

SuperServer 1029UZ-TN20R25M (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, 4 DIMMs and 10 U.2 NVMe).

▶ [Drivers & Utilities](#) ▶ [BIOS](#) ▶ [IPMI](#) ▶ [Tested Memory](#) ▶ [Tested M.2 List](#) ▶ [NVMe Options](#) ▶ [Manuals](#) ▶ [OS Certification Matrix](#)
▶ [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
Cloud Computing
High Density Enterprise Server
Software Defined Storage

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. Up to 2 PCI-E 3.0 x8 slots (FH, FL); For 20 NVMe configuration, only 1 PCI-E 3.0 x8 is available For 18 NVMe configuration, 2 PCI-E 3.0 x8 will be available
4. 2x 25G SFP28 Ethernet ports
5. 20 Hot-swap 2.5" 7mm drive bays; up to 20 NVMe (CPU1: 10 NVMe, CPU2: 8 NVMe + 2 NVMe/ SATA/SAS hybrid); 1 M.2 NVMe port, Optional extra M.2 NVMe and SATA3 ports
6. 8 Heavy duty fans w/ optimal fan speed control; 2 air shrouds
7. 1600W Redundant Power Supplies **Titanium Level (96%)**

Specifications

Product SKUs

SYS-1029UZ-TN20R25M	<ul style="list-style-type: none"> SuperServer 1029UZ-TN20R25M (Black)
----------------------------	---

Motherboard

Super X11DPU-ZE+

Processor

CPU	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Up to 28 Cores
--------------	--

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

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^{††}
------------------------	--

Memory Type	<ul style="list-style-type: none"> 2933[†]/2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM
--------------------	--

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.
-------------	--

On-Board Devices

Chipset	<ul style="list-style-type: none"> Intel® C621 chipset
----------------	---

SATA	<ul style="list-style-type: none"> SATA3 (6Gbps); RAID 0, 1, 5, 10
-------------	---

Network Connectivity	<ul style="list-style-type: none"> 2 25GbE SFP28 ports via AOC-URN4-M2TS (Mellanox ConnectX-4 Lx EN) Download networking card drivers here
-----------------------------	--

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
-------------	--

Graphics	<ul style="list-style-type: none"> ASPEED AST2500 BMC
-----------------	--

Input / Output

NVMe	<ul style="list-style-type: none"> 8 NVMe ports + 2 SAS/SATA3/NVMe Hybrid Ports (from CPU 1) 10 NVMe ports (from CPU 2)
-------------	---

LAN	<ul style="list-style-type: none"> 2 25GbE SFP28 ports 1 RJ45 Dedicated IPMI LAN port
------------	---

USB	<ul style="list-style-type: none"> 3 USB 3.0 ports (2 rear, 1 Type A) 2 USB 2.0 ports (front)
------------	---

Video	<ul style="list-style-type: none"> 1 VGA port
--------------	--

Chassis

Form Factor	<ul style="list-style-type: none"> 1U Rackmount
--------------------	--

Model	<ul style="list-style-type: none"> CSE-116UTS-R1K62P-T
--------------	---

Dimensions and Weight

Height	<ul style="list-style-type: none"> 1.7" (43mm)
---------------	---

Width	<ul style="list-style-type: none"> 17.2" (437mm)
--------------	---

Depth	<ul style="list-style-type: none"> 27.8" (706mm)
--------------	---

Gross Weight	<ul style="list-style-type: none"> 48 lbs (21.8 kg)
---------------------	--

Available Color	<ul style="list-style-type: none"> Black
------------------------	---

Front Panel

Buttons	<ul style="list-style-type: none"> Power On/Off button System UID button
----------------	--

LEDs	<ul style="list-style-type: none"> Power LED Hard drive activity LED Network activity LEDs UID LED
-------------	--

Expansion Slots

PCI-Express	<ul style="list-style-type: none"> 2 PCI-E 3.0 x8 slots (FH, FL) For 20 NVMe configuration, only 1 PCI-E 3.0 x8 is available. For 18 NVMe configuration, 2 PCI-E 3.0 x8 will be available.
--------------------	---

(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"> 20 Hot-swap 2.5" 7mm drive bays 20 NVMe (CPU1: 10 NVMe, CPU2: 8 NVMe + 2 NVMe/SATA/SAS hybrid)
-----------------	---

M.2	<ul style="list-style-type: none"> 1 M.2 PCI-E 3.0 x4 M-Key NVMe (2240/2260/2280/22110) or 1 M.2 M-Key SATA3 (2240/2260/2280/22110) via optional parts 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	<ul style="list-style-type: none"> 8 Heavy duty fans with optimal fan speed control
-------------	--

Air Shroud	<ul style="list-style-type: none"> 2 Air Shroud
-------------------	--

Power Supply

1600W Redundant Power Supplies with PMBus

Total Output Power	<ul style="list-style-type: none"> 1600W/1000W
---------------------------	---

Dimension (W x H x L)	<ul style="list-style-type: none"> 73.5 x 40 x 203 mm
------------------------------	--

Input	<ul style="list-style-type: none"> 100-127Vac / 13 - 9A / 50-60Hz 200-240Vac / 10 - 8A / 50-60Hz
--------------	--

Serial Port	<ul style="list-style-type: none"> 1 Serial header
DOM	<ul style="list-style-type: none"> 2 SuperDOM (Disk on Module) ports

System BIOS

BIOS Type	<ul style="list-style-type: none"> AMI 32Mb SPI Flash ROM
------------------	--

Management

Software	<ul style="list-style-type: none"> Intel® Node Manager <u>IPMI 2.0</u> KVM with dedicated LAN NMI <u>SSM, SPM, SUM</u> <u>SuperDoctor® 5</u> WatchDog
-----------------	--

Power Configurations	<ul style="list-style-type: none"> ACPI Power Management
-----------------------------	---

PC Health Monitoring

CPU	<ul style="list-style-type: none"> Monitors for CPU Cores, Chipset Voltages, Memory. 4+1 Phase-switching voltage regulator
------------	--

FAN	<ul style="list-style-type: none"> Fans with tachometer monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors
------------	---

Temperature	<ul style="list-style-type: none"> Monitoring for CPU and chassis environment Thermal Control for fan connectors
--------------------	--

+12V	<ul style="list-style-type: none"> Max: 83.3A / Min: 0A (100-127Vac) Max: 133A / Min: 0A (200-240Vac)
-------------	---

12Vsb	<ul style="list-style-type: none"> Max: 2.1A / Min: 0A
--------------	---

Output Type	<ul style="list-style-type: none"> 25 Pairs Gold Finger Connector
--------------------	--

Certification	  Titanium Level [Test Report]
----------------------	---

Operating Environment

RoHS	<ul style="list-style-type: none"> RoHS Compliant
-------------	--

Environmental Spec.	<ul style="list-style-type: none"> 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-116UTS-R1K62P-T	1	CSE-116UTS-R1K62P-T
Add-on Card / Module	AOC-SLG3-2E4R-P	2	NVMe AOC by 8,HF,RoHS/REACH
Add-on Card / Module	AOC-SLG3-4E4R-P	1	NVMe AOC by 16,HF,RoHS/REACH
Add-on Card / Module	AOC-URN4-M2TS-P	1	1U Ultra Riser 2-port 25GbE SFP28, based on Mellanox Connect
Backplane	BPN-NVME3-116UN	1	20-port 1U (CSE116U) NVMe direct-attached backplane, support up to 20x 7mm NVMe SSDs, 2 are hybrid ports also support SAS/SATA devices
Cable 1	CBL-PWEX-1018	1	BPN PWR,2X4F/GPU-White to 2x2F,P4.2, 12V, 42CM,18AWG, 11A/pin, -25~85C
Cable 2	CBL-PWEX-1019	1	BPN PWR,2X4F/GPU-White to 2x2F,P4.2, 12V, 67CM,18AWG, 11A/pin, -25~85C
Cable 3	CBL-SAST-0819	2	OCuLink v 1.0,INT,PCIe NVMe SSD, 65CM,34AWG,RoHS/REACH
Cable 4	CBL-SAST-0842	2	MiniSAS HD source to OcuLink v 1.0,INT,PCIe, 85CM,34AWG,RoHS
Cable 5	CBL-SAST-0847	8	OcuLink v 1.0,INT,PCIe NVMe SSD, 76CM,34AWG
Cable 6	CBL-SAST-0849	2	MiniSAS HD source to OcuLink v 1.0,INT,PCIe, 57CM,34AWG
Cable 7	CBL-SAST-0850	4	MiniSAS HD source to OcuLink v 1.0,INT,PCIe, 37CM,34AWG
Cable 8	CBL-SAST-0974-1	2	OcuLink v 1.0,INT,PCIe NVMe SSD, 37CM,34AWG
Cable 9	CBL-SAST-1015-1	1	MINI SAS-2 SATA (RA),6G,INT,52CM,62CM SB,30AWG,RoHS
Air Shroud	MCP-310-11601-0B	1	Mylar air shroud for SC116U (X11 24DIMM, left side)
Air Shroud	MCP-310-11602-0B	1	Mylar air shroud for SC116U (X11 24DIMM, right side)
Riser Card	RSC-UMR-8	1	1U Ultra RHS Riser Card with 1 PCIE/SATA Hybrid M.2 & 1 PCIE
Riser Card	RSC-UN4-88	1	RSC-UN4-88
Heatsink / Retention	SNK-P0067PS	2	1U 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 10	CBL-0160L	2	NEMA5-15P to C13 US power cord 16AWG 6ft, PBF (default for high watt)
* Cable 11	CBL-0263L	1	USB 2.0,INT,2X5/P2.54 TO 2X5/P2.54,2 CH,80CM,26AWG
* Cable 12	CBL-0335L	1	CBL,FRONT CNTL,20 TO 20 PIN,RA,RND TUBE,73CM,28AWG
* FAN 1	FAN-0101L4	8	40x56,4 Pin PWM,Primary for SC809,111, Sec.for SC816,819,808
* Drive Tray(s)	MCP-220-00143-0B	20	SC116U Tool-less 2.5" NVME HDD Tray (fit up to 7mm only)
* Rear Window	MCP-240-81915-0N	1	Rear window for SC819U, 119U tool-less chassis (m2TS)
* Front Panel	MCP-280-11603-0N	1	116 front panel kit with FP cable, support 2* USB2.0, slim
* Rail Set	MCP-290-00102-0N	1	Outer rail, quick-release type, 25.6" to 33.05"
* Rail Set	MCP-290-00112-0N	1	Inner rail, extension, long (quick) for 1U 17.2
* Rail Set	MCP-290-00120-0N	2	Inner rail, front, quick-release type (thumb screw applied)
* Air Shroud	MCP-310-81905-0B	1	Plastic air shroud for SC819U, 119U, 829U, 219U (PWS),RoHS/REACH
* FAN 2	MCP-340-00030-0N	1	40x56,4 Pin PWM,Primary for SC809, Sec. for SC816,819,808

Notes:

- Parts with * are inside the chassis
- 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
-------------	-----	-------------

Add-on card for internal M.2 NVMe	AOC-SLG3-2M2	1	Low Profile PCIe x8 add-on card supports 2 PCI-E 3.0 x4 M-Key M.2 NVMe Modules
Storage Control Card and Cable for 2x Hybrid NVMe/SAS Drive Bays	AOC-S3008L-L8e & 1 CBL-SAST-0699	1	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA
	AOC-S3008L-L8i & 1 CBL-SAST-0699	1	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E
	AOC-S3108L-H8iR & 1 CBL-SAST-0699	1	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60
2.5" 7mm SATA/SAS Drive Trays	MCP-220-00151-0B	1~2	SC116U 2.5" Tool-less SAS/SATA HDD Tray (fit up to 7mm only)
Cable for internal M.2 SATA	CBL-SAST-0538	1	29cm 30AWG SATA S-RA cable
Air Shroud for internal M.2	MCP-310-11603-0B	1	Mylar air shroud for SC116U (X11 24DIMM, M.2)
Compatible Networking Cables and Transceivers for System default Networking (AOC-URN4-m2TS)	-	1~2	Networking Cables and Transceivers Compatibility Matrix
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
1U Cable Management Arm	MCP-290-00152-0N	1	1U Supermicro Cable Management Arm 2nd Gen
CacheVault(s)	BTR-CV3108-1U1	-	CacheVault for Broadcom 3108 with Supercap mounting in 1U 40x56 fan tray
	BTR-TFM8G-LSICVM02 & BKT-BBU-BRACKET-05	-	CacheVault for Broadcom 3108; Supercap mounting bracket for PCI-E location
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)