

BigTwin SuperServer SYS-220BT-HNTR (Complete System Only)

NEW



Key Applications

- All-Flash NVMe Hyperconverged Infrastructure
- Container-as-a-Service; Application Accelerator
- High-Performance File System
- Diskless HPC Clusters

Key Features

Four hot-pluggable systems (nodes) in a 2U form factor. Each node supports the following:

1. Socket P+ (LGA 4189) support 3rd Gen Intel® Xeon® Scalable processors

2. Intel® C621A

3. 20 DIMM Slots (16 DIMM Slots + 4 Intel® Optane™ Persistent Memory Slots)

4. 2 PCI-E 4.0 x16 (LP) slot;
Tool-less support
Internal PCI-E 3.0 x8 for 2 M.2 NVMe/SATA support onboard
Optional NVMe Boot Controller via AOC-SMG3-2M2-B

5. Network connectivity via AIOM (OCP 3.0 compliant)

6. 6 Hot-swap 2.5" drive bays; 6 PCI-E 4.0 NVMe/SATA 2.5" drives

7. 4 cooling fans per 2U enclosure, 16.5K RPM; Shared Cooling Design
Liquid Cooling Support

8. 2600W Redundant Power Supplies Titanium Level (96%+); Shared Power Design

Specifications

Product SKUs

SYS-220BT-HNTR	▪ SuperServer SYS-220BT-HNTR (Black)
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Motherboard

Super X12DPT-B6

Processor (per Node)

CPU	▪ Dual Socket P+ (LGA 4189) ▪ 3rd Gen Intel® Xeon® Scalable processors ▪ Support CPU TDP 205W *
Cores	▪ 36C/72T
Note	▪ *Certain CPUs with high TDP may be supported only under specific conditions. Please contact Supermicro Technical Support for additional information about specialized system optimization

System Memory (per Node)

Memory	▪ Memory Capacity: 16 DIMM slots (16 DRAM + 4 PMem) ▪ Up to 4TB: 16x 256 GB DRAM ▪ Up to 6TB: 8x 256 GB DRAM and 8x 512 GB PMem ▪ Memory Type: 3200MHz ECC DDR4 RDIMM ▪ Intel® Optane™ persistent memory 200 series
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On-Board Devices (per Node)

Chipset	▪ Intel® C621A
Network Connectivity	▪ Via AIOM
IPMI	▪ Support for Intelligent Platform Management Interface v.2.0 ▪ IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

Input / Output (per Node)

LAN	▪ 1 RJ45 Dedicated BMC LAN port
USB	▪ 2 USB 3.0 port(s) (2 rear)
Video	▪ 1 VGA port(s)
Others	▪ M.2 for boot drive only

System BIOS

BIOS Type	▪ AMI 32MB Flash ROM
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Chassis

Form Factor	▪ 2U Rackmount
Model	▪ CSE-217BQ-000NP

Dimensions and Weight

Height	▪ 3.47" (88mm)
Width	▪ 17.68" (449mm)
Depth	▪ 28.75" (730mm)
Package	▪ 9.76" (H) x 24.65" (W) x 45.28" (D)
Weight	▪ Net Weight: 54.5 lbs (24.7 kg) ▪ Gross Weight: 85 lbs (38.6 kg)
Available Color	▪ Black

Front Panel

Buttons	▪ Power On/Off button ▪ UID button
LEDs	▪ HDD activity LED ▪ Network activity LEDs ▪ Power status LED ▪ Universal Information (UID) LED

Expansion Slots (per Node)

PCI-Express (PCI-E)	▪ Slot 1: PCI-E 4.0 x16 LP ▪ Slot 2: PCI-E 4.0 x16 LP ▪ Internal Slot: M.2
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Drive Bays / Storage (per Node)

Hot-swap	▪ 6x 2.5" hot-swap NVMe/SATA drive bays (6x 2.5" NVMe hybrid)
M.2	▪ 2 M.2 NVMe OR 2 M.2 SATA3

System Cooling

Fans	▪ 4x 16.5K RPM Heavy Duty 8cm Fan(s)
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Power Supply

1U 2600W Redundant Titanium PWS, 45(W) X 40(H) X 480(L)

Total Output Power	▪ 2600W : 208 - 240 Vac ▪ 2600W : 220 - 240 Vdc for CQC only
Dimension (W x H x L)	▪ 45 x 40 x 480 mm
AC Input	▪ 208-240Vac / 12.5A-15A / 50-60Hz ▪ 220-240Vdc / 12.5A-13.5A (CQC only)
+12V	▪ Max: 216.6A / Min: 0A

Management

- Software**
- Supemicro Out of Band (OOB) License (Included per Node)
 - SuperCloud Composer
 - SSM
 - Intel® Node Manager
 - SPM
 - KVM with dedicated LAN
 - IPMI 2.0
 - SUM
 - Watch Dog
 - SuperDoctor® 5

- Power Configurations**
- ACPI / APM Power Management

PC Health Monitoring

- CPU**
- 7+1 Phase-switching voltage regulator
 - Monitors for CPU Cores, Chipset Voltages, Memory.

- FAN**
- Fans with tachometer monitoring
 - Pulse Width Modulated (PWM) fan connectors
 - Status monitor for speed control

- Temperature**
- Monitoring for CPU and chassis environment

- 12V SB**
- Max: 4.5A / Min: 0A

Certification



Titanium Level

[Test Report]

Operating Environment

- RoHS**
- RoHS Compliant

Environmental Spec.

- Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F)
- Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)
- Operating Relative Humidity: 8% to 90% (Non-Condensing)
- Non-operating Relative Humidity: 5% to 95% (Non-Condensing)

Parts List

Parts List - (Items Included)			
	Part Number	Qty	Description
Motherboard / Chassis	MBD-X12DPT-B6	4	Super X12DPT-B6 Motherboard
	CSE-217BQ-000NP	1	2U Chassis
Add-on Card / Module	AOC-SMG3-2H8M2-BW-P	4	2x Hybrid M.2 riser carrier card for X12 BigTwin,RoHS
Backplane	BPN-NVME4-217BHQ-S6	1	2U 24-Slot 4-Node BigTwin Backplane Supports up to 6xNVMe4/SAS4/SATA3 per Node
Cable 1	CBL-PWCD-0376-IS	2	PWCD,US,IEC60320 C19 TO C20,940mm (3ft),14AWG,15A,250V,Black
Cable 2	CBL-SAST-1243-100	4	Slimline X8 (STR) to Slimline X8 (STR), 41.5CM,100 OHM
Drive Tray(s)	MCP-220-00144-0B-BULK	24	Black Gen3 hot-swap 2.5 inch HDD tray with lock, orange tab
Air Shroud	MCP-310-21730-0B	4	BigTwin 2U4N plastic air shroud for X12DPT-B
Riser Card	RSC-PR-6-X2	4	1U RHS TwinPro Riser card with one PCI-E 4.0 x16 slot,HF,RoH
Storage Controller Card	SCC-F6N6T-B1	4	1U Storage Controller card for X12 2U4N BigTwin
Software	SFT-OOB-LIC	4	License key for enabling OOB BIOS management
Heatsink / Retention	SNK-P0077PW	4	1U Passive CPU HS 92mm Width for X12 Whitley Platform
Heatsink / Retention	SNK-P0077VM	4	X12 ICX/CPX CPU Heatsink (78x113x25.5mm), VC Base w/ Channel
*Power Supply	PWS-2K60A-1R	2	1U 2600W Redundant Titanium PWS, 45(W) X 40(H) X 480(L)
*Power Distributor	PDB-PT217-BGTWN	1	2U Big Twin Power Distributor Board Support Redundant 2KW
*FAN 1	FAN-0183L4	4	80x80x38 mm, 16.5K RPM, Non-hot-swappable Middle Cooling Fan for X11 Twin Pro, X10 and X11 Big Twin Series Servers
*Rail Set	MCP-290-00172-0N	1	2U non-tip rail set, quick release, default for 2,3U 17.6"W
*Fan Holder	MCP-320-21702-0N	2	Bigtwin fan holder (with 4.1mm rubber feet)(hold 2 80x38 fans)

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
HDD Dummy Tray	MCP-220-00185-0N	4	2.5" HDD tray dummy cover for 2 slot
M.2 NVMe RAID Controller	<u>AOC-SMG3-2M2-B-P</u>	-	2x M.2 NVMe RAID Controller Card, x8 Gen3
SPI Capable TPM 1.2	<u>AOM-TPM-9671H-S</u>	-	SPI Capable TPM 1.2 Provisioned for Server, Horizontal Form Factor
SPI Capable TPM 2.0	<u>AOM-TPM-9670H-S</u>	-	SPI Capable TPM 2.0 Provisioned for Server, Horizontal Form Factor
SPI Capable TPM 2.0 with FIPS 140-2	AOM-TPM-9670H-FIPS	-	SPI Capable TPM 2.0 Provisioned for Server, Horizontal Form Factor, Supporting FIPS 140-2
SuperCloud Composer License	SFT-SDDC-SINGLE	-	SDDC Monitor License - Single License per Monitored host
System Management Suite	<u>SFT-DCMS-Single</u>	-	Supermicro System Management Software Suite node

VROC Intel SSD Only	<u>AOC-VROCINTMOD</u>	-	Intel VROC, RAID 0, 1, 5, 10 (Intel SSD Only)
VROC Premium	<u>AOC-VROCPREMOD</u>	-	Intel VROC Premium, RAID 0, 1, 5, 10
VROC Standard	<u>AOC-VROCSTNMOD</u>	-	Intel VROC Standard, RAID 0, 1, 10