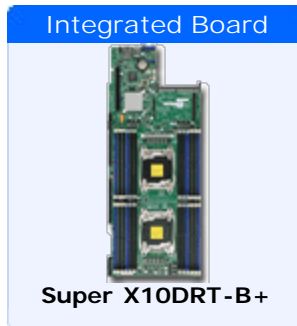


# SuperServer 2028BT-HNR+ (Complete System Only)



Super X10DRT-B+

Due to the complexity of integration, this product is sold as completely assembled systems only (with minimum 2 CPU, 2 DIMM, 1 HDD/NVMe and 1 NIC or SIOM card per node). Please contact your Supermicro sales rep for special requirements.

[▶ Drivers & Utilities](#) ▶ [BIOS](#) ▶ [IPMI](#) ▶ [Tested Memory](#) ▶ [NVMe Options](#)

## Coming Soon

### Key Features

- Compute Intensive Application
- HPC, Data Center
- Enterprise Server
- Financial Analysis
- Mission-critical applications

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

1. Dual socket R3 (LGA 2011) supports Intel® Xeon® processor E5-2600 v4†/ v3 family; QPI up to 9.6GT/s
2. Up to 3TB† ECC 3DS LRDIMM , up to DDR4- 2400†MHz ; 24x DIMM slots
3. 2 PCI-E 3.0 x16 (LP) slots; 1 **SIOM** card support (flexible networking)  
Note: must bundle with Network card
4. IPMI 2.0 + KVM with dedicated LAN
5. 6 Hot-swap 2.5" NVMe drive bays
6. Video via Aspeed AST2400 BMC
7. 4x 8cm heavy duty PWM fans with air shroud
8. 2200W Redundant Power Supplies Titanium Level
9. 2 M.2 Cards support

### [Product Review](#)

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

## Specifications

### Product SKUs

SYS-2028BT-HNR+ ■ SuperServer 2028BT-HNR+ (Black)

### Motherboard

Super X10DRT-B+

### Processor/Cache (per Node)

CPU ■ Intel® Xeon® processor E5-2600 v4†/ v3 family (up to 145W TDP) \*  
■ Dual Socket R3 (LGA 2011)

### Chassis

Form Factor ■ 2U Rackmount  
Model ■ CSE-217BHQ+ -R2K22BP

### 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)

Cores / Cache	<ul style="list-style-type: none"> <li>Up to 22 Cores<sup>†</sup> / Up to 55MB<sup>†</sup> Cache</li> </ul>
System Bus	<ul style="list-style-type: none"> <li>QPI up to 9.6 GT/s</li> </ul>
Note	<ul style="list-style-type: none"> <li><sup>†</sup> BIOS version 2.0 or above is required</li> </ul>
Note	<ul style="list-style-type: none"> <li>* Please contact Supermicro Technical Support for additional information about frequency optimized CPUs and specialized system optimization.</li> </ul>

#### System Memory (per Node)

Memory Capacity	<ul style="list-style-type: none"> <li>24x 288-pin DDR4 DIMM slots</li> <li>Up to 3TB<sup>†</sup> ECC 3DS LRDIMM, 768GB ECC RDIMM</li> </ul>
Memory Type	<ul style="list-style-type: none"> <li>2400<sup>†</sup>/2133/1866/1600MHz ECC DDR4 SDRAM 72-bit</li> </ul>
DIMM Sizes	<ul style="list-style-type: none"> <li>RDIMM: 32GB, 16GB, 8GB, 4GB</li> <li>LRDIMM: 64GB, 32GB</li> <li>3DS LRDIMM: 128GB</li> </ul>
Memory Voltage	<ul style="list-style-type: none"> <li>1.2 V</li> </ul>
Error Detection	<ul style="list-style-type: none"> <li>Corrects single-bit errors</li> </ul>

#### On-Board Devices (per Node)

Chipset	<ul style="list-style-type: none"> <li>Intel® C612 chipset</li> </ul>
IPMI	<ul style="list-style-type: none"> <li>Support for Intelligent Platform Management Interface v.2.0</li> <li>IPMI 2.0 with virtual media over LAN and KVM-over-LAN support</li> <li>ASPEED AST2400 BMC</li> </ul>
Network	<ul style="list-style-type: none"> <li>Must bundle with at least one <a href="#">SIOM</a> network card</li> </ul>
Video	<ul style="list-style-type: none"> <li>ASPEED AST2400 BMC</li> </ul>

#### Input / Output (per Node)

LAN	<ul style="list-style-type: none"> <li>1 RJ45 Dedicated IPMI LAN port</li> </ul>
USB	<ul style="list-style-type: none"> <li>2 USB 3.0 ports (rear)</li> </ul>
Video	<ul style="list-style-type: none"> <li>1 VGA port</li> </ul>

Available Colors	<ul style="list-style-type: none"> <li>Black</li> </ul>
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#### Front Panel

Buttons	<ul style="list-style-type: none"> <li>Power On/Off button</li> <li>System Reset button</li> <li>UID button</li> </ul>
LEDs	<ul style="list-style-type: none"> <li>Power status LED</li> <li>HDD activity LED</li> <li>2 Network activity LEDs</li> <li>Universal Information (UID) LED</li> </ul>

#### Expansion Slots (per Node)

PCI-Express	<ul style="list-style-type: none"> <li>2 PCI-E 3.0 (x16) Low-profile slots</li> <li>1 SIOM card (must bundle with network card)</li> </ul>
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#### Drive Bays (per Node)

Hot-swap	<ul style="list-style-type: none"> <li>6 Hot-swap 2.5" NVMe drive bays</li> </ul>
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#### System Cooling

Fans	<ul style="list-style-type: none"> <li>4x 8cm heavy duty PWM fans with air shroud</li> </ul>
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#### Power Supply

2200W Redundant Power Supplies with PMBus	
Total Output Power	<ul style="list-style-type: none"> <li>1200W/1800W/1980W/2090/2200W</li> </ul>
Dimension (W x H x L)	<ul style="list-style-type: none"> <li>45 x 40 x 480 mm</li> </ul>
Input	<ul style="list-style-type: none"> <li>100-127Vac / 50-60Hz (1200W)</li> <li>200-220Vac / 50-60Hz (1800W)</li> <li>220-230Vac / 50-60Hz (1980W)</li> <li>230-240Vac / 50-60Hz (2090W)</li> <li>180-220Vac / 50-60Hz (2090W)</li> <li>220-240Vac / 50-60Hz (2200W)</li> </ul>
+12V	<ul style="list-style-type: none"> <li>Max: 100A / Min: 0A (100-127Vac)</li> <li>Max: 150A / Min: 0A (200-220Vac)</li> <li>Max: 165A / Min: 0A (220-230Vac)</li> <li>Max: 174.17A / Min: 0A (230-240Vac)</li> <li>Max: 174.17A / Min: 0A (180-220Vac)</li> <li>Max: 183.33A / Min: 0A (220-240Vac)</li> </ul>
12Vsb	<ul style="list-style-type: none"> <li>Max: 2.1A / Min: 0A</li> </ul>
Output Type	<ul style="list-style-type: none"> <li>Backplanes (connector)</li> </ul>
Certification	  <ul style="list-style-type: none"> <li>UL/cUL/CB/BSMI/CE/CCC Titanium Level [ Cert. in progress ]</li> </ul>

#### System BIOS

BIOS Type	<ul style="list-style-type: none"> <li>128Mb SPI Flash EEPROM with AMI BIOS</li> </ul>
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#### Operating Environment / Compliance

RoHS	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>
Environmental Spec.	<ul style="list-style-type: none"> <li>Operating Temperature: 10°C to 35°C (50°F to 95°F)</li> <li>Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)</li> <li>Operating Relative Humidity: 8% to 90% (non-condensing)</li> <li>Non-operating Relative Humidity: 5% to 95% (non-condensing)</li> </ul>

## Parts List

### Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X10DRT-B+	4	Super X10DRT-B+ Motherboard
	CSE-217BHQ+-R2K22BP	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
Drive Tray(s)	MCP-220-00127-0B-BULK	24	Black gen3 Hotswap 2.5 NVMe drive tray, Orange tab/Lock/Bulk
Air Shroud	MCP-310-21706-0B	4	SC217B/827B BigTwin air shroud for X10DRT-B+
Riser Card	RSC-P-6	4	[NR]RSC-P-6 (1U LHS TwinPro RSC with 1 PCI-Ex16),RoHS
Riser Card	RSC-R1UTP-E16R	4	,RoHS/REACH,PBF
Heatsink / Retention	SNK-P0047PSM	4	1U Passive Front CPU Heat Sink w/ a Middle Air Channel for X9, X10 2U Twin^2+ and Twin Pro^2 Series Servers
Heatsink / Retention	SNK-P0057PS	4	1U High Performance Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Narrow ILM MB
Power Supply	PWS-2K22A-1R	2	1U 2200W Redundant Power Supply Titanium, 45(W) X 40(H) X 48
FAN 1	FAN-0162L4	4	80x80x38 mm, 13.5K RPM, HCP, LMV, and LPC Cooling Fan,RoHS/REACH

### Optional Parts List

	Part Number	Qty	Description
Global Services & Support	<a href="#">OS4HR3/2/1</a>	-	3/2/1-year onsite 24x7x4 service
	<a href="#">OSNBD3/2/1</a>	-	3/2/1-year onsite NBD service
Software	SFT-OOB-LIC	1	OOB Management Package (per node license)
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)
SuperDOM	-	-	Supermicro SATA DOM Solutions [ <a href="#">Details</a> ]
Network Card(s)	AOC-STG-i2	-	Standard LP, 2x 10GbE CX4, PCI-E x8, Intel 82598EB
	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 10G SFP+, PCI-E x8, Broadcom BCM57840S
	AOC-STGN-i2S	-	Standard LP, 2x 10G SFP+, PCI-E x8, Intel 82599ES
	AOC-STGN-i1S	-	Standard LP, 1x 10G SFP+, PCI-E x8, Intel 82599EN
	AOC-STG-i2T	-	Standard LP, 2x 10GbE RJ45, PCI-E x8, Intel X540
	AOC-STG-i4T	-	Standard LP, 4x 10GbE RJ45, PCI-E x8, Intel XL710 + X557-AT4
	AOC-STG-i2S	-	Standard LP, 2x 10G SFP+, PCI-E x8, Intel XL710-BM1
	AOC-STG-i4S	-	Standard LP, 4x 10G SFP+, PCI-E x8, Intel XL710-BM1
	AOC-STGS-i1T	-	Standard LP, 1x 10GbE RJ45, PCI-E x4, Intel X550-AT2
	AOC-STGS-i2T	-	Standard LP, 2x 10GbE RJ45, PCI-E x4, Intel X550-AT2
	AOC-S25G-b2S	-	Standard LP, 2x 25G SFP28, PCI-E x8, Broadcom BCM57414
	AOC-S25G-m2S	-	Standard LP, 2x 25G SFP28, PCI-E x8, Mellanox ConnectX-4 LX EN
	AOC-S40G-i1Q	-	Standard LP, 1x 40GbE QSFP+, PCI-E x8, Intel XL710
	AOC-S40G-i2Q	-	Standard LP, 2x 40GbE QSFP+, PCI-E x8, Intel XL710
	AOC-S100G-m2S	-	Standard LP, 2x 100GbE QSFP28, PCI-E x16, Mellanox ConnectX-4 EN