

# SuperServer 7049P-TR



## Key Features

### Cost Effective

1. Dual Socket P (LGA 3647) support 2nd Gen Intel® Xeon® Scalable processors (Cascade Lake/Skylake)‡
2. 16 DIMMs; up to 4TB 3DS ECC DDR4-2933MHz† RDIMM/LRDIMM, Supports Intel® Optane™ DCPMM††
3. 4 PCI-E 3.0 x16, 2 PCI-E 3.0 x8 slots
4. 8 Hot-swap 2.5"/3.5" SATA3 (6Gbps) drive bays; RAID 0, 1, 5, 10
5. Optional DVD-ROM drive, optional support: 2 fixed 2.5" NVMe/SSD/HDD, 1 M.2 support
6. **M.2 Interface:** PCI-E 3.0 x4  
**M.2 Form Factor:** 2260, 2280, 22110  
**M.2 Key:** M-Key
7. 3 Peripheral 5.25" bays
8. 2x 1GbE LAN ports with Intel® X722
9. 1200W Redundant Power Supplies  
**Titanium Level**  
(Updated for 2021 Version)

### Integrated Board



### Super X11DPi-N

Views: | [Angled View](#) | [Side View](#) |  
| [Front View](#) | [Rear View](#) |

▶ [Drivers & Utilities](#) ▶ [BIOS](#) ▶ [IPMI](#) ▶ [Tested Memory](#) ▶ [Tested M.2 List](#) ▶ [NVMe Options](#) ▶ [Manuals](#) ▶ [OS Certification Matrix](#)  
▶ [Quick-References Guide](#) ▶ [Drive Options](#) ▶ [Network Card \(AOC\) Matrix](#)

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

# Specifications

## Product SKUs

**SYS-7049P-TR** ■ SuperServer 7049P-TR (**Black**)

## Motherboard

**Super X11DPI-N**

## Processor

**CPU** ■ Dual Socket P (LGA 3647)  
 ■ 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors<sup>‡</sup>, Dual UPI up to 10.4GT/s  
 ■ Support CPU TDP 70-205W

**Cores** ■ Up to 28 Cores

**Note** <sup>‡</sup> BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R)  
 \* CPU SKUs not supported: Gold 6256 and Gold 6250(L) (L = increased memory capacity per socket), Gold 6233W and Gold 5216W

## System Memory

**Memory Capacity** ■ 16 DIMM slots  
 ■ Up to 4TB 3DS ECC DDR4-2933MHz<sup>†</sup> RDIMM/LRDIMM  
 ■ Supports Intel® Optane™ DCPMM<sup>††</sup>

**Memory Type** ■ 2933<sup>†</sup>/2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM

**Note** <sup>†</sup> 2933MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro  
<sup>††</sup> Cascade Lake only. Contact your Supermicro sales rep for more info.

## On-Board Devices

**Chipset** ■ Intel® C621 chipset

**SATA** ■ SATA3 (6Gbps); RAID 0, 1, 5, 10

**Network Controllers** ■ Dual 1GbE LAN with Intel® X722

**IPMI** ■ Support for Intelligent Platform Management Interface v.2.0  
 ■ IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

**Video** ■ ASPEED AST2500 BMC

## Input / Output

**SATA** ■ 8 SATA3 (6Gbps) ports

**LAN** ■ 2 RJ45 Gigabit Ethernet LAN ports  
 ■ 1 RJ45 Dedicated IPMI LAN port

**USB** ■ Rear USB: 2 USB 3.0 + 2 USB 2.0  
 ■ Front USB: 2 USB 2.0  
 ■ USB Header: 1 Type A

**Video** ■ 1 VGA port

**Serial Port / Header** ■ 2 Fast UART 16550 serial  
 ■ 2 COM Ports (1 rear, 1 header)

## Chassis

**Form Factor** ■ 4U Rackmountable / Tower  
 ■ Optional Rackmount Kit

**Model** ■ **CSE-745BTS-R1K23B**

## Dimensions and Weight

**Height** ■ 17.8" (452mm)

**Width** ■ 7.0" (178mm)

**Depth** ■ 25.5" (648mm)

**Package** ■ 24" (H) x 14" (W) x 26.5" (D)

**Weight** ■ Net Weight: 56 lbs (25.6 kg)  
 ■ Gross Weight: 73.5 lbs (33.6 kg)

**Available Colors** ■ Black

## Front Panel

**Buttons** ■ Power On/Off button  
 ■ System Reset button

**LEDs** ■ Power LED  
 ■ Hard drive activity LED  
 ■ Network activity LEDs  
 ■ System Information LED  
 ■ Power Fail LED

**Ports** ■ 2 USB Ports

## Expansion Slots

**PCI-Express** ■ 4 PCI-E 3.0 x16 slots  
 ■ 2 PCI-E 3.0 x8 slots  
 ■ Support total of 6 Full-height AOC

## Drive Bays

**Hot-swap** ■ 8 Hot-swap 2.5"/3.5" SATA3 (6Gbps) drive bays

**Peripheral Bays** ■ 3 Peripheral 5.25" drive bays

## SAS / SATA Backplane

SAS / SATA Hard Drive Backplane w/AMI MG9072

## System Cooling

**Fans** ■ 3x 80mm high-performance fans  
 ■ 2x 80mm PWM Rear Chassis fans

## Power Supply

1200W Redundant High-efficiency Power Supplies

**Total Output Power** ■ 1000W with Input 100 - 127Vac  
 ■ 1200W with Input 200 - 240Vac  
 ■ 1200W with Input 200 - 240Vdc (for CCC only)

**Dimension (W x H x L)** ■ 76 x 40 x 336 mm

**Input** ■ 50-60Hz

**+12V** ■ Max: 83A & Min: 0A (100Vac-127Vac)  
 ■ Max: 100A & Min: 0A (200Vac-240Vac)

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<b>DOM</b>	<ul style="list-style-type: none"> <li>2 Super<u>DOM</u> (Disk on Module) ports</li> </ul>
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#### System BIOS

<b>BIOS Type</b>	<ul style="list-style-type: none"> <li>AMI UEFI</li> </ul>
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#### Management

<b>Software</b>	<ul style="list-style-type: none"> <li>Intel® Node Manager</li> <li><u>IPMI 2.0</u></li> <li>KVM with dedicated LAN</li> <li>NMI</li> <li><u>SSM, SPM, SUM</u></li> <li><u>SuperDoctor® 5</u></li> </ul>
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<b>Power Configurations</b>	<ul style="list-style-type: none"> <li>ACPI Power Management</li> </ul>
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#### PC Health Monitoring

<b>CPU</b>	<ul style="list-style-type: none"> <li>Monitors for CPU Cores, Chipset Voltages, Memory.</li> <li>4+1 Phase-switching voltage regulator</li> </ul>
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<b>FAN</b>	<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>
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<b>Temperature</b>	<ul style="list-style-type: none"> <li>Monitoring for CPU and chassis environment</li> <li>Thermal Control for fan connectors</li> </ul>
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#### Certification



#### Titanium Level

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#### Operating Environment

<b>RoHS</b>	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>
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<b>Environmental Spec.</b>	<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>
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## Parts List

### Parts List - (Items Included)

	Part Number	Qty	Description
<b>Motherboard / Chassis</b>	MBD-X11DPI-N	1	Super X11DPI-N Motherboard
	CSE-745BTS-R1K23B	1	4U Chassis
<b>Backplane</b>	BPN-SAS3-743A	1	8-port 4U/Tower 3.5-inch SAS3/SAS2/SATA3 12Gbps backplane for SC743/SC745 chassis
<b>Cable 1</b>	CBL-SAST-0508-01	2	MINI SAS HD-MINI SAS,6G,INT,50CM,SB,30AWG
<b>Cable 2</b>	CBL-SAST-0508-02	2	MINI SAS HD-MINI SAS,6G,INT,50CM,SB,30AWG
<b>Parts</b>	MCP-260-00042-0N	1	STD I/O shield for X9 socket R server MB with Gasket.
<b>Manual</b>	MNL-1940-QRG	1	SYS-7049P-TR/SYS-7049P-TRT, QRG
<b>Heatsink / Retention</b>	SNK-P0068PS	2	2U Passive CPU Heat Sink for X11 Purley Platform Equipped with a Narrow Retention Mechanism
<b>* Power Supply</b>	PWS-1K23A-SQ	2	1U, Redundancy, Titanium, Input: 100-127Vac, 200-240Vac
<b>* Power Distributor</b>	PDB-PT747-4648	1	POWER DISTRIBUTOR FOR SC747 W/ GRAPHIC OUTPUT FEATURE
<b>* Cable 3</b>	CBL-0087	1	CBL,FRONT CNTL,16 TO 16 PIN,Ribbon,50CM
<b>* Cable 4</b>	CBL-0160L	2	NEMA5-15P to C13 US power cord 16AWG 6ft, PBF (default for high watt)
<b>* Cable 5</b>	CBL-0216L	3	4 PIN TO 4 PIN MIDDLE FAN POWER EXTENSION, 20cm. 24AWG(PWM)
<b>* Cable 6</b>	CBL-0471L	1	USB 3.0,INT,19 PIN/F TO 19PIN/F,2 CH,80CM,30/28/26AWG
<b>* FAN 1</b>	FAN-0180L4	2	80x80x38 mm, 9.4K RPM, Hot-swappable Rear Exhaust Fan for X11 Purley Platform Newly Enabled 4U Chassis
<b>* FAN 2</b>	FAN-0182L4	3	80x80x38 mm, 9.4K RPM, Hot-swappable Middle Cooling Fan for X11 Purley Platform Newly Enabled 4U Chassis
<b>* Drive Tray(s)</b>	MCP-220-00092-0B	8	Black Hot-swap 3.5inch HDD Tray (w/o logo)
<b>* Parts</b>	MCP-290-74502-0B	1	Plastic feet (4 pcs set) for 4U tower chassis, black color
<b>* Air Shroud</b>	MCP-310-49001-0N	1	SC745 Intel DP X9, X8 PC air shroud 1368x13/12x13MB

#### Notes:

1. Parts with \* are inside the chassis
2. Excessive parts might not be shipped, including but not limited to excessive drive trays, fans, riser brackets, air shrouds, IO shields, cables.....etc.

### Optional Parts List

	Part Number	Qty	Description
<b>Storage Controller Card(s) &amp; Cables(s)</b>	AOC-S3008L-L8i & 2x CBL-SAST-0531-01	-	Standard LP, 8 internal ports (12Gb/s) Gen-3, 63HDD; RAID 0, 1, 10
	AOC-S3008L-L8e & 2x CBL-SAST-0531-01		Standard LP, 8 internal ports (12Gb/s) Gen-3, 122HDD; HBA
	AOC-S3108L-H8IR & 2x CBL-SAST-0531-01		Standard LP, 8 internal ports (12Gb/s) 8x Gen3; RAID 0, 1, 5, 6, 10, 50, 60
	AOC-S3108L-H8IR-16DD & 2x CBL-SAST-0531-01		Standard LP, 8 internal ports (12Gb/s) Gen-3, 16HDD; RAID 0, 1, 5, 6, 10, 50, 60
<b>Mounting Rails</b>	CSE-PT26L-B	1	4U Chassis Rail Kits SC743,745 (w/ 2pcs Black Chassis Ears)
<b>5.25" SATA DVD drive</b>	5.25" DVD reader or writer	1	Any third party 5.25 inch SATA DVD reader or writer
<b>SATA cable for DVD drive</b>	CBL-0178L	1	SATA CABLE 48CM FLAT S-S PBF. 26AWG
<b>SATA Power cable for DVD drive</b>	CBL-0080L	1	Big 4 pin to SATA POWER ADAPTER CABLE 6", 18AWG
<b>2.5" NVMe fixed drive support</b>	MCP-220-00160-0N	1	Dual 2.5" NVMe Drive BKT: 743, 745, 502, 503, 510, 512, 515
<b>2.5" NVMe fixed drive support</b>	CBL-SAST-0956	1	Oculink to 1 NVMe drive w/ power, each NVMe drive needs 1 cable, system can support total 2 NVMe fixed drives

<b>3.5" to 2.5" HDD tray Converter</b>	MCP-220-00080-0B	1	Black hot-swap gen2 3.5" to 2.5" HDD tray converter. Each 2.5" drive needs one converter, total 8x 2.5" Hot-swap drives can be supported
<b>HDD Bracket</b>	MCP-220-00044-0N	1	Dual 2.5" fixed HDD bracket for SC502, 503, 510, 512, 515U
<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>	<a href="#">SFT-OOB-LIC</a> • <a href="#">eStore</a>	1	OOB Management Package (per node license)
<b>Software</b>	<a href="#">SFT-DCMS-Single</a>	1	DataCenter Management Package (per node license)

