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# Hyper SuperServer SYS-221H-TNR

2U Hyper with 8 hot-swap 2.5" NVMe/SAS/SATA bays and 4 PCIe 5.0 x16 slots + up to 2 PCIe 5.0 x16 AIOM slots

## Key Applications

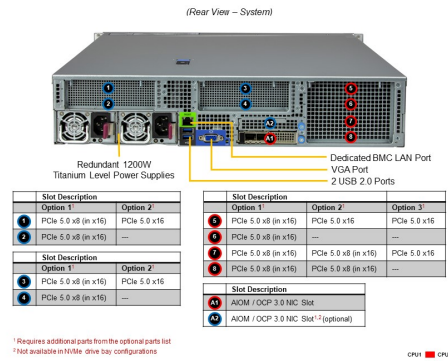
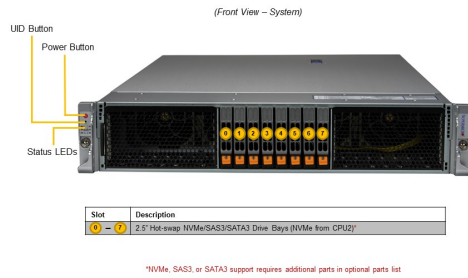
Virtualization, Software-defined Storage, AI Inference and Machine Learning, Cloud Computing, Enterprise Server,

## Key Features

- Dual Socket E (LGA-4677) 5th/4th Gen Intel® Xeon® Scalable processors;
- 32 DIMM slots supporting up to 8TB of memory; RDIMMs up to DDR5-5600;
- Optional PCIe slot configurations up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 slots with support for up to 4 double-width or 8 x8 single-width GPU/Accelerator cards;
- Flexible networking options with up to 2 AIOM networking slots (OCP NIC 3.0 compatible);
- 8x 2.5" hot-swap NVMe/SATA/SAS drive bays; Optional 8x 2.5" hot-swap NVMe/SAS/SATA drive bays; 2x internal M.2 NVMe/SATA drive slots; Optional RAID support via storage add-on card;
- 4 heavy duty hot-swap fans with optimal fan speed control;



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|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Form Factor              | 2U Rackmount<br>Enclosure: 437 x 88.9 x 760mm (17.2" x 3.5" x 29.9")<br>Package: 605 x 263 x 1107mm (23.8" x 10.4" x 43.6")                                                                                                                                                                                                                                                                                                                                         |
| Processor                | Dual Socket E (LGA-4677)<br>5th Gen Intel® Xeon®/4th Gen Intel® Xeon® Scalable processors<br>Supports Intel Xeon CPU Max Series with high bandwidth memory (HBM)<br>Up to 64C/128T; Up to 320MB Cache per CPU                                                                                                                                                                                                                                                       |
| GPU                      | Max GPU Count: Up to 4 double-width or 8 single-width GPUs<br>Supported GPU: NVIDIA PCIe: H100, H100 NVL, A100, A16, A40, L4, L40, L40S, RTX A4000, RTX A6000                                                                                                                                                                                                                                                                                                       |
| System Memory            | Slot Count: 32 DIMM slots<br>Max Memory (1DPC): Up to 4TB 5600MT/s ECC DDR5 RDIMM<br>Max Memory (2DPC): Up to 8TB 4400MT/s ECC DDR5 RDIMM                                                                                                                                                                                                                                                                                                                           |
| Drive Bays Configuration | Default: Total 8 bays <ul style="list-style-type: none"> <li>• 8 front hot-swap 2.5" NVMe*/SAS*/SATA* drive bays</li> </ul> Option A: Total 16 bays <ul style="list-style-type: none"> <li>• 16 front hot-swap 2.5" NVMe*/SAS*/SATA* drive bays</li> </ul> (*NVMe/SAS/SATA support may require additional storage controller and/or cables, please see the optional parts list for details)<br>M.2: 2 M.2 NVMe/SATA slots (M-key 2280/22110)                        |
| Expansion Slots          | PCI-Express (PCIe) Configuration: Option A* <ul style="list-style-type: none"> <li>• 4 PCIe 5.0 x16 FH/10.5"L double-width slots</li> <li>• 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible)</li> </ul> Option B* <ul style="list-style-type: none"> <li>• 8 PCIe 5.0 x8 (in x16) FH/10.5"L slots</li> <li>• 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible)</li> </ul> CXL Support: Up to 4 CXL 1.1 x16/x8 devices<br>M.2: 2 M.2 NVMe/SATA slots (B+M-key 2280/22110) |
| On-Board Devices         | SATA: SATA (6Gbps) ; RAID 0/1/5/10 support<br>NVMe: NVMe; RAID 0/1/5/10 support(Intel® VROC RAID key required)<br>Network Connectivity: Via AIOM                                                                                                                                                                                                                                                                                                                    |
| Input / Output           | LAN: 1 RJ45 1 GbE Dedicated BMC LAN port<br>USB: 2 USB 2.0 ports(rear)<br>2 USB 3.0 ports(Header)<br>Video: 1 VGA port                                                                                                                                                                                                                                                                                                                                              |



|                       |                                                                                                                                                                                                                                                                                                             |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System Cooling        | <p>Fans: Up to 4x 8cm heavy duty fans with optimal fan speed control</p> <p>Air Shroud: 2 Air Shrouds</p> <p>Liquid Cooling: Direct to Chip (D2C) Cold Plate (optional)</p>                                                                                                                                 |
| Power Supply          | 2x 1200W Redundant Titanium Level (96%) Hot-plug power supplies                                                                                                                                                                                                                                             |
| System BIOS           | BIOS Type: AMI 64MB SPI Flash                                                                                                                                                                                                                                                                               |
| Management            | <p>SuperCloud Composer®; 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!</p>                                                           |
| PC Health Monitoring  | <p>CPU: Monitors for CPU Cores, Chipset Voltages, Memory</p> <p>FAN: Fans with tachometer monitoring</p> <p>Pulse Width Modulated (PWM) fan connectors</p> <p>Status monitor for speed control</p> <p>Temperature: Monitoring for CPU and chassis environment</p> <p>Thermal Control for fan connectors</p> |
| Dimensions and Weight | <p>Weight: Gross Weight: 66 lbs (30 kg)</p> <p>Net Weight: 40 lbs (18.2 kg)</p> <p>Available Color: N/A</p>                                                                                                                                                                                                 |
| Operating Environment | <p>Name: A2</p> <p>Operating Temperature: 10°C to 35°C (50°F to 95°F)</p> <p>Non-operating Temperature: -30°C to 60°C (-40°F to 140°F)</p> <p>Operating Relative Humidity: 8% to 80% (max 21° DP; non-condensing)</p> <p>Non-operating Relative Humidity: 8% to 90% (max 38° DP; non-condensing)</p>        |
| Motherboard           | <a href="#">Super X13DEM</a>                                                                                                                                                                                                                                                                                |
| Chassis               | CSE-HS219-R1K24P                                                                                                                                                                                                                                                                                            |