

TECHNICAL DATASHEET

SUPERMICRO · EDGE & EMBEDDED

Supermicro 2U IoT Server SYS-212D-64C-FN8P

SKU SYS-212D-64C-FN8P

2U

LGA4710

Supermicro



FORM FACTOR

2U

MAX POWER (BASE)

296 W

HEAT OUTPUT

1,010 BTU/h

PRICE

On request

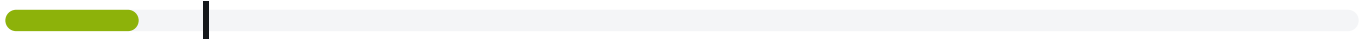
CONFIGURE & QUOTE ONLINE

serverinvest.com/product/sys-212d-64c-fn8p

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%



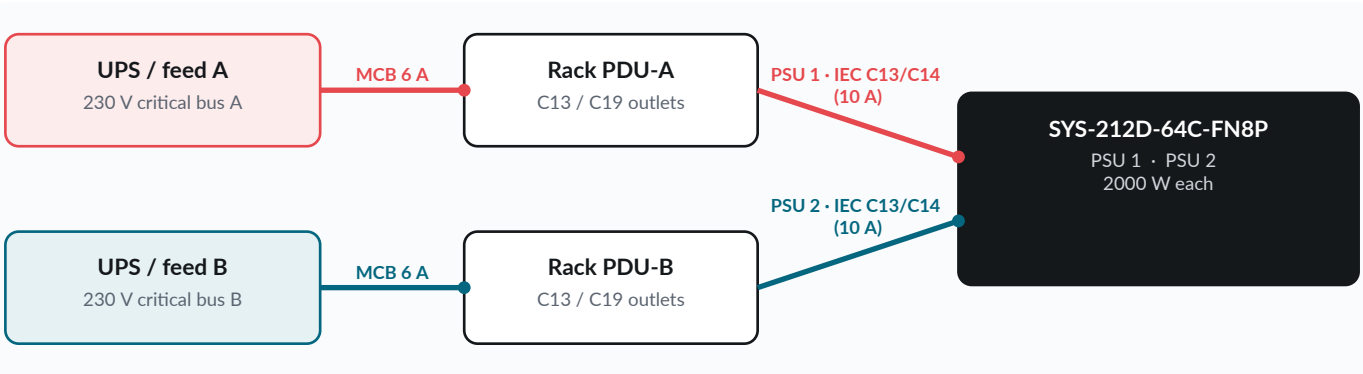
Annual IT energy (24/7)	1,429 kWh
Annual facility energy (PUE 1.5)	2,144 kWh
Annual energy cost	€286 IT · €429 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	0.56 t (grid factor 0.26 kg/kWh)
Power supplies	2× 2000 W redundant (N+1)

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 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 X14SDW-64C-SP9F
PROCESSOR	
CPU	Intel Xeon 6 SoC
Core Count	64C/128T

Note Supports up to 305W TDP CPUs (Air Cooled)

SYSTEM MEMORY

Memory	Slot Count: 8 DIMM slots/8 Channels Max Memory (1DPC): 1TB 6400MT/s ECC DDR5 RDIMM 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	8 SFP28 25GbE with Intel SoC View AOC Options

INPUT / OUTPUT

LAN	1 RJ45 1 GbE LAN port (Intel I210-IT) (IPMI shared on LAN port 1) 8 SFP28 25 GbE LAN ports (Intel SOC) (IPMI shared on LAN port 1)
USB	2 USB 3.2 Gen1 Type-A ports (front)
Video	1 mini-DP port
TPM	1 TPM header 1 TPM Onboard/port 80
Others	1 Dry contact (4 sets) port 3 SMA (GNSS / 1PPS in / 1PPS out) ports

SYSTEM BIOS

BIOS Type	AMI 64MB 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
Features	Cryptographically Signed Firmware Secure Boot Secure Firmware Updates Automatic Firmware Recovery System Lockdown

PC HEALTH MONITORING

CPU	Monitors for CPU Cores, +3.3V, +5V, +12V, +3.3V Standby, +5V Standby, VBAT, Memory, Chipset Voltages.
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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
Voltage	Voltage, VBAT, Memory temperature, CPU temperature, 3.3V standby, +5V standby, +5V, +3.3V, +12V, VRM temperature, CPU thermal trip support, 1.8V standby

CERTIFICATIONS

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

Form Factor	2U Rackmount
Model	CSE-221M2-R000NDP

DIMENSIONS AND WEIGHT

Height	3.5" (89 mm)
Width	17.2" (437 mm)
Depth	15.79" (401.1 mm)
Package	10.47" (H) x 28.35" (W) x 21.85" (D)
Weight	Gross Weight: 19.84 lbs (9 kg) Net Weight: 13.23 lbs (6 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) FHHL slots View AOC Options
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DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 2 bays 2 internal fixed 2.5" NVMe drive bays View NVMe Options
M.2	1 M.2 PCIe 4.0 x2 NVMe slot (M-key 2280(default); VROC required for RAID) View M.2 Options

SYSTEM COOLING

Fans	Up to 4x 8cm heavy duty fans with optimal fan speed control
Air Shroud	1 Air Shroud

POWER SUPPLY

2x 2000W
2x 1300W
2x 2000W
2x 2000W Redundant (1 + 1) Titanium (certification pending) Level (96%) power supplies
Dimension (WxHxL)
73.5 x 40 x 203 mm

OPERATING ENVIRONMENT

RoHS

RoHS Compliant

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)

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-212d-64c-fn8p/datasheet/manufacture

