

Specifications

Product SKUs		Chassis	
SYS-220HE-FTNRD	<ul style="list-style-type: none"> SuperServer SYS-220HE-FTNRD 	Form Factor	<ul style="list-style-type: none"> 2U Rackmount
<hr/>		Model	<ul style="list-style-type: none"> CSE-HE211-R000NFP
Motherboard		Dimensions and Weight	
Super X12DHM-6		Height	<ul style="list-style-type: none"> 3.5" (88.9mm)
<hr/>		Width	<ul style="list-style-type: none"> 17.2" (436.88mm)
Processor		Depth	<ul style="list-style-type: none"> 22.6" (574mm)
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 	Package	<ul style="list-style-type: none"> 9.7" (H) x 23.5" (W) x 36.9" (D)
Cores	<ul style="list-style-type: none"> Up to 40C/80T; Up to 60MB Cache 	Weight	<ul style="list-style-type: none"> Net Weight: 34.4 lbs (15.6 kg) Gross Weight: 47.4 lbs (21.5 kg)
<hr/>		Available Color	<ul style="list-style-type: none"> N/A
System Memory		Front Panel	
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 	Buttons	<ul style="list-style-type: none"> Power On/Off UID button
Memory Voltage	<ul style="list-style-type: none"> 1.2 V 	LEDs	<ul style="list-style-type: none"> HDD activity LAN1 activity Power status System information
Error Detection	<ul style="list-style-type: none"> ECC 	<hr/>	
On-Board Devices		Expansion Slots	
SATA	<ul style="list-style-type: none"> SATA3 (6Gbps); RAID 0/1/5/10 support 	PCI-Express (PCI-E)	<ul style="list-style-type: none"> Slot 1: PCI-E 4.0 x16 or (Optional) x8 FH, 10.5"L Slot 2: (Optional) PCI-E 4.0 x8 FH, 10.5"L Slot 3: PCI-E 4.0 x16 or (Optional) x8 FH, 10.5"L Slot 4: (Optional) PCI-E 4.0 x8 FH, 10.5"L Slot 5: PCI-E 4.0 x16 or (Optional) x8 FH, 10.5"L Slot 6: (Optional) PCI-E 4.0 x8 FH, 10.5"L Slot 7: PCI-E 4.0 x8 FH, 6.6"L Slot 8: PCI-E 4.0 x8 FH, 6.6"L
NVMe	<ul style="list-style-type: none"> NVMe (64GT/s); RAID 0/1/5/10 support 	<hr/>	
Chipset	<ul style="list-style-type: none"> Intel® C621A 	Note	<ul style="list-style-type: none"> 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.
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) 	<hr/>	
<hr/>		Drive Bays / Storage	
<hr/>		Hot-swap	<ul style="list-style-type: none"> 6x 2.5" hot-swap NVMe/SATA drive bays (6x 2.5" NVMe hybrid)
<hr/>		M.2	<ul style="list-style-type: none"> 2 M.2 NVMe OR 2 M.2 SATA3
<hr/>		System Cooling	

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"> 2 USB 3.0 port(s) (2 front)
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

Fans	<ul style="list-style-type: none"> 6x 6cm heavy duty fans with optimal fan speed control
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Air Shroud	<ul style="list-style-type: none"> 4 Air Shroud(s)
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Power Supply

1300W Redundant DC -48V Power Supplies with PMBus

Dimension (W x H x L)	<ul style="list-style-type: none"> 73.5 x 40 x 203 mm
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DC Input	<ul style="list-style-type: none"> 1300W
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+12V	<ul style="list-style-type: none"> Max: 108.3A
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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: 5°C ~ 35°C (41°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-HE211-R000NFP	1	2U Chassis
Add-on Card / Module	AOM-AIOM-2X8-P	1	2nd AIOM board (cable solution) for Hyper-E 2U system,RoHS
Add-on Card / Module	AOM-HE211-AIOM-P	1	AIOM connection for Hyper-E 2U system,RoHS
Add-on Card / Module	AOM-HS119-IO-P	1	Hyper IO Board,RoHS
Backplane	BPN-NVME4-HE211N-S6	1	1U 6-Slot BPN Supports 6 x SAS3/SATA3/NVMe4 Storage Device,HF,RoHS
Cable 1	CBL-GNZ4-1221LP-85	1	Genz4C (STR) to 2x SlimlineLP x8 (STR),21/23CM,85 OHM,R
Cable 2	CBL-OTHR-1117	1	[NR] 2x15,PH1.0 to 2x15,PH1.0,28AWG,30CM,1A/pin,RoHS
Cable 3	CBL-PWEX-1088-26	3	2x4,PH4.2 + 2x2pin,PH3.0 to 2x4,PH3.0,26/54CM,16AWG,9A
Cable 4	CBL-PWEX-1226	1	Microfit,2x4,PH3.0 to Microfit,2x4,PH3.0,30CM,9A/P,16AW
Cable 5	CBL-SAST-1218LP-85	1	SlimlineLP X8 (STR) to SlimlineLP x8 (STR),INT,19CM,85
Cable 6	CBL-SAST-1222LP-85	1	SlimlineLP X8 (STR) to SlimlineLP x8 (STR),27CM,85 OHM,
Cable 7	CBL-SAST-1223LP-85	1	SlimlineLP X8 (STR) to SlimlineLP x8 (STR),INT,12CM,85
Cable 8	CBL-SAST-1226LP-85	1	SlimlineLP X8 (STR) to SlimlineLP x8 (STR),25CM,85 OHM,
Cable 9	CBL-SAST-1229LP-85	3	SlimlineLP X8 (STR) to SlimlineLP x8 (STR),INT,28CM,85
Cable 10	CBL-SAST-1230LP-85	1	SlimlineLP X8 (STR) to SlimlineLP x8 (RA),INT,29CM,85 O
Cable 11	CBL-SAST-1232LP-85	1	SlimlineLP X8 (STR) to SlimlineLP x8 (RA),INT,32CM,85 O
Cable 12	CBL-SAST-1243LP-85	1	SlimlineLP X8 (RA) to SlimlineLP x8 (STR),INT,43CM,85 O
Cable 13	CBL-SAST-1249LP-85	1	SlimlineLP x8 (STR) tp 2x SlimlineLP x4 (STR),49/61CM,8
FAN 1	FAN-0215L4	6	60x60x56 mm, 17K-17K RPM, Counter-rotating Cooling Fan for 2U Hyper-E (CSE-HE211) Series Servers
Power Supply	PWS-1K30F-1R	2	1300W -48Vdc single output power supply
Riser Card	RSC-H2-6888G4	1	2U LHS Hyper riser card with one PCI-E 4.0 x16 and three PCI
Riser Card	RSC-H2-68G4	2	2U LHS Hyper riser card with one PCI-E 4.0 x16 and one PCI-E
Software	SFT-OOB-LIC	1	License key for enabling OOB BIOS management
Heatsink / Retention	SNK-P0078PR	2	2U Proprietary Passive CPU Heat Sink for X12 Generation Hype-E Series Servers
*Cable 14	CBL-CDAT-1290F	1	[NR] FRONT CNTL,20 TO 20 PIN, P0.5, FFC,FLAT, 90CM, STD
*Cable 15	CBL-PWEX-1104-8	1	[NR] 2x4,PH3.0,M to 2x3,PH2.0,F,3A/pin,22AWG,8CM
*Front Panel	FPB-FP826-T	1	Chassis front control board for SC826
*Drive Tray(s)	MCP-220-00178-0B	6	2.5 thin profile drive tray, Orange tab (for hotswap NVMe drive), for SC119UH

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

48VDC Input Power Cable for PWS-1K60D-1R, 4M, 8AWG, RoHS/REA	CBL-PWEX-0710	2	48VDC Input Power Cable for PWS-1K60D-1R, 4M, 8AWG, RoHS/REA
6 Drive Bay Configuration (6 SAS/SATA)	AOC-S3808L-L8IT-O + CBL-SAST-1273LP-100	1	6 SAS/SATA (HBA/IT Mode) via Broadcom 3808 for drive bays 0-5
	AOC-S3908L-H8IR-16DD-O + CBL-SAST-1273LP-100	1	6 SAS/SATA (HW RAID) via Broadcom 3908 (RAID 0, 1, 5, 6, 10, 50, 60) for drive bays 0-5
Cable Management Arm for Hyper-E	MCP-290-00168-0N	1	Cable Management Arm for Hyper-E
CacheVault SuperCap	BTR-CVPM05	1	CacheVault Flash Cache Protection Module for Broadcom 3916/3908 RAID controller (CVPM05)
CacheVault SuperCap to PCIe Card Bracket	BKT-BBU-BRACKET-05	1	CacheVault Flash Cache Protection Module for Broadcom 3916/3908 RAID controller (CVPM05)
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)
Optional Hyper-E RSC for slot 5 & 7 for 2 PCI-E 4.0 x16	RSC-H2-668G4S	1	Hyper-E RSC for slot 5 & 7 for 2 PCI-E 4.0 x16
Optional RSC and GPU AUX power cable: PCI-E Auxiliary 6 pin or 8 pin for RTX GPU, Intel N3000, Xilinx U200	CBL-PWEX-1086-26	1,2,3	RSC and GPU AUX power cable: PCI-E Auxiliary 6 pin or 8 pin for RTX GPU, Intel N3000, Xilinx U200
Optional sliding rail kit	MCP-290-11901-0N	1	Optional sliding rail kit for Post to Post: 26.5" ~ 41.2"
	MCP-290-11902-0N	1	Optional sliding rail kit for Post to Post: 24" ~ 35.3"
Slim AIOM module	AOC-ATG-i4SM	1	AIOM Quad-Port 10GbE SFP+, based on Intel XL710-BM1 with 0.5U Bracket,RoHS
	AOC-ATG-i2SM	1	AIOM Dual-Port 10GbE SFP+, based on X710-BM2 with 0.5U Bracket,RoHS
	<u>AOC-ATG-i2TM</u>	1	AIOM 2-port 10GBase-T, Intel X550,RoHS
	<u>AOC-AG-i4M</u>	1	AIOM Quad-Port 1GbE RJ45, based on i350-AM4 with 0.5U Bracket, RoHS
	AOC-A100G-m2CM	1	AIOM 2-port 100GbE QSFP28, Mellanox CX-6 DX w/ 0.5U bracket,RoHS
	<u>AOC-AG-i2M</u>	1	AIOM Dual-Port 1GbE RJ45, based on i350-AM2 with 0.5U Bracket, RoHS
	<u>AOC-AH25G-m2S2TM</u>	1	AIOM Dual-Port 25GbE SFP28 based on Mellanox CX-4 Lx EN, and Dual-Port 10GbE RJ45 based on Intel X550-AT2 with 0.5U Bracket, RoHS
	<u>AOC-AG-i4SM</u>	1	AIOM 4-port GbE SFP, Intel i350-AM4 with 0.5U bracket,RoHS
	<u>AOC-A25G-b2SM</u>	1	AIOM 2-port 25GbE SFP28, Broadcom BCM57414 with 0.5U bracket,RoHS
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

