

TECHNICAL DATASHEET

SUPERMICRO · EDGE & EMBEDDED

Supermicro 1U IoT Server SYS-112D-20C-FN3P

1U Intel Xeon Processor, 20-Core, front I/O System with 2x 100G ports, 800W
redundant Platinum Level PWS

SKU SYS-112D-20C-FN3P

1U

LGA4710

Supermicro



FORM FACTOR

1U

MAX POWER (BASE)

269 W

HEAT OUTPUT

918 BTU/h

PRICE

On request

CONFIGURE & QUOTE ONLINE

serverinvest.com/product/sys-112d-20c-fn3p

01 Product overview

The Supermicro SYS-112D-20C-FN3P is a 1U IoT Server built on Intel Xeon 6 with up to 512 GB of memory in 4 DIMM slots.

1U Intel Xeon Processor, 20-Core, front I/O System with 2x 100G ports, 800W redundant Platinum Level PWS.

The chassis accepts up to 1 GPU accelerators for AI, rendering and HPC workloads.

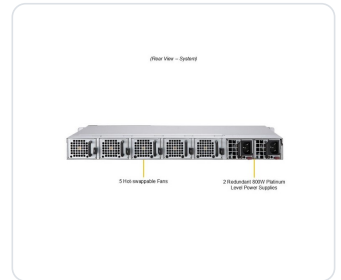
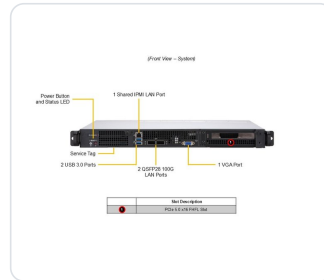
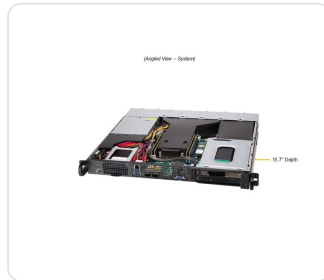
ServerInvest configures every SYS-112D-20C-FN3P to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Intel Xeon 6
- Up to 512 GB memory · 4 DIMM slots
- Total 2 bays 2 internal fixed 2.5" PCIe 4.0 x4 NVMe drive bays
- Up to 1 GPUs
- Power: 2x 800W
- Networking: 1 RJ45 1GbE with Intel I210-IT

KEY SPECIFICATIONS

Form factor	1U
Processor	Intel Xeon 6
Socket	LGA4710
Memory	4 DIMM slots, up to 512 GB
Memory type	DDR5-6400 ECC RDIMM
Drive bays	2 (2 NVMe)
GPU	Up to 1 GPUs
Power supply	2× 800 W
Typical power draw	900 W
Networking	1 RJ45 1GbE with Intel I210-IT
Dimensions (W×H×D)	437 × 44 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 1U IoT Server SYS-112D-20C-FN3P	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
71 W	178 W	269 W	918 BTU/h	0.3 kW	34%

Typical 178 W · max 269 W · single PSU rating 800 W

Annual IT energy (24/7)	1,278 kWh
Annual facility energy (PUE 1.5)	1,917 kWh
Annual energy cost	€256 IT · €383 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.50 t (grid factor 0.26 kg/kWh)
Power supplies	2× 800 W redundant (N+1)

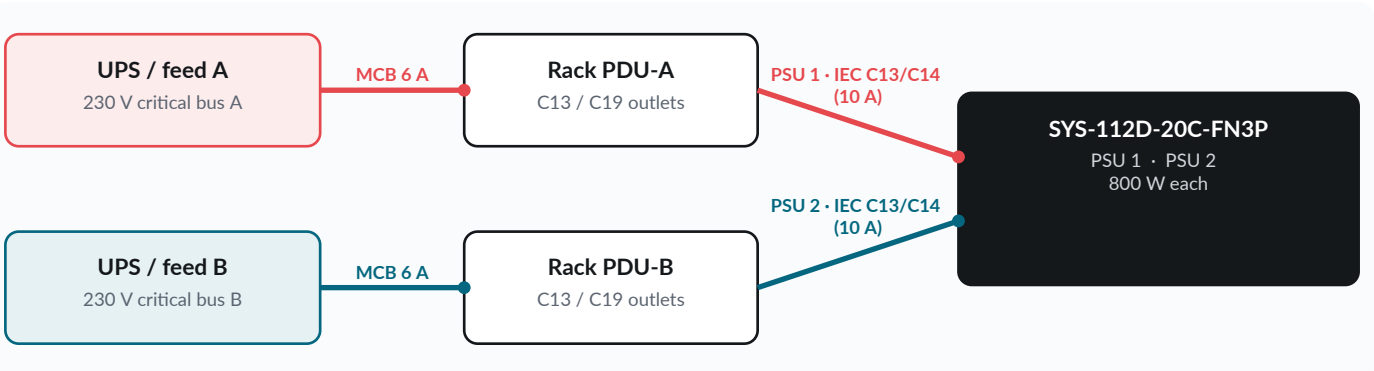
POWER BY COMPONENT

	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	38 W	59 W	85 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: 1.2 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: 269 W = 918 BTU/h (0.3 kW).

05 Full specifications

MOTHERBOARD

Super X14SDV-20C-SP3F

PROCESSOR

CPU	Intel Xeon 6 SoC
Note	Supports up to 145W TDP CPUs (Air Cooled)

GPU

Max GPU Count	Up to 1 double-width or 1 single-width GPU
CPU-GPU Interconnect	PCIe 5.0 x16 CPU-to-GPU Interconnect

SYSTEM MEMORY

Memory	Slot Count: 4 DIMM slots/1 Channels Max Memory (1DPC): Up to 512GB 4800MT/s ECC DDR5 RDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES

Network Connectivity	1 RJ45 1GbE with Intel I210-IT 2 QSFP28 100GbE with Intel SoC View AOC Options
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INPUT / OUTPUT

LAN	1 RJ45 1 GbE LAN port (Intel I210-IT) (IPMI shared on LAN port 1) 2 QSFP28 100 GbE LAN ports (Intel SOC)
USB	2 USB 2.0 ports (header) 2 USB 3.0 Type-A ports (Front)
Video	1 VGA port
Serial	1 COM port (header)
TPM	1 TPM header

SYSTEM BIOS

BIOS Type	AMI 64MB UEFI
BIOS Features	ACPI 6.5 SMBIOS 3.7 or later UEFI 2.9 PCI F/W 3.3 Plug and Play (PnP)

MANAGEMENT

Software	SuperCloud Composer (SCC) Supermicro Server Manager (SSM) Super Diagnostics Offline (SDO) Supermicro Thin-Agent Service (TAS) SuperServer Automation Assistant (SAA) New! Plug-ins for 3rd Party Software
Power configurations	Power-on mode for AC power recovery ACPI Power Management

SECURITY

Hardware	Trusted Platform Module (TPM) 2.0
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
Other Features	WOL,RoHS, Control of power-on for recovery from AC power loss, ACPI power management
Temperature	CPU thermal trip support, PEPI Monitoring for CPU and chassis environment
Voltage	Monitors CPU Core Voltages, +3.3V, +12V, +3.3Vstb, +5Vstb, Vcore, Vmem

CERTIFICATIONS

Operating Systems	Oracle Linux 10.0, RHEL 10.0, Windows Server 2022, Windows Server 2025 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	1U Rackmount
Model	CSE-515M-R000NDFP2

DIMENSIONS AND WEIGHT

Height	1.7" (43.18 mm)
Width	17.2" (437 mm)
Depth	15.7" (399 mm)
Package	8" (H) x 27" (W) x 24" (D)
Weight	Gross Weight: 19.27 lbs (8.74 kg) Net Weight: 16.53 lbs (7.5 kg)
Available Color	Black Front & Silver Body

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 5.0 x16 (in x16) FHFL slot View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 2 bays 2 internal fixed 2.5" PCIe 4.0 x4 NVMe drive bays View NVMe Options
M.2	1 M.2 PCIe 4.0 x4 NVMe slot (M-key 2280) View M.2 Options

SYSTEM COOLING

Fans	Up to 5 Counter-rotating, Hot-swappable 40x40x56mm Fan(s)
Air Shroud	1 Air Shroud

POWER SUPPLY

2x 800W
2x 600W
2x 800W
2x 800W
2x 800W Redundant (1 + 1) Platinum Level (94%) power supplies
Dimension (WxHxL)
54.5 x 40.25 x 220 mm

OPERATING ENVIRONMENT

Environmental Spec.	Operating Temperature: 0°C to 40°C (32°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)
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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-112d-20c-fn3p/datasheet/manufacture

