

TECHNICAL DATASHEET

SUPERMICRO · MULTI-NODE & TWIN

Supermicro 2U FlexTwin Server SYS-222FT-HEA-ALC

The Supermicro SYS-222FT-HEA-ALC is a 2U 4-node FlexTwin server with dual Intel Xeon 6900 processors and up to 6TB DDR5 memory per node, as well as advanced liquid cooling for up to 95% heat capture – designed for rack-scale HPC, scientific research, oil and gas, and research lab applications requiring maximum thermal efficiency.

SKU SYS-222FT-HEA-ALC

2U

LGA7529

Supermicro



FORM FACTOR

2U



MAX POWER (BASE)

591 W



HEAT OUTPUT

2,016 BTU/h

PRICE

On request

CONFIGURE & QUOTE ONLINE

serverinvest.com/product/sys-222ft-hea-alc


01 **Product overview**

The Supermicro SYS-222FT-HEA-ALC is a 2U FlexTwin Server built on dual Intel Xeon 6 processors with up to 6 TB of memory in 24 DIMM slots.

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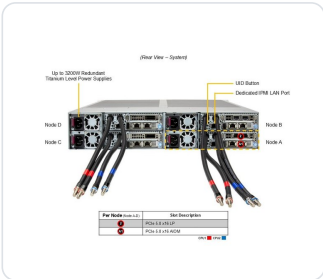
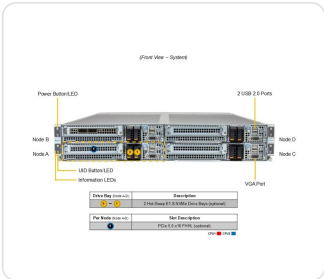
ServerInvest configures every SYS-222FT-HEA-ALC to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

HIGHLIGHTS

- Dual Intel Xeon 6
- Up to 6 TB memory · 24 DIMM slots
- Total 2 bays 2 front hot-swap E1.S NVMe* drive bays
- Power: 4x 3200W
- Networking: Via AIOM

KEY SPECIFICATIONS

Form factor	2U
Processor	2× Intel Xeon 6
Socket	LGA7529
Memory	24 DIMM slots, up to 6 TB
Memory type	DDR5-6400 ECC RDIMM
Drive bays	2 (2 NVMe)
Power supply	4× 3200 W
Typical power draw	750 W
Networking	Via AIOM
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 FlexTwin Server SYS-222FT-HEA-ALC	1
Processor	Intel Xeon 6710E Processor 64 Cores (96M Cache, 2.40Ghz) 205W	2
Memory	16GB 6400MT/s DDR5 ECC Registered DIMM Module	4
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
132 W	386 W	591 W	2,016 BTU/h	0.6 kW	18%

Typical 386 W · max 591 W · single PSU rating 3200 W

Annual IT energy (24/7)	2,714 kWh
Annual facility energy (PUE 1.5)	4,071 kWh
Annual energy cost	€543 IT · €814 incl. cooling (at 0.20 €/kWh)
CO ₂ emissions / year	1.06 t (grid factor 0.26 kg/kWh)
Power supplies	4× 3200 W redundant (N+1)

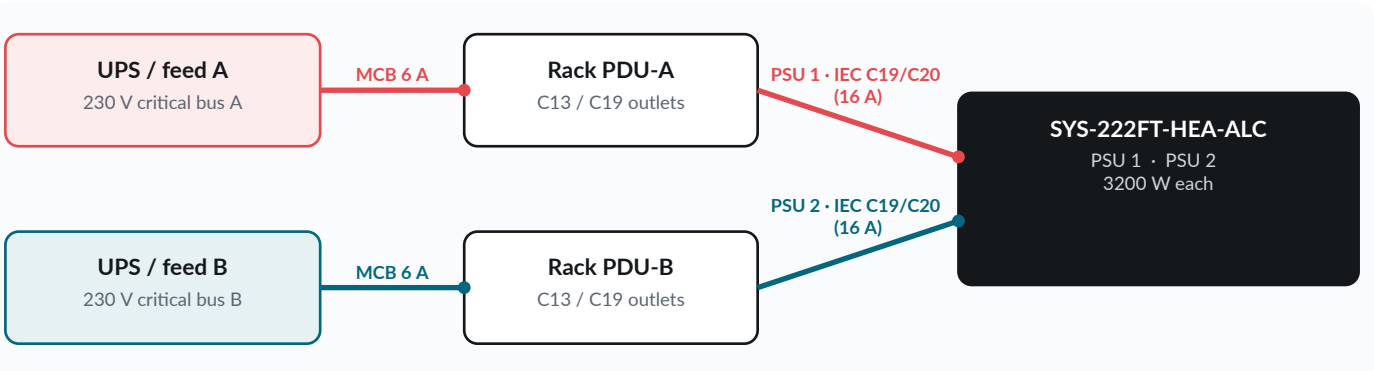
POWER BY COMPONENT

	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	50 W	77 W	110 W
2× CPU — Intel Xeon 6710E Processor 64 Cores	62 W	266 W	410 W
4× Memory 16 GB DIMM	12 W	20 W	36 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 C19/C20 (16 A) power cords.
- Maximum current per feed: 2.7 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: 591 W = 2,016 BTU/h (0.6 kW).

05 Full specifications

MOTHERBOARD

Super X14DBT-FLAP

PROCESSOR (PER NODE)

CPU	Dual Socket BR (LGA-7529) Intel Xeon 6900 series processors with P-cores
Core Count	Up to 128C/256T; Up to 504MB Cache per CPU

Note Supports up to 500W TDP CPUs (Liquid Cooled)

SYSTEM MEMORY (PER NODE)

Memory	Slot Count: 24 DIMM slots Max Memory (1DPC): Up to 6TB 6400MT/s ECC DDR5 RDIMM Max Memory (1DPC): Up to 3TB 8800MT/s ECC DDR5 MRDIMM View Memory Options
Memory Voltage	1.1V

ON-BOARD DEVICES (PER NODE)

NVMe	NVMe; RAID 0/1/5/10 support(Intel VROC RAID key required) View NVMe Options
Network Connectivity	Via AIOM View AIOM Options View AOC Options

INPUT / OUTPUT (PER NODE)

LAN	1 RJ45 1 GbE Dedicated BMC LAN port
USB	2 USB 2.0 Type-A ports (front)
Video	1 VGA port (Front)

SYSTEM BIOS

BIOS Type	AMI 64MB SPI Flash
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MANAGEMENT

Software	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/APM 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 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	Monitoring for CPU and chassis environment

CERTIFICATIONS

Operating Systems	Oracle Linux 9.6, RHEL 10.0, Windows Server 2025 View all OS Compatibility and Certification Matrix
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CHASSIS

Form Factor	2U Rackmount
Model	CSE-F214EC-000NP

DIMENSIONS AND WEIGHT

Height	3.46" (88 mm)
Width	17.67" (449 mm)
Depth	36.08" (916.6 mm)
Package	11.54" (H) x 27.6" (W) x 50.63" (D)
Weight	Gross Weight: 148.2 lbs (67.28 kg) Net Weight: 124.2 lbs (56.39 kg)
Available Color	Silver

FRONT PANEL

Buttons	Power On/Off button UID button
LED	HDD activity LED Network activity LEDs Power status LED Universal Information (UID) LED

EXPANSION SLOTS (PER NODE)

PCI-Express (PCIe) Configuration	Default 1 PCIe 5.0 x16 LP slot 1 PCIe 5.0 x16 AIOM slot (OCP 3.0 compatible) Option A* 1 PCIe 5.0 x16 LP slot 1 PCIe 5.0 x16 AIOM slot (OCP 3.0 compatible) 1 PCIe 5.0 x16 FHHL 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 22110(default); optional configuration)

DRIVE BAYS / STORAGE (PER NODE)

Drive Bays Configuration	Option A: Total 2 bays 2 front hot-swap E1.S 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 PCIe 5.0 x4 NVMe slots (M-key 22110; optional configuration) View M.2 Options

SYSTEM COOLING

Fans	Up to 16x 31K RPM Counter Rotating 40x40x56mm Fan(s)
Air Shroud	4 Air Shrouds

Liquid Cooling

Direct to Chip (D2C) Cold Plate

POWER SUPPLY

4x 3200W
4x 2000W
4x 2000W
4x 3200W
4x 3200W Redundant (2 + 2) Titanium Level (96%) power supplies
Dimension (WxHxL)
73.5 x 40 x 185 mm

OPERATING ENVIRONMENT

RoHS

RoHS Compliant

Environmental Spec.

Operating Temperature: 10°C to 35°C (50°F to 95°F)
Non-operating Temperature: -30°C to 60°C (-22°F to 140°F)
Operating Relative Humidity: 8% to 80% (non-condensing)
Non-operating Relative Humidity: 8% to 90% (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-222ft-hea-alc/datasheet/manufacture

