Intel Xeon (X14) | 3U Rackmount | GPU Server

Supermicro SYS-322GA-NR

Intel Xeon (X14) · 3U Rackmount · GPU Server Server

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Form Factor	CPU
3U Rackmount	Intel® Xeon® 6900 series processors with P-cores
GPU	**Memory**
Up to 8 double-width or 16 single-width GPUs	Max Memory (1DPC): 6TB 6400MT/s ECC DDR5 RDIMM

Key Features

- Dual Intel® Xeon® 6900-Series Processors with P-cores up to 500W
- 24 DIMMs supporting up to 6TB 6400MT/s DDR5 RDIMM or 6TB 8800MT/s DDR5 MRDIMM
- Up to 10 PCIe 5.0 x16 FHFL or 20 PCIe 5.0 x8 FHFL slots
- 6/8/14 hot-swap E1.S NVMe drive bays or 2/4/6 hot-swap 2.5" NVMe drive bays
- 3x 3200W or 2700W Redundant (2+1) Titanium Level power supplies
- Support up to 8 Double Width Full Height Full Length GPU or 19 Single Width GPU

Form Factor	3U Rackmount
Platform	Intel Xeon (X14)
CPU	Dual Socket BR (LGA-7529) Intel® Xeon® 6900 series processors with P-cores
Max GPU Count	Up to 8 double-width or 16 single-width GPUs
Supported GPU	NVIDIA PCIe: H100, A10, H200 NVL (141GB), L40S, NVIDIA RTX PRO™ 4000 Blackwell, NVIDIA RTX PRO™ 5000 Blackwell, NVIDIA RTX PRO™ 6000 Blackwell Max-Q Workstation Edition, NVIDIA RTX PRO™ 6000 Blackwell Server Edition, RTX 5000 Ada
Memory	Slot Count: 24 DIMM slots/1 Channels Max Memory (1DPC): 6TB 6400MT/s ECC DDR5 RDIMM
Drive Bays	Option A: Total 6 bays6 front hot-swap E1.S PCIe 5.0 x4 NVMe* drive bays
Fans	Up to 5 Front 8cm Fan(s)
Power Supply	3x 3200W Redundant (2 + 1) Titanium Level (96%) Hot-plug power supplies

Full Specifications — SYS-322GA-NR

Product SKUs

Part numbers	SYS-322GA-NR

Motherboard

Motherboard	Super X14DBG-XAP

Processor

CPU	Dual Socket BR (LGA-7529) Intel® Xeon® 6900 series processors with P-cores
Core Count	128C/256T; 504MB Cache per CPU
Note	Supports up to 500W TDP CPUs (Air Cooled)

GPU

Max GPU Count	Up to 8 double-width or 16 single-width GPUs
Supported GPU	NVIDIA PCIe: H100, A10, H200 NVL (141GB), L40S, NVIDIA RTX PRO™ 4000 Blackwell, NVIDIA RTX PRO™ 5000 Blackwell, NVIDIA RTX PRO™ 6000 Blackwell Max-Q Workstation Edition, NVIDIA RTX PRO™ 6000 Blackwell Server Edition, RTX 5000 Ada Intel: Arc™ Pro B60 Graphics (DW), Arc™ Pro B70 Graphics View GPU Options
CPU-GPU Interconnect	PCIe 5.0 x16 CPU-to-GPU Interconnect
GPU-GPU Interconnect	PCIe, NVIDIA® NVLink™

System Memory

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

On-Board Devices

Network Connectivity	View AOC Options

Input / Output

LAN	1 RJ45 1 GbE Dedicated BMC LAN port
USB	2 USB 3.2 Gen1 Type-A ports
Video	1 VGA port
TPM	1 TPM header

System BIOS

BIOS Type	AMI 64MB SPI Flash EEPROM

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 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 Thermal Control for fan connectors

Certifications

Operating Systems	Oracle Linux 9.4, RHEL 9.4, RHEL 10.0, Windows Server 2025 View all OS Compatibility and Certification Matrix

Chassis

Form Factor	3U Rackmount
Model	CSE-MX301TS-R0NDFP

Dimensions and Weight

Height	5.2" (132.1 mm)

Width	17.26" (438.4 mm)
Depth	31.5" (800 mm)
Package	13" (H) x 29" (W) x 47" (D)
Weight	Gross Weight: 135 lbs (61.24 kg) Net Weight: 70 lbs (32 kg)
Available Color	Silver

Front Panel

LED	Universal Information (UID) LED

Expansion Slots

PCI-Express (PCIe) Configuration	Default8 PCIe 5.0 x16 (in x16) FHFL double-width slots Option A*8 PCIe 5.0 x16 (in x16) FHFL double-width slots 2 PCIe 5.0 x16 (in x16) FHFL slots Option B*20 PCIe 5.0 x8 (in x16) FHFL slots (*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
CXL Support	Up to 17 CXL 2.0 x16/x8 devices
M.2	2 M.2 PCIe 5.0 x2 NVMe slots (M-key 22110(default)/2280)

Drive Bays / Storage

Drive Bays Configuration	Option A: Total 6 bays6 front hot-swap E1.S PCIe 5.0 x4 NVMe* drive bays Option B: Total 14 bays14 front hot-swap E1.S PCIe 5.0 x4 NVMe* drive bays Option C: Total 2 bays2 front hot-swap 2.5" PCIe 5.0 x4 NVMe* drive bays Option D: Total 4 bays4 front hot-swap 2.5" PCIe 5.0 x4 NVMe* drive bays Option E: Total 6 bays6 front hot-swap 2.5" PCIe 5.0 x4 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 x2 NVMe slots (M-key) View M.2 Options

System Cooling

Fans	Up to 5 Front 8cm Fan(s) Up to 6 Internal 6cm Fan(s)
Air Shroud	1 Air Shroud

Power Supply

3x 3200W Redundant (2 + 1) Titanium Level (96%) Hot-plug power supplies

Dimension (WxHxL)	73.5 x 40 x 185 mm

Input	1000W: 100-127Vac / 50-60Hz 2900W: 200-207Vac / 50-60Hz 3000W: 207-220Vac / 50-60Hz 3200W: 220-240Vac / 50-60Hz 3200W: 0240Vdc / 50-60Hz (for CQC only)
+12V	Max: 82A / Min: 0A (100Vac-127Vac) Max: 237.7A / Min: 0A (200Vac-207Vac) Max: 245.9A / Min: 0A (207Vac-220Vac) Max: 262.3A / Min: 0A (220Vac-240Vac)
12V SB	Max: 3A / Min: 0A
Output Type	Backplanes (gold finger)

3x 2700W Redundant (2 + 1) Titanium Level (96%) Hot-plug power supplies

Dimension (WxHxL)	73.5 x 40 x 185 mm
Input	2700W: 200-240Vac / 50-60Hz 2700W: 240-240Vdc / 50-60Hz (for CQC only)
+12V	Max: 225A / Min: 0A (200Vac-240Vac) Max: 225A / Min: 0A (240Vdc-240Vdc)
12V SB	Max: 4A / Min: 0A
Output Type	Backplanes (gold finger)

Operating Environment

Environmental Spec.	Operating Temperature: 10°C to 35°C (50°F to 95°F) Non-operating Temperature: -40°C to 60°C (-40°F to 140°F) Operating Relative Humidity: 8% to 90% (non-condensing) Non-operating Relative Humidity: 5% to 95% (non-condensing)