

# SuperServer 2028TP-HTR



## Integrated Board



Super X10DRT-P



## 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 Low-profile slot and 1x "0 slot"
4. Intel® i350-AM2 Dual port GbE LAN
5. Integrated IPMI 2.0 with KVM and Dedicated LAN
6. 6x 2.5" Hot-swap SATA HDD Bays
7. 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-HTR** ■ SuperServer 2028TP-HTR (**Black**)

### Motherboard

**Super X10DRT-P**

### Processor/Cache (per Node)

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

- Cores / Cache** ■ Up to 18 Cores / Up to 45MB Cache

- System Bus** ■ QPI up to 9.6 GT/s

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

### System Memory (per Node)

- 16x 288-pin DDR4 DIMM slots

### 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

### Expansion Slots (per Node)

|                        |   |
|------------------------|---|
| <b>Memory Capacity</b> | <ul style="list-style-type: none"> <li>Up to 1TB ECC LRDIMM, 512GB ECC RDIMM</li> </ul>                   |
| <b>Memory Type</b>     | <ul style="list-style-type: none"> <li>2133/1866/1600MHz ECC DDR4 SDRAM 72-bit</li> </ul>                 |
| <b>DIMM Sizes</b>      | <ul style="list-style-type: none"> <li>RDIMM: 32GB, 16GB, 8GB, 4GB</li> <li>LRDIMM: 64GB, 32GB</li> </ul> |
| <b>Memory Voltage</b>  | <ul style="list-style-type: none"> <li>1.2 V</li> </ul>   |
| <b>Error Detection</b> | <ul style="list-style-type: none"> <li>Corrects single-bit errors</li> </ul>                              |

#### On-Board Devices

|                            |   |
|----------------------------|---|
| <b>Chipset</b>             | <ul style="list-style-type: none"> <li>Intel® C612 Express chipset</li> </ul>   |
| <b>SATA</b>                | <ul style="list-style-type: none"> <li>SATA3 (6Gbps); RAID 0, 1, 5, 10</li> </ul>   |
| <b>IPMI</b>                | <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>  |
| <b>Network Controllers</b> | <ul style="list-style-type: none"> <li>Intel® i350-AM2 Dual Port Gigabit Ethernet</li> <li>Virtual Machine Device Queues reduce I/O overhead</li> <li>Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output</li> <li>1x Realtek RTL8201N PHY (dedicated IPMI)</li> </ul> |
| <b>Graphics</b>            | <ul style="list-style-type: none"> <li>ASPEED AST2400 BMC</li> </ul>  |

#### Input / Output (per Node)

|                             |   |
|-----------------------------|---|
| <b>SATA</b>                 | <ul style="list-style-type: none"> <li>6x SATA3 (6Gbps) ports</li> </ul>  |
| <b>LAN</b>                  | <ul style="list-style-type: none"> <li>2x RJ45 Gigabit Ethernet LAN ports</li> <li>1x RJ45 Dedicated IPMI LAN port</li> </ul> |
| <b>USB</b>                  | <ul style="list-style-type: none"> <li>2x USB 3.0 ports total (2x rear)</li> </ul>  |
| <b>VGA</b>                  | <ul style="list-style-type: none"> <li>1x VGA port</li> </ul>   |
| <b>Serial Port / Header</b> | <ul style="list-style-type: none"> <li>1x Fast UART 16550 port / 1 Header (internal)</li> </ul>                               |
| <b>Others</b>               | <ul style="list-style-type: none"> <li>1x <a href="#">SATADOM</a> support on the motherboard</li> </ul>                       |

#### PCI-Express

- 1x PCI-E 3.0 x16 Low-profile slot
- 1x "0 slot" (x16)
- [Compatible Listing](#)

#### 0 Slot

**(Both CPUs need to be installed for full access to PCI-E slots and 0 slot.)**

#### Drive Bays (per Node)

- Hot-swap** 6x 2.5" Hot-swap SAS/SATA HDD trays

#### System Cooling

- Fans** 4x 8cm heavy duty PWM fans with optimal fan speed control

#### Switching Power Supply

2000W Redundant Power Supplies with I<sup>2</sup>C & PMBus

- 1100W Output @ 100-120V, 12.7-10.5A, 50-60Hz
- 1400W Output @ 120-140V, 13.5-11.5A, 50-60Hz
- 1800W Output @ 200-220V, 10.0-9.5A, 50-60Hz
- 1980W Output @ 220-230V, 10.0-9.8A, 50-60Hz
- 2000W Output @ 230-240V, 10.0-9.8A, 50-60Hz

**5Vsb** 4A

**I<sup>2</sup>C Remote Monitoring** FRU Data / SMBus / PMBus

#### Certification



**Platinum Certified [ Test Report ]**

#### System BIOS

- BIOS Type** 128Mb SPI Flash EEPROM with AMI BIOS
- BIOS Features**
  - Plug and Play (PnP)
  - APM 1.2
  - PCI 2.2
  - ACPI 1.0 / 2.0
  - USB Keyboard support
  - SMBIOS 2.3
  - UEFI

#### Operating Environment / Compliance

- RoHS** RoHS Compliant
- Environmental Spec.**
  - 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  |
| <b>Motherboard / Chassis</b>  | MBD-X10DRT-P        | 4   | Super X10DRT-P Motherboards  |
|                               | CSE-217HQ+-R2K02B   | 1   | 2U Chassis   |
| <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-6SATA3P-O-P | 4   | Backplan adapter card; 6SATA ports,RoHS/REACH,PBF  |
| <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>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) |