

# IoT SuperServer SYS-220HE-TNRD

X12 DP 2U Short-depth rear I/O System with 6 NVMe/SATA bays and redundant DC PSU



## Key Applications

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

## Key Features

- Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors;
- 32 DIMM Slots; Up to 8TB DRAM; Up to 8TB Intel® Optane™ Persistent Memory (up to 12TB with DRAM); 3200/2933/2666 ECC DDR4 LRDIMM; RDIMM; Intel® Optane™ Persistent Memory 200 series;
- 3 PCIe 4.0 x16 slots with GPU/Accelerator support (Default); 1 PCIe 4.0 x16 expansion slots (Optional);
- 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 Rear I/O, tool-less design;
- 1300W 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 P+ (LGA-4189)  
3rd Gen Intel® Xeon® Scalable processors

### GPU

Max GPU Count: Up to 3 double-width or 3 single-width GPUs  
Supported GPU: NVIDIA PCIe: A10, A100, A40, T4  
CPU-GPU Interconnect: PCIe 4.0 x16 CPU-to-GPU Interconnect  
GPU-GPU Interconnect: PCIe

### System Memory

Slot Count: 32 DIMM slots  
Max Memory (2DPC): Up to 8TB 3200MT/s ECC DDR4 RDIMM/LRDIMM

### 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, please see the optional parts list for details)  
M.2: 2 M.2 NVMe/SATA slots (M-key 2280/22110)

### Expansion Slots

Default  
• 2 PCIe 4.0 x8 FH/10.5"L slots  
• 2 PCIe 4.0 x8 FHH slots  
• 2 PCIe 4.0 x16 AIOM slots (OCP 3.0 compatible)  
Option A  
• 1 PCIe 4.0 x16 FH/10.5"L slot  
• 1 PCIe 4.0 x16 FHH slot  
• 2 PCIe 4.0 x16 AIOM slots (OCP 3.0 compatible)  
Option B  
• 6 PCIe 4.0 x8 FH/10.5"L slots  
• 2 PCIe 4.0 x8 FHH slots  
• 2 PCIe 4.0 x16 AIOM slots (OCP 3.0 compatible)  
Option C  
• 3 PCIe 4.0 x16 FH/10.5"L slots  
• 1 PCIe 4.0 x16 FHH slot  
• 2 PCIe 4.0 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)  
Network Connectivity: Via AIOM  
BMC: ASPEED AST2600 BMC

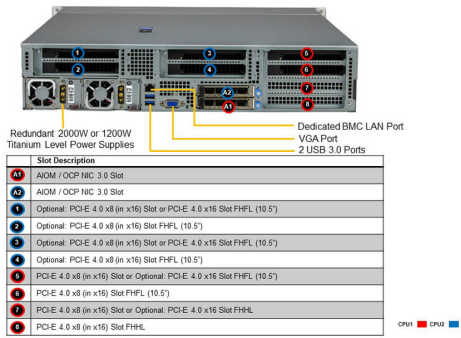
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|----------------|-----------------------------------------------------------------------------------------------|
| Input / Output | LAN: 1 RJ45 1 GbE Dedicated BMC LAN port<br>USB: 2 USB 2.0 ports (front)<br>Video: 1 VGA port |
|----------------|---------------------------------------------------------------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



(Rear View – System)

| Slot   | Description                                                 |
|--------|-------------------------------------------------------------|
| 1 – 6  | 2.5" Hot-swap NVMe/SAS3*/SATA3 Drive Bays (NVMe from CPU1)* |
| 7 – 12 | 2.5" Hot-swap NVMe/SAS3*/SATA3 Drive Bays (NVMe from CPU2)* |

\*SAS3 support requires additional parts in optional parts list



|                       |                                                                                                                                                                                                                                                                                  |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System Cooling        | Fans: Up to 6 Hot-swappable 60x60x56mm Fan(s)<br>Air Shroud: 4 Air Shrouds                                                                                                                                                                                                       |
| Power Supply          | 1x 1300W Redundant power supply                                                                                                                                                                                                                                                  |
| Management            | SuperCloud Composer® (SCC); 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>Pulse Width Modulated (PWM) fan connectors<br>Status monitor for speed control<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: 5°C to 35°C (41°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 X12DHM-6</a>                                                                                                                                                                                                                                                   |
| Chassis               | CSE-HE211-R000NFP                                                                                                                                                                                                                                                                |