

SuperServer 2028TP-HC1FR



Integrated Board



Super X10DRT-PIBF



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. 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. 6x 2.5" Hot-swap SAS/SATA HDD Bays
8. LSI 3108 SAS3 controller (6 ports); RAID 0, 1, 5, 6, 10, 50, 60
9. 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-HC1FR ■ SuperServer 2028TP-HC1FR (Black)

Motherboard

Super X10DRT-PIBF

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

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

■ Power status LED

frequency optimized CPUs and specialized system optimization.

System Memory (per Node)

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

Chipset	<ul style="list-style-type: none"> Intel® C612 Express chipset
Infiniband	<ul style="list-style-type: none"> Mellanox ConnectX-3 FDR Infiniband 56Gbps Controller
SAS	<ul style="list-style-type: none"> LSI 3108 SAS3 (12Gbps) controller; RAID 0, 1, 5, 6, 10, 50, 60 support Optional SuperCap
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 Controllers	<ul style="list-style-type: none"> Intel® i350-AM2 Dual Port Gigabit Ethernet Virtual Machine Device Queues reduce I/O overhead Supports 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output 1x Realtek RTL8201N PHY (dedicated IPMI)
Graphics	<ul style="list-style-type: none"> ASPEED AST2400 BMC

Input / Output (per Node)

SAS	<ul style="list-style-type: none"> 6x SAS3 (12Gbps) ports
LAN	<ul style="list-style-type: none"> 2x RJ45 Gigabit Ethernet LAN ports 1x RJ45 Dedicated IPMI LAN port
Infiniband	<ul style="list-style-type: none"> 1x external QSFP Infiniband connector
USB	<ul style="list-style-type: none"> 2x USB 3.0 ports total (2x rear)
VGA	<ul style="list-style-type: none"> 1x VGA port
Serial Port / Header	<ul style="list-style-type: none"> 1x Fast UART 16550 port / 1 Header (internal)
Others	<ul style="list-style-type: none"> 1x <u>SATADOM</u> support on the motherboard

LEDs

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

Expansion Slots (per Node)

	<ul style="list-style-type: none"> 1x PCI-E 3.0 x16 Low-profile slot
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"> 6x 2.5" Hot-swap SAS/SATA HDD trays
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System Cooling

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

2000W Redundant Power Supplies with I ² C & PMBus	
	<ul style="list-style-type: none"> 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
AC Input	

5Vsb	4A
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I ² C Remote Monitoring	FRU Data / SMBus / PMBus
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Certification	  Platinum Certified [Test Report]
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System BIOS

BIOS Type	<ul style="list-style-type: none"> 128Mb SPI Flash EEPROM with AMI BIOS
BIOS Features	<ul style="list-style-type: none"> 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	<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	X10DRT-PIBF	4	Super X10DRT-PIBF Motherboards 2U Chassis
	CSE-217HQ+-R2K02B	1	
Backplane	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.
Backplane	BPN-ADP-S3108L-H6IRP-O-P	4	LSI 3108, SAS 12Gbps (x6 internal)
Riser Card	RSC-R1UTP-E16R-O-P	4	,RoHS/REACH,PBF
Heatsink / Retention	SNK-P0057PS	4	1U High Performance Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Narrow ILM MB
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
Power Supply	PWS-2K04A-1R	2	AC-DC 2000W, Titanium Level, Redundancy, 1U, PMBus 1.2, +12V/+5Vsb, 360x76x40mm,HF,RoHS/REACH
Power Supply	PWS-2K02P-1R	2	2000W redundant platinum power supply

Optional Parts List

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