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

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 1300W -48V DC 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 64C/128T; Up to 320MB Cache per CPU
GPU	Max GPU Count: Up to 3 double-width or 3 single-width GPUs Supported GPU: NVIDIA PCIe: H100, L40, L40S, A40, A2, A10 　　　　　　　　Intel PCIe: Intel Data Center GPU Flex 170 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 Configuration	Default: Total 6 bays 　• 6 front hot-swap 2.5" NVMe/SAS*/SATA drive bays (*SAS support may require additional storage controller and/or cables) M.2: 2 M.2 NVMe/SATA slots (M-key 2280/22110)
Expansion Slots	Default 　• 3 PCIe 5.0 x16 FHFL slots 　• 2 PCIe 5.0 x8 FHHL slots 　• 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible) Option A 　• 6 PCIe 5.0 x8 FHFL slots 　• 2 PCIe 5.0 x8 FHHL slots 　• 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible) Option B 　• 3 PCIe 5.0 x16 FHFL slots 　• 1 PCIe 5.0 x16 FHHL slot 　• 2 PCIe 5.0 x16 AIOM slots (OCP 3.0 compatible)
On-Board Devices	SATA: SATA (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: 2 SFP28 25GbE with Broadcom® BCM57414 (optional) 　　　　　　　　　　　　2 QSFP28 100GbE with Broadcom® BCM57508 (optional) 　　　　　　　　　　　　2 QSFP28 100GbE with Intel® E810-CAM2 (optional) 　　　　　　　　　　　　2 QSFP28 100GbE (optional) 　　　　　　　　　　　　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
	USB: 2 USB 2.0 ports(front)
	Video: 1 VGA port

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)

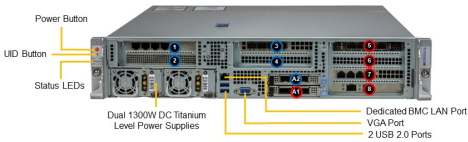4 RJ45 10GbE with Intel® X550 (optional)

(Rear View – System)

(Front View – System)

Power Button
UID Button
Status LEDs
Dual 1300W DC Titanium Level Power Supplies
Dedicated BMC LAN Port
VGA Port
2 USB 2.0 Ports

Drive Bay	Description
0 – 3	4 Hot-swap 2.5" NVMe/SATA3 Drive Bays (NVMe from CPU1)
4 – 5	2 Hot-swap 2.5" NVMe/SATA3 Drive Bays (NVMe from CPU2)

Slot Description		
	Default	Option 1*
1	PCIe 5.0 x16 FHFL	PCI-E 5.0 x8 FHFL
2	...	PCI-E 5.0 x8 FHFL
3	PCIe 5.0 x16 FHFL	PCI-E 5.0 x8 FHFL
4	...	PCI-E 5.0 x8 FHFL

Slot Description		
	Default	Option 1	Option 2**
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 Slot
A1	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 2U RSC to optional 2U RSC is required.

CPU1 CPU2

System Cooling

Fans: 6 Counter-rotating, Hot-swappable 6cm Fan(s)

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
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

Weight: Gross Weight: 47.4 lbs (21.5 kg)
    Net Weight: 34.4 lbs (15.6 kg)
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