

SuperServer 2029UZ-TR4+ (Complete System Only)



Integrated Board



X11DPU-ZE+

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](#)
▶ [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

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 (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)
4. 4 Gigabit Ethernet ports
5. 24 Hot-swap 2.5" drive bays; Optional SAS3 and NVMe support, Optional 2 hot-swap 2.5" rear drive bays for SSDs; Optional M.2 NVMe and SATA3 ports
6. 4 Heavy duty 8cm fans
7. 1600W Redundant Power Supplies **Titanium Level (96%)**

Specifications

Product SKUs

- SYS-2029UZ-TR4+** ■ SuperServer 2029UZ-TR4+ (Black)

Motherboard

Super X11DPU-ZE+

Processor

- CPU** ■ Dual Socket P (LGA 3647)
 ■ 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors[‡], 3 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

- 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** ■ 4x 1GbE LAN ports via Intel® I210, I211, I217, I219, I225, I226, I227, I228, I229, I235, I236, I237, I238, I239, I240, I241, I242, I243, I244, I245, I246, I247, I248, I249, I250, I251, I252, I253, I254, I255, I256, I257, I258, I259, I260, I261, I262, I263, I264, I265, I266, I267, I268, I269, I270, I271, I272, I273, I274, I275, I276, I277, I278, I279, I280, I281, I282, I283, I284, I285, I286, I287, I288, I289, I290, I291, I292, I293, I294, I295, I296, I297, I298, I299, I300, I301, I302, I303, I304, I305, I306, I307, I308, I309, I310, I311, I312, I313, I314, I315, I316, I317, I318, I319, I320, I321, I322, I323, I324, I325, I326, I327, I328, I329, I330, I331, I332, I333, I334, I335, I336, I337, I338, I339, I340, I341, I342, I343, I344, I345, I346, I347, I348, I349, I350 (AOC-2UR68-i4G)

- 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** ■ 10 SATA3 (6Gbps) ports

- LAN** ■ 4 GbE ports
 ■ 1 RJ45 Dedicated IPMI LAN port

- USB** ■ 3 USB 3.0 ports (2 rear, 1 Type A)

- Video** ■ 2 VGA ports (1 rear, 1 onboard)

- Serial Port** ■ 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-R1K62P-T

Dimensions and Weight

- Height** ■ 3.5" (89mm)

- Width** ■ 17.2" (437mm)

- Depth** ■ 27.76" (705mm)

- Weight** ■ Net Weight: 36 lbs (16.4 kg)
 ■ Gross Weight: 72 lbs (32.7 kg)

- Available Color** ■ Black

Front Panel

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

- LEDs** ■ Power LED
 ■ Hard drive activity LED
 ■ Network activity LEDs
 ■ UID LED

Expansion Slots

- PCI-Express** ■ 1 PCI-E 3.0 x16 slot (FH, 10.5"L)
 ■ 5 PCI-E 3.0 x8 slot (FH, 10.5"L)
 ■ 1 PCI-E 3.0 x8 slot (LP)
 ■ 1 PCI-E 3.0 x8 slot (internal LP)

Drive Bays / Storage

- Hot-swap** ■ 24 Hot-swap 2.5" drive bays
 ■ Optional 20 SAS3 + 4 SAS3/NVMe
 ■ 2 Rear Hot-swap 2.5" drive bays

- 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 fans

Power Supply

1600W Redundant Power Supplies with PMBus

- Total Output Power** ■ 1600W/1000W

- Dimension (W x H x L)** ■ 73.5 x 40 x 203 mm

- Input** ■ 100-127Vac / 13 - 9A / 50-60Hz
 ■ 200-240Vac / 10 - 8A / 50-60Hz

- +12V** ■ Max: 83.3A / Min: 0A (100-127Vac)
 ■ Max: 133A / Min: 0A (200-240Vac)

- 12Vsb** ■ Max: 2.1A / Min: 0A

- Output Type** ■ 25 Pairs Gold Finger Connector

Management

- Software**
 - Intel® Node Manager
 - [Redfish API](#)
 - [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

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-ZE+ | 1 | Super X11DPU-ZE+ Motherboard |
| | CSE-219U2TS-R1K62P-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-SAS3-216A-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-0306L | 1 | CBL,FRONT CNTL,16 TO 16 PIN,RA,RND TUBE,65CM,28AWG |
| Cable 2 | CBL-PWEX-0673 | 3 | 8 pin female to 2x big 4 pin female power, 65/70CM, 18AWG,RoHS/REACH |
| Cable 3 | CBL-SAST-0591 | 1 | MINI SAS HD-4 SATA,6G,INT,RF,Cross Over,75CM,75CM SB,30AWG |
| Cable 4 | CBL-SAST-0655 | 1 | MINI SAS HD(ST)-MINI SAS(RA-RS EXIT),6G,INT,47CM,SB,30AWG |
| Cable 5 | CBL-SAST-0657 | 1 | MINI SAS HD(ST)-MINI SAS(RA-RS EXIT),6G,INT,55CM,SB,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 x4 slots |
| Heatsink / Retention | SNK-P0068PS | 2 | 2U Passive CPU Heat Sink for X11 Purley Platform Equipped with a Narrow Retention Mechanism |
| * Power Supply | PWS-1K62A-1R | 2 | AC-DC 1600W, Titanium Level, Redundancy, 1U, DC Output: +12V and +12Vs, 203 x 73.5 x 40 mm, AC Input: 90 - 264 VAC/47-63Hz, PMBus 1.2 with DSP controller,HF,RoHS/REACH |
| * Cable 6 | CBL-0088L | 4 | 4 PIN MIDDLE FAN POWER CABLE (PWM). 27cm, 24AWG |
| * Cable 7 | CBL-0160L | 2 | NEMA5-15P to C13 US power cord 16AWG 6ft, PBF (default for high watt) |
| * Cable 8 | CBL-0318L | 1 | CBL,FRONT CNTL,16 TO 16 PIN,RA,RND TUBE,24CM,28AWG |
| * FAN 1 | FAN-0158L4 | 4 | 80x80x38 mm, 10.5K RPM, Optional Middle Cooling Fan for X10 2U Ultra and HFT Series Servers,RoHS/REACH |
| * Drive Tray(s) | MCP-220-00047-0B | 24 | Black gen 3rd hot-swap 2.5inch HDD tray |
| * Rail Set | MCP-290-00057-0N | 1 | Rail set, quick/quick, default for 4U 17.2"; W |
| * Rail Set | MCP-290-00060-0N | 1 | Threaded rail adapter default for round hole rack |
| * Air Shroud | MCP-310-81905-0B | 1 | Plastic air shroud for SC819U, 119U, 829U, 219U (PWS),RoHS/REACH |
| * Front Panel | TB826 | 1 | Front panel adaptor board (TB826) forSC826,213,216,219 |
| * Rail Set | MCP-290-00115-0N | 1 | Inner rail, quick-release type |
| * Rail Set | MCP-290-00117-0N | 1 | Outer rail, quick-release type |

Notes:

1. Parts with * are inside the chassis
2. Excessive parts might not be shipped, including but not limited to excessive drive trays, fans, riser brackets, air shrouds, IO shields, cables.....etc.

Optional Parts List

| | Part Number | Qty | Description |
|--|-----------------|-----|---|
| Optional Upgrade for 2U LHS WIO Riser | RSC-R2UW-2E8E16 | 1 | 2U LHS WIO Riser card with 1 PCI-E x16 double width + 2 PCI-E x8 slots |
| | Or RSC-W2-66 | 1 | 2U LHS WIO Riser card with 2 PCI-E x16 double width slots |
| 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 Ultra optional rear drive kit | MCP-240-82922-0N-OEM | 1 | Rear 2x2.5" HDDs riser bracket kit for SC829U/219U, tool-less |
| 2 Rear 2.5" Hot-swap SATA Drive Bays | MCP-240-82922-0N-OEM | - | Rear 2x 2.5" HDDs riser bracket kit for SC829U/219U, tool-less |
| Storage Control Card and Cable for 4x Hybrid NVMe/SAS Drive Bays | AOC-S3008L-L8e & 2 CBL-SAST-0593 (1~3) | - | Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA |
| | AOC-S3008L-L8i & 2 CBL-SAST-0593 (1~3) | - | Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E |
| | AOC-S3108L-H8iR & 2 CBL-SAST-0593 (1~3) | - | Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60 |
| | AOC-S3108L-H8iR-16DD & 2 CBL-SAST-0593 (1~3) | - | 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 |
| 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 MCP-220-00127-0B | 1 ~ 4 | Tool-less black hot-swap 2.5" NVMe drive tray (Orange tab, w/ key lock, clip design) 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 |
| Cable for internal M.2 SATA | CBL-SAST-0538 | 1 | 29cm 30AWG SATA S-RA cable |
| 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 |
| 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) |
| CacheVault(s) | BTR-CV3108-U1 | - | CacheVault for Broadcom 3108 with Supercap mounting for 2U Ultra |
| TPM security module | AOM-TPM-9670V | 1 | SPI capable TPM 2.0 with Infineon 9670 controller, Vertical form factor |
| TPM security module | AOM-TPM-9671V | 1 | SPI capable TPM 1.2 with Infineon 9670 controller, Vertical form factor |
| 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) |