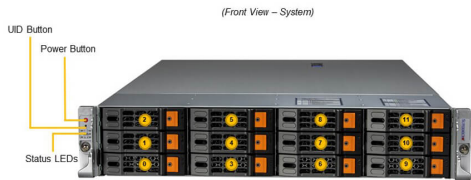# Hyper SuperServer SYS-620H-TN12R

Key Applications

Virtualization, Software-defined Storage, AI Inference and Machine Learning,
Cloud Computing, Enterprise Server,

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;
- Optional PCIe slot configurations up to 8 PCIe 4.0 x8 or 4 PCIe 4.0 x16 slots with support for double-width GPU/Accelerator cards;
- Flexible networking options with up to 2 AIOM networking slots (OCP NIC 3.0 compatible);
- 12x 3.5"/2.5" hot-swap NVMe/SATA/SAS drive bays; 2x internal M.2 NVMe/SATA drive slots; Optional RAID support via storage add-on card;
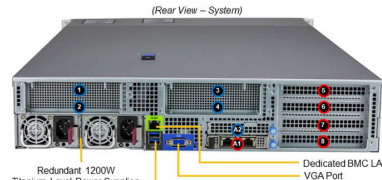- 4 heavy duty hot-swap fans with optimal fan speed control;

Form Factor	2U Rackmount Enclosure: 437 x 88.9 x 803mm (17.2" x 3.5" x 31.6") Package: 605 x 263 x 1107mm (23.8" x 10.4" x 43.6")
Processor	Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable processors Up to 40C/80T; Up to 60MB Cache per CPU
GPU	Max GPU Count: Up to 4 double-width GPU(s)
System Memory	Slot Count: 32 DIMM slots Max Memory (2DPC): Up to 8TB 3200MT/s ECC DDR4 Supports Intel® Optane™ persistent memory 200 series
Drive Bays	12x 3.5" hot-swap NVMe/SATA/SAS drive bays (NVMe, SATA, or SAS support requires additional parts. Please see the Optional Parts list.) 2 M.2 NVMe OR 2 M.2 SATA3 M-Key, 2280/2210
Expansion Slots	3 (Optional) PCIe 4.0 x16 or x8 FH, 10.5"L slot(s) 1 (Optional) PCIe 4.0 x8 FH, 10.5"L slot(s) 4 PCIe 4.0 x8 FH, 10.5"L 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; If Slot 7 is configured as PCIe x16, Slot 8 will be disabled. For 12 NVMe configurations, PCIe slots 1,2 cannot be used.
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® C621A Network Connectivity: 2x 1GbE BaseT with Intel® i350-AM2 (optional) 4x 1GbE BaseT or 4x 1GbE SFP with Intel® i350-AM4 (optional) 2x 10GbE BaseT with Intel® X550-AT2 (optional) 2x 10GbE SFP+ with Intel® X710-BM2 (optional) 4x 10GbE SFP+ with Intel® XL710-BM1 (optional) 4x 10GbE RJ45/SFP+ with Intel® X710-TM4 (optional) 2x 25GbE SFP28 with Broadcom® BCM57414 (optional) 4x 25GbE RJ45/SFP28 with Mellanox® CX-4 Lx EN Intel® X550-AT2 (optional) 2x 100GbE QSFP28 with Broadcom® BCM57508 (optional) IPMI: Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

(Front View – System)

UID Button
Power Button
Status LEDs

Slot	Description
0 – 3	3.5" or 2.5" Hot-swap NVMe/SAS3/SATA3 Drive Bays (NVMe from CPU1)*
4 – 11	3.5" or 2.5" Hot-swap NVMe/SAS3/SATA3 Drive Bays (NVMe from CPU2)*

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

(Rear View – System)

Redundant 1200W
Titanium Level Power Supplies
Dedicated BMC LAN Port
VGA Port
2 USB 3.0 Ports

Slot Description

	Option 1*	Option 2*	Option 3*
1	PCI-E 4.0 x8 (in x16)	PCI-E 4.0 x16	2x Hot-Swap 2.5" NVMe Drive Bays (CPU 1)
2	PCI-E 4.0 x8 (in x16)	—	

Slot Description

	Option 1*	Option 2*	Option 3*
3	PCI-E 4.0 x8 (in x16)	PCI-E 4.0 x16	2x Hot-Swap 2.5" NVMe Drive Bays (CPU 2)
4	PCI-E 4.0 x8 (in x16)	—	

*Requires additional parts in optional parts list

Slot Description

	Default	Option 1	Option 2*
5	PCI-E 4.0 x8 (in x16)	PCI-E 4.0 x16	PCI-E 4.0 x16
6	PCI-E 4.0 x8 (in x16)	—	—
7	PCI-E 4.0 x8 (in x16)	PCI-E 4.0 x8 (in x16)	PCI-E 4.0 x16
8	PCI-E 4.0 x8 (in x16)	PCI-E 4.0 x8 (in x16)	—

Slot Description

A1	AIOM / OCP NIC 3.0 Slot
A2	(Optional) AIOM / OCP NIC 3.0 Slot*

CPU1 ■ CPU2 ■

System Cooling	Fans: 4x 8cm heavy duty fans with optimal fan speed control Air Shroud: 2 Air Shroud(s)
Power Supply	2x 1200W Redundant Titanium 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" (437 mm) Depth: 31.6" (803 mm) Gross Weight: 63 lbs (28.6 kg) Net Weight: 37 lbs (16.8 kg) Packaging: 10.4" (H) x 23.8" (W) x 43.6" (D) Available Color: N/A
Operating Environment	Operating Temperature: 10°C ~ 35°C (50°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 X12DHM-6](#)
Chassis	CSE-HS829-R1K24P