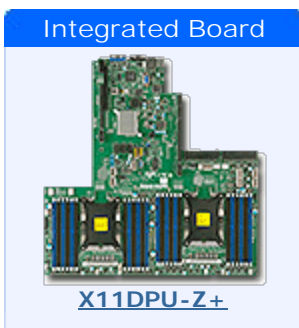


# SuperServer 1029UZ-TN20R25M (Complete System Only)



## Key Features

- Virtualization
- Cloud Computing
- High Density Enterprise Server
- Software Defined Storage

1. Dual socket P (LGA 3647) supports Intel® Xeon® Scalable Processors, 3 UPI up to 10.4GT/s
2. Up to 3TB ECC 3DS LRDIMM or RDIMM, up to DDR4-2666MHz; 24 DIMM slots
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: 8 NVMe + 2 NVMe/SAS/SATA3 hybrid, CPU2: 10 NVMe); 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%)

Due to the complexity of integration, this product is sold as a completely assembled system only (with minimum 2 CPU, 4 DIMM and 10 NVMe). Please contact your Supermicro sales rep for special requirements.

[▶ Drivers & Utilities](#)
[▶ BIOS](#)
[▶ IPMI](#)
[▶ Tested Memory](#)
[▶ Manuals](#)
[▶ OS Certification Matrix](#)
[▶ Drive Options](#)
[▶ Tested Network Card \(AOC\)](#)

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

## Specifications

### Product SKUs

- |                     |                                       |
|---------------------|---------------------------------------|
| SYS-1029UZ-TN20R25M | ▪ SuperServer 1029UZ-TN20R25M (Black) |
|---------------------|---------------------------------------|

### Motherboard

Super X11DPU-Z+

### Processor/Cache

- |       |   |
|-------|---|
| CPU   | ▪ Dual Socket P (LGA 3647)<br>▪ Intel® Xeon® Scalable Processors, 3 UPI up to 10.4GT/s<br>▪ Support CPU TDP 70-205W |
| Cores | ▪ Up to 28 Cores with Intel® HT Technology  |

### System Memory

- |        |                 |
|--------|-----------------|
| Memory | ▪ 24 DIMM slots |
|--------|-----------------|

### Chassis

- |             |                        |
|-------------|------------------------|
| Form Factor | ▪ 1U Rackmount         |
| Model       | ▪ CSE-116UTQ20-R1K62-T |



### Dimensions and Weight

- |                 |                    |
|-----------------|--------------------|
| Height          | ▪ 1.7" (43mm)      |
| Width           | ▪ 17.2" (437mm)    |
| Depth           | ▪ 27.8" (706mm)    |
| Gross Weight    | ▪ 48 lbs (21.8 kg) |
| Available Color | ▪ Black            |

### Front Panel

- |         |  |
|---------|--|
| Buttons | ▪ Power On/Off button<br>▪ System UID button |
|---------|--|

Capacity	<ul style="list-style-type: none"> <li>Up to 3TB ECC 3DS LRDIMM, 3TB ECC RDIMM, DDR4 up to 2666MHz</li> </ul>
Memory Type	<ul style="list-style-type: none"> <li>2666/2400/2133MHz ECC DDR4 SDRAM</li> </ul>
<b>On-Board Devices</b>	
Chipset	<ul style="list-style-type: none"> <li>Intel® C621 chipset</li> </ul>
SATA	<ul style="list-style-type: none"> <li>SATA3 (6Gbps); RAID 0, 1, 5, 10</li> </ul>
Network Connectivity	<ul style="list-style-type: none"> <li>2 25GbE SFP28 ports via AOC-URN4-M2TS (Mellanox ConnectX-4 Lx EN)</li> <li>Download networking card drivers <a href="#">here</a></li> </ul>
IPMI	<ul style="list-style-type: none"> <li>Support for Intelligent Platform Management Interface v.2.0</li> <li>IPMI 2.0 with virtual media over LAN and KVM-over-LAN support</li> </ul>
Graphics	<ul style="list-style-type: none"> <li>ASPEED AST2500 BMC</li> </ul>
<b>Input / Output</b>	
NVMe	<ul style="list-style-type: none"> <li>8 NVMe ports + 2 SAS/SATA3/NVMe Hybrid Ports (from CPU 1)</li> <li>10 NVMe ports (from CPU 2)</li> </ul>
LAN	<ul style="list-style-type: none"> <li>2 25GbE SFP28 ports</li> <li>1 RJ45 Dedicated IPMI LAN port</li> </ul>
USB	<ul style="list-style-type: none"> <li>3 USB 3.0 ports (2 rear, 1 Type A)</li> <li>2 USB 2.0 ports (front)</li> </ul>
Video	<ul style="list-style-type: none"> <li>1 VGA port</li> </ul>
Serial Port	<ul style="list-style-type: none"> <li>1 Serial header</li> </ul>
DOM	<ul style="list-style-type: none"> <li>2 SuperDOM (Disk on Module) ports</li> </ul>
<b>System BIOS</b>	
BIOS Type	<ul style="list-style-type: none"> <li>AMI 32Mb SPI Flash ROM</li> </ul>
<b>Management</b>	
Software	<ul style="list-style-type: none"> <li>Intel® Node Manager</li> <li><a href="#">IPMI 2.0</a></li> <li>KVM with dedicated LAN</li> <li>NMI</li> <li><a href="#">SSM</a>, <a href="#">SPM</a>, <a href="#">SUM</a></li> <li><a href="#">SuperDoctor® 5</a></li> <li>WatchDog</li> </ul>
Power Configurations	<ul style="list-style-type: none"> <li>ACPI Power Management</li> </ul>
<b>PC Health Monitoring</b>	
CPU	<ul style="list-style-type: none"> <li>Monitors for CPU Cores, Chipset Voltages, Memory.</li> <li>4+1 Phase-switching voltage regulator</li> </ul>
FAN	<ul style="list-style-type: none"> <li>Fans with tachometer monitoring</li> <li>Status monitor for speed control</li> <li>Pulse Width Modulated (PWM) fan connectors</li> </ul>
Temperature	<ul style="list-style-type: none"> <li>Monitoring for CPU and chassis environment</li> <li>Thermal Control for fan connectors</li> </ul>

LEDs	<ul style="list-style-type: none"> <li>Power LED</li> <li>Hard drive activity LED</li> <li>Network activity LEDs</li> <li>UID LED</li> </ul>
<b>Expansion Slots</b>	
PCI-Express	<ul style="list-style-type: none"> <li>2 PCI-E 3.0 x8 slots (FH, FL)</li> </ul> <p>For 20 NVMe configuration, only 1 PCI-E 3.0 x8 is available.</p> <p>For 18 NVMe configuration, 2 PCI-E 3.0 x8 will be available.</p> <p><b>(Both CPUs need to be installed for full access to PCI-E slots and onboard controllers. See manual block diagram and <a href="#">AOC Support</a> for details.)</b></p>
<b>Drive Bays / Storage</b>	
Hot-swap	<ul style="list-style-type: none"> <li>20 Hot-swap 2.5" 7mm drive bays</li> <li>20 NVMe (CPU1: 8 NVMe + 2 NVMe/SAS/SATA3 hybrid ports, CPU2: 10 NVMe ports)</li> </ul>
M.2	<ul style="list-style-type: none"> <li>1 M.2 NVMe (2240/2260/2280/22110)</li> <li>1 M.2 SATA3 via optional cable CBL-SAST-0538 (2240/2260/2280/22110)</li> <li>2 M.2 NVMe via optional add-on card AOC-SLG3-2M2 (2260/2280/22110)</li> </ul>
<b>System Cooling</b>	
Fans	<ul style="list-style-type: none"> <li>8 Heavy duty fans with optimal fan speed control</li> </ul>
Air Shroud	<ul style="list-style-type: none"> <li>2 Air Shroud</li> </ul>
<b>Power Supply</b>	
1600W Redundant Power Supplies with PMBus	
Total Output Power	<ul style="list-style-type: none"> <li>1000W/1600W</li> </ul>
Dimension (W x H x L)	<ul style="list-style-type: none"> <li>73.5 x 40 x 203 mm</li> </ul>
Input	<ul style="list-style-type: none"> <li>100-127Vac / 13 - 9A / 50-60Hz</li> <li>200-240Vac / 10 - 8A / 50-60Hz</li> </ul>
+12V	<ul style="list-style-type: none"> <li>Max: 83.3A / Min: 0A (100-127Vac)</li> <li>Max: 133A / Min: 0A (200-240Vac)</li> </ul>
12Vsb	<ul style="list-style-type: none"> <li>Max: 2.1A / Min: 0A</li> </ul>
Output Type	<ul style="list-style-type: none"> <li>25 Pairs Gold Finger Connector</li> </ul>
Certification	  <ul style="list-style-type: none"> <li>UL/cUL/CB/BSMI/CE/CCC Titanium Level</li> <li>[ <a href="#">Test Report</a> ]</li> </ul>
<b>Operating Environment</b>	
RoHS	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>
Environmental Spec.	<ul style="list-style-type: none"> <li>Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F)</li> <li>Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)</li> <li>Operating Relative Humidity: 8% to 90% (non-condensing)</li> <li>Non-operating Relative Humidity: 5% to 95% (non-condensing)</li> </ul>

## Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X11DPU-Z+	1	Super X11DPU-Z+ Motherboard
	CSE-116UTQ20-R1K62-T	1	CSE-116UTQ20-R1K62-T
Add-on Card / Module	AOC-SLG3-2E4T-P	2	AOC-SLG3-2E4T-P
Add-on Card / Module	AOC-SLG3-4E4T-P	1	AOC-SLG3-4E4T-P
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-CDAT-0674	1	4 Pin to 4 Pin I2C cable, 30cm, 26AWG, 4 wires, pinout 1-1, for vpp header(jnvi2c1),RoHS/REACH
Cable 2	CBL-PWEX-1018	1	BPN PWR,2X4F/GPU-White to 2x2F,P4.2, 12V, 42CM,18AWG, 11A/pin, -25~85C
Cable 3	CBL-PWEX-1019	1	BPN PWR,2X4F/GPU-White to 2x2F,P4.2, 12V, 67CM,18AWG, 11A/pin, -25~85C
Cable 4	CBL-SAST-0818	3	OCuLink v. 1.0,INT,PCIe NVMe SSD, 55CM,34AWG
Cable 5	CBL-SAST-0819	2	OCuLink v 1.0,INT,PCIe NVMe SSD, 65CM,34AWG,RoHS/REACH
Cable 6	CBL-SAST-0820	2	OCuLink v. 1.0,INT,PCIe NVMe SSD, 85CM,34AWG,RoHS/REACH
Cable 7	CBL-SAST-0847	8	OcuLink v 1.0,INT,PCIe NVMe SSD, 76CM,34AWG
Cable 8	CBL-SAST-0974-1	5	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)
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
FAN 1	FAN-0101L4	8	40x56,4 Pin PWM,Primary for SC809,111, Sec.for SC816,819,808
Rear Window	MCP-240-81915-0N	1	Rear window for SC819U, 119U tool-less chassis (m2TS)

## 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 M.2 NVMe Modules
Cable for 4x Hybrid NVMe/SATA Drive Bays	CBL-SAST-0880	1	MINI SAS(RA-RS EXIT)-4 SATA,INT,55/55/55/55CM,55CM SB,30AWG for optional 4x SATA3
Storage Control Card and Cable for 4x Hybrid NVMe/SAS Drive Bays	AOC-S3008L-L8e & 1 CBL-SAST-0948	1	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA
	AOC-S3008L-L8i & 1 CBL-SAST-0948	1	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E
	AOC-S3108L-H8iR & 1 CBL-SAST-0948	1	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60
Cable for internal M.2 SATA	CBL-SAST-0538	1	29cm 30AWG SATA S-RA cable
Storage Control Card and Cable(s)	AOC-S3008L-L8e	-	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA
	AOC-S3008L-L8i		Std LP, 8 internal ports, 12Gb/s per port- Gen3, 63HDD, RAID 0,1,1E
	AOC-S3108L-H8iR		Std LP, 8 internal ports, 12Gb/s per port- Gen3, 240HDD, RAID 0, 1, 5, 6, 10, 50, 60
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	-	

	AOC-S40G-i2Q More	- -	Standard LP, 2x 25GbE SFP28, Mellanox ConnectX-4 LX EN Standard LP 2-port 40GbE controller, Intel Fortville XL710 <a href="#">AOC Compatibility Matrix</a>
CachVault(s)	BTR-CV3108-1U1 BTR-TFM8G-LSICVM02 & BKT-BBU-BRACKET-05	- -	CacheVault for Broadcom 3108 with Supercap mounting in 1U 40x56 fan tray CacheVault for Broadcom 3108; Supercap mounting bracket for PCI-E location
Hot-swap 3.5" to 2.5" Hard Disk Drive Tray	MCP-220-00043-0N	-	Black hot-swap 3.5" to 2.5" HDD tray
1U Cable Management Arm	MCP-290-00152-0N	1	1U Supermicro Cable Management Arm 2nd Gen
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	<a href="#">OS4HR3/2/1</a>	-	3/2/1-year onsite 24x7x4 service
	<a href="#">OSNBD3/2/1</a>	-	3/2/1-year onsite NBD service
Software	SFT-OOB-LIC	1	OOB Management Package (per node license)
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)