

# SuperServer 1028TP-DTFR



## Key Features

Two **hot-pluggable** systems (nodes) in a 1U form factor. Each node supports the following:

1. Dual socket R3 (LGA 2011) supports Intel® Xeon® processor E5-2600 v4<sup>†</sup>/ v3 family; QPI up to 9.6GT/s
2. Up to 2TB<sup>†</sup> ECC 3DS LRDIMM , up to DDR4- 2400<sup>†</sup>MHz ; 16x DIMM slots
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 Dual port GbE LAN
6. Integrated IPMI 2.0 with KVM and Dedicated LAN
7. 4x 2.5" Hot-swap SATA3 drive bays
8. 1000W Redundant Power Supplies Titanium Level (96%)

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

## Specifications

### Product SKUs

SYS-1028TP-DTFR ■ SuperServer 1028TP-DTFR (Black)

### Motherboard

Super X10DRT-PIBF

### Processor/Cache

CPU ■ Intel® Xeon® processor E5-2600 v4<sup>†</sup>/ v3 family (up to 145W TDP) \*  
 ■ Dual Socket R3 (LGA 2011)

Cores / Cache ■ Up to 22 Cores<sup>†</sup> / Up to 55MB<sup>†</sup> Cache

System Bus ■ QPI up to 9.6 GT/s

Note <sup>†</sup> BIOS version 2.0 or above is required

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

### System Memory

■ 16x 288-pin DDR4 DIMM slots

### Chassis

Form Factor ■ 1U Rackmount

Model ■ CSE-809H-R1K05

### Dimensions and Weight

Width ■ 19.1" (485mm)

Height ■ 1.7" (43mm)

Depth ■ 29.5" (750mm)

Weight ■ Gross Weight: 48.1 lbs (21.9 kg)  
 ■ Net Weight: 33.5 lbs (15.2 kg)

Package (HxWxD) ■ 8" (203mm) x 29.6" (752mm) x 38.4" (975mm)

Available Colors ■ Black

### Front Panel

Buttons ■ Power On/Off button  
 ■ UID button/LED

LEDs ■ Power status LED  
 ■ Network activity LED  
 ■ Universal Information (UID) LED

### Expansion Slots (per Node)

Memory Capacity	<ul style="list-style-type: none"> <li>Up to 2TB<sup>†</sup> ECC 3DS LRDIMM, 512GB ECC RDIMM</li> </ul>
Memory Type	<ul style="list-style-type: none"> <li>2400<sup>†</sup>/2133/1866/1600MHz ECC DDR4 SDRAM 72-bit</li> </ul>
DIMM Sizes	<ul style="list-style-type: none"> <li>RDIMM: 64GB, 32GB, 16GB, 8GB, 4GB</li> <li>LRDIMM: 64GB, 32GB</li> <li>3DS LRDIMM: 128GB</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 chipset</li> </ul>
Infiniband	<ul style="list-style-type: none"> <li>Mellanox ConnectX-3 FDR Infiniband 56Gbps Controller</li> </ul>
SATA	<ul style="list-style-type: none"> <li>SATA3 (6Gbps) w/ RAID 0, 1, 5, 10</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 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)

SATA	<ul style="list-style-type: none"> <li>4x SATA3 (6Gbps) 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 (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>

PCI-Express	<ul style="list-style-type: none"> <li>1x PCI-E 3.0 x16 Low-profile slot</li> </ul>
0 Slot	<ul style="list-style-type: none"> <li>1x "0 slot" (x16)</li> </ul>

#### Drive Bays (per Node)

Hot-swap	<ul style="list-style-type: none"> <li>4x 2.5" Hot-swap SATA3 drive bays</li> </ul>
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#### System Cooling (per Node)

Fans	<ul style="list-style-type: none"> <li>3x heavy duty counter rotating fans with air shroud and optimal fan speed control</li> </ul>
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#### PowerStick Power Supply

1000W Redundant Power Supplies with PMBus	
Total Output Power	<ul style="list-style-type: none"> <li>800W/1000W</li> </ul>
Dimension (W x H x L)	<ul style="list-style-type: none"> <li>38 x 40 x 360 mm</li> </ul>
Input	<ul style="list-style-type: none"> <li>100-127Vac / 9-7.5A / 50-60Hz</li> <li>200-240Vac / 6-5A / 50-60Hz</li> </ul>
+12V	<ul style="list-style-type: none"> <li>Max: 66.7A / Min: 0A (100-127Vac)</li> <li>Max: 83A / Min: 0A (200-240Vac)</li> </ul>
+5Vsb	<ul style="list-style-type: none"> <li>Max: 4A / Min: 0A</li> </ul>
Output Type	<ul style="list-style-type: none"> <li>Gold Finger Connector (16 Power Pin, 14 Signal Pin)</li> </ul>

Certification	  <ul style="list-style-type: none"> <li>UL/cUL/CB/BSMI/CE/CCC Titanium Level (Cert. in progress)</li> </ul>
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#### 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-809H-R1K05	1	1U Chassis
<b>Backplane</b>	BPN-SAS3-809H	1	1U 8-Port 2-Node 12Gbps Backplane for 4x2.5
<b>Backplane</b>	BPN-ADP-6SATA3P	2	Backplan adapter card; 6SATA ports,RoHS/REACH,PBF
<b>Label</b>	LBL-0108	1	CAUTION LABEL FOR REDUNDANT PWR SYSTEMS
<b>Manual</b>	MNL-1848-QRG	1	1028TP-DT(R/TR/FR),QRG
<b>Riser Card</b>	RSC-R1UTP-E16R	2	,RoHS/REACH,PBF
<b>Heatsink / Retention</b>	SNK-P0047PSM	2	1U Passive Front CPU Heat Sink w/ a Middle Air Channel for X9, X10 2U Twin^2+ and Twin Pro^2 Series Servers
<b>Heatsink / Retention</b>	SNK-P0057PS	2	1U High Performance Passive CPU Heat Sink for X9, X10 Systems Equipped w/ a Narrow ILM MB
<b>Power Supply</b>	PWS-1K05A-1R	2	1000W Redundant Titanium Level (96%) Power Supplies

### Optional Parts List

	Part Number	Qty	Description
<b>Global Services &amp; Support</b>	<a href="#">OS4HR3/2/1</a>	-	3/2/1-year onsite 24x7x4 service
	<a href="#">OSNBD3/2/1</a>	-	3/2/1-year onsite NBD service
<b>Software</b>	SFT-OOB-LIC	1	OOB Management Package (per node license)
<b>Software</b>	SFT-DCMS-Single	1	DataCenter Management Package (per node license)
<b>TPM security module (optional, not included)</b>	<a href="#">AOM-TPM-9655V</a> <a href="#">AOM-TPM-9655H</a>	-	TPM module with Infineon 9655, RoHS/REACH,PBF; Vertical or Horizontal depends on the server
<b>SuperDOM</b>	-	-	Supermicro SATA DOM Solutions [ <a href="#">Details</a> ]
<b>Network Card(s)</b>	AOC-PTG-I1S	-	Proprietary 1-port 10GbE controller w/ SFP+, based on Intel 82599EN
	AOC-S40G-i2Q	-	Standard LP 2-port 40GbE controller, based on Intel Fortville XL710
	AOC-SGP-i2	-	Standard LP, 2x GbE RJ45, PCI-E x4, Intel i350AM2
	AOC-SGP-i4	-	Standard LP, 4x GbE RJ45, PCI-E x4, Intel i350
	AOC-STG-b4S	-	Standard LP, 4x 10GbE SFP+, PCI-E x8, Broadcom BCM57840S
	AOC-STGN-i2S	-	Standard LP, 2x 10GbE SFP+, PCI-E x8, Intel 82599ES
	AOC-STGN-i1S	-	Standard LP, 2x 10GbE SFP+, PCI-E x8, Intel 82599EN
	AOC-STG-i2T	-	Standard LP, 1x 10GbE SFP+, PCI-E x8, Intel 82599EN
	AOC-STG-i2	-	Standard LP, 2x 10GbE RJ45, PCI-E x8, Intel X540
		-	Standard LP, 2x 10GbE CX4, PCI-E x8, Intel 82598EB