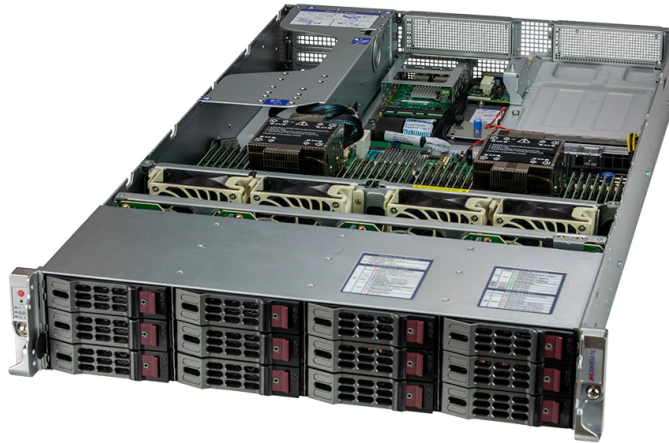


Hyper SuperServer SYS-620H-TN12R (Complete System Only)

COMING SOON



Key Applications

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

Key Features

1. Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors
2. 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. Configurable PCI-E slot options up to 8 PCI-E 4.0 x8 or 4 PCI-E 4.0 x16 slots with support for double-width GPU/Accelerator cards
4. Flexible networking options with up to 2 AIOM networking slots (OCP NIC 3.0 compatible)
5. 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
6. 4 heavy duty hot-swap fans with optimal fan speed control

Specifications

Product SKUs

- SYS-620H-TN12R**
 - SuperServer SYS-620H-TN12R

Motherboard

Super X12DHM-6

Processor

- CPU**
 - Dual Socket P+ (LGA-4189)
 - 3rd Gen Intel® Xeon® Scalable processors
 - Support CPU TDP 270W

- Cores**
 - Up to 40C/80T; Up to 60MB Cache

System Memory

- Memory**
 - Memory Capacity: 32 DIMM slots
 - Up to 8TB: 32x 256 GB DRAM
 - Up to 12TB: 16x 512 GB PMem and 16x 256 GB DRAM
 - Memory Type: 3200MHz ECC DDR4
 - Intel® Optane™ persistent memory 200 series

- Memory Voltage**
 - 1.2 V

- Error Detection**
 - ECC

On-Board Devices

- Chipset**
 - Intel® C621A

- Network Connectivity**
 - 2x 1GbE BaseT with Intel® i350-AM2 (optional)
 - 4x 1GbE SFP or 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)
 - 4x 1GbE BaseT with Intel® i350-AM4 (optional)

- IPMI**
 - Support for Intelligent Platform Management Interface v.2.0
 - IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

System BIOS

Chassis

- Form Factor**
 - 2U Rackmount

- Model**
 - CSE-HS829-R1K24P

Dimensions and Weight

- Height**
 - 3.5" (88.9mm)

- Width**
 - 17.2" (436.88mm)

- Depth**
 - 31.6" (803mm)

- Package**
 - 10.07" (H) x 23.81" (W) x 37.28" (D)

- Weight**
 - Net Weight: 37 lbs (16.8 kg)
 - Gross Weight: 63 lbs (28.6 kg)

- Available Color**
 - N/A

Front Panel

- Buttons**
 - Power On/Off
 - UID button

- LEDs**
 - HDD activity
 - LAN1 activity
 - Power status
 - System information

Expansion Slots

- PCI-Express (PCI-E)**
 - Slot 1: (Optional) PCI-E 4.0 x16 or x8 FH, 10.5"L
 - Slot 2: (Optional) PCI-E 4.0 x8 FH, 10.5"L
 - Slot 3: (Optional) PCI-E 4.0 x16 or x8 FH, 10.5"L
 - Slot 4: (Optional) PCI-E 4.0 x16 or x8 FH, 10.5"L
 - Slot 5: PCI-E 4.0 x8 FH, 10.5"L
 - Slot 6: PCI-E 4.0 x8 FH, 10.5"L
 - Slot 7: PCI-E 4.0 x8 FH, 10.5"L
 - Slot 8: PCI-E 4.0 x8 FH, 10.5"L

- Note**
 - If Slot 1 is configured as PCI-E x16, Slot 2 will be disabled; If Slot 3 is configured as PCI-E x16, Slot 4 will be disabled; If Slot 5 is configured as PCI-E x16, Slot 6 will be disabled; If Slot 7 is configured as PCI-E x16, Slot 8 will be disabled.**

Drive Bays / Storage

- Hot-swap**
 - 12x 3.5" hot-swap NVMe/SATA/SAS drive bays (NVMe, SATA, or SAS support requires additional parts. Please see the Optional Parts list.)

- M.2**
 - 2 M.2 NVMe OR 2 M.2 SATA3

System Cooling

BIOS Type	<ul style="list-style-type: none"> AMI 256MB SPI Flash
Management	
Software	<ul style="list-style-type: none"> Redfish API <u>IPMI 2.0</u> <u>SSM</u> Intel® Node Manager <u>SPM</u> KVM with dedicated LAN <u>SUM</u> NMI Watch Dog SuperDoctor® 5
Power Configurations	<ul style="list-style-type: none"> Power-on mode for AC power recovery ACPI Power Management
PC Health Monitoring	
CPU	<ul style="list-style-type: none"> Monitors for CPU Cores, Chipset Voltages, Memory
FAN	<ul style="list-style-type: none"> Fans with tachometer monitoring Pulse Width Modulated (PWM) fan connectors Status monitor for speed control
Temperature	<ul style="list-style-type: none"> Monitoring for CPU and chassis environment Thermal Control for fan connectors

Fans	<ul style="list-style-type: none"> 4x 8cm heavy duty fans with optimal fan speed control
Air Shroud	<ul style="list-style-type: none"> 2 Air Shroud(s)
Power Supply	
1200W Redundant Power Supplies with PMBus	
Dimension (W x H x L)	<ul style="list-style-type: none"> 73.5 x 40 x 265 mm
AC Input	<ul style="list-style-type: none"> 800W: 100-127Vac / 9.8A-7A / 50-60Hz 1200W: 200-240Vac / 7.5A-6A / 50-60Hz
+12V	<ul style="list-style-type: none"> Max: 83A / Min: 0A (100Vac-127Vac) Max: 166A / Min: 0A (200Vac-220Vac)
12V SB	<ul style="list-style-type: none"> Max: 2.1A / Min: 0A
Output Type	<ul style="list-style-type: none"> 25 Pairs Gold Finger Connector
Certification	<p>[Test Report]</p>

Operating Environment

Environmental Spec.	<ul style="list-style-type: none"> 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)
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Parts List

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X12DHM-6	1	Super X12DHM-6 Motherboard
	CSE-HS829-R1K24P	1	2U Chassis
Add-on Card / Module	AOM-HS119-IO-P	1	Hyper IO Board,RoHS
Backplane	BPN-SAS3-LA26A-N12	1	2U 12-Slot LFF Backplane Supports 12 x SAS3/SATA3/NVMe4 Storage Devices with 1x(2x4) + 4x(1x4) power connectors, co-lay with BPN-SAS3-LA26A-N12,HF,RoHS
Cable 1	CBL-GNZ4-1261-85	1	GENZ4C x16 (STR) to GENZ4C x16 (STR),8CM,85 OHM,RoHS
Cable 2	CBL-PWEX-1142-40	1	MicroHi,(2x4 to 2x4),PH3.0,40CM,8A/pin,18AWG,RoHS
Cable 3	CBL-SAST-1222LP-85	1	SlimlineLP X8 (STR) to SlimlineLP x8 (STR),27CM,85 OHM,
Cable 4	CBL-SAST-1225LP	1	SlimlineLP x8 (LE) to SlimlineLP x8 (RA),30CM,75/85/100,
Cable 5	CBL-SAST-1226LP-85	1	SlimlineLP X8 (STR) to SlimlineLP x8 (STR),25CM,85 OHM,
Riser Card	RSC-H2-6888G4L	1	2U LHS Hyper riser card with One PCI-E 4.0x16andthreePCI
Software	SFT-OOB-LIC	1	License key for enabling OOB BIOS management
Heatsink / Retention	SNK-P0078P	2	2U Passive CPU Heat Sink for X12 Generation Intel Whitley and Cedar Island Platforms
*Power Supply	PWS-1K24A-1R	2	1U 800W/1200W Redundant Titanium CRPS w/PMBus power supply,
*Cable 6	CBL-CDAT-0676-66	1	[NR] FRONT CNTL,20 TO 20 PIN,PH0.5, FFC,FLAT,66CM,STD
*Cable 7	CBL-PWCD-0160-IS	2	PWCD,US,NEMA5-15P TO IEC60320 C13,6FT,16AWG,RoHS/REACH
*FAN 1	FAN-0223L4	4	80x80x38 mm, 13.5K RPM Exhaust Fan for 2U Hyper-S(HS219),RoH
*Front Panel	FPB-FP826-T	1	Chassis front control board for SC826
*Drive Tray(s)	MCP-221-A0901-6B	12	Metallic Black gen-9.1 hot-swap tool-less 3.5" HDD tray orange tab

Notes:

- Parts with * are inside the chassis
- Excessive parts might not be shipped, including but not limited to excessive drive trays, fans, riser brackets, air shrouds, IO shields, cables.....etc.

Optional Parts List

	Part Number	Qty	Description
12 Drive Bay Configuration (Select one from options A-F)	(A) 12 NVMe: CBL-KIT-620H-TN12R-12-1	1	12 NVMe cable kit for drive bays 0-11
	(F) 8 SATA + 4 NVMe: CBL-SAST-1258LP-100 & CBL-SAST-1203LP-85 & CBL-SAST-1204LP-85	-	8 SATA via onboard Intel® PCH for drive bays 4-11 + 4 NVMe for drive bays 0-3

	(E) 8 SAS/SATA + 4 NVMe: AOC-S3808L-L8IT-O & CBL-SAST-1296F-100 & CBL-SAST-1203LP-85 & CBL-SAST-1204LP-85	-	8 SAS/SATA (HBA/IT Mode) via Broadcom 3808 for drive bays 4-11 + 4 NVMe for drive bays 0-3
	(B) 12 SAS/SATA (RAID): AOC-S3916L-H16IR-32DD-O & CBL-SAST-1276F-100 & CBL-SAST-1201F-100	-	12 SAS/SATA (HW RAID) via Broadcom 3916 (RAID 0, 1, 5, 6, 10, 50, 60) for drive bays 0-11
	(D) 8 SAS/SATA (RAID) + 4 NVMe: AOC-S3908L-H8IR-16DD-O & CBL-SAST-1296F-100 & CBL-SAST-1203LP-85 & CBL-SAST-1204LP-85	-	8 SAS/SATA (HW RAID) via Broadcom 3908 (RAID 0, 1, 5, 6, 10, 50, 60) for drive bays 4-11 + 4 NVMe for drive bays 0-3
	(C) 12 SAS/SATA: AOC-S3816L-L16IT-O & CBL-SAST-1276F-100 & CBL-SAST-1201F-100	-	12 SAS/SATA (HBA/IT Mode) via Broadcom 3816 for drive bays 0-11
14 Drive Bay Configuration (Select one from options A-B)	(B) 12 SAS/SATA + 2 NVMe: AOC-S3816L-L16IT-O & CBL-SAST-1276F-100 & CBL-SAST-1201F-100 & MCP-450-21905-ASM	-	12 SAS/SATA (HBA/IT Mode) via Broadcom 3816 for drive bays 0-11 + 2 NVMe for rear drive bays in rear slots 1-2
	(A) 12 SAS/SATA (RAID) + 2 NVMe: AOC-S3916L-H16IR-32DD-O & CBL-SAST-1276F-100 & CBL-SAST-1201F-100 & MCP-450-21905-ASM	-	12 SAS/SATA (HW RAID) via Broadcom 3916 (RAID 0, 1, 5, 6, 10, 50, 60) for drive bays 0-11 + 2 NVMe for rear drive bays in rear slots 1-2
16 Drive Bay Configuration (Select one from options A-B)	(B) 12 SAS/SATA + 4 NVMe: AOC-S3816L-L16IT-O & CBL-SAST-1276F-100 & CBL-SAST-1201F-100 & 2x MCP-450-21905-ASM	-	12 SAS/SATA (HBA/IT Mode) via Broadcom 3816 for drive bays 0-11 + 4 NVMe for rear drive bays in rear slots 1-4

	(A) 12 SAS/SATA (RAID) + 4 NVMe: AOC-S3916L-H16IR-32DD-O & CBL-SAST-1276F-100 & CBL-SAST-1201F-100 & 2x MCP-450-21905-ASM	-	12 SAS/SATA (HW RAID) via Broadcom 3916 (RAID 0, 1, 5, 6, 10, 50, 60) for drive bays 0-11 + 4 NVMe for rear drive bays in rear slots 1-4
2nd AIOM/OC NIC 3.0 Slot	MCP-450-21904-ASM	1	AIOM slot A2 kit for SYS-620H/220H
Drive Bay Cover	MCP-290-82521-0B	-	Drive bay cover for one 3.5" drive bay
Drive Tray Label	LBL-0968	-	Pack of 4 "NVMe" labels for hot-swap drive tray
Global Services & Support	<u>SMSAD3/2/1</u>	-	Bronze Level, 3/2/1-year 3BD SLA
	<u>OSNBD3/2/1</u>	-	Silver Level, 3/2/1-year onsite NBD SLA
	<u>OS4HR3/2/1</u>	-	Gold Level, 3/2/1-year onsite 24x7x4 SLA
Intel® VROC RAID Key Options	<u>AOC-VROCPREMOD</u>	1	Intel VROC Premium, RAID 0, 1, 5, 10
	<u>AOC-VROCSTNMOD</u>	1	Intel VROC Standard, RAID 0, 1, 10
	<u>AOC-VROCINTMOD</u>	1	Intel VROC, RAID 0, 1, 5, 10 (Intel SSD Only)
PCI-E Riser Card Kit for Rear Slots 1-2	MCP-450-21901-ASM	1	Slots 1-2 PCI-E riser card kit configurable for 2x PCI-E 4.0 x8 slots or 1x PCI-E 4.0 x16 slot
PCI-E Riser Card Kit for Rear Slots 3-4	MCP-450-21902-ASM	1	Slots 3-4 PCI-E riser card kit configurable for 2x PCI-E 4.0 x8 slots or 1x PCI-E 4.0 x16 slot
Software	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)
Trusted Platform Module Options	AOM-TPM-9671V-O	1	SPI capable vertical TPM 1.2
	AOM-TPM-9670V-O	1	SPI capable vertical TPM 2.0
	AOM-TPM-9670V-S-FIPS-O	1	AOM-TPM-9670V-S-FIPS TPM 2.0 support TAA and FIPS