

Hyper SuperServer SYS-212HA-TN

2U UP Hyper supporting up to 24 hot-swap 2.5" NVMe/SAS/SATA bays and up to 4 PCIe 5.0 + 1 PCIe 5.0 AIOM slots



Key Applications

Virtualization, Software-defined Storage, AI Inference and Machine Learning, Cloud Computing, Enterprise Server, Data Center Optimized, Database Processing and High Density Storage,

Key Features

- Hyper is a flagship performance rackmount server designed for scale-out cloud workloads.;
- Single Intel® Xeon® 6900-Series Processors with P-cores and Xeon 6+ processors;
- 12 DIMM slots support RDIMM / MRDIMM;
- Double width add-on card support.;
- Flexible networking options with 1 AIOM networking slot (OCP NIC 3.0 compatible).;
- Breeze through high throughput workloads with PCIe 5.0 NVMe drive support.;
- Trusted Platform Module (TPM) 2.0 onboard.;
- Modularized and Tool-less design for easy serviceability.;



Form Factor	2U Rackmount Enclosure: 437 x 88.9 x 806.2mm (17.2" x 3.5" x 31.74") Package: 672 x 253 x 1100mm (26.46" x 9.96" x 43.31")
Processor	Single Socket BR (LGA-7529) Intel® Xeon® 6900 Series processors with P-cores and Intel Xeon 6+ processors P-cores: Up to 128C/256T; Up to 504MB Cache E-cores: Up to 288C/288T; Up to 576MB Cache
GPU	Max GPU Count: Up to 1 double-width or 2 single-width GPUs Supported GPU: NVIDIA PCIe: H100 NVL, L4, L40S, NVIDIA RTX PRO 2000 Blackwell, NVIDIA RTX PRO™ 4000 Blackwell, NVIDIA RTX PRO™ 4500 Blackwell, NVIDIA RTX PRO™ 4500 Blackwell Server Edition, NVIDIA RTX PRO™ 5000 Blackwell Intel PCIe: Intel Data Center GPU Flex 170 CPU-GPU Interconnect: PCIe 5.0 x16 CPU-to-GPU Interconnect
System Memory	Slot Count: 12 DIMM slots Max Memory (1DPC): Up to 3TB 8800MT/s ECC DDR5 MRDIMM (P-core only) Max Memory (1DPC): Up to 1.5TB 8000MT/s ECC DDR5 RDIMM (E-core) Max Memory (1DPC): Up to 3TB 6400MT/s ECC DDR5 3DS RDIMM (P-core only)
Drive Bays Configuration	Default: Total 8 bays <ul style="list-style-type: none"> • 8 front hot-swap 2.5" NVMe*/SAS*/SATA* drive bays Option A: Total 24 bays <ul style="list-style-type: none"> • 24 front hot-swap 2.5" SAS*/SATA* drive bays Option B: Total 16 bays <ul style="list-style-type: none"> • 16 front hot-swap 2.5" SAS*/SATA* drive bays Option C: Total 4 bays <ul style="list-style-type: none"> • 4 front hot-swap 2.5" NVMe* drive bays (*NVMe/SAS/SATA support may require additional storage controller and/or cables, please see the optional parts list for details) M.2: 2 M.2 NVMe slots (M-key 2280/22110/25110; VROC required for RAID)
Expansion Slots	Option A* <ul style="list-style-type: none"> • 1 PCIe 5.0 x16 FH/10.5"L double-width slot • 1 PCIe 5.0 x8 FHFL slot • 1 PCIe 5.0 x16 FHFL double-width slot • 1 PCIe 5.0 x16 AIOM slot (OCP 3.0 compatible) Option B* <ul style="list-style-type: none"> • 2 PCIe 5.0 x8 FH/10.5"L slots • 1 PCIe 5.0 x8 FHHL slot

- 1 PCIe 5.0 x16 FHFL double-width slot
- 1 PCIe 5.0 x16 AIOM slot (OCP 3.0 compatible)

Option C*

- 1 PCIe 5.0 x16 FH/10.5"L double-width slot
- 2 PCIe 5.0 x16 FHFL double-width slots

On-Board Devices

NVMe: NVMe; RAID 0/1/5/10 support(Intel® VROC RAID key required)
Network Connectivity: Via AIOM

Input / Output

LAN: 1 RJ45 1 GbE Dedicated BMC LAN port
USB: 2 USB 3.2 Gen1 ports(Rear)
Video: 1 VGA port

(Front View – System)



Slot	Description
0 - 7	2.5" Hot-swap NVMe/SAS/SATA3 Drive Bays*

*NVMe, SAS3, or SATA3 support requires additional parts from the optional parts list

(Rear View – System)



Slot Description	Option 1	Option 2	Option 3
1	Not Available	PCIe 5.0 x8 (in x16)†	PCIe 5.0 x8 (in x16)†
2	Not Available	Not Available	PCIe 5.0 x8 (in x16)†
3	PCIe 5.0 x16†	PCIe 5.0 x8 (in x16)†	PCIe 5.0 x8 (in x16)†
4	Not Available	PCIe 5.0 x8 (in x16)†	PCIe 5.0 x8 (in x16)†

Slot Description	Option 1	Option 2
5	PCIe 5.0 x8 (in x16)†	Not Available
6	PCIe 5.0 x8 (in x16)†	Not Available

Slot Description	
11	AIOM / OCP NIC 3.0 Slot
12	Not Available

†Requires additional parts from the optional parts list

System Cooling	Fans: Up to 6 counter-rotating 60x60x56mm Fan(s)
Power Supply	2x 1200W Redundant (1 + 1) Titanium Level (96%) power supplies
System BIOS	BIOS Type: AMI 64MB SPI Flash
Management	SuperCloud Composer® (SCC); Supermicro Server Manager (SSM); 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: 75 lbs (34 kg) Net Weight: 45 lbs (20.5 kg) Available Color: Silver
Operating Environment	Operating Temperature: 10°C to 35°C (50°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 X14SBH-AP
Chassis	CSE-HS201-R000NFP