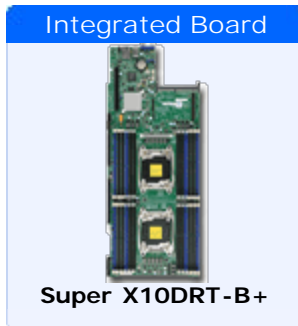


SuperServer 2028BT-HTR+ (Complete System Only)



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](#)

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" SATA3 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

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-HTR+	▪ SuperServer 2028BT-HTR+ (Black)
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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)
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Cores / Cache	▪ Up to 22 Cores† / Up to 55MB† Cache
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System Bus	▪ QPI up to 9.6 GT/s
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Note † BIOS version 2.0 or above is required

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)

Available Colors	▪ Black
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Front Panel

- Power On/Off button

Note * Please contact Supermicro Technical Support for additional information about frequency optimized CPUs and specialized system optimization.

System Memory (per Node)

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

On-Board Devices (per Node)

Chipset	<ul style="list-style-type: none"> Intel® C612 chipset
SATA	<ul style="list-style-type: none"> SATA3 (6Gbps) with RAID 0, 1, 5, 10
IPMI	<ul style="list-style-type: none"> Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support ASPEED AST2400 BMC
Network	<ul style="list-style-type: none"> Must bundle with at least one SIOM network card
Video	<ul style="list-style-type: none"> ASPEED AST2400 BMC

Input / Output (per Node)

SATA	<ul style="list-style-type: none"> 6 SATA3 (6Gbps) ports
LAN	<ul style="list-style-type: none"> 1 RJ45 Dedicated IPMI LAN port
USB	<ul style="list-style-type: none"> 2 USB 3.0 ports (rear)
Video	<ul style="list-style-type: none"> 1 VGA port

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

Expansion Slots (per Node)

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

	<ul style="list-style-type: none"> 6 Hot-swap 2.5" SATA3 drive bays
Hot-swap	<p>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.</p>

System Cooling

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

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

System BIOS

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

RoHS	<ul style="list-style-type: none"> RoHS Compliant
Environmental Spec.	<ul style="list-style-type: none"> Operating Temperature: 10°C to 35°C (50°F to 95°F) Non-operating Temperature: -40°C to 70°C (-40°F to 158°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-X10DRT-B+	4	Super X10DRT-B+ Motherboard
	CSE-217BHQ+-R2K22BP	1	2U Chassis
Backplane	BPN-ADP-6SATA3-1UB	4	Support 6 SATA HDD adaptor card for Big Twin
Backplane	BPN-SAS3-217BHQ	1	24-port 2U Big Twin SAS3 CSE-217BHQ (6 drives per node) backplane, support up to 24x 2.5-inch SAS3/SATA3 HDD/SSD
Drive Tray(s)	MCP-220-00141-0B-BULK	24	Black hot-swap 2.5 inch HDD tray with keylock and improved EMI
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	OS4HR3/2/1	-	3/2/1-year onsite 24x7x4 service
	OSNBD3/2/1	-	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 [Details]
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