

IoT SuperServer SYS-221HE-TNRD

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



More details here

Key Applications

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

Key Features

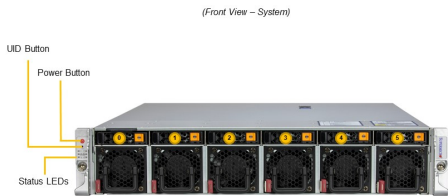
- Dual Socket E (LGA-4677) 5th/4th Gen Intel® Xeon® Scalable processors;
- 32 DIMM slots supporting up to 8TB of memory; RDIMMs up to DDR5-5600;
- Configurable PCIe slot options up to 8 PCIe 5.0 x8 (6 FHFL + 2 FHHL) or 4 PCIe 5.0 x16 (3 FHFL + 1 FHHL);
- Flexible networking options with 2 AIOM networking 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 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")
GPU	Max GPU Count: Up to 3 double-width or 3 single-width GPUs Supported GPU: NVIDIA PCIe: A2, RTX 5000, RTX 6000, RTX A4000 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 (*NVMe/SAS/SATA 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)

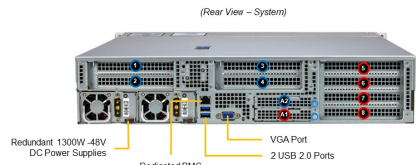
Input / Output

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



Drive Bay	Description
1 - 2	2.5" Hot-swap NVMe/SATA/SAS* Drive Bays (NVMe from CPU1)
3 - 6	2.5" Hot-swap NVMe/SATA/SAS* Drive Bays (NVMe from CPU2)

*SAS2 support requires additional parts from the optional parts list



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	
A1 OM/OCN NIC 3.0 (optional)	
A2 OM/OCN NIC 3.0	

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

CPU1 CPU2

System Cooling

Fans: Up to 6 Counter-rotating, Hot-swappable 6cm Fan(s)
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
FAN: Fans with tachometer monitoring
Pulse Width Modulated (PWM) fan connectors
Status monitor for speed control
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 to 35°C (32°F to 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