

TECHNICAL DATASHEET

SUPERMICRO · EDGE & EMBEDDED

Supermicro 2U IoT Server SYS-210P-FRDN6T

X12 2U Short-depth front I/O System with 2 x 10G & 4 x 1G ports, 2x 2.5"SATA bays and redundant DC PSU

SKU SYS-210P-FRDN6T

2U

LGA4189

Supermicro



FORM FACTOR

2U

MAX POWER (BASE)

333 W

HEAT OUTPUT

1,136 BTU/h

PRICE

On request

REQUEST A QUOTATION ONLINE

serverinvest.com/product/sys-210p-frdn6t

01 Product overview

The Supermicro SYS-210P-FRDN6T is a 2U IoT Server built on Intel Xeon Scalable 3rd Gen with up to 2 TB of memory in 8 DIMM slots.

X12 2U Short-depth front I/O System with 2 x 10G & 4 x 1G ports, 2x 2.5"SATA bays and redundant DC PSU.

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

ServerInvest configures every SYS-210P-FRDN6T 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 Scalable 3rd Gen
- Up to 2 TB memory · 8 DIMM slots
- Total 2 bays 2 front hot-swap 2.5" SATA drive bays
- Up to 2 GPUs
- Power: 1x 600W
- Networking: 4 RJ45 1GbE

KEY SPECIFICATIONS

Form factor	2U
Processor	Intel Xeon Scalable 3rd Gen
Socket	LGA4189
Memory	8 DIMM slots, up to 2 TB
Drive bays	2
GPU	Up to 2 GPUs
Power supply	1x 600 W
Typical power draw	1350 W
Networking	4 RJ45 1GbE
Dimensions (W×H×D)	437 × 89 mm



02 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
86 W	210 W	333 W	1,136 BTU/h	0.3 kW	56%

Typical 210 W · max 333 W · single PSU rating 600 W

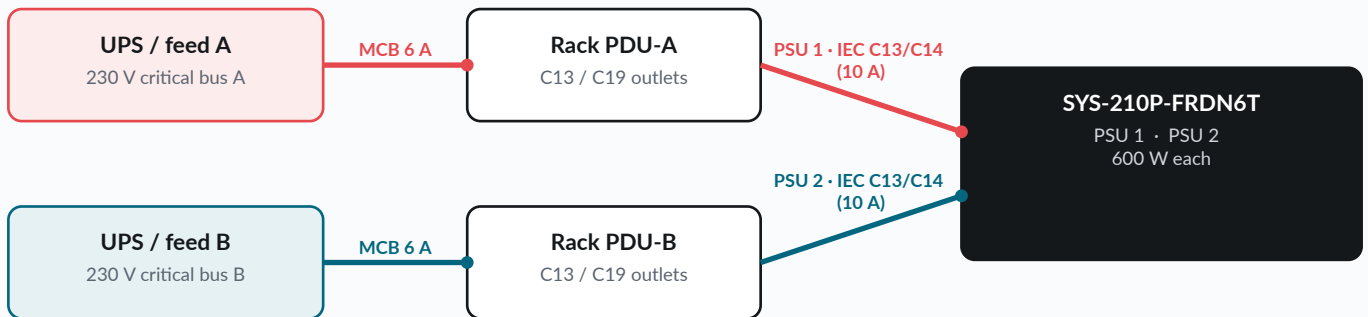
Annual IT energy (24/7)	1,514 kWh
Annual facility energy (PUE 1.5)	2,271 kWh
Annual energy cost	€303 IT · €454 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.59 t (grid factor 0.26 kg/kWh)
Power supplies	1x 600 W

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	50 W	77 W	110 W
CPU (base configuration)	25 W	110 W	185 W
2x Memory (base configuration)	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.

03 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: 1.5 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: 333 W = 1,136 BTU/h (0.3 kW).

04 Full specifications

MOTHERBOARD

Super X12SPM-LN6TF

PROCESSOR

CPU	Single Socket P+ (LGA-4189) 3rd Gen Intel Xeon Scalable processors
Core Count	Up to 36C/72T; Up to 60MB Cache
Note	Supports 85W - 270W TDP CPUs (Air Cooled)

GPU

Max GPU Count	Up to 2 double-width GPUs
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SYSTEM MEMORY

Memory	Slot Count: 8 DIMM slots Max Memory (2DPC): Up to 2TB 3200MT/s ECC DDR4 RDIMM/LRDIMM View Memory Options
Memory Voltage	1.2V

ON-BOARD DEVICES

SATA	SATA (6Gbps) ; RAID 0/1 support
Network Connectivity	4 RJ45 1GbE 2 RJ45 10GbE View AOC Options
BMC	ASPEED AST2600 BMC

INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port 2 RJ45 10 GbE LAN ports (Intel X550) 4 RJ45 1 GbE LAN ports (Intel I350-AM4)
USB	2 USB 2.0 ports (front) 2 USB 3.2 Gen1 ports (front)
Video	1 VGA port

MANAGEMENT

Software	SuperCloud Composer (SCC) Supermicro Server Manager (SSM) Supermicro Update Manager (SUM) Supermicro SuperDoctor 5 (SD5) Super Diagnostics Offline (SDO) Supermicro Thin-Agent Service (TAS) SuperServer Automation Assistant (SAA) New!
Power configurations	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 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 8.3, RHEL 9.0, Windows Server 2019, Windows Server 2022 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	2U Rackmount
Model	CSE-211M

DIMENSIONS AND WEIGHT

Height	3.5" (88.9 mm)
Width	17.2" (436.88 mm)
Depth	11.8" (298.8 mm)
Package	13.3" (H) x 19.3" (W) x 23.3" (D)

Weight	Gross Weight: 22 lbs (10 kg) Net Weight: 17 lbs (7.7 kg)
Available Color	Silver/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 1 PCIe 3.0 x16 HHHL slot 2 PCIe 3.0 x16 FHHH slots View AOC Options
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DRIVE BAYS / STORAGE

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

SYSTEM COOLING

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

	1x 600W 1x 600W Redundant Typical 90%+ Level (96%) power supply Dimension (WxHxL) 54.5 x 40 x 220 mm
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OPERATING ENVIRONMENT

Environmental Spec.	Operating Temperature: 0°C to 35°C (32°F to 95°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)
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05 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.



Interested in this solution?

Request a quotation online or talk to a solutions engineer — we reply within one business day.
office@serverinvest.com

Official manufacturer datasheet: serverinvest.com/product/sys-210p-frdn6t/datasheet/manufacture

