xeon 6 with up to 3 TB of memory in 12 DIMM slots.

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The chassis accepts up to 1 GPU accelerators for AI, rendering and HPC workloads.

ServerInvest configures every SYS-212GT-DNAF 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.

KEY SPECIFICATIONS

Form factor	2U
Processor	Intel Xeon 6
Socket	LGA7529
Memory	12 DIMM slots, up to 3 TB
Memory type	DDR5-6400 ECC RDIMM
Drive bays	4 (4 NVMe)
GPU	Up to 1 GPUs
Power supply	2× 2200 W
Typical power draw	900 W
Networking	View AOC Options
Dimensions (W×H×D)	437 × 89 mm

HIGHLIGHTS

- Intel Xeon 6
- Up to 3 TB memory · 12 DIMM slots
- Total 4 bays 4 front hot-swap 2.5" PCIe 5.0 x4 NVMe drive bays
- Up to 1 GPUs
- Power: 2x 2200W
- Networking: View AOC Options



02 **Base configuration**

Components included in the listed base price — every part can be changed in the online configurator

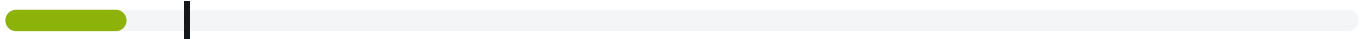
COMPONENT	DESCRIPTION	QTY
Base system	Supermicro 2U GrandTwin Server SYS-212GT-DNAF	1
Processor	Intel Xeon 6505P Processor 12 Cores (48M Cache, 2.20Ghz) 150W	1
Memory	16GB 6400MT/s DDR5 ECC Registered DIMM Module	2
Warranty & support	3-year return-to-base warranty (included)	1

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
84 W	197 W	296 W	1,010 BTU/h	0.3 kW	13%



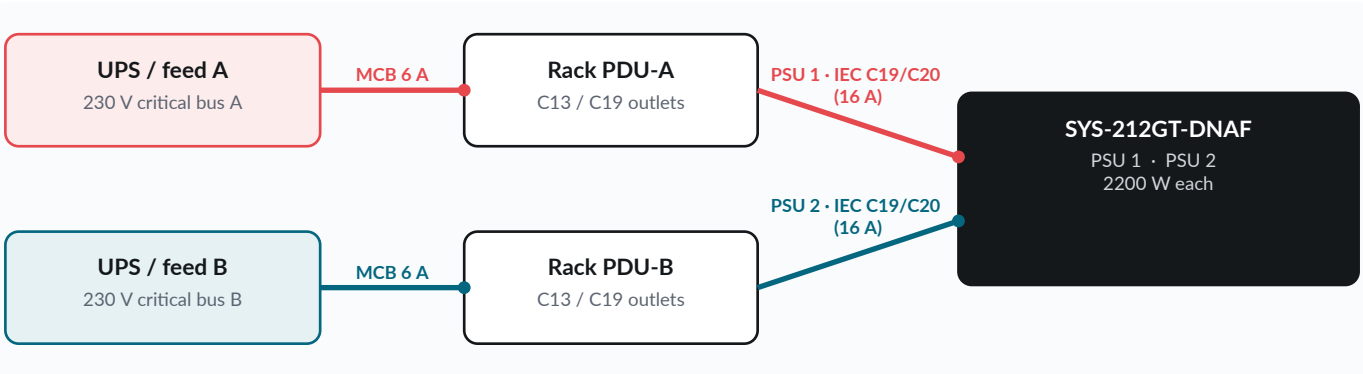
Annual IT energy (24/7)	1,429 kWh
Annual facility energy (PUE 1.5)	2,144 kWh
Annual energy cost	€286 IT · €429 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.56 t (grid factor 0.26 kg/kWh)
Power supplies	2× 2200 W redundant (N+1)

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 X14SBT-GAP

PROCESSOR (PER NODE)

CPU Single Socket BR (LGA-7529)
Intel Xeon 6900 Series processors with P-cores and Intel Xeon 6+ processors

Core Count	P-cores: Up to 128C/256T; Up to 504MB Cache E-cores: Up to 288C/288T; Up to 576MB Cache
Note	Supports up to 500W TDP CPUs (Air Cooled)

GPU (PER NODE)

Max GPU Count	Up to 1 double-width or 2 single-width GPUs
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SYSTEM MEMORY (PER NODE)

Memory	Slot Count: 12 DIMM slots/1 Channels Max Memory (1DPC): Up to 3TB 8800MT/s ECC DDR5 MRDIMM Max Memory (1DPC): Up to 3TB 8000MT/s ECC DDR5 RDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES (PER NODE)

NVMe	NVMe; RAID 0/1/5/10 support(VROC HW key required) View NVMe Options
Network Connectivity	View AOC Options

INPUT / OUTPUT (PER NODE)

USB	2 USB 3.0 ports
Video	1 VGA port

SYSTEM BIOS

BIOS Type	AMI 64MB Flash ROM
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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!
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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 Supply Chain Security: Remote Attestation Runtime BMC Protections System Lockdown

PC HEALTH MONITORING

CPU	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

CERTIFICATIONS

Operating Systems Oracle Linux 9.4, RHEL 9.4, RHEL 10.0, Windows Server 2025
View all OS Compatibility and Certification Matrix

CHASSIS

Form Factor 2U Rackmount
Model CSE-GT222BG-R2K21BP

DIMENSIONS AND WEIGHT

Height 3.46" (88 mm)
Width 17.67" (449 mm)
Depth 28" (711.2 mm)
Package 9.76" (H) x 24.65" (W) x 45.28" (D)
Weight Gross Weight: 77.3 lbs (35.1 kg)
Net Weight: 57.3 lbs (26 kg)
Available Color Silver

FRONT PANEL

Buttons Power On/Off button
UID button
LED HDD activity LED
Network activity LEDs
Power status LED
Universal Information (UID) LED

EXPANSION SLOTS (PER NODE)

PCI-Express (PCIe) Configuration Default
2 PCIe 5.0 x16 (in x16) FH/10.5"L slots
View AOC Options
CXL Support Up to 64 internal CXL 2.0 x16 Type 1/Type 2/Type 3 devices
M.2 2 M.2 PCIe 5.0 x4 NVMe slots (M-key 22110(default); VROC required for RAID)

DRIVE BAYS / STORAGE (PER NODE)

Drive Bays Configuration Default: Total 4 bays 4 front hot-swap 2.5" PCIe 5.0 x4 NVMe drive bays
View NVMe Options
M.2 2 M.2 PCIe 5.0 x4 NVMe slots (M-key 22110(default)/2280; VROC required for RAID)
View M.2 Options

SYSTEM COOLING

Fans Up to 2x 16K RPM Heavy Duty 8cm Fan(s)

POWER SUPPLY

2x 2200W
2x 3000W
2x 2200W
2x 2200W Redundant (1 + 1) Titanium Level (96%) power supplies
Dimension (WxHxL)
106.5 x 84 x 245.3 mm

OPERATING ENVIRONMENT

RoHS

RoHS Compliant

Environmental Spec.

Operating Temperature: 5°C to 40°C (41°F to 104°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-212gt-dnaf/datasheet/manufacture

