

## TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

# Supermicro 4U MP Server SYS-442B-NR

4U 4-socket system with 64 DIMMs and 24 NVMe/SAS/SATA drive bays

SKU SYS-442B-NR

4U

LGA4710

Supermicro



FORM FACTOR

**4U**

MAX POWER (BASE)

**349 W**

HEAT OUTPUT

**1,191 BTU/h**

PRICE

**On request**

CONFIGURE &amp; QUOTE ONLINE

[serverinvest.com/product/sys-442b-nr](https://serverinvest.com/product/sys-442b-nr)

01 Product overview

The Supermicro SYS-442B-NR is a 4U MP Server built on Intel Xeon 6 with up to 16 TB of memory in 64 DIMM slots.

4U 4-socket system with 64 DIMMs and 24 NVMe/SAS/SATA drive bays.

The chassis accepts up to 4 GPU accelerators for AI, rendering and HPC workloads.

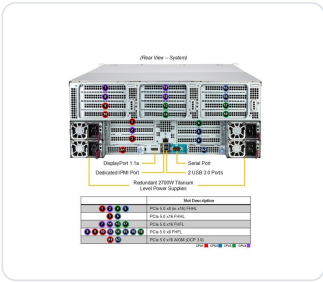
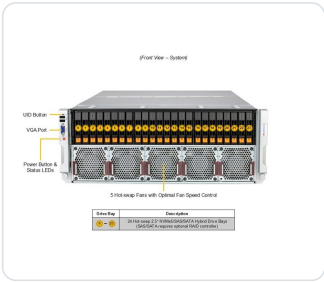
ServerInvest configures every SYS-442B-NR to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Intel Xeon 6
- Up to 16 TB memory · 64 DIMM slots
- Total 24 bays 24 front hot-swap 2.5" PCIe 5.0 NVMe\*/SAS\*/SATA\* drive bays
- Up to 4 GPUs
- Power: 4x 2700W
- Networking: Via AIOM

KEY SPECIFICATIONS

|                    |                            |
|--------------------|----------------------------|
| Form factor        | 4U                         |
| Processor          | Intel Xeon 6               |
| Socket             | LGA4710                    |
| Memory             | 64 DIMM slots, up to 16 TB |
| Memory type        | DDR5-6400 ECC RDIMM        |
| Drive bays         | 24 (24 NVMe)               |
| GPU                | Up to 4 GPUs               |
| Power supply       | 4× 2700 W                  |
| Typical power draw | 2250 W                     |
| Networking         | Via AIOM                   |
| 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

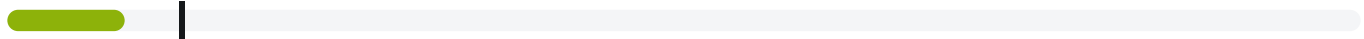
| COMPONENT          | DESCRIPTION                                                   | QTY |
|--------------------|---------------------------------------------------------------|-----|
| Base system        | Supermicro 4U MP Server SYS-442B-NR                           | 1   |
| Processor          | 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>107 W</b> | <b>234 W</b> | <b>349 W</b> | <b>1,191 BTU/h</b> | <b>0.3 kW</b> | <b>13%</b> |



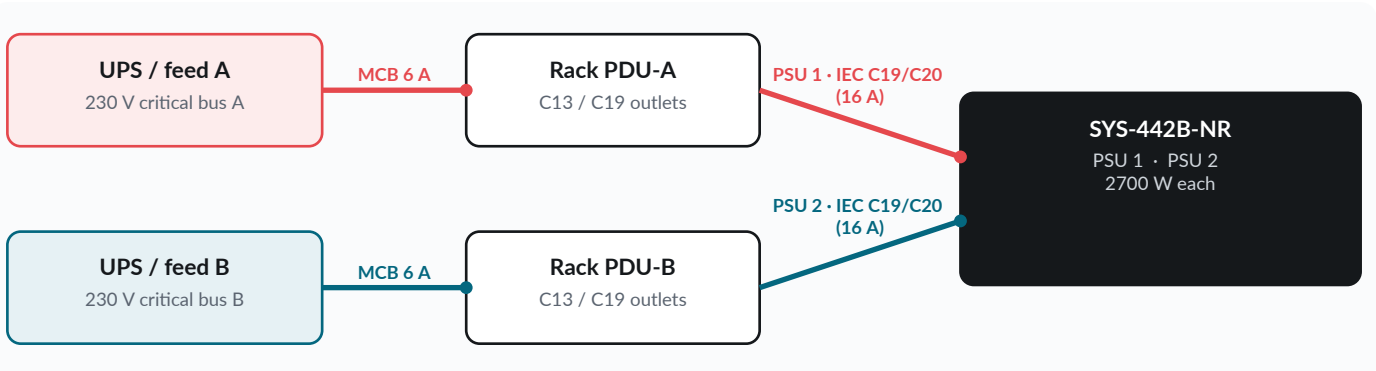
|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Annual IT energy (24/7)          | 1,716 kWh                                    |
| Annual facility energy (PUE 1.5) | 2,574 kWh                                    |
| Annual energy cost               | €343 IT · €515 incl. cooling (at 0.20 €/kWh) |
| CO <sub>2</sub> emissions / year | 0.67 t (grid factor 0.26 kg/kWh)             |
| Power supplies                   | 4× 2700 W redundant (N+1)                    |

| POWER BY COMPONENT                        | IDLE | TYPICAL | MAX   |
|-------------------------------------------|------|---------|-------|
| Chassis, motherboard, fans, BMC           | 72 W | 112 W   | 160 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: 1.6 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: 349 W = 1,191 BTU/h (0.3 kW).

### 05 Full specifications

| MOTHERBOARD |                                                                              |
|-------------|------------------------------------------------------------------------------|
|             | Super X14QBH+                                                                |
| PROCESSOR   |                                                                              |
| CPU         | Quad E2 (LGA-4710)<br>Intel Xeon 6700 series processors with P-cores (4S/8S) |
| Core Count  | Up to 86C/172T; Up to 336MB Cache per CPU                                    |

Note Supports 165W - 350W TDP CPUs (Air Cooled)

## GPU

|                      |                                      |
|----------------------|--------------------------------------|
| Max GPU Count        | Up to 4 double-width GPUs            |
| CPU-GPU Interconnect | PCIe 5.0 x16 CPU-to-GPU Interconnect |
| GPU-GPU Interconnect | PCIe                                 |

## SYSTEM MEMORY

|                |                                                                                                                                                                   |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Memory         | Slot Count: 64 DIMM slots<br>Max Memory (1DPC): Up to 8TB 6400MT/s ECC DDR5 RDIMM<br>Max Memory (2DPC): Up to 16TB 5200MT/s ECC DDR5 RDIMM<br>View Memory Options |
| Memory Voltage | 1.1V                                                                                                                                                              |

## ON-BOARD DEVICES

|                      |                                                   |
|----------------------|---------------------------------------------------|
| Network Connectivity | Via AIOM<br>View AIOM Options<br>View AOC Options |
|----------------------|---------------------------------------------------|

## INPUT / OUTPUT

|        |                                                 |
|--------|-------------------------------------------------|
| LAN    | 1 RJ45 1 GbE Dedicated BMC LAN port             |
| USB    | 2 USB 3.0 ports (rear)                          |
| Video  | 1 VGA port (Front)<br>1 DisplayPort port (Rear) |
| Serial | 1 COM port (rear)                               |

## SYSTEM BIOS

|           |                           |
|-----------|---------------------------|
| BIOS Type | AMI 32MB SPI Flash EEPROM |
|-----------|---------------------------|

## 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! |
| Power configurations | Power-on mode for AC power recovery<br>ACPI Power Management                                                                                                                          |

## 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         | 7 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<br>Thermal Control for fan connectors                                  |

## CERTIFICATIONS

|                      |                                                                                                                                                |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Systems    | Oracle Linux 9.4, RHEL 9.4, RHEL 10.0, SAP HANA 2.0, Windows Server 2025<br><a href="#">View all OS Compatibility and Certification Matrix</a> |
| Enterprise Solutions | SAP HANA                                                                                                                                       |

## CHASSIS

|             |                     |
|-------------|---------------------|
| Form Factor | 4U Rackmount        |
| Model       | CSE-418H2TS-R5K4AWP |

## DIMENSIONS AND WEIGHT

|                 |                                                                      |
|-----------------|----------------------------------------------------------------------|
| Height          | 7" (177 mm)                                                          |
| Width           | 17.3" (438.4 mm)                                                     |
| Depth           | 33.4" (848.7 mm)                                                     |
| Package         | 15.94" (H) x 27.32" (W) x 49.41" (D)                                 |
| Weight          | Gross Weight: 158.9 lbs (72.1 kg)<br>Net Weight: 120.4 lbs (54.6 kg) |
| Available Color | No Paint                                                             |

## EXPANSION SLOTS

|                                  |                                                                                                                                                                                                                              |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PCI-Express (PCIe) Configuration | Default<br>4 PCIe 5.0 x8 FHHL slots<br>2 PCIe 5.0 x16 FHHL slots<br>8 PCIe 5.0 x8 FHFL slots<br>4 PCIe 5.0 x16 FHFL double-width slots<br>2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible)<br><a href="#">View AOC Options</a> |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## DRIVE BAYS / STORAGE

|                          |                                                                                                                                                                                                                                                             |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Drive Bays Configuration | Default: Total 24 bays 24 front hot-swap 2.5" PCIe 5.0 NVMe*/SAS*/SATA* drive bays<br>(*NVMe/SAS/SATA 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                      | 1 M.2 PCIe 4.0 x4 NVMe slot (M-key 2280/22110)<br>1 M.2 PCIe 4.0 x4 NVMe slot (M-key 22110)<br><a href="#">View M.2 Options</a>                                                                                                                             |

## SYSTEM COOLING

|            |                                           |
|------------|-------------------------------------------|
| Fans       | 10 Heavy duty counter-rotating 8cm Fan(s) |
| Air Shroud | 5 Air Shrouds                             |

## POWER SUPPLY

4x 2700W  
4x 2700W Redundant (3 + 1) Titanium Level (96%) Hot-plug power supplies  
Dimension (WxHxL)  
73.5 x 40 x 203 mm

## OPERATING ENVIRONMENT

RoHS

RoHS Compliant

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)

## 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-442b-nr/datasheet/manufacturerr](https://serverinvest.com/product/sys-442b-nr/datasheet/manufacturerr)

