

IoT SuperServer SYS-221HE-FTNR



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 Enclosure: 436.88 x 88.9 x 574mm (17.2" x 3.5" x 22.6") Package: 598 x 247 x 938mm (23.5" x 9.7" x 36.9")
Processor	Dual Socket E (LGA-4677) 5th Gen Intel® Xeon®/4th Gen Intel® Xeon® Scalable processors Supports Intel Xeon CPU Max Series with high bandwidth memory (HBM) Up to 60C/120T; Up to 112.5MB Cache per CPU
GPU	Supported GPU: Intel PCIe: Intel Data Center GPU Flex 170 NVIDIA PCIe: H100,A2,L40,L40S,A40,A10 CPU-GPU Interconnect: PCIe 5.0 x16 CPU-to-GPU Interconnect GPU-GPU Interconnect: PCIe
System Memory	Slot Count: 32 DIMM slots/16 Channels Max Memory (2DPC): Up to 8TB 5600MT/s ECC DDR5 RDIMM
Drive Bays	6x 2.5" hot-swap NVMe/SATA/SAS drive bays (6x 2.5" NVMe hybrid)(SAS support requires additional parts. Please see the Optional Parts list.) 2 M.2 NVMe OR 2 M.2 SATA3 M-Key, 2280/22110
Expansion Slots	3 PCIe 5.0 x16 or x8 FHFL slot(s) 3 (Optional) PCIe 5.0 x8 FHFL slot(s) 1 PCIe 5.0 x8 or (Optional) x16 FHHL slot(s) 1 PCIe 5.0 x8 FHHL or Disable slot(s) Note: 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; 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 NVMe: NVMe; RAID 0/1/5/10 support (Intel® VROC RAID Key required) Chipset: Intel® C741 Network Connectivity: 2x 25GbE SFP28 with Broadcom® BCM57414 (optional) 2x 100GbE QSFP28 with Broadcom® BCM57508 (optional) 2x 100GbE QSFP28 with Intel® E810-CAM2 (optional) 2x 100GbE QSFP28 or 4x 10GbE SFP+ with Intel® X710-BM2 (optional) 2x 200GbE QSFP56 with Mellanox® CX-6 VPI (optional) 2x 100GbE QSFP56 with Mellanox® CX-6 DX (optional) 2x 1GbE BaseT with Intel® I350-AM2 (optional) 4x 10GbE RJ45/SFP+ with Intel® X710-TM4 (optional) 1x 400GbE OSFP with NVIDIA® CX-7 NDR (optional) 4x 10GbE BaseT with Intel® X550 (optional)

IPMI: Support for Intelligent Platform Management Interface v.2.0
IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

Input / Output

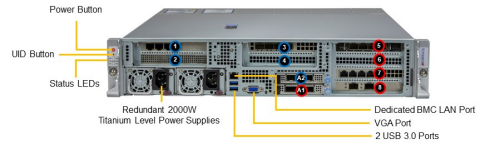
LAN: 1 RJ45 Dedicated BMC LAN port
USB: 2 USB 2.0 port(s) (2 front)
Video: 1 VGA port(s)

(Rear View – System)



Slot	Description
1 – 3	2.5" Hot-swap NVMe/SATA3 Drive Bays (NVMe from CPU1)
4 – 6	2.5" Hot-swap 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)	6	PCIe 5.0 x16 (FHFL)	PCIe 5.0 x16 (FHFL)
2	---	7	---	---
3	PCIe 5.0 x16 (FHFL)	8	PCIe 5.0 x8 (FHHL)	PCIe 5.0 x16 (FHH4)
4	---	9	PCIe 5.0 x8 (FHHL)	---
5	PCIe 5.0 x8 (FHFL)	10	PCIe 5.0 x8 (FHH4)	---
6	---	11	PCIe 5.0 x8 (FHH4)	---

Slot Description
AIOM / OCP-INC 3.0 slot
AIOM / OCP-INC 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 2U RSC to optional 2U RSC is required



System Cooling	Fans: 6 Counter-rotating, Hot-swappable 6cm Fan(s) Liquid Cooling: 1Direct to Chip (D2C) Cold Plate (optional)
Power Supply	2x 2000W Redundant Titanium (certification pending) Level power supplies
System BIOS	BIOS Type: AMI 256MB SPI Flash
Management	Redfish API; Supermicro Server Manager (SSM); Supermicro Power Manager (SPM); Supermicro Update Manager (SUM); SuperDoctor® 5; Super Diagnostics Offline ; KVM with dedicated LAN ; IPMI 2.0
PC Health Monitoring	CPU: Monitors for CPU Cores, Chipset Voltages, Memory FAN: Fans with tachometer monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors Temperature: Monitoring for CPU and chassis environment Thermal Control for fan connectors
Dimensions and Weight	Height: 3.5" (88.9 mm) Width: 17.2" (436.88 mm) Depth: 22.6" (574 mm) Gross Weight: 47.4 lbs (21.5 kg) Net Weight: 34.4 lbs (15.6 kg) Packaging: 9.7" (H) x 23.5" (W) x 36.9" (D) Available Color: Silver
Operating Environment	Operating Temperature: 0°C ~ 35°C (32°F ~ 95°F) Non-operating Temperature: -40°C to 70°C (-40°F to 158°F) Operating Relative Humidity: 8% to 90% (non-condensing) Non-operating Relative Humidity: 5% to 95% (non-condensing)
Motherboard	Super X13DEM
Chassis	CSE-HE211-R000NFP