

TECHNICAL DATASHEET

SUPERMICRO · EDGE & EMBEDDED

Supermicro 2U IoT Server SYS-212B-FN2T

X14 2U compact front I/O edge AI system with up to 5 PCIe 5.0 slots and redundant AC/DC PSU

SKU SYS-212B-FN2T

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-212b-fn2t

01 **Product overview**

The Supermicro SYS-212B-FN2T is a 2U IoT Server built on Intel Xeon 6 with up to 2 TB of memory in 8 DIMM slots.

X14 2U compact front I/O edge AI system with up to 5 PCIe 5.0 slots and redundant AC/DC PSU.

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

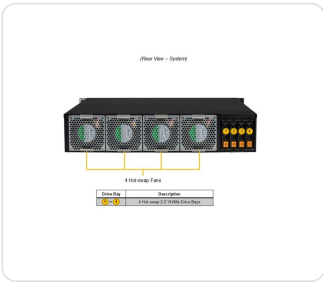
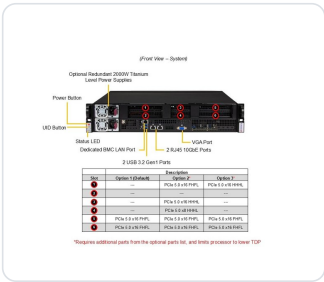
ServerInvest configures every SYS-212B-FN2T to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Intel Xeon 6
- Up to 2 TB memory · 8 DIMM slots
- Total 4 bays 4 rear hot-swap 2.5" NVMe* drive bays
- Up to 2 GPUs
- Power: 1x 2000W
- Networking: 2 RJ45 10GBASE-T with Intel X710-AT2

KEY SPECIFICATIONS

Form factor	2U
Processor	Intel Xeon 6
Socket	LGA4710
Memory	8 DIMM slots, up to 2 TB
Memory type	DDR5-6400 ECC RDIMM
Drive bays	4 (4 NVMe)
GPU	Up to 2 GPUs
Power supply	1× 2000 W
Typical power draw	1350 W
Networking	2 RJ45 10GBASE-T with Intel X710-AT2
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

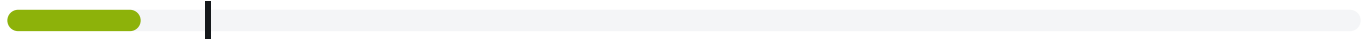
COMPONENT	DESCRIPTION	QTY
Base system	Supermicro 2U IoT Server SYS-212B-FN2T	1
Processor	Intel Xeon 6505P Processor 12 Cores (48M Cache, 2.20Ghz) 150W	1
Memory	16GB 6400MT/s DDR5 ECC Registered DIMM Module	2
Warranty & support	3-year return-to-base warranty (included)	1

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	15%



Typical 197 W · max 296 W · single PSU rating 2000 W

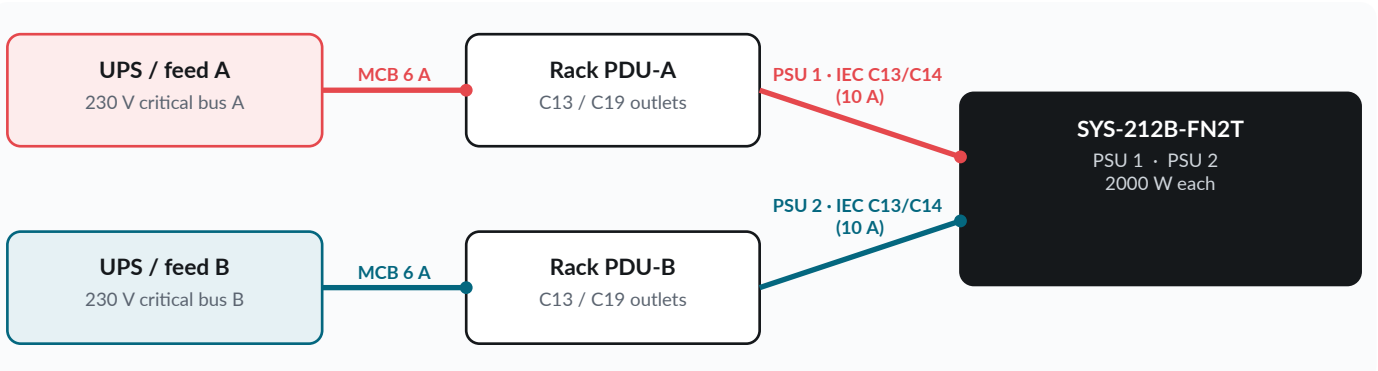
Annual IT energy (24/7)	1,429 kWh
Annual facility energy (PUE 1.5)	2,144 kWh
Annual energy cost	€286 IT · €429 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.56 t (grid factor 0.26 kg/kWh)
Power supplies	1× 2000 W

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 C13/C14 (10 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 X14SBM-TF
PROCESSOR	
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 E-cores: Up to 144C/144T; Up to 108MB Cache
Note	Supports up to 350W TDP CPUs (Air Cooled)* *Air Cooled CPUs with TDP over 205W only supported under specific conditions. Contact a Supermicro representative for details.

GPU

Max GPU Count	Up to 2 double-width or 3 single-width GPUs
Supported GPU	NVIDIA PCIe: L4, L40S, NVIDIA RTX PRO 4500 Blackwell Server Edition Intel: Arc Pro B50 Graphics, Arc Pro B60 Graphics (SW) View GPU Options
CPU-GPU Interconnect	PCIe 5.0 x16 CPU-to-GPU Interconnect
GPU-GPU Interconnect	PCIe

SYSTEM MEMORY

Memory	Slot Count: 8 DIMM slots Max Memory (1DPC): Up to 2TB 6400MT/s ECC DDR5 RDIMM Max Memory (1DPC): Up to 512GB 8000MT/s ECC DDR5 MRDIMM (P-core only) View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

NVMe	NVMe; RAID 0/1/5/10 support(Intel VROC RAID key required) View NVMe Options
Network Connectivity	2 RJ45 10GBASE-T with Intel X710-AT2 View AOC Options

INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port 2 RJ45 10 GbE LAN ports
USB	2 USB 3.2 Gen1 Type-A ports (front)
Video	1 VGA port
TPM	1 TPM Onboard TPM & TPM Header

SYSTEM BIOS

BIOS Type	AMI 256MB SPI Flash
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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	ACPI Power Management Power-on mode for DC power recovery

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	CPU thermal trip support, PEPI Monitoring for CPU and chassis environment

CERTIFICATIONS

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

Form Factor	2U Rackmount
Model	CSE-223M-R000RCNDP

DIMENSIONS AND WEIGHT

Height	3.5" (89 mm)
Width	17.2" (437 mm)
Depth	17.72" (450 mm)
Package	10.47" (H) x 28.35" (W) x 21.85" (D)
Weight	Gross Weight: 29 lbs (13.18 kg) Net Weight: 21 lbs (9.55 kg)
Available Color	Black

FRONT PANEL

Buttons	Power On/Off UID button
LED	HDD activity LAN1 activity LAN2 activity Power status System information

EXPANSION SLOTS

PCI-Express (PCIe) Configuration

Default
2 PCIe 5.0 x16 (in x16) FHFL slots
Option A*
2 PCIe 5.0 x16 (in x16) FHFL slots
1 PCIe 5.0 x16 (in x16) FHFL double-width slot
1 PCIe 5.0 x16 (in x16) HHHL slot
1 PCIe 5.0 x8 (in x8) HHHL slot
Option B*
2 PCIe 5.0 x16 (in x16) FHFL slots
1 PCIe 5.0 x16 (in x16) HHHL slot
(*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

M.2

2 M.2 NVMe slots (M-key)

DRIVE BAYS / STORAGE

Drive Bays Configuration

Default: Total 4 bays 4 rear hot-swap 2.5" NVMe* drive bays
(*NVMe support may require additional storage controller and/or cables, please see the optional parts list for details)
View NVMe Options

M.2

2 M.2 NVMe slots (M-key 2280/22110)
View M.2 Options

SYSTEM COOLING

Fans

Up to 4x 4-PIN PWM 8cm Fan(s)

Air Shroud

1 Air Shroud

POWER SUPPLY

1x 2000W
1x 2000W Redundant Titanium Level (96%) power supply
Dimension (WxHxL)
73.5 x 40 x 185 mm

OPERATING ENVIRONMENT

Environmental Spec.

Operating Temperature: 5°C to 40°C (41°F to 104°F)
Non-operating Temperature: -40°C to 70°C (-40°F to 158°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-212b-fn2t/datasheet/manufacturerr

