

SuperServer 2029U-TRT (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 and 4 DIMMs).

[▶ 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 Applications

Virtualization
Hyperconverge Storage
Cloud Computing
High End Enterprise Server

Key Features

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; 14 SATA3 (optional 20 SAS3 + 4 NVMe/SAS3),
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%)

Specifications

Product SKUs

SYS-2029U-TRT ■ SuperServer 2029U-TRT (Black)

Motherboard

Super X11DPU

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)

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

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

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

SATA ■ 14 SATA3 (6Gbps) ports

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

USB ■ 5 USB 3.0 ports (2 rear, 2 onboard header, 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

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.)

Drive Bays / Storage

Hot-swap ■ 24 Hot-swap 2.5" drive bays; 14 SATA3 (optional 20 SAS3 + 4 NVMe/SAS3)

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

Backplane

2U SAS/SATA backplane

System Cooling

Fans ■ 4 Heavy duty 8cm PWM fans

Power Supply

1000W Redundant Power Supplies with PMBus

Total Output Power ■ 800W: 100 – 127Vac
■ 1000W: 200 – 240Vac
■ 1000W: 200 – 240Vdc (for CCC only)

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
-

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
-

- 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)
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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-SAS3-216A-N4	1	24-port 2U SAS3 12Gbps hybrid backplane, support up to 20x 2.5-inch SAS3/SATA3 HDD/SSD and 4x SAS3/SATA3/NVMe 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-0591	1	MINI SAS HD-4 SATA,6G,INT,RF,Cross Over,75CM,75CM SB,30AWG
Cable 3	CBL-SAST-0655	1	MINI SAS HD(ST)-MINI SAS(RA-RS EXIT),6G,INT,47CM,SB,30AWG
Cable 4	CBL-SAST-0656	1	MINI SAS HD(ST)-MINI SAS(RA-RS EXIT),6G,INT,39CM,SB,30AWG
Cable 5	CBL-SAST-0657	1	MINI SAS HD(ST)-MINI SAS(RA-RS EXIT),6G,INT,55CM,SB,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 CBL-SAST-0948	2 1 1	SATA3 S-S Cable 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 & 2x CBL-SAST-0593	1~3	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA; MINI SAS HD,12G,INT,60CM,30AWG
	AOC-S3008L-L8i & 2x CBL-SAST-0593		Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E; MINI SAS HD,12G,INT,60CM,30AWG
	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; MINI SAS HD,12G,INT,60CM,30AWG
	AOC-S3108L-H8iR-16DD & 2x CBL-SAST-0593		Std LP, 8 internal ports, 12Gb/s per port- Gen3, 16HDD, RAID 0, 1, 5, 6, 10, 50, 60; MINI SAS HD,12G,INT,60CM,30AWG
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)