

# IoT SuperServer SYS-221HE-FTNRD

X13 DP 2U Short-depth front I/O System with 6 NVMe/SATA bays and redundant DC PSU



More details here

## Key Applications

Telecom Micro Data Center, AI Inference and Machine Learning, Cloud Computing, Network Function Virtualization (NFV), 5G Networking,

## 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 1300W -48V DC 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 64C/128T; Up to 320MB Cache per CPU                                                                                                                                                                                                                                                                                                                                              |
| GPU                      | Max GPU Count: Up to 3 double-width or 3 single-width GPUs<br>Supported GPU: NVIDIA PCIe: H100, L40, L40S, A40, A2, A10<br>Intel PCIe: Intel Data Center GPU Flex 170<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 bays <ul style="list-style-type: none"> <li>• 6 front hot-swap 2.5" NVMe/SAS*/SATA drive bays</li> </ul> (*SAS support may require additional storage controller and/or cables)<br>M.2: 2 M.2 NVMe/SATA slots (M-key 2280/22110)                                                                                                                                                                                                                                                                                                            |
| Expansion Slots          | Default <ul style="list-style-type: none"> <li>• 3 PCIe 5.0 x16 FHFL slots</li> <li>• 2 PCIe 5.0 x8 FHHL slots</li> <li>• 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible)</li> </ul> Option A <ul style="list-style-type: none"> <li>• 6 PCIe 5.0 x8 FHFL slots</li> <li>• 2 PCIe 5.0 x8 FHHL 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>• 3 PCIe 5.0 x16 FHFL slots</li> <li>• 1 PCIe 5.0 x16 FHHL slot</li> <li>• 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible)</li> </ul> |
| 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: System on Chip<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)

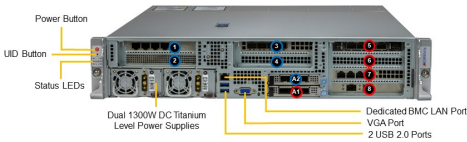
|                |                                                                                              |
|----------------|----------------------------------------------------------------------------------------------|
| Input / Output | LAN: 1 RJ45 1 GbE Dedicated BMC LAN port<br>USB: 2 USB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

(Rear View – System)



| Drive Bay | Description                                            |
|-----------|--------------------------------------------------------|
| 1 – 4     | 4 Hot-swap 2.5" NVMe/SATA3 Drive Bays (NVMe from CPU1) |
| 5 – 6     | 2 Hot-swap 2.5" NVMe/SATA3 Drive Bays (NVMe from CPU2) |

(Front View – System)



| Slot Description          |                  | Slot Description    |                  |                   |
|---------------------------|------------------|---------------------|------------------|-------------------|
| Default                   | Option 1*        | Default             | Option 1         | Option 2**        |
| 1 PCIe 5.0 x16 FHFL       | PCIe 5.0 x8 FHFL | 1 PCIe 5.0 x16 FHFL | PCIe 5.0 x8 FHFL | PCIe 5.0 x16 FHFL |
| 2 ---                     | PCIe 5.0 x8 FHFL | 2 ---               | PCIe 5.0 x8 FHFL | ---               |
| 3 PCIe 5.0 x16 FHFL       | PCIe 5.0 x8 FHFL | 3 PCIe 5.0 x8 FHFL  | PCIe 5.0 x8 FHFL | PCIe 5.0 x16 FHFL |
| 4 ---                     | PCIe 5.0 x8 FHFL | 4 PCIe 5.0 x8 FHFL  | PCIe 5.0 x8 FHFL | ---               |
| Slot Description          |                  |                     |                  |                   |
| 5 AIOM / OCP NIC 3.0 Slot |                  |                     |                  |                   |
| 6 AIOM / OCP NIC 3.0 Slot |                  |                     |                  |                   |

\*For slot 1 - 4 Option 1 config, two optional cables are required to replace existing cables.  
 \*\*For slot 5 - 6 Option 2 config, switching from (a) RSC to (b) RSC is required.

CPU1 CPU2

|                       |                                                                                                                                                                                                                                                                                  |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System Cooling        | Fans: Up to 6 Counter-rotating, Hot-swappable 6cm Fan(s)<br>Air Shroud: 4 Air Shrouds                                                                                                                                                                                            |
| Power Supply          | 2x 1300W Redundant 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 to 35°C (32°F to 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           | <a href="#">Super X13DEM</a>                                                                                                                                                                                                                                                     |
| Chassis               | CSE-HE211-R000NFP                                                                                                                                                                                                                                                                |