

SuperServer 6029UZ-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 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 (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. 12 Hot-swap 3.5" 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-6029UZ-TR4+** ■ SuperServer 6029UZ-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® 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-829U2TS-R1K62P-T

Dimensions and Weight

- Height** ■ 3.5" (89mm)

- Width** ■ 17.2" (437mm)

- Depth** ■ 28.46" (723mm)

- 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** ■ 12 Hot-swap 3.5" drive bays
 Optional 8 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-829U2AC4-R1K62-T	1	CSE-829U2AC4-R1K62-T
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-SAS3-826A-N4	1	12-port 2U SAS3 12Gbps hybrid backplane, support up to 8x 3.5-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-0652	1	8 pin female to 2x RA(Right Angle) big 4 pin female power, 60/65CM, 18AWG,RoHS/REACH
Cable 3	CBL-PWEX-0673	1	8 pin female to 2x big 4 pin female power, 65/70CM, 18AWG,RoHS/REACH
Cable 4	CBL-SAST-0591	1	MINI SAS HD-4 SATA,6G,INT,RF,Cross Over,75CM,75CM SB,30AWG
Cable 5	CBL-SAST-0655	1	MINI SAS HD(ST)-MINI SAS(RA-RS EXIT),6G,INT,47CM,SB,30AWG
Cable 6	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 7	CBL-0088L	4	4 PIN MIDDLE FAN POWER CABLE (PWM). 27cm, 24AWG
* Cable 8	CBL-0160L	2	NEMA5-15P to C13 US power cord 16AWG 6ft, PBF (default for high watt)
* Cable 9	CBL-0318L	1	CBL,FRONT CNTL,16 TO 16 PIN,RA,RND TUBE,24CM,28AWG
* FAN 1	FAN-0118L4	4	80 x 80 x 38 mm, 9.5K RPM, 4-pin PWM Fan, Hot
* Parts	MCP-150-00009-0B	1	Internal AOC rubber support for SC819U, 119U
* Drive Tray(s)	MCP-220-00075-0B	12	Black gen 5.5 hot-swap 3.5"; 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 (1~2)	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA
	AOC-S3008L-L8i & 2 CBL-SAST-0593 (1~2)	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E
	AOC-S3108L-H8iR & 2 CBL-SAST-0593 (1~2)	-	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 (1~2)	-	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
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)
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	QS4HR3/2/1	-	3/2/1-year onsite 24x7x4 service
	QSNBD3/2/1	-	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)