

# SuperServer 2029TP-HC1R



## Key Features

- Compute Intensive Application
- HPC, Data Center
- Enterprise Server
- Financial Analysis
- Mission-critical applications

Four **hot-pluggable** systems (nodes) in a 2U form factor. Each node supports the following:

1. Dual socket P (LGA 3647) supports Intel® Xeon® Scalable Processors, Dual UPI up to 10.4GT/s
2. Up to 2TB ECC 3DS LRDIMM, up to DDR4-2666MHz; 16 DIMM slots
3. 2 PCI-E 3.0 x16 slots
4. Flexible Networking support via SIOM; Dedicated IPMI 2.0 LAN
5. 6 Hot-swap 2.5" SAS/SATA drive bays
6. Broadcom 3108 SAS3 controller; RAID 0, 1, 5, 6, 10, 50, 60 with SuperCap option
7. Up to 2200W Redundant Power Supplies Titanium Level (96%)

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[▶ Tested Network Card \(AOC\)](#)



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

## Specifications

Product SKUs	
SYS-2029TP-HC1R	▪ SuperServer 2029TP-HC1R (Black)
Motherboard	
Super X11DPT-PS	
Processor/Cache (per Node)	
CPU	<ul style="list-style-type: none"> <li>▪ Dual Socket P (LGA 3647)</li> <li>▪ Intel® Xeon® Scalable Processors, Dual UPI up to 10.4GT/s</li> <li>▪ Support CPU TDP 70-165W*</li> </ul>
Cores	▪ Up to 28 Cores with Intel® HT Technology
Note	* Please contact Supermicro Technical Support for supporting conditions of high power (TDP 150W and above) or high base frequency (3.0 GHz and above) processors.
Note	* 165W support ambient up to 25C.

Chassis	
Form Factor	▪ 2U Rackmount
Model	▪ CSE-217HQ+-R2K20BP3
Dimensions and Weight	
Width	▪ 17.25" (438mm)
Height	▪ 3.47" (88mm)
Depth	▪ 28.5" (724mm)
Weight	<ul style="list-style-type: none"> <li>▪ Gross Weight: 90 lbs (40.9kg)</li> <li>▪ Net Weight: 72 lbs (32.7 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>
LEDs	<ul style="list-style-type: none"> <li>▪ Power status LED</li> <li>▪ HDD activity LED</li> <li>▪ Network activity LEDs</li> <li>▪ Universal Information (UID) LED</li> </ul>

System Memory (per Node)	
Memory Capacity	<ul style="list-style-type: none"> <li>16 DIMM slots</li> <li>Up to 2TB ECC 3DS LRDIMM, 2TB ECC RDIMM, DDR4 up to 2666MHz</li> </ul>
Memory Type	<ul style="list-style-type: none"> <li>2666/2400/2133MHz ECC DDR4 SDRAM</li> </ul>
On-Board Devices	
Chipset	<ul style="list-style-type: none"> <li>Intel® C621 chipset</li> </ul>
SAS	<ul style="list-style-type: none"> <li>Broadcom 3108 SAS3 (12Gbps) controller;</li> <li>RAID 0, 1, 5, 6, 10, 50, 60 support</li> <li>Optional SuperCap</li> </ul>
Network Controllers	<ul style="list-style-type: none"> <li>Must bundle with at least one <a href="#">SIOM</a> or <a href="#">network</a> card <b>per node</b></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> </ul>
Graphics	<ul style="list-style-type: none"> <li>ASPEED AST2500 BMC</li> </ul>
Input / Output (per Node)	
SAS	<ul style="list-style-type: none"> <li>6 SAS3 (12Gbps) ports</li> </ul>
LAN	<ul style="list-style-type: none"> <li>1 RJ45 Dedicated IPMI LAN port</li> </ul>
USB	<ul style="list-style-type: none"> <li>2 USB 3.0 ports (rear)</li> </ul>
VGA	<ul style="list-style-type: none"> <li>1 VGA port</li> </ul>
Serial Port / Header	<ul style="list-style-type: none"> <li>1 Fast UART 16550 port / 1 Header (internal)</li> </ul>
Others	<ul style="list-style-type: none"> <li>2 <a href="#">SATADOM</a> support on the motherboard</li> </ul>
System BIOS	
BIOS Type	<ul style="list-style-type: none"> <li>AMI 32MB SPI Flash ROM</li> </ul>
Management	
Software	<ul style="list-style-type: none"> <li>Intel® Node Manager</li> <li>IPMI 2.0</li> <li>KVM with dedicated LAN</li> <li>NMI</li> <li><a href="#">SSM</a>, <a href="#">SPM</a>, <a href="#">SUM</a></li> <li><a href="#">SuperDoctor® 5</a></li> <li>Watchdog</li> </ul>
Power Configurations	<ul style="list-style-type: none"> <li>ACPI Power Management</li> </ul>
PC Health Monitoring	
CPU	<ul style="list-style-type: none"> <li>Monitors for CPU Cores, Chipset Voltages, Memory.</li> <li>5+1 Phase-switching voltage regulator</li> </ul>
FAN	<ul style="list-style-type: none"> <li>Fans with tachometer monitoring</li> <li>Status monitor for speed control</li> <li>Pulse Width Modulated (PWM) fan connectors</li> </ul>
Temperature	<ul style="list-style-type: none"> <li>Monitoring for CPU and chassis environment</li> <li>Thermal Control for fan connectors</li> </ul>
Omni-Path Fabric CPUs	<ul style="list-style-type: none"> <li>Do not support</li> </ul>

Expansion Slots (per Node)	
	<ul style="list-style-type: none"> <li>2 PCI-E 3.0 x16 Low-profile slots</li> <li>1 SIOM card support</li> </ul>
PCI-Express	<p>Note: Must bundle with Network Card</p> <p>(With only one CPU installed, SXB2 M.2 and SXB4 riser card slots not function)</p>
Drive Bays (per Node)	
Hot-swap	<ul style="list-style-type: none"> <li>6 Hot-swap 2.5" SAS/SATA HDD trays</li> </ul>
System Cooling	
Fans	<ul style="list-style-type: none"> <li>4 Heavy duty 8cm PWM fans with optimal fan speed control</li> </ul>
Power Supply	
2200W Redundant Power Supplies with PMBus	
Total Output Power and Input	<ul style="list-style-type: none"> <li>1200W with Input 100-127Vac</li> <li>1800W with Input 200-220Vac</li> <li>1980W with Input 220-230Vac</li> <li>2090W with Input 230-240Vac</li> <li>2200W with Input 220-240Vac (for UL/cUL use only)</li> <li>2090W with Input 230-240Vdc (for CCC only)</li> </ul>
AC Input Frequency	<ul style="list-style-type: none"> <li>50-60Hz</li> </ul>
Dimension (W x H x L)	<ul style="list-style-type: none"> <li>76 x 40 x 336 mm</li> </ul>
+12V	<ul style="list-style-type: none"> <li>Max: 100A / Min: 0A (100-127Vac)</li> <li>Max: 150A / Min: 0A (200-220Vac)</li> <li>Max: 165A / Min: 0A (220-230Vac)</li> <li>Max: 174.17A / Min: 0A (230-240Vac)</li> <li>Max: 183.3A / Min: 0A (220-240Vac)</li> </ul>
5VSB	<ul style="list-style-type: none"> <li>Max: 1A / Min: 0A</li> </ul>
Output Type	<ul style="list-style-type: none"> <li>Backplanes (gold finger)</li> </ul>
Certification	  <ul style="list-style-type: none"> <li>UL/cUL/CB/BSMI/CE/CCC Titanium Level [ Cert. in progress ]</li> </ul>
Operating Environment	
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 ~ 35°C (50°F ~ 95°F)</li> <li>Non-operating Temperature: -40°C to 60°C (-40°F to 140°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>	<u>MBD-X11DPT-PS</u>	4	Super X11DPT-PS Motherboards
	<u>CSE-217HQ+-R2K20BP3</u>	1	2U Chassis
<b>Backplane</b>	BPN-ADP-S3108L-H6IRP	4	LSI 3108, SAS 12Gbps (x6 internal)
<b>Backplane</b>	BPN-SAS3-217HQ2	1	2U 24-Port 4-Node Backplane Supports 6x2.5
<b>Air Shroud</b>	MCP-310-21707-0B	4	SC217HQ+ TwinPro 2pcs air shroud set for X11 DPT-PS
<b>Riser Card</b>	RSC-P-6	4	RSC-P-6 (1U LHS TwinPro RSC with 1 PCI-Ex16),RoHS
<b>Riser Card</b>	RSC-R1UTP-E16R	4	1U RHS TwinPro Riser card with one PCI-E x16 slot
<b>Heatsink / Retention</b>	SNK-P0067PS	4	1U Passive CPU Heat Sink for X11 Purley Platform Equipped with a Narrow Retention Mechanism
<b>Heatsink / Retention</b>	SNK-P0067PSM	4	1U Passive CPU Heat Sink with a 26-mm Wide Middle Air Channel for X11 Purley Platform Equipped with a Narrow Retention Mechanism
<b>Power Supply</b>	PWS-2K20A-1R	2	1U 2200W Redundant, Titanium, 76(W) X 40(H) X 336(L) mm

### Optional Parts List

	Part Number	Qty	Description
<b>TPM security module (optional, not included)</b>	AOM-TPM-9670V	1	SPI capable TPM 2.0 with Infineon 9670 controller with vertical form factor
<b>TPM security module (optional, not included)</b>	AOM-TPM-9671V	1	SPI capable TPM 1.2 with Infineon 9670 controller with vertical form factor
<b>SuperCap Kit</b>	BTR-CV3108-TP2	-	Broadcom 3108 CacheVault kit for TwinPro
<b>Global Services &amp; Support</b>	<u>OS4HR3/2/1</u>	-	3/2/1-year onsite 24x7x4 service
	<u>OSNBD3/2/1</u>	-	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)