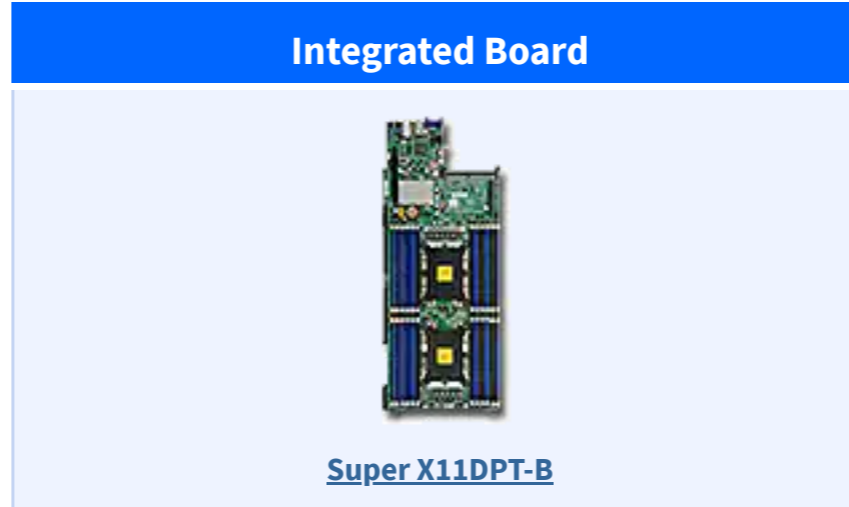


SuperServer 2029BT-HNC1R (Complete System Only)



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^{††}
- 1 PCI-E 3.0 x16 (LP) slot; 1 [SIOM](#) card support (flexible networking) Note: must bundle with Network card
- 6 SAS3 or 4 NVMe + 2 SAS3 Hot-swap 2.5" drive bays; 2 M.2 SATA3 or NVMe support
- SAS3 support via Broadcom 3108; RAID 0, 1, 5, 6, 10, 50, 60
- 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
- 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 HDD/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](#)
[Drive Options](#) [Tested SIOM](#) [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-HNC1R	SuperServer 2029BT-HNC1R (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
SAS	SAS3 (12Gbps) via Broadcom 3108; RAID 0, 1, 5, 6, 10, 50, 60
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+-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	1 PCI-E 3.0 (x16) Low-profile slot 1 SIOM card support (must bundle with network card)
Drive Bays / Storage (per Node)	
Hot-swap	6 Hot-swap 2.5" SAS3 drive bays or 4 NVMe + 2 SAS3 Hot-swap 2.5" Please contact Supermicro Technical Support for additional information about HDD and SSD if mixed. Some restrictions and configuration rules that apply to SSD are different from HDD.
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	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-X11DPT-B	4	Super X11DPT-B Motherboard
	CSE-217BHQ+-R2K22BP2	1	2U Chassis
Add-on Card / Module	AOC-S3108L-H8iR-16DD-P	4	AOC-S3108L-H8iR-16DD
	BPN-ADP-4TNS6-1UB	4	for Big Twin only
	BPN-SAS3-217BHQ-N4	1	2U 4-Node 24-Port Backplane Supports 2x2.5" SATA3/SAS3 SSD/HDD and 4x2.5" SATA3/SAS3/NVMe storage Media per Node
Cable 1	CBL-PWCD-0578	2	PWCD,US,IEC60320 C14 TO C13,3FT,14AWG
Cable 2	CBL-SAST-0846-1	4	SLIMLINE SAS to MiniSAS HD 2X,INT,48CM, SB
Drive Tray(s)	MCP-220-00141-0B-BULK	8	Black Gen3 hot-swap 2.5 inch HDD tray with lock improved EMI
Drive Tray(s)	MCP-220-00144-0B-BULK	16	Black Gen3 hot-swap 2.5 inch HDD tray with lock, orange tab
Parts	MCP-240-21730-0N	1	217B BigTwin type I (Impact) BPN retention bkt w/ foam 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/NC)R Quick Reference Guide
Riser Card	RSC-P-6	4	RSC-P-6 (1U LHS TwinPro RSC with 1 PCI-Ex16),RoHS
	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
	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
Fan	FAN-0183L4	4	80x80x38 mm, 16.5K RPM, Non-hot-swappable Middle Cooling Fan
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	QS4HR3/2/1	-	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
Cache Protection for RAID Card	BTR-TFM8G-LSICVM02 & BKT-BBU-BRACKET-05	-	CacheVault for Broadcom 3108; Supercap mounting bracket for PCI-E location [Details]

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