# IoT SuperServer SYS-221HE-TNR

2U DP Hyper-E with 6 hot-swap 2.5" drive bays and AC power supplies

More details here

## Key Applications

5G Core and Edge, Telecom Micro Data Center, AI Inference and Machine Learning, Network Function Virtualization, Cloud Computing,



## 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;
- Configurable PCIe slot options up to 8 PCIe 5.0 x8 (6 FHFL+ 2 FHHL) or 4 PCIe 5.0 x16 (3 FHFL + 1 FHHL);
- Flexible networking options with 2 AIOM networking slots (OCP NIC 3.0 compatible);
- Up to 6x 2.5" hot-swap drive bays with options to support NVMe/SATA drives;
- 6 heavy duty hot-swap fans with optimal fan speed control;
- Redundant 2000W Titanium level AC power supplies;

| | |
|---|---|
| Form Factor | 2U Rackmount<br>Enclosure: 436.88 x 88.9 x 574mm (17.2" x 3.5" x 22.6")<br>Package: 598 x 247 x 938mm (23.5" x 9.7" x 36.9") |
| 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 60C/120T; Up to 112.5MB Cache per CPU |
| GPU | Max GPU Count: Up to 3 double-width or 3 single-width GPU(s)<br>Supported GPU: NVIDIA PCIe: RTX A6000, RTX A5000, RTX A4000, A2<br>CPU-GPU Interconnect: PCIe 5.0 x16 CPU-to-GPU Interconnect<br>GPU-GPU Interconnect: PCIe |
| System Memory | Slot Count: 32 DIMM slots/16 Channels<br>Max Memory (2DPC): Up to 8TB 5600MT/s ECC DDR5 RDIMM |
| Drive Bays Configuration | Default: Total 6 bay(s)<br>• 6 front hot-swap 2.5" NVMe*/SAS*/SATA* drive bay(s)<br>(*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 slot(s) (M-key 2280/22110) |
| Expansion Slots | Default<br>• 3 PCIe 5.0 x16 FHFL slot(s)<br>• 2 PCIe 5.0 x8 FHHL slot(s)<br>• 2 PCIe 5.0 x16 AIOM slot(s) (OCP 3.0 compatible)<br>Option A<br>• 6 PCIe 5.0 x8 FHFL slot(s)<br>• 2 PCIe 5.0 x8 FHHL slot(s)<br>• 2 PCIe 5.0 x16 AIOM slot(s) (OCP 3.0 compatible)<br>Option B<br>• 3 PCIe 5.0 x16 FHFL slot(s)<br>• 1 PCIe 5.0 x16 FHHL slot(s)<br>• 2 PCIe 5.0 x16 AIOM slot(s) (OCP 3.0 compatible) |
| 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>Chipset: Intel® C741<br>Network Connectivity: 2 SFP28 25GbE with Broadcom® BCM57414 (optional)<br>2 QSFP28 100GbE with Broadcom® BCM57508 (optional)<br>2 QSFP28 100GbE with Intel® E810-CAM2 (optional)<br>2 QSFP28 100GbE (optional)<br>4 SFP+ 10GbE with Intel® X710-BM2 (optional) |

2 QSFP56 200GbE (optional)
2 QSFP56 100GbE (optional)
2 RJ45 1GbE with Intel® I350-AM2 (optional)
4 SFP+ 10GbE with Intel® X710-TM4 (optional)
1 OSFP 400GbE with NVIDIA® ConnectX®-7 NDR (optional)
4 RJ45 10GbE with Intel® X550 (optional)

| | |
|---|---|
| Input / Output | LAN: 1 RJ45 1 GbE Dedicated BMC LAN port(s)<br>USB: 2 USB 2.0 port(s) (front)<br>Video: 1 VGA port(s) |

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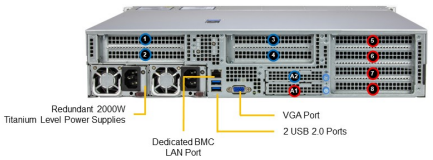
*(Front View – System)*




| Drive Bay | Description |
|---|---|
| 0 – 3 | 2.5" Hot-swap NVMe/SATA3/SAS3* Drive Bays (NVMe from CPU1) |
| 4 – 5 | 2.5" Hot-swap NVMe/SATA3/SAS3* Drive Bays (NVMe from CPU2) |

*SAS3 support requires additional parts from the optional parts list

*(Rear View – System)*




| | Slot Description | |
|---|---|---|
| | Optional 1 | Optional 2 |
| 1 | PCIe 5.0 x16 (FHFL) | PCIe 5.0 x8 (FHFL) |
| 2 | --- | PCIe 5.0 x8 (FHFL) |
| 3 | PCIe 5.0 x16 (FHFL) | PCIe 5.0 x8 (FHFL) |
| 4 | --- | PCIe 5.0 x8 (FHFL) |

| | Slot Description | | |
|---|---|---|---|
| | Optional 1 | Optional 2 | Optional 3 |
| 5 | PCIe 5.0 x16 (FHFL) | PCIe 5.0 x8 (FHFL) | PCIe 5.0 x16 (FHFL) |
| 6 | --- | PCIe 5.0 x8 (FHFL) | --- |
| 7 | PCIe 5.0 x8 (FHHL) | PCIe 5.0 x8 (FHHL) | PCIe 5.0 x16 (FHHL) |
| 8 | PCIe 5.0 x8 (FHHL) | PCIe 5.0 x8 (FHHL) | --- |

| | Slot Description |
|---|---|
| A2 | AIOM/OCP NIC 3.0 (optional) |
| A1 | AIOM/OCP NIC 3.0 |

CPU1 CPU2

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|---|---|
| System Cooling | Fans: 6 Counter-rotating, Hot-swappable 6cm Fan(s) |
| Power Supply | 2x 2000W Redundant Titanium Level (96%) power supplies |
| System BIOS | BIOS Type: AMI 256MB SPI Flash |
| Management | 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! |
| PC Health Monitoring | CPU: Monitors for CPU Cores, Chipset Voltages, Memory<br>FAN: Fans with tachometer monitoring<br>Status monitor for speed control<br>Pulse Width Modulated (PWM) fan connectors<br>Temperature: Monitoring for CPU and chassis environment<br>Thermal Control for fan connectors |
| Dimensions and Weight | Weight: Gross Weight: 47.4 lbs (21.5 kg)<br>Net Weight: 34.4 lbs (15.6 kg)<br>Available Color: Silver |
| Operating Environment | Operating Temperature: 0°C ~ 35°C (32°F ~ 95°F)<br>Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)<br>Operating Relative Humidity: 8% to 90% (non-condensing)<br>Non-operating Relative Humidity: 5% to 95% (non-condensing) |
| Motherboard | **Super X13DEM** |
| Chassis | **CSE-HE211-R000NFP** |

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