

TECHNICAL DATASHEET

SUPERMICRO · RACKMOUNT SERVERS

Supermicro 2U MP Server SYS-242H-NR

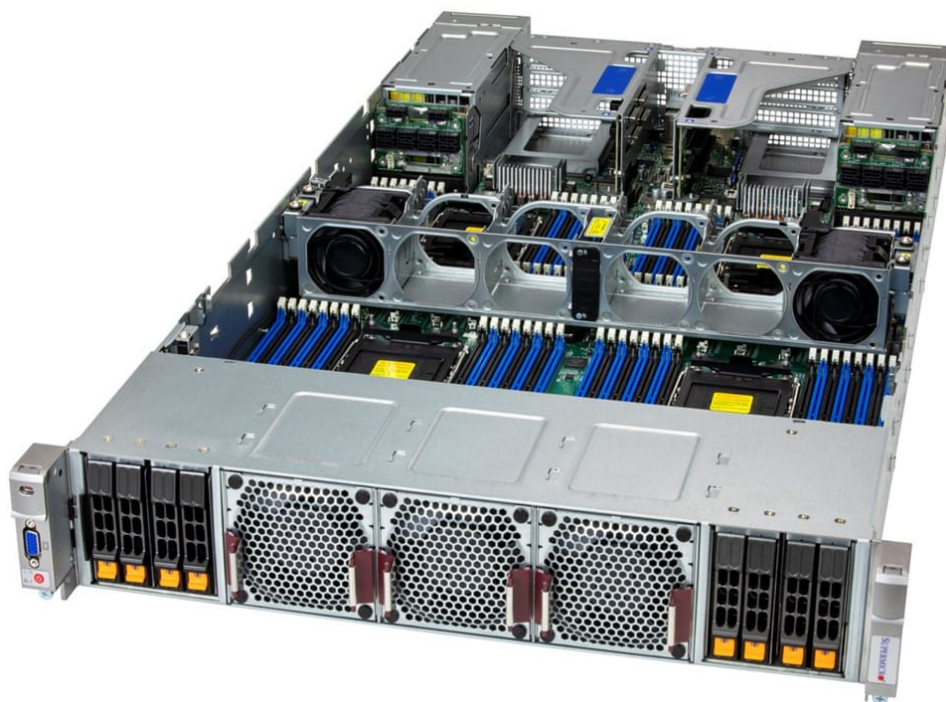
2U 4-socket system with 64 DIMMs and 8 NVMe drive bays

SKU SYS-242H-NR

2U

LGA4710

Supermicro



FORM FACTOR

2U

MAX POWER (BASE)

296 W

HEAT OUTPUT

1,010 BTU/h

PRICE

On request

CONFIGURE & QUOTE ONLINE

serverinvest.com/product/sys-242h-nr

01 **Product overview**

The Supermicro SYS-242H-NR is a 2U MP Server built on Intel Xeon 6 with up to 16 TB of memory in 64 DIMM slots.

2U 4-socket system with 64 DIMMs and 8 NVMe drive bays.

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

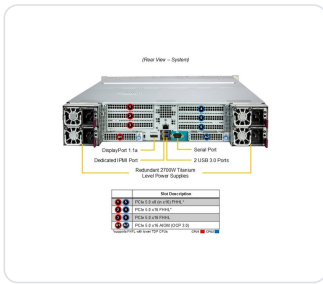
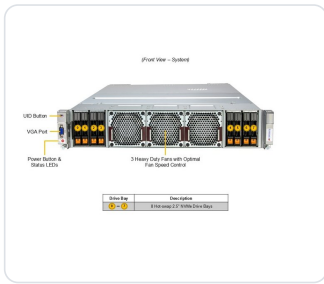
ServerInvest configures every SYS-242H-NR to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Intel Xeon 6
- Up to 16 TB memory · 64 DIMM slots
- Total 8 bays 8 front hot-swap 2.5" NVMe drive bays
- Up to 2 GPUs
- Power: 4x 2700W
- Networking: Via AIOM

KEY SPECIFICATIONS

Form factor	2U
Processor	Intel Xeon 6
Socket	LGA4710
Memory	64 DIMM slots, up to 16 TB
Memory type	DDR5-6400 ECC RDIMM
Drive bays	8 (8 NVMe)
GPU	Up to 2 GPUs
Power supply	4× 2700 W
Typical power draw	1350 W
Networking	Via AIOM
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

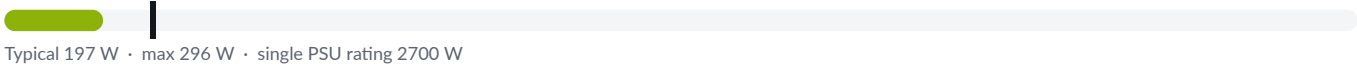
COMPONENT	DESCRIPTION	QTY
Base system	Supermicro 2U MP Server SYS-242H-NR	1
Processor	Intel Xeon 6505P Processor 12 Cores (48M Cache, 2.20Ghz) 150W	1
Memory	16GB 6400MT/s DDR5 ECC Registered DIMM Module	2
Warranty & support	3-year return-to-base warranty (included)	1

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
84 W	197 W	296 W	1,010 BTU/h	0.3 kW	11%



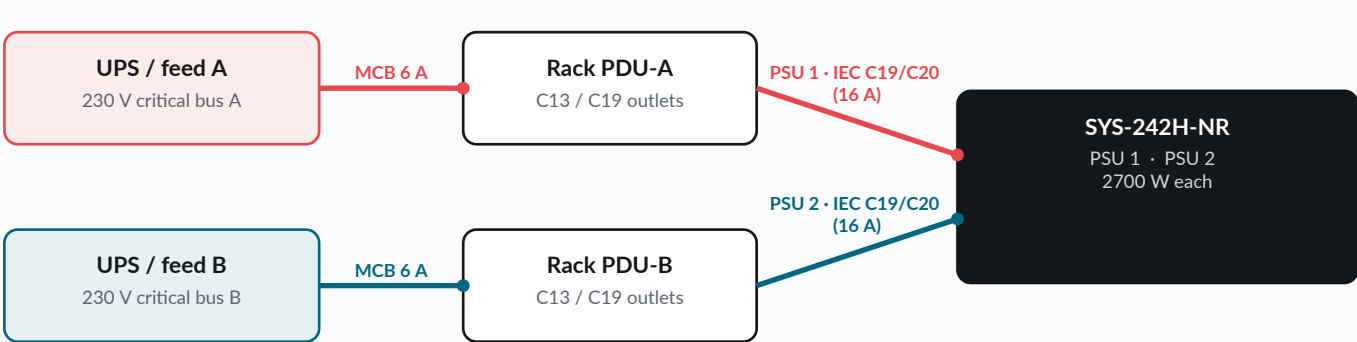
Annual IT energy (24/7)	1,429 kWh
Annual facility energy (PUE 1.5)	2,144 kWh
Annual energy cost	€286 IT · €429 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.56 t (grid factor 0.26 kg/kWh)
Power supplies	4× 2700 W redundant (N+1)

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 X14QBH+
PROCESSOR	
CPU	Quad E2 (LGA-4710) 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 2 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 Max Memory (1DPC): Up to 8TB 6400MT/s ECC DDR5 RDIMM Max Memory (2DPC): Up to 16TB 5200MT/s ECC DDR5 RDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

Network Connectivity	Via AIOM 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 (Rear)
Video	1 VGA port (Front) 1 DisplayPort port (Rear)
Serial	1 COM port (rear)

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 Supply Chain Security: Remote Attestation Runtime BMC Protections System Lockdown

PC HEALTH MONITORING

CPU	8 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 9.4, RHEL 9.4, RHEL 10.0, SAP HANA 2.0, Windows Server 2025 View all OS Compatibility and Certification Matrix
Enterprise Solutions	SAP HANA

CHASSIS

Form Factor	2U Rackmount
Model	CSE-218H2TS-R5K4AWP

DIMENSIONS AND WEIGHT

Height	3.5" (88 mm)
Width	17.3" (438.4 mm)
Depth	33.4" (848.7 mm)
Package	11.53" (H) x 27.6" (W) x 46.57" (D)
Weight	Gross Weight: 99.7 lbs (45.2 kg) Net Weight: 72.1 lbs (32.7 kg)
Available Color	Silver

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default 2 PCIe 5.0 x8 (in x16) FHHL slots 4 PCIe 5.0 x16 FHHL slots 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible) Option A* 2 PCIe 5.0 x16 FHFL double-width slots 2 PCIe 5.0 x16 FHHL slots 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible) (*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.) View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 8 bays 8 front hot-swap 2.5" NVMe drive bays View NVMe Options
M.2	1 M.2 PCIe 4.0 x4 NVMe slot (M-key 2280/22110) 1 M.2 PCIe 4.0 x4 NVMe slot (M-key 22110) View M.2 Options

SYSTEM COOLING

Fans	Up to 2 Internal Heavy duty counter-rotating 6cm Fan(s) Up to 3 Heavy duty counter-rotating 8cm Fan(s)
Air Shroud	4 Air Shrouds

POWER SUPPLY

4x 2700W
4x 2700W Redundant (2 + 2) Titanium Level (96%) 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

Official manufacturer datasheet: serverinvest.com/product/sys-242h-nr/datasheet/manufacturer

