

SuperServer 2029U-E1CRT (Complete System Only)



Integrated Board



Super X11DPU

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

Complete System Only: To maintain quality and integrity, this product is sold only as a completely-assembled system (with minimum 2 CPUs, 4 DIMMs and a storage add-on-card).

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

Key Features

- ❑ **Virtualization**
- ❑ **Hyperconverge Storage**
- ❑ **Cloud Computing**
- ❑ **High End Enterprise Server**

1. Dual Socket P (LGA 3647) support
2nd Gen Intel® Xeon® Scalable processors (Cascade Lake/Skylake)[‡]
2. 24 DIMMs; up to 6TB 3DS ECC DDR4-2933MHz[†] RDIMM/LRDIMM, Supports Intel® Optane™ DCPMM^{††}
3. 1 PCI-E 3.0 x16 slot (FH, 10.5" L),
5 PCI-E 3.0 x8 slots (FH, 10.5" L),
1 PCI-E 3.0 x8 slot (LP),
1 PCI-E 3.0 x8 slot (internal LP)
4. 2x 10GBase-T LAN ports via Intel X540
5. 24 Hot-swap 2.5" drive bays:
24 SAS3 via opt. AOC
(4 hybrid ports - opt. 4 NVMe),
Optional 2 hot-swap 2.5" rear drive bays for SSDs;
Optional M.2 NVMe and SATA3 ports
6. 4 Heavy duty 8cm PWM fans
7. 1000W 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-2029U-E1CRT	■ SuperServer 2029U-E1CRT (Black)
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Motherboard

Super X11DPU

Processor/Cache

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)

System Memory

Memory Capacity	■ 24 DIMM slots ■ Up to 6TB 3DS ECC DDR4-2933MHz [†] RDIMM/LRDIMM ■ Supports Intel® Optane™ DCPMM ^{††}
Memory Type	■ 2933 [†] /2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM ■ 2666 ECC DDR4 NVDIMM
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® C621 chipset
SAS	■ SAS3 (12Gbps) via expander + Broadcom 3108/3008 AOC
Network Connectivity	■ 2x 10GBase-T ports via Intel® X540 (AOC-2UR68-i2XT)
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

SAS	■ 24 SAS3 ports support via expander and storage Add-on Cards
LAN	■ 2 RJ45 10GBase-T LAN ports ■ 1 RJ45 Dedicated IPMI LAN port
USB	■ 3 USB 3.0 ports (2 rear, 1 Type A)
Video	■ 1 VGA Connector
Serial Header	■ 1 Serial header
DOM	■ 2 SuperDOM (Disk on Module) ports

System BIOS

BIOS Type	■ AMI 32Mb SPI Flash ROM
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Chassis

Form Factor	■ 2U Rackmount
Model	■ CSE-219U2TS-R1K02P-T

Dimensions and Weight

Width	■ 17.2" (437mm)
Height	■ 3.5" (89mm)
Depth	■ 27.76" (705.3mm)
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 ■ HDD activity LED ■ Network activity LEDs ■ System information (overheat/UID) LED

Expansion Slots

PCI-Express	■ 1 PCI-E 3.0 x16 (FH, 10.5" L) ■ 5 PCI-E 3.0 x8 (FH, 10.5" L) ■ 1 PCI-E 3.0 x8 (LP) ■ 1 PCI-E 3.0 x8 (internal LP) (Both CPUs need to be installed for full access to PCI-E slots and onboard controllers. See manual block diagram and AOC Support for details.)
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Drive Bays / Storage

Hot-swap	■ 24 Hot-swap 2.5" drive bays: 24 SAS3 via opt. AOC (4 hybrid ports - opt. 4 NVMe) Note: Storage Add-on card is required
M.2	■ 1 M.2 PCI-E 3.0 x4 M-Key NVMe or 1 M.2 M-Key SATA3 (2240/2260/2280/22110) via optional riser card (see optional parts list) ■ 2 M.2 PCI-E 3.0 x4 M-Key NVMe (2260/2280/22110) via optional add-on card AOC-SLG3-2M2

System Cooling

Fans	■ 4 Heavy duty 8cm PWM fans
Shroud	■ 1 Air Shroud

Power Supply

1000W Redundant Power Supplies with PMBus	
Total Output Power	■ 800W: 100 – 127Vac ■ 1000W: 200 – 240Vac ■ 1000W: 200 – 240Vdc (for CCC only)
Dimension (W x H x L)	■ 73.5 x 40 x 203 mm
Input	■ 100-127Vac / 9.8 - 7A / 50-60Hz ■ 200-240Vac / 7 - 5A / 50-60Hz ■ 200-240Vdc / 7 - 5A (for CCC only)
+12V	■ Max: 66.7A / Min: 0A (100-127Vac) ■ Max: 83A / Min: 0A (200-240Vac) ■ Max: 83A / Min: 0A (200-240Vdc)

Management

Software	■ Intel® Node Manager ■ Redfish API ■ IPMI 2.0 ■ KVM with dedicated LAN ■ NMI ■ SSM, SPM, SUM ■ SuperDoctor® 5
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Power Configurations	■ ACPI Power Management
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PC Health Monitoring

CPU	■ Monitors for CPU Cores, Chipset Voltages, Memory. ■ 4+1 Phase-switching voltage regulator
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FAN	■ Fans with tachometer monitoring ■ Status monitor for speed control ■ Pulse Width Modulated (PWM) fan connectors
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Temperature	■ Monitoring for CPU and chassis environment ■ Thermal Control for fan connectors
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12Vsb	■ Max: 2.1A / Min: 0A
Output Type	■ 25 Pairs Gold Finger Connector
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 70°C (-40°F to 158°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
Motherboard / Chassis	MBD-X11DPU	1	Super X11DPU Motherboard
	CSE-219U2TS-R1K02P-T	1	2U Chassis
Add-on Card / Module	AOC-2UR68-I2XT	1	2U Ultra Riser based on Intel X540 controller with 2 10Gbase-T ports, 1 internal PCI-E x8 3.0 slot, 1 PCI-E x16 3.0, and 1 PCI-E x8 3.0 (in x16 slot)
Backplane	BPN-SAS3-216EL1-N4	1	24-port 2U SAS3 12Gbps single-expander backplane, support up to 20x 2.5-inch SAS3/SATA3 HDD/SSD and 4x NVMe/SAS3/SATA3 storage devices
Cable 1	CBL-PWEX-0673	3	8 pin female to 2x big 4 pin female power, 65/70CM, 18AWG,RoHS/REACH
Cable 2	CBL-SAST-0593	2	MINI SAS HD,12G,INT,60CM,30AWG
Parts	MCP-240-82909-0N	1	Ultra I/O bracket for SC829U, 219U (i2XT),RoHS/REACH
Air Shroud	MCP-310-82921-0N	1	Plastic air shroud for SC829U, 219U (X11 24DIMM, left side)
Air Shroud	MCP-310-82922-0N	1	Plastic air shroud for SC829U, 219U (X11 24DIMM, right side)
Riser Card	RSC-R1UW-E8R	1	1U RHS WIO Riser card with one PCI-E x8 slot
Riser Card	RSC-R2UW-4E8	1	2U LHS WIO Riser card with four PCI-E x8 slots
Heatsink / Retention	SNK-P0068PS	2	2U Passive CPU Heat Sink for X11 Purley Platform Equipped with a Narrow Retention Mechanism
Power Supply	PWS-1K02A-1R	2	1U 1000W Redundant Power Supply 73.5mm width Titanium Level,RoHS/REACH
FAN 1	FAN-0118L4	4	80 x 80 x 38 mm, 9.5K RPM, 4-pin PWM Fan, Hot

Optional Parts List

	Part Number	Qty	Description
Add-on card for internal M.2 NVMe	AOC-SLG3-2M2	1	Low Profile PCI-E x8 add-on card supports 2 PCI-E 3.0 x4 M-Key M.2 NVMe Modules
2U Cable Management Arm	MCP-290-00128-0N & MCP-290-00127-0N	1	2U Supermicro Cable Management Arm 2nd Gen (Compatible for racks that are 42" in depth)
Internal Drive Tray for Two 2.5" Drives	MCP-120-82916-0N	1	Internal drive plate Supports Two 2.5" Drive, PCI slots
	CBL-PWEX-0650	1	Power cable for Two internal 2.5" drives
	CBL-0080L	2	
	CBL-0484L Or CBL-SAST-0654 Or	2	SATA3 S-S Cable
	CBL-SAST-0948	1	miniSAS(iPass) to 4 SATA Cable miniSAS HD to 4 SATA Cable
Cable for 4 NVMe Hybrid Drive Bays	2 CBL-SAST-0929 & 2 CBL-SAST-0972	1	OCuLink source to MiniSAS HD target V.91,INT,PCIe NVMe SSD, 57CM,34AWG
2.5" NVMe Drive Trays	MCP-220-00167-0B	1~4	Tool-less black hot-swap 2.5" NVMe drive tray (Orange tab, w/ key lock, clip design)
	MCP-220-00127-0B		Black hot-swap 2.5" NVMe drive tray (Orange tab, w/ key lock)
2 Internal M.2 slots (1 SATA, 1 NVMe)	RSC-UMR-8 & CBL-SAST-0538 & MCP-120-82924-0N & MCP-310-21902-0N	1	1U Ultra RHS Riser Card with 1 PCIE/SATA Hybrid M.2 & 1 PCIE X8
2 Rear 2.5" Hot-swap SATA Drive Bays (Complete System Only)	MCP-240-82922-0N-OEM	-	Rear 2x 2.5" HDDs riser bracket kit for SC829U/219U, tool-less
Storage Control Card and Cable(s)	AOC-S3008L-L8e	1	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA
	AOC-S3008L-L8i		Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E
	AOC-S3108L-H8iR		Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60

Network Card(s)	AOC-SGP-i2/4	-	Standard LP, 2/4x GbE RJ45, PCI-E x4, Intel i350
	AOC-STGN-i1S/i2S	-	Standard LP, 1/2x 10GbE SFP+, PCI-E x8, Intel 82599EN
	AOC-STGF-i2S	-	Standard LP, 2x 10GbE SFP+, PCI-E x8, Intel XL710-BM2
	AOC-STG-i4S	-	Standard LP, 4x 10GbE SFP+, PCI-E x8, Intel XL710
	AOC-STG-b4S	-	Standard LP, 4x 10GbE SFP+, PCI-E x8, Broadcom BCM57840S
	AOC-STG-i2T	-	Standard LP, 2x 10GbE RJ45, PCI-E x8, Intel X540
	AOC-STGS-i1/2T	-	Standard LP, 1/2x 10GbE RJ45, PCI-E x8, Intel X550
	AOC-STG-i4T	-	Standard LP, 4x 10GbE RJ45, PCI-E x8, Intel XL710
	AOC-STG-i2	-	Standard LP, 2x 10GbE CX4, PCI-E x8, Intel 82598EB
	AOC-S25G-m2S	-	Standard LP, 2x 25GbE SFP28, Mellanox ConnectX-4 LX EN
	AOC-S40G-i2Q	-	Standard LP 2-port 40GbE controller, Intel Fortville XL710
	More	-	AOC Compatibility Matrix
CacheVault(s)	BTR-CV3108-U1	-	CacheVault for Broadcom 3108 with Supercap mounting for 2U Ultra
TPM security module	AOM-TPM-9670H-S	1	TCG 2.0 compliant trusted platform module (TPM), Horizontal FF
	AOM-TPM-9671H-S	1	TCG 1.2 compliant trusted platform module (TPM), Horizontal FF
Intel VROC RAID Key	AOC-VROCINTMOD	1	Intel VROC, RAID 0, 1, 5, 10 (Intel SSD Only)
	AOC-VROCSTNMOD	1	Intel VROC Standard, RAID 0, 1, 10
	AOC-VROCPREMOD	1	Intel VROC Premium, RAID 0, 1, 5, 10
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)