

# SuperServer 2029P-TXRT



**Integrated Board**



**Super X11DPX-T**

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

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

## Key Applications

**Industrial Server Solutions**  
**Networking Telephony**  
**Surveillance DCR**  
**GPU Pass-through VM server**  
**Flash Array Server**  
**Head-node Controller**

## Key Features

1. Dual Socket P (LGA 3647) support  
2nd Gen Intel® Xeon® Scalable processors (Cascade Lake/Skylake)<sup>‡</sup>
2. 16 DIMMs; up to 4TB 3DS ECC DDR4-2933MHz<sup>†</sup> RDIMM/LRDIMM, Supports Intel® Optane™ DCPMM<sup>††</sup>
3. 2 PCI-E 3.0 x16 slots,  
2 PCI-E 3.0 x16 slots (or 4 PCI-E 3.0 x8), 4 PCI-E 3.0 x8 slots,  
1 PCI-E 3.0 x4 (in x8 slot);  
Support 11 low-profile AOC
4. 16 Hot-swap 2.5" SAS/SATA drive bays, 1 slim DVD-ROM drive bay
5. 2x 10GBase-T ports via Intel X550-AT2
6. Integrated IPMI 2.0 with KVM and Dedicated LAN
7. 1 PCI-E 3.0 x4 M.2 2280 slot from PCH
8. 4 middle fans
9. 1000W Redundant Power Supplies  
**Titanium Level (96%)**

# Specifications

## Product SKUs

**SYS-2029P-TXRT** ■ SuperServer 2029P-TXRT (**Black**)

## Motherboard

**Super X11DPX-T**

## Processor

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

## 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) with RAID 0, 1, 5, 10

**Network Controllers** ■ Intel® X550-AT2 Dual Port 10GBase-T

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

**Graphics** ■ ASPEED AST2500 BMC

## Input / Output

**Serial ATA** ■ 8 SATA3 (6Gbps) ports

**LAN** ■ 2 RJ45 10GBase-T ports  
 ■ 1 RJ45 Dedicated IPMI LAN port

**USB** ■ 2 USB 3.0 ports (rear)  
 ■ 2 USB 2.0 ports (rear)

**Serial Port / Header** ■ 1 COM port (rear)

**VGA** ■ 1 VGA port

**DOM** ■ 2 Super**DOM** (Disk on Module) ports

**TPM** ■ 1 TPM 2.0 Header

## System BIOS

## Chassis

**Form Factor** ■ 2U Rackmount

**Model** ■ **CSE-213XAC-R1K05LP**

## Dimensions

**Width** ■ 17.2" (437mm)

**Height** ■ 3.5" (89mm)

**Depth** ■ 25.6" (650mm)

**Package** ■ 14.8" (H) x 27" (W) x 37.3" (D)

**Weight** ■ Net Weight: 36 lbs (16.4 kg)  
 ■ Gross Weight: 72 lbs (32.7 kg)

**Available Colors** ■ Black

## Front Panel

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

**LEDs** ■ Power status LED  
 ■ Hard drive activity LED  
 ■ Network activity LEDs  
 ■ System information (overheat/UID) LED  
 ■ Power fail LED

## Expansion Slots

**PCI-Express** ■ 2 PCI-E 3.0 x16 slots  
 ■ 2 PCI-E 3.0 x16 slots (or 4 PCI-E 3.0 x8 by MUX)  
 ■ 4 PCI-E 3.0 x8 slots  
 ■ 1 PCI-E 3.0 x4 (in x8 slot)  
 ■ Support total of 11 Low-profile AOC

## Drive Bays

**Hot-swap** ■ 16 Hot-swap 2.5" drive bays  
 ■ 10 SATA3 ports by default  
 ■ Optional drive support: 16 SAS3  
 Note: optional storage card is required to support more than 10 drives

## Peripheral Bay

**Peripheral** ■ 1 slim DVD-ROM drive

## Backplane

1 SAS/SATA backplane

## System Cooling

**Fans** ■ 4 Middle fans

## PowerStick Power Supply

1000W 1U Redundant Power Supplies with PMBus

**Total Output Power** ■ 800W: 100 – 127Vac  
 ■ 1000W: 200 – 240Vac

**Dimension (W x H x L)** ■ 38 x 40 x 360 mm

**BIOS Type** ■ AMI UEFI

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**Management**

- Software**
- Intel® Node Manager
  - IPMI 2.0
  - KVM with dedicated LAN
  - NMI
  - SSM, SPM, SUM
  - SuperDoctor® 5
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- Power Configurations**
- ACPI Power Management
- 

**PC Health Monitoring**

- CPU**
- Monitors for CPU Cores, Chipset Voltages, Memory.
  - 4+1 Phase-switching voltage regulator
- 

- FAN**
- Fans with tachometer monitoring
  - Status monitor for speed control
  - Pulse Width Modulated (PWM) fan connectors
- 

- Temperature**
- Monitoring for CPU and chassis environment
  - Thermal Control for fan connectors
- 

- Input**
- 100-127Vac / 9-7.5A / 50-60Hz
  - 200-240Vac / 6-5A / 50-60Hz
- 

- +12V**
- Max: 66.7A / Min: 0A (100-127Vac)
  - Max: 83A / Min: 0A (200-240Vac)
- 

- +5Vsb**
- Max: 4A / Min: 0A
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- Output Type**
- Gold Finger Connector (16 Power Pin, 14 Signal Pin)
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**Certification**




**Titanium Level**  
[ Test Report ]

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**Operating Environment**

- RoHS**
- RoHS Compliant
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- Environmental Spec.**
- Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F)
  - Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)
  - Operating Relative Humidity: 8% to 90% (non-condensing)
  - Non-operating Relative Humidity: 5% to 95% (non-condensing)
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## Parts List

### Parts List - (Items Included)

	Part Number	Qty	Description
<b>Motherboard / Chassis</b>	MBD-X11DPX-T	1	Super X11DPX-T Motherboard
	CSE-213XAC-R1K05LP	1	2U Chassis
<b>Backplane</b>	BPN-SAS3-213A	1	16-port 2U SAS3 12Gbps direct-attached backplane, support up to 16x 2.5-inch SAS3/SATA3 HDD/SSD
<b>Cable 1</b>	CBL-SAST-0508-01	2	MINI SAS HD-MINI SAS,6G,INT,50CM,SB,30AWG
<b>Parts</b>	MCP-260-00042-2N	1	STD I/O shield for X9/X10/X11 server MB with EMI Gasket & Mylar
<b>Air Shroud</b>	MCP-310-00082-0B	1	Mylar Air Shroud for SC213X (X11DPX)
<b>Parts</b>	MCP-450-00003-0N	1	Plastic M.2 holder kit for X11 MB
<b>Manual</b>	MNL-2081-QRG	1	2029P-TXRT Quick Reference Guide
<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-1K05A-1R	2	1U 1000W Redundant Power Supply Titanium, 38X40X360mm length
<b>FAN 1</b>	FAN-0190L4	4	80x80x38 mm, 10.5K RPM, Middle Cooling Fan for SC213X Chassis

### Optional Parts List

	Part Number	Qty	Description
<b>Cable Management Arm</b>	MCP-290-00073-0N	1	Supermicro Cable Management Arm for 2U, 3U and 4U chassis
<b>Cable Arm Adapter</b>	MCP-120-82503-0N	1	Cable arm adapter for SC825,213,829H,847B (MCP-290-00073-0N required)
<b>Slim DVD Kit</b>	MCP-220-81502-0N	-	Slim SATA DVD mounting kit for SC213,219,813,815,818,819,825,828,829,836,842
<b>5.25" DVD kit</b>	MCP-220-00006-00	-	5.25" drive rail set
<b>USB 2.0/COM port tray</b>	MCP-220-00007-01	-	Black USB2.0 /COM port tray (mount with Slim DVD Kit)
<b>USB 3.0/COM port tray</b>	MCP-220-00114-0N	-	Black 2x USB3.0/COM port tray (mount with Slim DVD Kit)
<b>Mobile Rack</b>	CSE-M14TQC & CBL-SAST-0699	-	Black SAS3/SATA3 Mobile Rack for 4x 2.5 (mount with 5.25" DVD kit); internal mini SAS HD to 4 SATA 12G, 75/75/90/90cm w/75cm SB, S. 30AWG
<b>Storage Control Card and Cable(s)</b>	AOC-S3008L-L8e & 2x CBL-SAST-0593	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA; Internal Mini-SAS HD to Mini-SAS HD 60cm,30AWG,12Gb/s
<b>Storage Control Card and Cable(s)</b>	AOC-S3008L-L8i & 2x CBL-SAST-0593	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E; Internal Mini-SAS HD to Mini-SAS HD 60cm,30AWG,12Gb/s
<b>Storage Control Card and Cable(s)</b>	AOC-S3108L-H8iR & 2x CBL-SAST-0593	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60; Internal Mini-SAS HD to Mini-SAS HD 60cm,30AWG,12Gb/s
<b>CacheVault</b>	BTR-TFM8G-LSICVM02	1	Supercap 8GB CV + BKT-BBU-BRACKET-05 or MCP-240-00127-0N x1
	BKT-BBU-BRACKET-05	1	Mounting PCIe Card
	MCP-240-00127-0N	1	SuperCap tray for 2.5" HDD
<b>P4 GPU kit</b>	MCP-310-00085-0B	1	Mylar Air Shroud(GPU) and air block for SC213X (X11DPX)
	MCP-310-00086-0B	1	Mylar Air dummy(GPU) for SC213X
<b>AOC</b>	AOC-VROCPREMOD	-	Intel VROC Premium, RAID 0, 1, 5, 10
	AOC-VROCSTNMOD	-	Intel VROC HW key (RSTe) standard upgrade module
	AOC-VROCINTMOD	-	Intel VROC, RAID 0, 1, 5, 10 (Intel SSD Only)
<b>TPM security module (optional, not included)</b>	AOM-TPM-9670V	-	TPM module (Vertical) TPM 2.0
	AOM-TPM-9671V	-	TPM module (Vertical) TPM 1.2.
<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> • eStore	1	OOB Management Package (per node license)
<b>Software</b>	<a href="#">SFT-DCMS-Single</a>	1	DataCenter Management Package (per node license)

