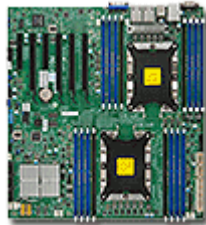


# SuperServer 2029P-C1RT



## Integrated Board



## X11DPi-NT

Views: | [Angled View](#) | [Top 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.

## Key Features

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, 1 PCI-E 3.0 x8 slots, support 5 low-profile AOCs
4. 8x 2.5" SAS3 & 8x 2.5" SATA3 Hot-swap Drive Bays, optional DVD-ROM drive, optional support 2 NVMe/SSD/HDD 2.5" fix drives, 1 M.2 support
5. **M.2 Interface:** PCI-E 3.0 x4  
**M.2 Form Factor:** 2260, 2280, 22110  
**M.2 Key:** M-Key
6. 2x 10GBase-T LAN ports with Intel X722
7. Integrated IPMI 2.0 with KVM and Dedicated LAN
8. 2 SuperDOM, 1 VGA, 2 COM, 2 USB 3.0, 4 USB 2.0, 1 Type A
9. 3 Heavy duty 8cm fans with PWM fan speed and cooling zone control
10. 1200W Redundant Power Supplies  
**Titanium Level** (96%)

# Specifications

## Product SKUs

- SYS-2029P-C1RT** ■ SuperServer 2029P-C1RT (**Black**)

## Motherboard

### Super X11DPI-NT

## Processor/Cache

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

- Cores** ■ Up to 28 Cores

- Note** ‡ BIOS version 3.0a or above is required to support 2nd Gen. Intel® Xeon® Scalable processors

## System Memory

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

- Memory Type** ■ 2933†/2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM

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

## On-Board Devices

- Chipset** ■ Intel® C622 chipset

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

- SAS** ■ Broadcom 3108 SAS3 (12Gbps) controller;
  - HW RAID 0, 1, 5, 6, 10, 50, 60

- Network Controllers** ■ Intel® X722 10GBase-T Ethernet Controller
  - Virtual Machine Device Queues reduce I/O overhead
  - Supports 10GBASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output

- IPMI** ■ Support for Intelligent Platform Management Interface v.2.0
  - IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
  - ASPEED AST2500 BMC

- Graphics** ■ ASPEED AST2500 BMC

## Input / Output

- SATA** ■ 8 SATA3 (6Gbps) ports

- SAS** ■ 8 SAS3 (12Gbps) ports

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

## Chassis

- Form Factor** ■ 2U Rackmount

- Model** ■ **CSE-213AC-R1K23LPB**

## Dimensions and Weight

- Height** ■ 3.5" (89mm)

- Width** ■ 17.2" (437mm)

- Depth** ■ 24.8" (630mm)

- Package** ■ 11" (H) x 29" (W) x 38.7" (D)

- Weight** ■ Net Weight: 38 lbs (17.4 kg)
  - Gross Weight: 63 lbs (28.8 kg)

- Available Color** ■ Black

## Front Panel

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

- LEDs** ■ Power LED
  - Hard drive activity LED
  - Network activity LEDs
  - System Overheat LED / Fan fail LED / UID LED

## Expansion Slots

- PCI-Express** ■ 4 PCI-E 3.0 x16 slots
  - 1 PCI-E 3.0 x8 slot
  - Support total of 5 Low-profile AOC

## Drive Bays

- Hot-swap** ■ 8x 2.5" SAS3 and 8x 2.5" SATA3 Hot-swap drive bays

- Peripheral** ■ Optional DVD-ROM drive supports 1x slim or 1x 5.25" DVD drive

- Optional** ■ Optional 2 NVMe/SSD/HDD 2.5" fix drives
  - 1 M.2 support

## System Cooling

- Fans** ■ 3 Heavy duty 8cm fans with PWM fan speed and cooling zone control

## Power Supply (76mm Width)

1200W Redundant Power Supplies with PMBus

- Total Output Power** ■ 1000W/1200W

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

- Input** ■ 100-127Vac / 15-12A / 50-60Hz
  - 200-240Vac / 8.5-7A / 50-60Hz
  - 200-240Vdc / 8.5-7A (for CCC only)

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

- +5Vsb** ■ Max: 4A / Min: 0A

- Output Type** ■ 19 Pairs Gold Finger Connector

|                             |  |
|-----------------------------|--|
| <b>USB</b>                  | <ul style="list-style-type: none"> <li>2 USB 3.0 ports (2 rear)</li> <li>4 USB 2.0 ports (2 rear, 2 front)</li> <li>1 USB Type A</li> </ul>  |
| <b>Video</b>                | <ul style="list-style-type: none"> <li>1 VGA Connector</li> </ul>  |
| <b>Serial Port / Header</b> | <ul style="list-style-type: none"> <li>2 Fast UART 16550 serial</li> <li>2 COM Ports (1 rear, 1 front)</li> </ul>  |
| <b>System BIOS</b>          |  |
| <b>BIOS Type</b>            | <ul style="list-style-type: none"> <li>AMI UEFI</li> </ul>   |
| <b>Management</b>           |  |
| <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> <li>Watchdog</li> </ul> |
| <b>Power Configurations</b> | <ul style="list-style-type: none"> <li>ACPI Power Management</li> </ul>  |
| <b>PC Health Monitoring</b> |  |
| <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>   |
| <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>  |
| <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>   |

**Certification**



**Titanium Level**

[ [Test Report](#) ]

**Operating Environment**

**RoHS**

- RoHS Compliant

**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)

# Parts List

## Parts List - (Items Included)

|                              | Part Number          | Qty | Description  |
|------------------------------|----------------------|-----|--|
| <b>Motherboard / Chassis</b> | MBD-X11DPI-NT        | 1   | Super X11DPI-NT Motherboard  |
|                              | CSE-213AC-R1K23LPB   | 1   | 2U Black SC213AC Chassis   |
| <b>Add-on Card / Module</b>  | AOC-S3108L-H8IR-16DD | 1   | LSI 3108 based SAS3 RAID, 12Gb, 8 internal ports, 16 drives w ith expander - RAID 0,1,10,5,6,50,60, Gen3 x8 Standard Low Profile |
| <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>Cable 2</b>               | CBL-SAST-0508-02     | 2   | MINI SAS HD-MINI SAS,6G,INT,50CM,SB,30AWG  |
| <b>Cable 3</b>               | CBL-SAST-0532        | 1   | MINI SAS HD,12G,INT,50CM,30AWG   |
| <b>Cable 4</b>               | CBL-SAST-0568        | 1   | MINI SAS HD,12G,INT,35CM,30AWG   |
| <b>Drive Tray(s)</b>         | MCP-220-00007-01     | 1   | Black USB/COM port tray for SC825, 836   |
| <b>Parts</b>                 | MCP-260-00042-0N     | 1   | STD I/O shield for X9 socket R server MB w ith Gasket.   |
| <b>Manual</b>                | MNL-1993-QRG         | 1   | SYS-2029P-C1R/SYS-2029P-C1RT, QRG  |
| <b>Heatsink / Retention</b>  | SNK-P0068PS          | 1   | 2U Passive CPU Heat Sink for X11 Purley Platform Equipped w ith a Narrow Retention Mechanism                                     |
| <b>Heatsink / Retention</b>  | SNK-P0068PSC         | 1   | 2U Passive CPU Heat Sink w ith a Side Air Channel for X11 Purley Platform Equipped w ith a Narrow Retention Mechanism            |
| <b>Power Supply</b>          | PWS-1K23A-1R         | 2   | AC-DC 1200W, Titanium Level, Redundancy, 1U, PMBUS 1.2, +12V/+5Vsb, 360x76x40 mm,HF,RoHS/REACH                                   |
| <b>FAN 1</b>                 | FAN-0181L4           | 3   | 80x80x38 mm, 9.4K RPM, Hot-sw appable Middle Cooling Fan for X11 Purley Platform New ly Enabled 2U+ 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 (Extendable Length: 70mm to 830mm)                   |
| <b>Adaptor Bracket</b>                | MCP-120-82503-0N                     | 1   | Cable arm adapter for SC825LP,213LP (MCP-290-00073-0N required),HF,RoHS/REACH,PBF                              |
| <b>SATA DVD Kit</b>                   | MCP-220-81502-0N                     | 1   | Slim SATA DVD mounting kit for SC213,219,813,815,818,819,825,828,829,836,842                                   |
| <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>5.25" SATA DVD drive</b>           | 5.25" DVD reader or w riter          | 1   | Any third party 5.25 inch SATA DVD reader or w riter   |
| <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>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)   |