Intel Xeon (X13) | Tower or 5U Rackmount | Workstation

Supermicro SYS-751GE-TNRT-NV1

Intel Xeon (X13) · Tower or 5U Rackmount · Liquid Cooling Server

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Form Factor	CPU
Tower or 5U Rackmount	5th Gen Intel® Xeon® / 4th Gen Intel® Xeon® Scalable processors
GPU	**Memory**
Up to 4 double-width GPUs	Max Memory (2DPC): 512GB 4800MT/s ECC DDR5

Key Features

- Acoustically optimized for quiet operationClosed-loop liquid cooling for CPUs and GPUs
- 4 liquid-cooled NVIDIA A100 GPUs with NVIDIA® NVLink™ (2+2) installed
- Dual 4th Gen Intel® Xeon® Scalable Processors, 6444Y (16 cores at 3.6Ghz) installed
- Dual-port active-cooled NVIDIA Connect-X6 Dx 25G Network Adapter installed
- Supermicro Cloud Orchestrator AI software stack
- Ubuntu 22.04 LTS installed

Form Factor	Tower or 5U Rackmount
Platform	Intel Xeon (X13)
CPU	Dual Socket E (LGA-4677) 5th Gen Intel® Xeon® / 4th Gen Intel® Xeon® Scalable processors
Max GPU Count	Up to 4 double-width GPUs
Memory	Slot Count: 16 DIMM slots Max Memory (2DPC): 512GB 4800MT/s ECC DDR5
Drive Bays	Default: Total 8 bays8 front hot-swap 2.5" NVMe/SAS*/SATA drive bays
Fans	Up to 1 fan 8cm Fan(s)
Power Supply	1x 2200W Redundant Titanium Level (96%) power supply

Full Specifications — SYS-751GE-TNRT-NV1

Motherboard

Motherboard	SYS-751GE-TNRT-NV1 Super X13DEG-QT

Processor

CPU	Dual Socket E (LGA-4677) 5th Gen Intel® Xeon® / 4th Gen Intel® Xeon® Scalable processors
Core Count	16C/32T; 30MB Cache per CPU
Note	Supports up to 350W TDP CPUs (Air Cooled) Supports up to 350W TDP CPUs (Liquid Cooled)

GPU

Max GPU Count	Up to 4 double-width GPUs
CPU-GPU Interconnect	PCIe 5.0 x16 CPU-to-GPU Interconnect
GPU-GPU Interconnect	NVIDIA® NVLink™ Bridge (2+2)

System Memory

Memory	Slot Count: 16 DIMM slots Max Memory (2DPC): 512GB 4800MT/s ECC DDR5 View Memory Options
Memory Voltage	1.1V

On-Board Devices

SATA	SATA (6Gbps) ; RAID 0/1/5/10 support
Network Connectivity	2 RJ45 10GbE with Intel® X550-AT2 1 RJ45 1GbE with ASPEED AST2600 1 SFP28 25GbE View AOC Options
BMC	ASPEED AST2600 BMC

Input / Output

LAN	1 RJ45 1 GbE Dedicated BMC LAN port 2 RJ45 10 GbE LAN ports 1 SFP28 25 GbE LAN port
USB	2 USB 3.2 Gen1 ports (front) 3 USB 3.2 Gen1 ports (rear) 1 USB 3.2 Gen2 port (rear)
Video	1 VGA port

DOM	2 SATA DOM (Disk on Module) ports
Audio	7.1 HD Audio Line Out Mic in

System BIOS

BIOS Type	AMI 32MB SPI Flash EEPROM

Management

Software	SuperCloud Composer® (SCC) Supermicro Server Manager (SSM) Supermicro Update Manager (SUM) Supermicro SuperDoctor® 5 (SD5) 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	8+4 Phase-switching voltage regulator 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 9.0, RHEL 9.0, Windows 2022 View all OS Compatibility and Certification Matrix

Chassis

Form Factor	Tower or 5U Rackmount
Model	CSE-759TS-R2K21BP

Dimensions and Weight

Height	8.6" (218.4 mm)
Width	17.9" (454.7 mm)
Depth	27.6" (701 mm)
Package	25.8" (H) x 15.3" (W) x 37.6" (D)
Weight	Gross Weight: 121 lbs (55 kg) Net Weight: 97 lbs (44 kg)
Available Color	Black Front & Black Body

Front Panel

Buttons	Power On/Off button Reset button
LED	HDD activity LED Information LED Network 1 activity LED Network 2 activity LED Power status LED

Expansion Slots

PCI-Express (PCIe) Configuration	Default7 PCIe 5.0 x16 FHFL slots View AOC Options

Drive Bays / Storage

Drive Bays Configuration	Default: 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 NVMe slots (M-key) View M.2 Options

System Cooling

Fans	Up to 1 fan 8cm Fan(s) Up to 2 fan 12cm Fan(s)
Liquid Cooling	Direct to Chip (D2C) Cold Plate (optional)

Power Supply

1x 2200W Redundant Titanium Level (96%) power supply

Dimension (WxHxL)	106.5 x 82.1 x 203.5 mm
Input	1200W: 100-127Vac / 50-60Hz 1800W: 200-220Vac / 50-60Hz 1980W: 220-230Vac / 50-60Hz 2090W: 230-240Vac / 50-60Hz 2090W: 230-240Vdc / 50-60Hz (for CQC only) 2200W: 220-240Vac / 50-60Hz (For UL/cUL Only)
+12V	Max: 100A / Min: 0A (100Vac-127Vac) Max: 150A / Min: 0A (200Vac-220Vac) Max: 165A / Min: 0A (220Vac-230Vac) Max: 174.17A / Min: 0A (230Vac-240Vac) Max: 183.33A / Min: 0A (220Vac-240Vac) (for UL/cUL only)
12V SB	Max: 3A / Min: 0A
Output Type	Backplanes (gold finger)

Operating Environment

Environmental Spec.	Operating Temperature: 10°C to 25°C (50°F to 77°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)