

SuperServer 6029U-E1CR4 (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](#)

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

Key Features

Virtualization
Hyperconverge Storage
Cloud Computing
High End Enterprise Server
Flexible Networking Options

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. 4 1GbE LAN ports via Intel i350
5. 12 Hot-swap 3.5" drive bays:
12 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 High efficiency (96%)
Redundant PSU; **Titanium Level**

Specifications

Product SKUs

SYS-6029U-E1CR4	■ SuperServer 6029U-E1CR4 (Black)
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Motherboard

Super X11DPU

Processor

CPU	<ul style="list-style-type: none"> ■ 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
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Cores	■ Up to 28 Cores
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Note	[‡] BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R)
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System Memory

Memory Capacity	<ul style="list-style-type: none"> ■ 24 DIMM slots ■ Up to 6TB 3DS ECC DDR4-2933MHz[†] RDIMM/LRDIMM ■ Supports Intel® Optane™ DCPMM^{††}
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Memory Type	<ul style="list-style-type: none"> ■ 2933[†]/2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM ■ 2666 ECC DDR4 NVDIMM
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Note	<ul style="list-style-type: none"> † 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.
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On-Board Devices

Chipset	■ Intel® C621 chipset
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SATA	■ SATA3 (6Gbps) with RAID 0, 1, 5, 10
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Network Connectivity	■ 4 GbE ports via AOC-2UR68-i4G (Intel i350)
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IPMI	<ul style="list-style-type: none"> ■ Support for Intelligent Platform Management Interface v.2.0 ■ IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
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Graphics	■ ASPEED AST2500 BMC
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Input / Output

SAS	■ 12 SAS3 ports via expander and AOC
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LAN	<ul style="list-style-type: none"> ■ 4 RJ45 Gigabit Ethernet LAN ports ■ 1 RJ45 Dedicated IPMI LAN port
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USB	■ 3 USB 3.0 ports (2 rear, 1 Type A)
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Video	■ 2 VGA ports (1 rear, 1 onboard)
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Serial Port / Header	■ 1 Serial header
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DOM	■ 2 SuperDOM (Disk on Module) ports
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Chassis

Form Factor	■ 2U Rackmount
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Model	■ CSE-829U2E1C4-R1K02-T
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Dimensions and Weight

Width	■ 17.2" (437mm)
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Height	■ 3.5" (89mm)
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Depth	■ 28.46" (723mm)
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Weight	<ul style="list-style-type: none"> ■ Net Weight: 36 lbs (16.4 kg) ■ Gross Weight: 72 lbs (32.7 kg)
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Available Colors	■ Black
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Front Panel

Buttons	<ul style="list-style-type: none"> ■ Power On/Off button ■ System Reset button
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LEDs	<ul style="list-style-type: none"> ■ Power status LED ■ HDD activity LED ■ Network activity LEDs ■ System information (overheat/UID) LED
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Expansion Slots

PCI-Express	<ul style="list-style-type: none"> ■ 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)
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(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.)

Drive Bays / Storage

Hot-swap	<ul style="list-style-type: none"> ■ 12 Hot-swap 3.5" drive bays ■ 12 SAS3 via opt. AOC (4 hybrid ports - opt. 4 NVMe) <p>Note: Storage Add-on card is required</p>
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M.2	<ul style="list-style-type: none"> ■ 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
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Backplane

2U SAS/SATA backplane

System Cooling

Fans	■ 4 Heavy duty 8cm PWM fans
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Power Supply

1000W Redundant Power Supplies with PMBus

System BIOS

- BIOS Type** ■ AMI 32Mb SPI Flash ROM

Management

- Software**
- Intel® Node Manager
 - [IPMI 2.0](#)
 - KVM with dedicated LAN
 - NMI
 - [SSM](#), [SPM](#), [SUM](#)
 - [SuperDoctor® 5](#)

- 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

- 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)

- 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-829U2E1C4-R1K02-T	1	2U Chassis
Add-on Card / Module	AOC-2UR68-I4G-P	1	2U Ultra Riser based on Intel i350AM4 controller with 4 GbE RJ45 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-SAS3-826EL1-N4	1	12-port 2U SAS3 12Gbps single-expander backplane, support up to 8x 3.5-inch SAS3/SATA3 HDD/SSD and 4x NVMe/SAS3/SATA3 storage devices
Cable 1	CBL-PWEX-0652	1	8 pin female to 2x RA(Right Angle) big 4 pin female power, 60/65CM, 18AWG,RoHS/REACH
Cable 2	CBL-PWEX-0673	1	8 pin female to 2x big 4 pin female power, 65/70CM, 18AWG,RoHS/REACH
Cable 3	CBL-SAST-0593	2	MINI SAS HD, 12G,INT,60CM,30AWG
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
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
Hot-swap 3.5" to 2.5" NVMe Drive Tray	MCP-220-00138-0B	1~4	Tool-less black hot-swap 3.5-to-2.5 converter NVMe drive tray (Orange tab)
Hot-swap 3.5" to 2.5" SATA/SAS Drive Trays	MCP-220-00118-0B	1~12	Tool-less black hot-swap 3.5-to-2.5 converter HDD drive tray (Red tab)
	MCP-220-00043-0N		Black hot-swap 3.5-to-2.5 converter HDD drive tray (Red tab)
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 Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60 Std LP, 8 internal ports, 12Gb/s per port- Gen3, 16HDD, RAID 0, 1, 5, 6, 10, 50, 60
	AOC-S3008L-L8i		
	AOC-S3108L-H8iR		
	AOC-S3108L-H8iR-16DD		
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)