

SuperServer 2029BZ-HNR (Complete System Only)



Views: [Angled View](#) | [Node View](#) | [Front View](#) | [Rear View](#)



Super X11DPT-BH

Key Features

- Compute Intensive Application
- HPC, Data Center, Enterprise Server
- Hyperscale / Hyperconverged

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

- Dual Socket P (LGA 3647) support
2nd Gen Intel® Xeon® Scalable processors (Cascade Lake/Skylake)[†]
- 24 DIMMs: up to 6TB 3DS ECC DDR4-2933MHz[†] RDIMM/LRDIMM, Supports Intel® Optane™ DCPMM^{††}
- 2 PCI-E 3.0 x16 (LP) slot: 1 [SIOM](#) card support (flexible networking)
Note: must bundle with Network card
- 6 Hot-swap 2.5" NVMe drive bays; 2 M.2 SATA3 or NVMe support
- 1 Carrier Card slot (M.2 support)
- IPMI 2.0 + KVM with dedicated LAN
- Video via Aspeed AST2500 BMC
- 16 Heavy duty 40x56mm fans with optimal fan speed control (4 fans per node)
- 2600W Redundant Power Supplies
Titanium Level (96%)

Complete System Only: To maintain quality and integrity, this product is sold only as a completely-assembled system (with minimum 2 CPUs, 2 DIMMs, 1 NVMe and 1 SIOM card per node).

[Drivers & Utilities](#) [BIOS](#) [IPMI](#) [Tested Memory](#) [Tested M.2 List](#) [NVMe Options](#) [Manuals](#) [OS Certification Matrix](#) [Quick-References Guide](#)

Note: Image above may show a varied configuration of optional parts. Please refer to parts list for standard parts included.

Specifications ^

Product SKUs

SYS-2029BZ-HNR SuperServer 2029BZ-HNR (Black)

Motherboard

Super X11DPT-BH

Processor

- CPU** Dual Socket P (LGA 3647)
2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors[†],
3 UPI up to 10.4GT/s
Support CPU TDP 70-205W*
- Cores** Up to 28 Cores
- Note** * 200W/205W CPUs are supported under certain configurations. Please contact Supermicro Technical Support for additional information about specialized system optimization
- Note** † BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R).

Extended thermal solutions may be required to support CPUs higher than 165W TDP, please contact Supermicro Technical Support for additional information.

System Memory

- Memory Capacity** 24 DIMM slots
Up to 6TB 3DS ECC DDR4-2933MHz[†] RDIMM/LRDIMM
Supports Intel® Optane™ DCPMM^{††}
- Memory Type** 2933[†]/2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM
- Note** † 2933MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro
†† Cascade Lake only. Contact your Supermicro sales rep for more info.

On-Board Devices

- Chipset** Intel® C621 chipset
- Network** Must bundle with at least one [SIOM](#) network card
- IPMI** Support for Intelligent Platform Management Interface v.2.0
IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
- Video** ASPEED AST2500 BMC

Input / Output (per Node)

- LAN** 1 RJ45 Dedicated IPMI LAN port
- USB** 2 USB 3.0 ports (rear)
- Video** 1 VGA port
- DOM** 1 SuperDOM (Disk on Module) port
- Others** **M.2 and SATA DOM for boot drive only**

System BIOS

BIOS Type AMI 32Mb SPI Flash ROM

Management

- Software** Intel® Node Manager
[IPMI 2.0](#)
KVM with dedicated LAN
[SSM](#), [SPM](#), [SUM](#)
[SuperDoctor® 5](#)
Watch Dog

Power Configurations ACPI / APM Power Management

PC Health Monitoring

- CPU** Monitors for CPU Cores, Chipset Voltages, Memory.
4+1 Phase-switching voltage regulator
- FAN** Fans with tachometer monitoring
Status monitor for speed control
Pulse Width Modulated (PWM) fan connectors
- Temperature** Monitoring for CPU and chassis environment
Thermal Control for fan connectors

Chassis

Form Factor 2U Rackmount

Model **CSE-217BHQ+-R2K60FP**

Dimensions and Weight

- Width** 17.6" (447mm)
- Height** 3.47" (88mm)
- Depth** 28.75" (730mm)
- Package** 24.65" (H) x 9.76" (W) x 45.28" (D)
- Weight** Gross Weight: 85 lbs (38.6kg)
Net Weight: 54.5 lbs (24.7 kg)

Available Colors Black

Front Panel

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

Expansion Slots (per Node)

- PCI-Express** 2 PCI-E 3.0 (x16) Low-profile slots
1 [SIOM](#) card support
(must bundle with network card)

Drive Bays / Storage (per Node)

- Hot-swap** 6 Hot-swap 2.5" NVMe drive bays
- M.2** 2 M.2 NVMe or SATA (2240/2260/2280) via optional AOC-SMG3-2H8M2-B

System Cooling

- Fans** 16 Heavy duty 40x56mm PWM fans with air shroud (4 fans per node)

AC/DC240V Input Redundant Power Supply

2600W Redundant Power Supplies with PMBus

- Total Output Power** 2600W: 208 – 240Vac
2600W: 220 – 240Vdc (for CQC only)
- Dimension (W x H x L)** 45 x 40 x 480 mm
- Input** 208-240Vac/15-12.5A / 50-60Hz
220-240Vdc/13.5-12.5A (CQC only)
- +12V** Max: 216.6A / Min: 0A
- 12Vsb** Max: 4.5A / Min: 0A
- Output Type** Gold Finger (4HP+2LP-20S output connector)
- Certification**

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-X11DPT-BH	4	Super X11DPT-BH Motherboard
	CSE-217BHQ+-R2K60FP	1	2U Chassis
Backplane	BPN-ADP-6NVME3-1UB	4	6x NVMe ports and 50A power sourcing daughter card for Big Twin
Backplane	BPN-NVME3-217BHQ	1	2U 24-Port 4-Node NVMe Backplane Support 6x2.5
Table 1	CBL-PWCD-0376-IS	2	PWCD,US,IEC60320 C19 TO C20,940mm (3ft),14AWG,15A,250V,Black
Drive Tray(s)	MCP-220-00127-0B-BULK	24	Black gen3 Hotswap 2.5 NVMe drive tray, Orange tab/Lock/Bulk
Air Shroud	MCP-310-21719-0B	4	Bigtwin mylar air shroud for X11DPT-BH (4CM fan chassis)
Air Shroud	MCP-310-21720-0B	4	Bigtwin plastic air shroud for X11DPT-BH (4CM fan chassis)
Manual	MNL-2126-QRG	1	2029BZ-HNR Quick Reference Guide
Riser Card	RSC-P-6	4	RSC-P-6 (1U LHS TwinPro RSC with 1 PCI-Ex16),RoHS
Riser Card	RSC-R1UTP-E16R	4	1U RHS TwinPro Riser card with one PCI-E x16 slot
Heatsink / Retention	SNK-P0067PSMB	4	1U Passive High Performance Front CPU Heat Sink w/ an 18-mm Wide Middle Air Channel for X11 Purley Platform Equipped w/ a Narrow Retention Mechanism/Bolster
Heatsink / Retention	SNK-P0071VS	4	1U Proprietary Passive CPU Heat Sink (124 mm Long) for SYS-2029BZ-HNR Series Servers (X11 2U4N 3UPI Big Twin)
Power Supply	PWS-2K60A-1R	2	1U 2600W Redundant Titanium PWS, 45(W) X 40(H) X 480(L)
Cooling Fans	FAN-0193L4	16	40x40x56 mm, 23.3K-20.3K RPM, Counter-rotating Fan; 4 fans per node x 4 nodes

Optional Parts List

	Part Number	Qty	Description
TPM security module	AOM-TPM-9670H-S	1	SPI Capable TPM 2.0 Provisioned for Server, Horizontal Form Factor
TPM security module	AOM-TPM-9671H-S	1	SPI Capable TPM 1.2 Provisioned for Server, Horizontal Form Factor
Intel VROC RAID Key	AOC-VROCINTMOD	1	Intel VROC, RAID 0, 1, 5, 10 (Intel SSD Only)
	AOC-VROCSNMOD	1	Intel VROC Standard, RAID 0, 1, 10
	AOC-VROCPREMOD	1	Intel VROC Premium, RAID 0, 1, 5, 10
Global Services & Support	OS4HR3/2/1	-	3/2/1-year onsite 24x7x4 service
	OSNBD3/2/1	-	3/2/1-year onsite NBD service
Software	SFT-OOB-LIC • eStore	1	OOB Management Package (per node license)
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)
SuperDOM	-	-	Supermicro SATA DOM Solutions [Details]
Network Card(s)	AOC-S40G-i2Q	-	Standard LP 2-port 40GbE controller, based on Intel Fortville XL710
	AOC-SGP-i2	-	Standard LP, 2x GbE RJ45, PCI-E x4, Intel i350AM2
	AOC-SGP-i4	-	Standard LP, 4x GbE RJ45, PCI-E x4, Intel i350
	AOC-STG-b4S	-	Standard LP, 4x 10GbE SFP+, PCI-E x8, Broadcom BCM57840S
	AOC-STGN-i2S	-	Standard LP, 2x 10GbE SFP+, PCI-E x8, Intel 82599ES
	AOC-STGN-i1S	-	Standard LP, 1x 10GbE SFP+, PCI-E x8, Intel 82599EN
	AOC-STG-i2T	-	Standard LP, 2x 10GbE RJ45, PCI-E x8, Intel X540
	AOC-STG-i2	-	Standard LP, 2x 10GbE CX4, PCI-E x8, Intel 82598EB
	Carrier Card(s)	AOC-SMG3-2H8M2-B	-
AOC-SMG2-2TM2		-	2x SATA M.2 RAID 1 adapter for BigTwin,HF,RoHS

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