Intel Xeon (X14) | 4U Rackmount | Workstation

Supermicro SYS-542AW-TR

Intel Xeon (X14) · 4U Rackmount Server

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Form Factor	CPU
4U Rackmount	Intel® Xeon® 600 Processor for Workstation
GPU	**Memory**
Up to 2 triple-width or 4 double-width GPUs	Max Memory (1DPC): Up to 2TB 6400MT/s ECC DDR5 RDIMM

Key Features

- Single Intel® Xeon® 600 Series processor (LGA 4710-2/Socket E2), with up to 86 cores/350W TDP
- 8 DDR5 ECC Registered RDIMM/3DS RDIMM, DDR5-6400MT/s Up to total 2TB
- Support for up to 4 double-width PCIe GPU cards or 2 triple-width PCIe GPU cards
- 1 Dedicated LAN for IPMIDual 10GbE LAN with Intel E610-XAT2 + 1 GbE LAN with Intel I219-LM
- 8 Hot-swap 3.5" NVMe/SAS/SATA drive bays4 M.2 (support 2280/22110, M-socket, 2x PCIe 5.0 x4 attached to CPU and 2x PCIe 4.0 x4 attached to PCH)
- 5 PCIe 5.0 x16 slots + 1 PCIe 5.0 x8 slot
- Dual 2000W / 2600W Redundant Titanium Level power supplies(Power supply full redundancy based on configuration and application load)

Form Factor	4U Rackmount
Platform	Intel Xeon (X14)
CPU	Single E2 (LGA 4710-2) Intel® Xeon® 600 Processor for Workstation
Max GPU Count	Up to 2 triple-width or 4 double-width GPUs
Supported GPU	NVIDIA PCIe: NVIDIA RTX PRO™ 4000 Blackwell, NVIDIA RTX PRO™ 4500 Blackwell, NVIDIA RTX PRO™ 5000 Blackwell, NVIDIA RTX PRO™ 6000 Blackwell Max-Q Workstation Edition, NVIDIA RTX PRO™ 6000 Blackwell Workstation Edition
Memory	Slot Count: 8 DIMM slots Max Memory (1DPC): Up to 2TB 6400MT/s ECC DDR5 RDIMM
Drive Bays	Default: Total 8 bays8 front hot-swap 3.5" NVMe/SAS*/SATA drive bays

Fans	Up to 5 heavy duty fans with optimal fan speed control
Power Supply	2x 2000W Redundant (1 + 1) Titanium Level (96%) power supplies

Full Specifications — SYS-542AW-TR

Product SKUs

Part numbers	SYS-542AW-TR

Motherboard

Motherboard	Super X14SRG-TF

Processor

CPU	Single E2 (LGA 4710-2) Intel® Xeon® 600 Processor for Workstation
Core Count	Up to 86C/172T; Up to 336MB Cache
Note	Supports up to 350W TDP CPUs (Air Cooled)

GPU

Max GPU Count	Up to 2 triple-width or 4 double-width GPUs
Supported GPU	NVIDIA PCIe: NVIDIA RTX PRO™ 4000 Blackwell, NVIDIA RTX PRO™ 4500 Blackwell, NVIDIA RTX PRO™ 5000 Blackwell, NVIDIA RTX PRO™ 6000 Blackwell Max-Q Workstation Edition, NVIDIA RTX PRO™ 6000 Blackwell Workstation Edition View GPU Options
CPU-GPU Interconnect	PCIe 5.0 x16 CPU-to-GPU Interconnect

System Memory

Memory	Slot Count: 8 DIMM slots Max Memory (1DPC): Up to 2TB 6400MT/s ECC DDR5 RDIMM View Memory Options
Memory Voltage	1.1V

On-Board Devices

SATA	SATA (6Gbps) via Intel® W890; RAID 0/1/5/10 support
Chipset	intel® W890
Network Connectivity	2 RJ45 10GbE with Intel® E610 1 RJ45 1GbE with Intel® I219-LM 1 RJ45 1GbE with ASPEED AST2600 View AOC Options

Input / Output

LAN	1 RJ45 1 GbE Dedicated BMC LAN port (ASPEED AST2600) 1 RJ45 1 GbE LAN port (Intel® I219-LM) 2 RJ45 10 GbE LAN ports (Intel® E610)

USB	2 USB 3.2 Gen1 Type-A ports (front) 3 USB 3.2 Gen2 Type-A ports (Rear) 1 USB 3.2 Gen2x2 Type-C port (Rear)
Video	1 VGA port (Rear)
Serial	1 COM port (rear)
Audio	7.1 HD Audio
TPM	1 TPM Onboard TPM & TPM Header

System BIOS

BIOS Type	AMI 64MB SPI Flash EEPROM

Management

Software	Supermicro Server Manager (SSM) Supermicro Update Manager (SUM) Super Diagnostics Offline (SDO) Supermicro Thin-Agent Service (TAS) SuperServer Automation Assistant (SAA) New!
Power configurations	Power button override mechanism Power-on mode control for AC power loss recovery ACPI 6.5 Power Management

Security

Hardware	Trusted Platform Module (TPM) 2.0
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

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	System temperature, Memory temperature, CPU temperature, 3.3V standby, +5V standby, +5V, +3.3V, +12V, CPU thermal trip support

Certifications

Operating Systems	RHEL 10.2, Windows 11 View all OS Compatibility and Certification Matrix

Chassis

Form Factor	4U Rackmount
Model	CSE-749TS-R000NBP

Dimensions and Weight

Height	18.32" (465.4 mm)
Width	6.96" (177 mm)
Depth	26.71" (678.5 mm)
Package	12.59" (H) x 26.85" (W) x 37.95" (D)
Weight	Gross Weight: 62 lbs (28.1 kg) Net Weight: 46 lbs (20.9 kg)
Available Color	Black

Expansion Slots

PCI-Express (PCIe) Configuration	Default5 PCIe 5.0 x16 FHFL slots 1 PCIe 5.0 x8 FHFL slot View AOC Options

Drive Bays / Storage

Drive Bays Configuration	Default: Total 8 bays8 front hot-swap 3.5" NVMe/SAS*/SATA drive bays Option A: Total 8 bays8 front hot-swap 2.5" NVMe/SAS*/SATA drive bays (*SAS support may require additional storage controller and/or cables, please see the optional parts list for details) View Drive Options
M.2	2 M.2 PCIe 4.0 x4 NVMe slots (M-key 22110(default)/2280) 2 M.2 PCIe 5.0 x4 NVMe slots (M-key 22110(default)/2280) View M.2 Options
Peripheral Bays	3 5.25" peripheral bays

System Cooling

Fans	Up to 5 heavy duty fans with optimal fan speed control
Air Shroud	1 Air Shroud

Power Supply

2x 2000W Redundant (1 + 1) Titanium Level (96%) power supplies

Dimension (WxHxL)	73.5 x 40 x 265 mm

Input	1000W: 100-127Vac / 50-60Hz 1800W: 200-220Vac / 50-60Hz 1980W: 220-230Vac / 50-60Hz 2000W: 230-240Vac / 50-60Hz 2000W: 220-240Vac / 50-60Hz (for UL only) 2000W: 230-240Vdc / 50-60Hz (for CQC only)
+12V	Max: 83A / Min: 0A (100Vac-127Vac) Max: 150A / Min: 0A (200Vac-220Vac) Max: 165A / Min: 0A (220Vac-230Vac) Max: 166A / Min: 0A (230Vac-240Vac)
12V SB	Max: 3.5A / Min: 0A
Output Type	Backplanes (gold finger)

2x 2600W Redundant (1 + 1) Titanium Level (96%) power supplies

Dimension (WxHxL)	73.5 x 40 x 265 mm
Input	2600W: 200-240Vac / 50-60Hz 2600W: 200-240Vdc / 50-60Hz (for CQC only)
+12V	Max: 216A / Min: 0A (200Vac-240Vac)
12V SB	Max: 3.5A
Output Type	Backplanes (gold finger)

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)