

TECHNICAL DATASHEET

SUPERMICRO · EDGE & EMBEDDED

Supermicro 2U IoT Server SYS-210TP-HPTRD

X12 SuperEdge 2U4-Node UP rear I/O Server with 24 SATA bays

SKU SYS-210TP-HPTRD

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-210tp-hptrd

01 Product overview

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

X12 SuperEdge 2U4-Node UP rear I/O Server with 24 SATA bays.

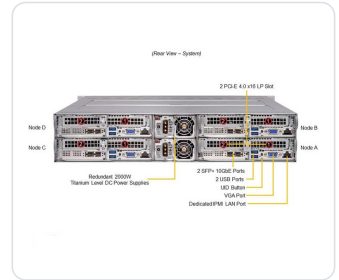
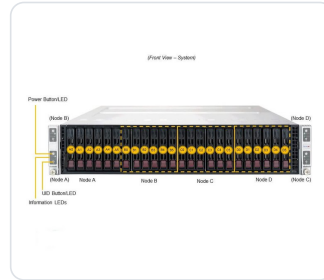
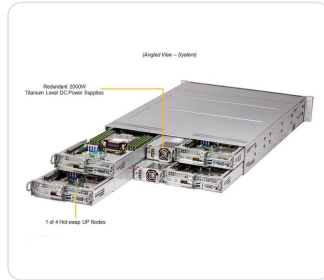
ServerInvest configures every SYS-210TP-HPTRD to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Intel Xeon Scalable 3rd Gen
- Up to 8 TB memory · 8 DIMM slots
- Total 6 bays 6 front hot-swap 2.5" SATA drive bays
- Power: 2x 2000W
- Networking: 2 SFP+ 10GbE with Intel X710-BM2

KEY SPECIFICATIONS

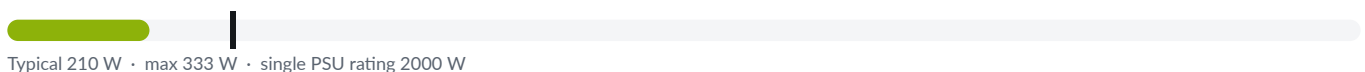
Form factor	2U
Processor	Intel Xeon Scalable 3rd Gen
Socket	LGA4189
Memory	8 DIMM slots, up to 8 TB
Drive bays	6
Power supply	2× 2000 W
Typical power draw	450 W
Networking	2 SFP+ 10GbE with Intel X710-BM2
Dimensions (W×H×D)	437 × 89 mm



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	17%



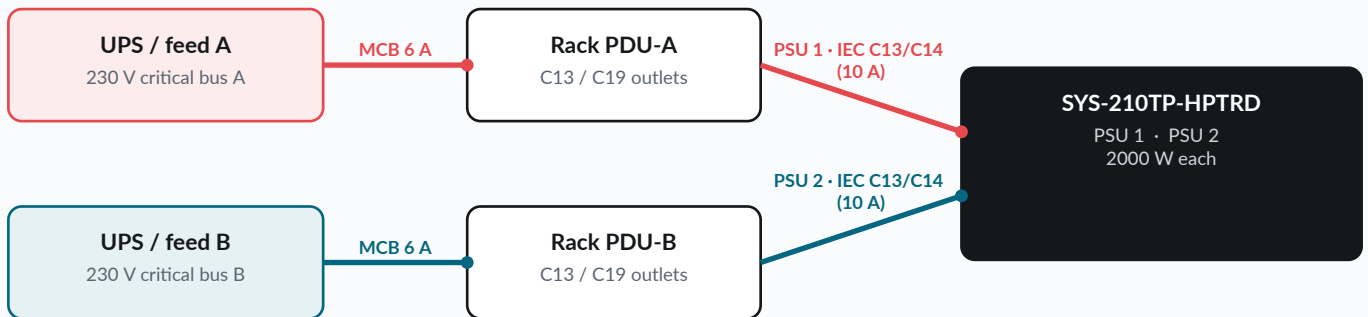
Annual IT energy (24/7)	1,514 kWh
Annual facility energy (PUE 1.5)	2,271 kWh
Annual energy cost	€303 IT · €454 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.59 t (grid factor 0.26 kg/kWh)
Power supplies	2× 2000 W redundant (N+1)

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
2× 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 X12SPT-PT

PROCESSOR (PER NODE)

CPU	Single Socket P+ (LGA-4189) 3rd Gen Intel Xeon Scalable processors
Core Count	Up to 32C/64T; Up to 48MB Cache
Note	Supports 85W - 270W TDP CPUs (Air Cooled)

SYSTEM MEMORY (PER NODE)

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

ON-BOARD DEVICES (PER NODE)

SATA	SATA (6Gbps) via Intel C621A; RAID 0/1/5/10 support(Intel VROC RAID key required)
Network Connectivity	2 SFP+ 10GbE with Intel X710-BM2 View AOC Options
BMC	ASPEED AST2600 BMC

INPUT / OUTPUT (PER NODE)

LAN	1 RJ45 1 GbE Dedicated BMC LAN port 2 SFP+ 10 GbE LAN ports (IPMI shared on LAN port 1)
USB	2 USB 3.2 Gen1 Type-A ports (rear)
Video	1 VGA port (Rear)

SYSTEM BIOS

BIOS Type	AMI 32MB UEFI
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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!
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Power configurations	ACPI Power Management Power-on mode for power recovery
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SECURITY

Hardware	Trusted Platform Module (TPM) 2.0 Silicon Root of Trust (RoT) – NIST 800-193 Compliant
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Features	Cryptographically Signed Firmware Secure Boot Secure Firmware Updates Automatic Firmware Recovery System Lockdown
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PC HEALTH MONITORING

CPU	Monitors for CPU Cores, Chipset Voltages, Memory
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Fan	Fans with tachometer monitoring Pulse Width Modulated (PWM) fan connectors Status monitor for speed control
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Temperature	CPU thermal trip support, PEPI Monitoring for CPU and chassis environment
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CERTIFICATIONS

Operating Systems	Oracle Linux 8.3, RHEL 8.3, Windows Server 2019, Windows Server 2022 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	2U Rackmount
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Model	CSE-217HQ+-000NBP4
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DIMENSIONS AND WEIGHT

Height	3.5" (88 mm)
Width	17.25" (438 mm)
Depth	28.75" (730 mm)
Package	9.8" (H) x 20.7" (W) x 38" (D)
Weight	Gross Weight: 90 lbs (40.8 kg) Net Weight: 70 lbs (31.8 kg)
Available Color	Black front & silver body

EXPANSION SLOTS (PER NODE)

PCI-Express (PCIe) Configuration	Default 2 PCIe 4.0 x16 HHL slots View AOC Options
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DRIVE BAYS / STORAGE (PER NODE)

Drive Bays Configuration	Default: Total 6 bays 6 front hot-swap 2.5" SATA drive bays View Drive Options
M.2	2 M.2 NVMe slots (M-key 2280/22110) View M.2 Options

SYSTEM COOLING

Fans	Up to 4x 8cm heavy duty fans with optimal fan speed control 80x80x38mm Fan(s)
Air Shroud	4 Air Shrouds

POWER SUPPLY

2x 2000W
2x 2000W Redundant (1 + 1) power supplies
Dimension (WxHxL)
76 x 40 x 336 mm

OPERATING ENVIRONMENT

RoHS	RoHS Compliant
Environmental Spec.	Operating Temperature: 0°C to 35°C (32°F to 95°F) Non-operating Temperature: 0°C to 70°C (32°F to 158°F) Operating Relative Humidity: 8% to 90% (non-condensing) Non-operating Relative Humidity: 5% to 95% (non-condensing)

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-210tp-hptrd/datasheet/manufacture

