

# SuperServer 2028TP-HC1TR



## Integrated Board



Super X10DRT-PT



## Key Features

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 v3 family; QPI up to 9.6GT/s
2. Up to 1TB ECC LRDIMM, 512GB ECC RDIMM, up to 2133MHz; 16x DIMM sockets
3. 1x PCI-E 3.0 x16 slot
4. Intel® X540 Dual port 10GBase-T LAN
5. Integrated IPMI 2.0 with KVM and Dedicated LAN
6. 6x 2.5" Hot-swap SAS/SATA HDD Bays
7. LSI 3108 SAS3 controller (6 ports); RAID 0, 1, 5, 6, 10, 50, 60
8. 2000W Redundant Power Supplies Platinum Level (94%)

Available Colors:

Black



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

## Specifications

### Product SKUs

SYS-2028TP-HC1TR	▪ SuperServer 2028TP-HC1TR (Black)
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### Motherboard

Super X10DRT-PT

### Processor/Cache (per Node)

CPU	▪ Intel® Xeon® processor E5-2600 v3 family (up to 145W TDP) * ▪ Dual Socket R3 (LGA 2011)
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Cores / Cache	▪ Up to 18 Cores / Up to 45MB Cache
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System Bus	▪ QPI up to 9.6 GT/s
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Note  
\* Please contact Supermicro Technical Support for additional information about frequency optimized CPUs and specialized system optimization.

### Chassis

Form Factor	▪ 2U Rackmount
Model	▪ CSE-217HQ+-R2K02B

### Dimensions and Weight

Width	▪ 17.25" (438mm)
Height	▪ 3.47" (88mm)
Depth	▪ 28.75" (730mm)
Weight	▪ Gross Weight: 90 lbs (40.9kg) ▪ Net Weight: 72 lbs (32.7 kg)
Available Colors	▪ Black

### Front Panel

Buttons	▪ Power On/Off button ▪ UID button
LEDs	▪ Power status LED ▪ HDD activity LED ▪ 2x Network activity LEDs ▪ Universal Information (UID) LED

### System Memory (per Node)

Memory Capacity	<ul style="list-style-type: none"><li>16x 288-pin DDR4 DIMM slots</li><li>Up to 1TB ECC LRDIMM, 512GB ECC RDIMM</li></ul>
Memory Type	<ul style="list-style-type: none"><li>2133/1866/1600MHz ECC DDR4 SDRAM</li><li>72-bit</li></ul>
DIMM Sizes	<ul style="list-style-type: none"><li>RDIMM: 32GB, 16GB, 8GB, 4GB</li><li>LRDIMM: 64GB, 32GB</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

Chipset	<ul style="list-style-type: none"><li>Intel® C612 Express chipset</li></ul>
SAS	<ul style="list-style-type: none"><li>LSI 3108 SAS3 (12Gbps) controller; RAID 0, 1, 5, 6, 10, 50, 60 support</li><li>Optional SuperCap</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 Controllers	<ul style="list-style-type: none"><li>Intel® X540 Dual port 10GBase-T</li><li>Virtual Machine Device Queues reduce I/O overhead</li><li>Supports 10GBASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output</li><li>1x Realtek RTL8201N PHY (dedicated IPMI)</li></ul>
Graphics	<ul style="list-style-type: none"><li>ASPEED AST2400 BMC</li></ul>

### Input / Output (per Node)

SAS	<ul style="list-style-type: none"><li>6x SAS3 (12Gbps) ports</li></ul>
LAN	<ul style="list-style-type: none"><li>2x RJ45 10GBase-T ports</li><li>1x RJ45 Dedicated IPMI LAN port</li></ul>
USB	<ul style="list-style-type: none"><li>2x USB 3.0 ports total (2x rear)</li></ul>
VGA	<ul style="list-style-type: none"><li>1x VGA port</li></ul>
Serial Port / Header	<ul style="list-style-type: none"><li>1x Fast UART 16550 port / 1 Header (internal)</li></ul>
Others	<ul style="list-style-type: none"><li>1x <a href="#">SATADOM</a> support on the motherboard</li></ul>

### Expansion Slots (per Node)

	<ul style="list-style-type: none"><li>1x PCI-E 3.0 x16 Low-profile slot</li></ul>
PCI-Express	<p>(Both CPUs need to be installed for full access to PCI-E slots)</p>



### Drive Bays (per Node)

Hot-swap	<ul style="list-style-type: none"><li>6x 2.5" Hot-swap SAS/SATA HDD trays</li></ul>
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### System Cooling

Fans	<ul style="list-style-type: none"><li>4x 8cm heavy duty PWM fans with optimal fan speed control</li></ul>
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### Switching Power Supply

2000W Redundant Power Supplies with I <sup>2</sup> C & PMBus	
AC Input	<ul style="list-style-type: none"><li>1100W Output @ 100-120V, 12.7-10.5A, 50-60Hz</li><li>1400W Output @ 120-140V, 13.5-11.5A, 50-60Hz</li><li>1800W Output @ 200-220V, 10.0-9.5A, 50-60Hz</li><li>1980W Output @ 220-230V, 10.0-9.8A, 50-60Hz</li><li>2000W Output @ 230-240V, 10.0-9.8A, 50-60Hz</li></ul>
5Vsb	4A
I <sup>2</sup> C Remote Monitoring	FRU Data / SMBus / PMBus
Certification	  Platinum Certified [ <a href="#">Test Report</a> ]

### System BIOS

BIOS Type	<ul style="list-style-type: none"><li>128Mb SPI Flash EEPROM with AMI BIOS</li></ul>
BIOS Features	<ul style="list-style-type: none"><li>Plug and Play (PnP)</li><li>APM 1.2</li><li>PCI 2.2</li><li>ACPI 1.0 / 2.0</li><li>USB Keyboard support</li><li>SMBIOS 2.3</li><li>UEFI</li></ul>

### 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
<b>Motherboard / Chassis</b>	MBD-X10DRT-PT	4	Super X10DRT-PT Motherboards 2U Chassis
	CSE-217HQ+-R2K02B	1	
<b>Backplane</b>	BPN-SAS3-217HQ	1	,RoHS/REACH,PBF 2U Twin Square Backplane, support 24 SAS3/SATA3 HDD (2.5") with Hot Swapping. Per node for 6 HDDs. PWM fan control, HDD spin up and failure LED supported.
<b>Backplane</b>	BPN-ADP-S3108L-H6IRP-O-P	4	LSI 3108, SAS 12Gbps (x6 internal)
<b>Riser Card</b>	RSC-R1UTP-E16R-O-P	4	,RoHS/REACH,PBF
<b>Heatsink / Retention</b>	SNK-P0057PS	4	1U High Performance Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Narrow ILM MB
<b>Heatsink / Retention</b>	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
<b>Power Supply</b>	PWS-2K04A-1R	2	AC-DC 2000W, Titanium Level, Redundancy, 1U, PMBus 1.2, +12V/+5Vsb, 360x76x40mm,HF,RoHS/REACH
<b>Power Supply</b>	PWS-2K02P-1R	2	2000W redundant platinum power supply

### Optional Parts List

	Part Number	Qty	Description
<b>SuperCap Kit</b>	BTR-CV3108-TP1	-	LSI 3108 CacheVault kit for TwinPro
<b>Onsite Service Program</b>	<a href="#">OS4HR3/2/1</a>	-	3/2/1-year onsite 24x7x4 service
<b>Onsite Service Program</b>	<a href="#">OSNBD3/2/1</a>	-	3/2/1-year onsite NBD service
<b>Software</b>	SFT-OOB-LIC	4	OOB Management Package (per node license)
<b>Software</b>	SFT-DCMS-Single	4	DataCenter Management Package (per node license)