

SuperServer 2028TP-HTFR



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. 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 SATA HDD Bays
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-HTFR	▪ SuperServer 2028TP-HTFR (Black)
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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)
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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"> 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
SATA	<ul style="list-style-type: none"> SATA3 (6Gbps); 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 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)	
SATA	<ul style="list-style-type: none"> 6x SATA3 (6Gbps) 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 SATADOM support on the motherboard

Expansion Slots (per Node)	
PCI-Express	<ul style="list-style-type: none"> 1x PCI-E 3.0 x16 Low-profile slot
0 Slot	<ul style="list-style-type: none"> 1x "0 slot" (x16) Compatible Listing <p>(Both CPUs need to be installed for full access to PCI-E slots and 0 slot.)</p>

Drive Bays (per Node)	
Hot-swap	<ul style="list-style-type: none"> 6x 2.5" Hot-swap SAS/SATA HDD trays

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

Switching Power Supply	
2000W Redundant Power Supplies with I ² C & PMBus	
AC Input	<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
5Vsb	4A
I ² C Remote Monitoring	FRU Data / SMBus / PMBus

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	MBD-X10DRT-PIBF	4	Super X10DRT-PIBF Motherboards
	CSE-217HQ+-R2K02B	1	2U Chassis
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-6SATA3P-O-P	4	Backplan adapter card; 6SATA ports,RoHS/REACH,PBF
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
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)