

Hyper SuperServer SYS-220H-TN24R (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. 24x 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-220H-TN24R	<ul style="list-style-type: none"> SuperServer SYS-220H-TN24R
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Motherboard

Super X12DHM-6

Processor

CPU	<ul style="list-style-type: none"> Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable processors Support CPU TDP 270W
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Cores	<ul style="list-style-type: none"> Up to 40C/80T; Up to 60MB Cache
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System Memory

Memory	<ul style="list-style-type: none"> 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
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Memory Voltage	<ul style="list-style-type: none"> 1.2 V
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Error Detection	<ul style="list-style-type: none"> ECC
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On-Board Devices

SATA	<ul style="list-style-type: none"> SATA3 (6Gbps); RAID 0/1/5/10 support
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NVMe	<ul style="list-style-type: none"> NVMe; RAID 0/1/5/10 support
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Chipset	<ul style="list-style-type: none"> Intel® C621A
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Network Connectivity	<ul style="list-style-type: none"> 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)
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IPMI	<ul style="list-style-type: none"> Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
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Chassis

Form Factor	<ul style="list-style-type: none"> 2U Rackmount
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Model	<ul style="list-style-type: none"> CSE-HS219-R1K63P
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Dimensions and Weight

Height	<ul style="list-style-type: none"> 3.5" (88.9mm)
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Width	<ul style="list-style-type: none"> 17.2" (436.88mm)
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Depth	<ul style="list-style-type: none"> 29.9" (760mm)
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Package	<ul style="list-style-type: none"> 9.96" (H) x 24.6" (W) x 45.43" (D)
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Weight	<ul style="list-style-type: none"> Net Weight: 40 lbs (18.2 kg) Gross Weight: 66 lbs (30 kg)
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Available Color	<ul style="list-style-type: none"> N/A
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Front Panel

Buttons	<ul style="list-style-type: none"> Power On/Off UID button
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LEDs	<ul style="list-style-type: none"> HDD activity LAN1 activity Power status System information
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Expansion Slots

PCI-Express (PCI-E)	<ul style="list-style-type: none"> 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: (Optional) PCI-E 4.0 x16 or x8 FH, 10.5"L Slot 6: (Optional) PCI-E 4.0 x8 FH, 10.5"L Slot 7: (Optional) PCI-E 4.0 x16 or x8 FH, 10.5"L Slot 8: (Optional) PCI-E 4.0 x8 FH, 10.5"L
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Note	<ul style="list-style-type: none"> For 16 NVMe configurations, PCI-E slots 1,2 and AIOM slot A2 cannot be used. For 24 NVMe configurations, PCI-E slots 3,4,5,6,7,8 and AIOM slot A2 cannot be used. For 8 NVMe configurations, AIOM slot A2 cannot be used. If PCI-E slot 1 is configured as x16, PCI-E slot 2 is disabled; If PCI-E slot 3 is configured as x16, PCI-E slot 4 is disabled; If PCI-E slot 5 is configured as x16, PCI-E slot 6 is disabled; If PCI-E slot 7 is configured as x16, PCI-E slot 8 is disabled.
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Drive Bays / Storage

Input / Output

LAN	▪ 1 RJ45 Dedicated BMC LAN port
USB	▪ 2 USB 3.0 port(s) (2 rear)
Video	▪ 1 VGA port(s)

System BIOS

BIOS Type	▪ AMI 256MB SPI Flash
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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	▪ 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

Hot-swap

- 24x 2.5" 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

Fans	▪ 4x 8cm heavy duty fans with optimal fan speed control
Air Shroud	▪ 2 Air Shroud(s)

Power Supply

1600W Redundant Power Supplies with PMBus

Dimension (W x H x L)	▪ 73.5 x 40 x 265 mm
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AC Input	<ul style="list-style-type: none"> ▪ 1000W: 100-127Vac / 12A-9A / 50-60Hz ▪ 1600W: 200-240Vac / 9A-7.5A / 50-60Hz
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+12V	<ul style="list-style-type: none"> ▪ Max: 83.3A / Min: 0A (100Vac-127Vac) ▪ Max: 133.3A / Min: 0A (200Vac-220Vac)
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12V SB	▪ Max: 3.5A / Min: 0A
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Output Type	▪ 25 Pairs Gold Finger Connector
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Certification

[[Test Report](#)]

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-HS219-R1K63P	1	2U Chassis
Add-on Card / Module	AOM-HS119-IO-P	1	Hyper IO Board,RoHS
Backplane	BPN-NVME4-HS219N-S24	1	2U 24-slot 2.5" NVMe/SAS/SATA backplane for Hyper CSE-219 chassis, requires +12V only as power source, using 12x SlimSASx8 connectors for NVMe and 6x SlimSASx4 connectors for SAS/SATA.,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-PWEX-1142-60	1	MicroHi,(2X4 to 2X4) P3.0,60CM,8A/pin,18AWG,RoHS
Cable 4	CBL-SAST-1225LP	1	SlimlineLP x8 (LE) to SlimlineLP x8 (RA),30CM,75/85/100,
Drive Tray(s)	MCP-220-00196-0B	24	Metallic black gen-3 hot-swap 2.5 NVMe tool-less tray
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-1K63A-1R	2	1U 1000W/1600W redundant single output power supply with inp
*Cable 5	CBL-CDAT-0676-66	1	[NR] FRONT CNTL,20 TO 20 PIN,PH0.5, FFC,FLAT,66CM,STD
*Cable 6	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

Notes:

1. Parts with * are inside the chassis
2. 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
24 Drive Bay Configuration (Select one from options A-H)	(A) 24 NVMe: CBL-KIT-220H-TN24R-24-1	1	24 NVMe kit for drive bays 0-23
	(G) 16 SAS/SATA (RAID) + 8 SAS/SATA (RAID): AOC-S3916L-H16IR-32DD-O & CBL-SAST-1276F-100 & CBL-SAST-1264F-100 AOC-S3908L-H8IR-16DD-O & CBL-SAST-1296F-100	-	16 SAS/SATA (HW RAID) via Broadcom 3916 (RAID 0, 1, 5, 6, 10, 50, 60) for drive bays 0-15 + 8 SAS/SATA (HW RAID) via Broadcom 3908 (RAID 0, 1, 5, 6, 10, 50, 60) for drive bays 16-23

	(F) 8 NVMe + 16 SAS/SATA: CBL-KIT-220H-TN24R-8-1 & AOC-S3816L-L16IT-O & CBL-SAST-1276F-100 & CBL-SAST-1264F-100	-	8 NVMe for drive bays 16-23 + 16 SAS/SATA (HBA/IT Mode) via Broadcom 3816 for drive bays 0-15
	(E) 8 NVMe + 16 SAS/SATA (RAID): CBL-KIT-220H-TN24R-8-1 & AOC-S3916L-H16IR-32DD-O & CBL-SAST-1276F-100 & CBL-SAST-1264F-100	-	8 NVMe for drive bays 16-23 + 16 SAS/SATA (HW RAID) via Broadcom 3916 (RAID 0, 1, 5, 6, 10, 50, 60) for drive bays 0-15
	(D) 16 NVMe + 8 SATA: CBL-KIT-220H-TN24R-16-1 & CBL-SAST-1258LP-100	-	16 NVMe for drive bays 8-23 + 8 SATA via onboard Intel® PCH for drive bays 0-7
	(C) 16 NVMe + 8 SAS/SATA: CBL-KIT-220H-TN24R-16-1 & AOC-S3808L-L8IT-O & CBL-SAST-1296F-100	-	16 NVMe for drive bays 8-23 + 8 SAS/SATA (HBA/IT Mode) via Broadcom 3808 for drive bays 0-7
	(B) 16 NVMe + 8 SAS/SATA (RAID): CBL-KIT-220H-TN24R-16-1 & AOC-S3908L-H8IR-16DD-O & CBL-SAST-1296F-100	-	16 NVMe for drive bays 8-23 + 8 SAS/SATA (HW RAID) via Broadcom 3908 (RAID 0, 1, 5, 6, 10, 50, 60) for drive bays 0-7
	(H) 16 SAS/SATA + 8 SAS/SATA: AOC-S3816L-L16IT-O & CBL-SAST-1276F-100 & CBL-SAST-1264F-100 AOC-S3808L-L8IT-O & CBL-SAST-1296F-100	-	16 SAS/SATA (HBA/IT Mode) via Broadcom 3816 for drive bays 0-15 + 8 SAS/SATA (HBA/IT Mode) via Broadcom 3808 for drive bays 16-23
2nd AIOM/OCP NIC 3.0 Slot	MCP-450-21904-ASM	1	AIOM slot A2 kit for SYS-620H/220H
Drive Tray Label	LBL-0968	-	Pack of 4 "NVMe" labels for hot-swap drive tray
Global Services & Support	SMSAD3/2/1	-	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-VROCIINTMOD</u>	1	Intel VROC, RAID 0, 1, 5, 10 (Intel SSD Only)
	<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
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

PCI-E Riser Card Kit for Rear Slots 5-8	MCP-450-21903-ASM	1	Slots 5-8 PCI-E riser card kit configurable for 4x PCI-E 4.0 x8 slots or 1x PCI-E 4.0 x16 slot + 2x PCI-E 4.0 x8 slots
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