

SuperServer 2029P-C1RT



Integrated Board



X11DPi-NT

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

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

Specifications

Product SKUs

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

Motherboard

Super X11DPI-NT

Processor

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

Cores ■ Up to 28 Cores

Note [‡] 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[†] 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

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

LAN	<ul style="list-style-type: none"> 2 RJ45 10GBase-T ports 1 RJ45 Dedicated IPMI LAN port
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USB	<ul style="list-style-type: none"> 2 USB 3.0 ports (2 rear) 4 USB 2.0 ports (2 rear, 2 front) 1 USB Type A
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Video	<ul style="list-style-type: none"> 1 VGA Connector
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Serial Port / Header	<ul style="list-style-type: none"> 2 Fast UART 16550 serial 2 COM Ports (1 rear, 1 front)
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System BIOS

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

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

CPU	<ul style="list-style-type: none"> Monitors for CPU Cores, Chipset Voltages, Memory. 4+1 Phase-switching voltage regulator
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FAN	<ul style="list-style-type: none"> Fans with tachometer monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors
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Temperature	<ul style="list-style-type: none"> Monitoring for CPU and chassis environment Thermal Control for fan connectors
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Output Type	<ul style="list-style-type: none"> 19 Pairs Gold Finger Connector
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Certification	  Titanium Level [Test Report]
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Operating Environment

RoHS	<ul style="list-style-type: none"> RoHS Compliant
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Environmental Spec.	<ul style="list-style-type: none"> 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
Motherboard / Chassis	MBD-X11DPI-NT	1	Super X11DPI-NT Motherboard
	CSE-213AC-R1K23LPB	1	2U Black SC213AC Chassis
Add-on Card / Module	AOC-S3108L-H8IR-16DD	1	LSI 3108 based SAS3 RAID, 12Gb, 8 internal ports, 16 drives with expander - RAID 0,1,10,5,6,50,60, Gen3 x8 Standard Low Profile
Backplane	BPN-SAS3-213A	1	16-port 2U SAS3 12Gbps direct-attached backplane, support up to 16x 2.5-inch SAS3/SATA3 HDD/SSD
Cable 1	CBL-SAST-0508-01	2	MINI SAS HD-MINI SAS,6G,INT,50CM,SB,30AWG
Cable 2	CBL-SAST-0508-02	2	MINI SAS HD-MINI SAS,6G,INT,50CM,SB,30AWG
Cable 3	CBL-SAST-0532	1	MINI SAS HD,12G,INT,50CM,30AWG
Cable 4	CBL-SAST-0568	1	MINI SAS HD,12G,INT,35CM,30AWG
Drive Tray(s)	MCP-220-00007-01	1	Black USB/COM port tray for SC825, 836
Parts	MCP-260-00042-0N	1	STD I/O shield for X9 socket R server MB with Gasket.
Manual	MNL-1993-QRG	1	SYS-2029P-C1R/SYS-2029P-C1RT, QRG
Heatsink / Retention	SNK-P0068PS	1	2U Passive CPU Heat Sink for X11 Purley Platform Equipped with a Narrow Retention Mechanism
Heatsink / Retention	SNK-P0068PSC	1	2U Passive CPU Heat Sink with a Side Air Channel for X11 Purley Platform Equipped with a Narrow Retention Mechanism
Power Supply	PWS-1K23A-1R	2	AC-DC 1200W, Titanium Level, Redundancy, 1U, PMBUS 1.2, +12V/+5Vsb, 360x76x40 mm, HF, RoHS/REACH
FAN 1	FAN-0181L4	3	80x80x38 mm, 9.4K RPM, Hot-swappable Middle Cooling Fan for X11 Purley Platform Newly Enabled 2U+ Chassis

Optional Parts List

	Part Number	Qty	Description
Storage Controller Card(s) & Cables(s)	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
Cable Management Arm	MCP-290-00073-0N	1	Supermicro Cable Management Arm for 2U, 3U and 4U chassis (Extendable Length: 70mm to 830mm)
Adaptor Bracket	MCP-120-82503-0N	1	Cable arm adapter for SC825LP,213LP (MCP-290-00073-0N required),HF, RoHS/REACH,PBF
SATA DVD Kit	MCP-220-81502-0N	1	Slim SATA DVD mounting kit for SC213,219,813,815,818,819,825,828,829,836,842
2.5" NVMe fixed drive support	MCP-220-00160-0N	1	Dual 2.5" NVMe Drive BKT: 743, 745, 502, 503, 510, 512, 515
2.5" NVMe fixed drive support	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
5.25" SATA DVD drive	5.25" DVD reader or writer	1	Any third party 5.25 inch SATA DVD reader or writer
SATA cable for DVD drive	CBL-0178L	1	SATA CABLE 48CM FLAT S-S PBF. 26AWG
SATA Power cable for DVD drive	CBL-0080L	1	Big 4 pin to SATA POWER ADAPTER CABLE 6", 18AWG
Global Services & Support	OS4HR3/2/1	-	3/2/1-year onsite 24x7x4 service
	OSNBD3/2/1	-	3/2/1-year onsite NBD service
Software	SFT-OOB-LIC • eStore	1	OOB Management Package (per node license)
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)

