

# SuperServer 2028TP-DC1FR



Available Colors:

Black



## Key Features

Two **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, 1x PCI-E 3.0 x8 slot, and 1x PCI-E 3.0 x16 for GPU/Xeon Phi support (w/ GPU kit)
4. Single port IB (FDR, 56Gbps), w/ QSFP connector
5. Intel® i350-AM2 Dual port GbE LAN
6. Integrated IPMI 2.0 with KVM and Dedicated LAN
7. 12x 2.5" Hot-swap SAS (8) / SATA (4) HDD Bays
8. LSI 3108 SAS3 controller (8 ports); RAID 0, 1, 5, 6, 10, 50, 60
9. mSATA (full size) support
10. 1280W Redundant Power Supplies Platinum Level Digital (94%)

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-DC1FR	■ SuperServer 2028TP-DC1FR (Black)
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### Motherboard

Super X10DRT-PIBF

### Processor/Cache (per Node)

CPU	<ul style="list-style-type: none"> <li>■ Intel® Xeon® processor E5-2600 v3 family (up to 145W TDP) *</li> <li>■ Dual Socket R3 (LGA 2011)</li> </ul>
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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

### Chassis

Form Factor	■ 2U Rackmount
Model	■ CSE-217HD+-R1K28B

### Dimensions and Weight

Width	■ 17.25" (438mm)
Height	■ 3.47" (88mm)
Depth	■ 28.75" (730mm)
Weight	<ul style="list-style-type: none"> <li>■ Gross Weight: 85 lbs (38.6kg)</li> <li>■ Net Weight: 66 lbs (29.9 kg)</li> </ul>
Available Colors	■ Black

### Front Panel

Buttons	<ul style="list-style-type: none"> <li>■ Power On/Off button</li> <li>■ UID button</li> </ul>
	■ Power status LED

frequency optimized CPUs and specialized system optimization.

### 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 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>
Infiniband	<ul style="list-style-type: none"> <li>Mellanox ConnectX-3 FDR Infiniband 56Gbps Controller</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® 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>
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>8x SAS3 (12Gbps) ports</li> </ul>
LAN	<ul style="list-style-type: none"> <li>2x RJ45 Gigabit Ethernet LAN ports</li> <li>1x RJ45 Dedicated IPMI LAN port</li> </ul>
Infiniband	<ul style="list-style-type: none"> <li>1x external QSFP Infiniband connector</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 <u>mSATA</u> (full size) and CacheVault support on the daughter card</li> <li>1x <u>SATADOM</u> support on the motherboard</li> </ul>

### LEDs

- HDD activity LED
- 2x Network activity LEDs
- Universal Information (UID) LED

### Expansion Slots (per Node)

PCI-Express	<ul style="list-style-type: none"> <li>1x PCI-E 3.0 x16 Low-profile slot</li> <li>1x PCI-E 3.0 x8 slot</li> <li>1x PCI-E 3.0 x16 for GPU/Xeon Phi support (w/ GPU kit)</li> </ul> <p>(Both CPUs need to be installed for full access to PCI-E slots)</p>
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### Drive Bays (per Node)

Hot-swap	<ul style="list-style-type: none"> <li>12x 2.5" Hot-swap SAS (8) / SATA (4) HDD Bays</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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### Power Supply

1280W Redundant High-efficiency Digital Power Supplies w/ PMBus 1.2	
AC Input	<ul style="list-style-type: none"> <li>1000W Output @ 100-140V, 8-12A, 50-60Hz</li> <li>1280W Output @ 180-240V, 6-8A, 50-60Hz</li> </ul>
DC Output	<ul style="list-style-type: none"> <li>1000W: +12V/83A; +5Vsb/4A</li> <li>1280W: +12V/106.7A, +5Vsb/4A</li> </ul>

### Certification



Platinum Certified [ [Test Report](#) ]

### 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-PIBF	2	Super X10DRT-PIBF Motherboards
	CSE-217HD+-R1K28B	1	2U Chassis
<b>Backplane</b>	BPN-ADP-S3108H-H8IRP-O-P	2	BPNADPS3108H-H8IRP
<b>Backplane</b>	BPN-SAS3-217HD	1	,RoHS/REACH,PBF 2U Twin Backplane, support 24 SAS3/SATA3 HDD (2.5") with Hot Swapping. Per node for 12 HDDs. PWM fan control, HDD spin up and failure LED supported.
<b>Heatsink / Retention</b>	SNK-P0048PS	4	2U Passive CPU Heat Sink for X9, X10 Generation Systems Equipped w/ a Narrow ILM MB
<b>Power Supply</b>	PWS-1K28P-SQ	2	1U 1280W, redundant single output power supply

### Optional Parts List

	Part Number	Qty	Description
<b>GPU Kit</b>	MCP-420-21715-ASM	-	Support passive GPU and Xeon Phi (passive)
	MCP-420-21715-ASM-OEM	-	Support Geforce GTX GPU (active)
<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	2	OOB Management Package (per node license)
<b>Software</b>	SFT-DCMS-Single	2	DataCenter Management Package (per node license)