

## TECHNICAL DATASHEET

SUPERMICRO · MULTI-NODE &amp; TWIN

# Supermicro 2U GrandTwin Server SYS-212GT-HNF

2U 4-Node GrandTwin with up to 8 hot-swap E1.S NVMe drives per node and Front I/O

SKU SYS-212GT-HNF

2U

LGA4710

Supermicro



FORM FACTOR

**2U**

MAX POWER (BASE)

**296 W**

HEAT OUTPUT

**1,010 BTU/h**

PRICE

**On request**

CONFIGURE &amp; QUOTE ONLINE

[serverinvest.com/product/sys-212gt-hnf](https://serverinvest.com/product/sys-212gt-hnf)

01 **Product overview**

The Supermicro SYS-212GT-HNF is a 2U GrandTwin Server built on Intel Xeon 6 with up to 4 TB of memory in 16 DIMM slots.

2U 4-Node GrandTwin with up to 8 hot-swap E1.S NVMe drives per node and Front I/O.

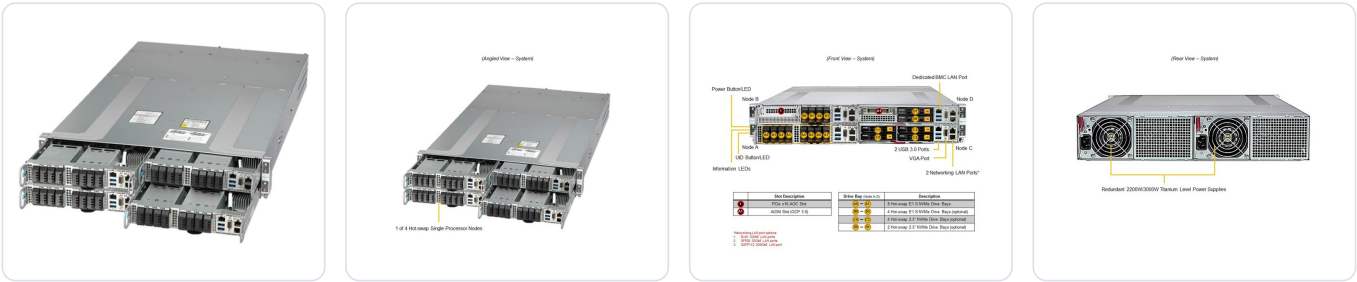
ServerInvest configures every SYS-212GT-HNF to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

**HIGHLIGHTS**

- Intel Xeon 6
- Up to 4 TB memory · 16 DIMM slots
- Total 8 bays 8 front hot-swap E1.S PCIe 5.0 x4 NVMe\* drive bays
- Power: 2x 3000W
- Networking: Via IO Module

**KEY SPECIFICATIONS**

|                    |                           |
|--------------------|---------------------------|
| Form factor        | 2U                        |
| Processor          | Intel Xeon 6              |
| Socket             | LGA4710                   |
| Memory             | 16 DIMM slots, up to 4 TB |
| Memory type        | DDR5-6400 ECC RDIMM       |
| Drive bays         | 18 (18 NVMe)              |
| Power supply       | 2× 3000 W                 |
| Typical power draw | 450 W                     |
| Networking         | Via IO Module             |
| 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

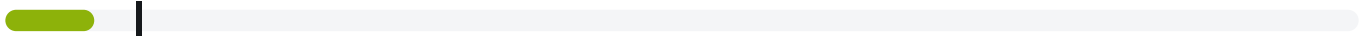
| COMPONENT          | DESCRIPTION                                                   | QTY |
|--------------------|---------------------------------------------------------------|-----|
| Base system        | Supermicro 2U GrandTwin Server SYS-212GT-HNF                  | 1   |
| Processor          | 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   |
|-------------|--------------|--------------|--------------------|---------------|------------|
| <b>84 W</b> | <b>197 W</b> | <b>296 W</b> | <b>1,010 BTU/h</b> | <b>0.3 kW</b> | <b>10%</b> |



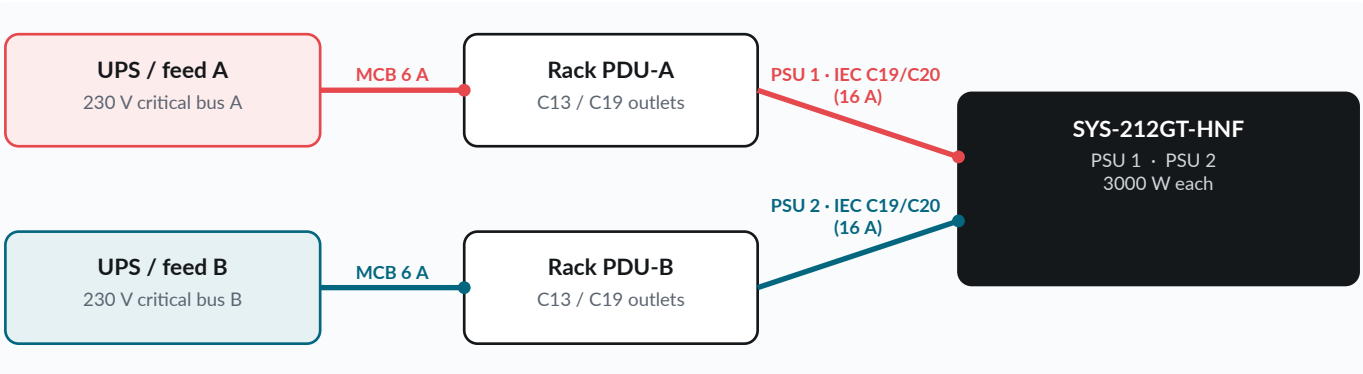
|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Annual IT energy (24/7)          | 1,429 kWh                                    |
| Annual facility energy (PUE 1.5) | 2,144 kWh                                    |
| Annual energy cost               | €286 IT · €429 incl. cooling (at 0.20 €/kWh) |
| CO <sub>2</sub> emissions / year | 0.56 t (grid factor 0.26 kg/kWh)             |
| Power supplies                   | 2× 3000 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-G

#### PROCESSOR (PER NODE)

CPU Single Socket E2 (LGA-4710)  
Intel Xeon 6700/6500 series processors with P-cores or 6700 series processors with E-cores

|            |                                                                                           |
|------------|-------------------------------------------------------------------------------------------|
| Core Count | P-cores: Up to 86C/172T; Up to 336MB Cache<br>E-cores: Up to 144C/144T; Up to 108MB Cache |
| Note       | Supports up to 350W TDP CPUs (Air Cooled)                                                 |

#### SYSTEM MEMORY (PER NODE)

|                |                                                                                                                                                                                                                                                        |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Memory         | Slot Count: 16 DIMM slots/2 Channels<br>Max Memory (1DPC): Up to 2TB 6400MT/s ECC DDR5 RDIMM<br>Max Memory (1DPC): Up to 512GB 8000MT/s ECC DDR5 MRDIMM<br>Max Memory (2DPC): Up to 4TB 5200MT/s ECC DDR5 RDIMM<br><a href="#">View Memory Options</a> |
| Memory Voltage | 1.1V                                                                                                                                                                                                                                                   |

#### ON-BOARD DEVICES (PER NODE)

|                      |                                                                                        |
|----------------------|----------------------------------------------------------------------------------------|
| NVMe                 | NVMe; RAID 0/1/5/10 support(VROC HW key required)<br><a href="#">View NVMe Options</a> |
| Network Connectivity | Via IO Module<br><a href="#">View AIOM Options</a><br><a href="#">View AOC Options</a> |

#### INPUT / OUTPUT (PER NODE)

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

#### SYSTEM BIOS

|           |                    |
|-----------|--------------------|
| BIOS Type | AMI 64MB Flash ROM |
|-----------|--------------------|

#### MANAGEMENT

|          |                                                                                                                                                                                       |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Software | SuperCloud Composer (SCC)<br>Supermicro Server Manager (SSM)<br>Super Diagnostics Offline (SDO)<br>Supermicro Thin-Agent Service (TAS)<br>SuperServer Automation Assistant (SAA) New! |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### SECURITY

|          |                                                                                                                                                                                                       |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hardware | Trusted Platform Module (TPM) 2.0<br>Silicon Root of Trust (RoT) – NIST 800-193 Compliant                                                                                                             |
| Features | Cryptographically Signed Firmware<br>Secure Boot<br>Secure Firmware Updates<br>Automatic Firmware Recovery<br>Supply Chain Security: Remote Attestation<br>Runtime BMC Protections<br>System Lockdown |

#### PC HEALTH MONITORING

|     |                                                                                            |
|-----|--------------------------------------------------------------------------------------------|
| CPU | 8+4 Phase-switching voltage regulator<br>Monitors for CPU Cores, Chipset Voltages, Memory. |
|-----|--------------------------------------------------------------------------------------------|

|             |                                                                                                                   |
|-------------|-------------------------------------------------------------------------------------------------------------------|
| Fan         | Fans with tachometer monitoring<br>Pulse Width Modulated (PWM) fan connectors<br>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 2022, Windows Server 2025<br><a href="#">View all OS Compatibility and Certification Matrix</a> |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|

## CHASSIS

|             |                      |
|-------------|----------------------|
| Form Factor | 2U Rackmount         |
| Model       | CSE-GT214BF-R2K21BP2 |

## 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: 88 lbs (39.9 kg)<br>Net Weight: 68 lbs (30.8 kg) |
| Available Color | Silver                                                         |

## FRONT PANEL

|         |                                                                                                  |
|---------|--------------------------------------------------------------------------------------------------|
| Buttons | Power On/Off button<br>UID button                                                                |
| LED     | HDD activity LED<br>Network activity LEDs<br>Power status LED<br>Universal Information (UID) LED |

## EXPANSION SLOTS (PER NODE)

|                                  |                                                                                                                                                                                                                                                               |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PCI-Express (PCIe) Configuration | Default*<br>1 PCIe 5.0 x16 LP slot<br>(*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.)<br><a href="#">View AOC Options</a> |
| 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 8 bays 8 front hot-swap E1.S PCIe 5.0 x4 NVMe* drive bays<br>Option A: Total 4 bays 4 front hot-swap E1.S PCIe 5.0 x4 NVMe* drive bays<br>Option B: Total 4 bays 4 front hot-swap 2.5" PCIe 5.0 x4 NVMe* drive bays<br>Option C: Total 2 bays 2 front hot-swap 2.5" PCIe 5.0 x4 NVMe* drive bays<br>(*NVMe support may require additional storage controller and/or cables, please see the optional parts list for details)<br><a href="#">View NVMe Options</a> |
| M.2                      | 2 M.2 PCIe 5.0 x4 NVMe slots (M-key 22110(default)/2280; VROC required for RAID)<br><a href="#">View M.2 Options</a>                                                                                                                                                                                                                                                                                                                                                            |

## SYSTEM COOLING

|      |                                                                        |
|------|------------------------------------------------------------------------|
| Fans | 2x 16K RPM Heavy Duty 8cm Fan(s)<br>2x 16K RPM Heavy Duty 5.6cm Fan(s) |
|------|------------------------------------------------------------------------|

## POWER SUPPLY

2x 3000W  
2x 2200W  
2x 3000W  
2x 3000W Redundant (1 + 1) Titanium (certification pending) 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)<br>Non-operating Temperature: -30°C to 60°C (-22°F to 140°F)<br>Operating Relative Humidity: 8% to 80% (non-condensing)<br>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](mailto:office@serverinvest.com)

Official manufacturer datasheet: [serverinvest.com/product/sys-212gt-hnf/datasheet/manufacture](https://serverinvest.com/product/sys-212gt-hnf/datasheet/manufacture)

