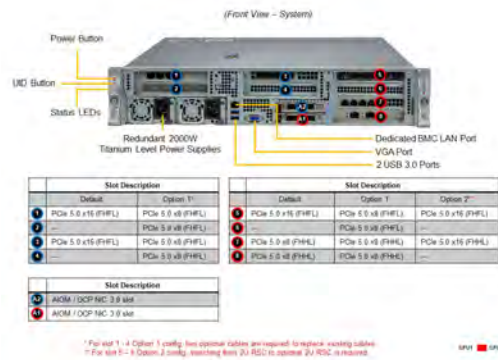# IoT SuperServer SYS-221HE-FTNR

## 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) 4th Gen Intel® Xeon® Scalable processors;
- 32 DIMM Slots; Up to 8TB: 32x 256GB DRAM;
- 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 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 | 4th Gen Intel® Xeon® Scalable processors<br>Dual Socket LGA-4677 (Socket E) supported<br>4 UPI Intel Xeon CPU Max Series with high bandwidth memory (HBM)<br>(Supports up to 350W TDP CPUs (Aircooled), Supports up to 350W TDP CPUs (Liquid Cooled)) |
| System Memory | 32 DIMM slots<br>Up to 8TB ECC RDIMM/LRDIMM, DDR5-4800MHz |
| Drive Bays | 6x 2.5" hot-swap NVMe/SATA drive bays; 6x 2.5" NVMe hybrid;<br>Optional RAID support via RAID Controller AOC |
| Expansion Slots | 6 PCIe 4.0 x16 FHFL slot(s)<br>2 PCIe 4.0 x16 FHHL slot(s)<br>Note:<br>If Slot 1 is configured as PCIe x16, Slot 2 will be disabled; If Slot 3 is configured as PCIe x16, Slot 4 will be disabled;<br>If Slot 5 is configured as PCIe x16, Slot 6 will be disabled; (Optional) If Slot 7 is configured as PCIe x16, Slot 8 will be disabled. |
| On-Board Devices | SATA: SATA3 (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: 2x 25GbE SFP28 with Broadcom® BCM57414 (optional)<br>2x 100GbE QSFP28 with Broadcom® BCM57508 (optional)<br>2x 100GbE QSFP28 with Intel® E810-CAM2 (optional)<br>2x 100GbE QSFP28 with Mellanox® CX-6 DX (optional)<br>4x 10GbE SFP+ with Intel® X710-BM2 (optional)<br>4x 10GbE BaseT with Intel® X550 (optional)<br>IPMI: Support for Intelligent Platform Management Interface v.2.0<br>IPMI 2.0 with virtual media over LAN and KVM-over-LAN support |
| Input / Output | LAN: 1 RJ45 Dedicated BMC LAN port<br>USB: 2 USB 2.0 port(s) (2 front)<br>Video: 1 VGA port(s) |

| System Cooling | 6 heavy duty fan(s)<br>Liquid Cooling: Direct to Chip (D2C) Cold Plate (optional) |
|---|---|
| Power Supply | 2000W 1U Redundant Power Supply Reverse airflow vs PWS-2K08A-1R<br>Dimension (W x H x L): 73.5 x 40 x 203 mm |
| System BIOS | BIOS Type: AMI 256MB SPI Flash |
| Management | IPMI 2.0; SuperDoctor® 5; Watch Dog; NMI; KVM with dedicated LAN; Intel® Node Manager; Redfish API; SPM; SUM; SSM |
| 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 | Height: 3.5" (88.9 mm)<br>Width: 17.2" (436.88 mm)<br>Depth: 22.6" (574 mm)<br>Gross Weight: 47.4 lbs (21.5 kg)<br>Net Weight: 34.4 lbs (15.6 kg)<br>Packaging: 9.7" (H) x 23.5" (W) x 36.9" (D)<br>Available Color: Silver |
| Operating Environment | Operating Temperature: 5°C ~ 35°C (41°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 |