

Specifications

Product SKUs		Chassis	
SYS-120H-TNR	<ul style="list-style-type: none"> SuperServer SYS-120H-TNR 	Form Factor	<ul style="list-style-type: none"> 1U Rackmount
Motherboard		Model	<ul style="list-style-type: none"> CSE-HS119-R1K24P
Super X12DHM-6		Dimensions and Weight	
Processor		Height	<ul style="list-style-type: none"> 1.7" (43mm)
CPU	<ul style="list-style-type: none"> Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable processors 3 UPI up to 11.2GT/s Support CPU TDP 270W * 	Width	<ul style="list-style-type: none"> 17.2" (437mm)
Cores	<ul style="list-style-type: none"> Up to 40C/80T; Up to 60MB Cache 	Depth	<ul style="list-style-type: none"> 29.36" (746mm)
Note	<ul style="list-style-type: none"> *Certain CPUs with high TDP may be supported only under specific conditions. Please contact Supermicro Technical Support for additional information about specialized system optimization 	Package	<ul style="list-style-type: none"> 7.99" (H) x 23.81" (W) x 37.4" (D)
System Memory		Weight	<ul style="list-style-type: none"> Net Weight: 34 lbs (15.4 kg) Gross Weight: 49 lbs (22.2 kg)
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 	Available Color	<ul style="list-style-type: none"> N/A
Memory Voltage	<ul style="list-style-type: none"> 1.2 V 	Front Panel	
Error Detection	<ul style="list-style-type: none"> ECC 	Buttons	<ul style="list-style-type: none"> Power On/Off UID button
On-Board Devices		LEDs	<ul style="list-style-type: none"> HDD activity LAN1 activity Power status System information
SATA	<ul style="list-style-type: none"> SATA3 (6Gbps); RAID 0/1/5/10 support 	Expansion Slots	
NVMe	<ul style="list-style-type: none"> NVMe (64GT/s); RAID 0/1/5/10 support 	PCI-Express (PCI-E)	<ul style="list-style-type: none"> Slot 1: PCI-E 4.0 x16 FH, 6.6"L Slot 2: PCI-E 4.0 x16 FH, 10.5"L Slot 3: PCI-E 4.0 x16 FH, 10.5"L
Chipset	<ul style="list-style-type: none"> Intel® C621A 	Drive Bays / Storage	
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) 	Hot-swap	<ul style="list-style-type: none"> 8x 2.5" hot-swap NVMe/SATA/SAS drive bays (8x 2.5" NVMe hybrid) (Configurable option for 12x 2.5" hot-swap NVMe/SAS/SATA drive bays. NVMe, SATA, or SAS support requires additional parts. Please see the Optional Parts list.)
Power Supply		M.2	<ul style="list-style-type: none"> 2 M.2 NVMe OR 2 M.2 SATA3
1200W Redundant Power Supplies with PMBus		System Cooling	
Dimension (W x H x L)	<ul style="list-style-type: none"> 73.5 x 40 x 265 mm 	Fans	<ul style="list-style-type: none"> 8x 4cm heavy duty fans with optimal fan speed control
AC Input	<ul style="list-style-type: none"> 800W: 100-127Vac / 9.8A-7A / 50-60Hz 1200W: 200-240Vac / 7.5A-6A / 50-60Hz 	Air Shroud	<ul style="list-style-type: none"> 2 Air Shroud(s)
+12V	<ul style="list-style-type: none"> Max: 83A / Min: 0A (100Vac-127Vac) Max: 166A / Min: 0A (200Vac-220Vac) 		

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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Input / Output

LAN	<ul style="list-style-type: none">■ 1 RJ45 Dedicated BMC LAN port
USB	<ul style="list-style-type: none">■ 3 USB 3.0 port(s) (1 front; 2 rear)
Video	<ul style="list-style-type: none">■ 1 VGA port(s)

System BIOS

BIOS Type	<ul style="list-style-type: none">■ 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	<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

12V SB	<ul style="list-style-type: none">■ Max: 2.1A / Min: 0A
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Output Type	<ul style="list-style-type: none">■ 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-HS119-R1K24P	1	1U Chassis
Add-on Card / Module	AOM-HS119-IO-P	1	Hyper IO Board,RoHS
Backplane	BPN-NVME4-HS119N-S8L	1	1U 8-Port Backplane Supports 8 x SAS3/SATA3/NVMe4 Storage Device for Hyper-S Platform,HF,RoHS
Cable 1	CBL-GNZ4-1261-85	1	[NR] GENZ4C x16 (STR) to GENZ4C x16 (STR),8CM,85 OHM,RoHS
Cable 2	CBL-PWEX-1120	1	MicroFit,2x4,PH3.0 to MicroFit,2x4,PH3.0,60CM,8A/pin,18
Cable 3	CBL-SAST-1225LP	1	SlimlineLP x8 (LE) to SlimlineLP x8 (RA),30CM,75/85/100,
Cable 4	CBL-SAST-1234LP-85	2	SlimlineLP x8 (STR) to 2x SlimlineLP x8 (STR),17CM,85 O
Drive Tray(s)	MCP-220-00178-0B	8	2.5 thin profile drive tray, Orange tab (for hotswap NVMe drive), for SC119UH
Air Shroud	MCP-310-11910-0N	1	CSE-HS119 Plastic Air Shroud (CPU1) for X12DHM,RoHS
Air Shroud	MCP-310-11911-0N	1	CSE-HS119 Plastic Air Shroud (CPU2) for X12DHM,RoHS
Riser Card	RSC-H-66G4L	2	1U LHS Hyper riser card with two PCI-E 4.0 X16 slots,HF,RoHS
Software	SFT-OOB-LIC	1	License key for enabling OOB BIOS management
Heatsink / Retention	SNK-P0077V	2	X12 ICX/CPX CPU Heatsink (78x113x25.5mm), VC Base, Cu Fin
*Power Supply	PWS-1K24A-1R	2	1U 800W/1200W Redundant Titanium CRPS w/PMBus power supply,
*Cable 5	CBL-CUSB-1265-119	1	[NR] USB 3.0(F) Type A, RA to USB3.0 20pin,65CM,26/32AWG
*Cable 6	CBL-PWCD-0160-IS	1	PWCD,US,NEMA5-15P TO IEC60320 C13,6FT,16AWG,RoHS/REACH
*FAN 1	FAN-0216L4	8	40x40x56 mm, 31K-26.6K RPM, Hot Swap, Counter-rotating Fan,R
*Front Panel	FPB-FP119UH	1	Front control board for 119UHTS 1U Ultra
*Rail Set	MCP-290-11903-0N	1	30.5" ball-bearing rail set, without auto latch for Hyper 1U

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
12 Drive Bay Configuration (Select one from options A-I)	(B) 12 SAS/SATA (RAID): AOC-S3916L-H16IR-32DD-O & CBL-SAST-1273LP-100 & MCP-450-11903-ASM	-	12 SAS/SATA (HW RAID) via Broadcom 3916 (RAID 0, 1, 5, 6, 10, 50, 60) for drive bays 0-11
	(H) 8 NVMe + 4 SAS/SATA: CBL-KIT-120H-TNR-8-1 & AOC-S3808L-L8IT-O & MCP-450-11903-ASM	-	8 NVMe cable kit for drive bays 0-7 + 4 SAS/SATA (HBA/IT Mode) via Broadcom 3808 for drive bays 8-11
	(A) 12 NVMe: MCP-450-11901-ASM	1	12 NVMe kit for drive bays 0-11

	(G) 8 NVMe + 4 SAS/SATA (RAID): CBL-KIT-120H-TNR-8-1 & AOC-S3908L-H8IR-16DD-O & MCP-450-11903-ASM	-	8 NVMe cable kit for drive bays 0-7 + 4 SAS/SATA (HW RAID) via Broadcom 3908 (RAID 0, 1, 5, 6, 10, 50, 60) for drive bays 8-11
	(F) 8 SATA + 4 NVMe: CBL-SAST-1237LP-100 & MCP-450-11902-ASM	-	8 SATA via onboard Intel® PCH for drive bays 0-7 + 4 NVMe for drive bays 8-11
	(E) 8 SAS/SATA + 4 NVMe: AOC-S3808L-L8IT-O & CBL-SAST-1273LP-100 & MCP-450-11902-ASM	-	8 SAS/SATA (HBA/IT Mode) via Broadcom 3808 for drive bays 0-7 + 4 NVMe for drive bays 8-11
	(D) 8 SAS/SATA (RAID) + 4 NVMe: AOC-S3908L-H8IR-16DD-O & CBL-SAST-1273LP-100 & MCP-450-11902-ASM	-	8 SAS/SATA (HW RAID) via Broadcom 3908 (RAID 0, 1, 5, 6, 10, 50, 60) for drive bays 0-7 + 4 NVMe for drive bays 8-11
	(C) 12 SAS/SATA: AOC-S3816L-L16IT-O & CBL-SAST-1273LP-100 & MCP-450-11903-ASM	-	12 SAS/SATA (HBA/IT Mode) via Broadcom 3808 for drive bays 0-11
	(I) 8 NVMe + 4 SATA: CBL-KIT-120H-TNR-8-1 & MCP-450-11904-ASM	-	8 NVMe cable kit for drive bays 0-7 + 4 SATA via onboard Intel® PCH for drive bays 8-11)
8 Drive Bay Configuration (Select one from options A-D)	(D) 8 SATA: CBL-SAST-1237LP-100	1	8 SATA via onboard Intel® PCH for drive bays 0-7
	(C) 8 SAS/SATA: AOC-S3808L-L8IT-O & CBL-SAST-1273LP-100	-	8 SAS/SATA (HBA/IT Mode) via Broadcom 3808 for drive bays 0-7
	(B) 8 SAS/SATA (RAID): AOC-S3908L-H8IR-16DD-O & CBL-SAST-1273LP-100	-	8 SAS/SATA (HW RAID) via Broadcom 3908 (RAID 0, 1, 5, 6, 10, 50, 60) for drive bays 0-7
	(A) 8 NVMe: CBL-KIT-120H-TNR-8-1	1	8 NVMe cable kit for drive bays 0-7
CacheVault	BTR-CVPM05	1	CacheVault Flash Cache Protection Module for Broadcom 3916/3908 RAID controller (CVPM05)
Front Bezel	MCP-210-11909-0B	1	Optional front bezel for 1U Hyper
Global Services & Support	<u>OS4HR3/2/1</u>	-	Gold Level, 3/2/1-year onsite 24x7x4 SLA
	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
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)
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