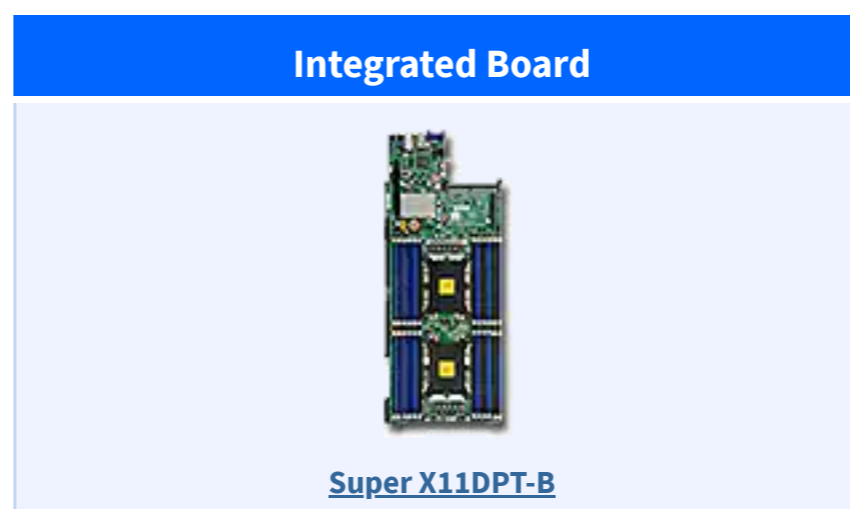


SuperServer 2029BT-HNR (Complete System Only)



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



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 S^{IO}M 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
- 4 Heavy duty 8cm PWM fans with air shroud
9. 2200W 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 S^{IO}M card per node).

[Drivers & Utilities](#) [BIOS](#) [IPMI](#) [Tested Memory](#) [Tested M.2 List](#) [NVMe Options](#) [Manuals](#) [OS Certification Matrix](#) [Quick-References Guide](#)
[Tested S^{IO}M](#) [Network Card \(AOC\) Matrix](#)

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

Specifications ^

Product SKUs

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

Motherboard

Super X11DPT-B

Processor (per Node)

CPU	Dual Socket P (LGA 3647) 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors [‡] , Dual 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 (per Node)

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 S ^{IO} M 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+-R2K22BP2

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 S^{IO}M 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 4 Heavy duty 8cm PWM fans with air shroud

Power Supply

2200W Redundant Power Supplies with PMBus

Total Output Power	1200W/1800W/1980W/2090/2200W
Dimension (W x H x L)	45 x 40 x 480 mm
Input	1200W: 100-127Vac / 50-60Hz 1800W: 200-220Vac / 50-60Hz 1980W: 220-230Vac / 50-60Hz 2090W: 230-240Vac / 50-60Hz 2090W: 180-220Vac (for UL/cUL only) 2200W: 220-240Vac (for UL/cUL only) 2090W: 230-240Vdc (for CCC only)
+12V	Max: 100A / Min: 0A (100-127Vac) Max: 150A / Min: 0A (200-220Vac) Max: 165A / Min: 0A (220-230Vac) Max: 174.17A / Min: 0A (230-240Vac) Max: 174.17A / Min: 0A (180-220Vac, UL/cUL only) Max: 183.33A / Min: 0A (220-240Vac, UL/cUL only) Max: 174.17A / Min: 0A (230-240Vdc, CCC only)
12Vsb	Max: 2.1A / Min: 0A
Output Type	Gold Finger
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-B	4	Super X11DPT-B Motherboard
CSE-217BHQ+-R2K22BP2	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
Cable 1 CBL-PWCD-0578	2	PWCD,US,IEC60320 C14 TO C13,3FT,14AWG
Drive Tray(s) MCP-220-00127-0B-BULK	24	Black gen3 Hotswap 2.5 NVMe drive tray, Orange tab/Lock/Bulk
Parts MCP-240-21721-0N	1	217B BigTwin type I (Impact) BPN retention bkt assy
Air Shroud MCP-310-21718-0B	4	Bigtwin air box for X11DPT-B(4pcs/set)
Air Shroud MCP-310-21724-0B	4	Bigtwin 2U4N plastic air shroud (2pcs) for Cascade lake MB
Manual MNL-1948-QRG	1	2029BT-H(N/T/NC0)R 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-P0067PS	4	1U Passive CPU Heat Sink for X11 Purley Platform Equipped with a Narrow Retention Mechanism
Heatsink / Retention SNK-P0067PSM	4	1U Passive CPU Heat Sink with a 26-mm Wide Middle Air Channel for X11 Purley Platform Equipped with a Narrow Retention Mechanism
Power Supply PWS-2K22A-1R	2	1U 2200W Redundant Power Supply Titanium, 45(W) X 40(H) X 48

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-VROCSTNMOD	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	-	2x Hybrid NVMe/SATA M.2 carrier for BigTwin, HF, RoHS
AOC-SMG2-2TM2	-	2x SATA M.2 RAID 1 adapter for BigTwin, HF, RoHS

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