

SuperServer 1029U-TN12RV (Complete System Only)



Integrated Board



X11DPU-V

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, 1 NIC adapter*, and 6x 2.5" drives). *NIC adapter requirement includes either 1 Ultra Riser card with integrated NIC or 1 Ultra Riser card AOC-URN4 with 1 standard PCI-E NIC adapter.

▶ [Drivers & Utilities](#) ▶ [BIOS](#) ▶ [IPMI](#) ▶ [Tested Memory](#) ▶ [NVMe Options](#) ▶ [Drive Options](#) ▶ [Manuals](#) ▶ [Quick-References Guide](#) ▶ [OS Certification Matrix](#) ▶ [Compatible GPU List](#) ▶ [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
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),
1 PCI-E 3.0 x8 (LP), 1 internal
PCI-E 3.0 x16
(for SMCI storage controller)
4. Flexible networking options,
up to 25GbE via Ultra Riser card
5. 12 Hot-swap 2.5" NVMe/SATA3 drive bays
6. 8 Heavy duty fans w/ optimal
fan speed control
7. 1200W Redundant Power Supplies
Titanium Level (96%)

Specifications

Product SKUs

SYS-1029U-TN12RV	<ul style="list-style-type: none"> SuperServer 1029U-TN12RV (Black)
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Motherboard

Super X11DPU-V

Processor

CPU	<ul style="list-style-type: none"> 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
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Cores	<ul style="list-style-type: none"> Up to 28 Cores
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Note	<p>[‡] BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake-R).</p>
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Extended thermal solutions may be required to support CPUs higher than 165W TDP, please contact Supermicro Technical Support for additional information.

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^{††}
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Memory Type	<ul style="list-style-type: none"> 2933[†]/2666/2400/2133MHz ECC DDR4 RDIMM/LRDIMM 2666 ECC DDR4 NVDIMM
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Note	<p>[†] 2933MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro</p> <p>^{††} Cascade Lake only. Contact your Supermicro sales rep for more info.</p>
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On-Board Devices

Chipset	<ul style="list-style-type: none"> Intel® C621 chipset
SATA	<ul style="list-style-type: none"> SATA3 (6Gbps)
Network Connectivity	<ul style="list-style-type: none"> Networking options provided via Ultra Riser card
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"> 6 NVMe/SATA ports (NVMe from CPU 1) 6 NVMe/SATA ports (NVMe from CPU 2)
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LAN	<ul style="list-style-type: none"> Networking options provided via Ultra Riser card 1 RJ45 Dedicated IPMI LAN port
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Chassis

Form Factor	<ul style="list-style-type: none"> 1U Rackmount
Model	<ul style="list-style-type: none"> CSE-119UHTS-R1K22HP-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"> 29.1" (739mm)
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"> 1 PCI-E 3.0 x16 (FH, 10.5"L) 1 PCI-E 3.0 x8 (LP) 1 Internal PCI-E 3.0
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(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"> 12 Hot-swap 2.5" NVMe/SATA drive bays Optional SAS support via SAS storage controller
M.2	<ul style="list-style-type: none"> 2 M.2 PCI-E 3.0 x4 M-Key NVMe via optional add-on card AOC-SLG3-2M2 (2260/2280/22110)

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"> 1 Air Shroud

Power Supply

1200W Redundant Hot-swap Power Supplies with PMBus	
Total Output Power	<ul style="list-style-type: none"> 800W: 100 – 127Vac 1200W: 200 – 240Vac 1200W: 200 -240Vdc (for CCC only)
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 / 9.8 - 7A / 50-60Hz 200-240Vac / 7.5 - 6A / 50-60Hz 200-240Vdc / 7.5 - 6A (for CCC only)

USB	<ul style="list-style-type: none"> 2 USB 3.0 ports (rear) 1 USB 3.0 (front)
Video	<ul style="list-style-type: none"> 1 VGA port
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
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Management

Software	<ul style="list-style-type: none"> Intel® Node Manager Redfish API IPMI 2.0 KVM with dedicated LAN NMI SSM, SPM, SUM SuperDoctor® 5
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: 66.7A / Min: 0A (100-127Vac) Max: 100A / Min: 0A (200-240Vac) Max: 100A / Min: 0A (200-240Vdc)
+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-V	1	Super X11DPU-V Motherboard
	CSE-119UHTS-R1K22HP-T	1	CSE-119UHTS-R1K22HP-T
Add-on Card / Module	AOC-SLG3-4E4R-P	1	NVMe AOC by 16,HF,RoHS/REACH
Backplane	BPN-SAS3-119A-N12	1	1U Hybrid BPN for 12x2.5"; SAS3/SATA3/NVMe Storage Devices
Cable 1	CBL-CDAT-0190	1	CBL,FRONT CNTL,20 TO 20 PIN,RA,RND TUBE,30CM,28AWG
Cable 2	CBL-PWEX-0781	1	PWYCB,2X4F/GPU-White to TWO 2X2F,P4.2, (5,12V),65/65CM,18AWG,RoHS
Cable 3	CBL-PWEX-1067	1	PWEX,2X2F/P4.2 TO 2x4F/P4.2,BLK*2,YEL*1,RED*1,61CM,16AWG
Cable 4	CBL-SAST-0655	1	(SATA 8-11) MINI SAS HD(ST)-MINI SAS(RA-RS EXIT),6G,INT,47CM,SB,30AWG
Cable 5	CBL-SAST-0656	1	(SATA 4-7) MINI SAS HD(ST)-MINI SAS(RA-RS EXIT),6G,INT,39CM,SB,30AWG
Cable 6	CBL-SAST-0657	1	(SATA 0-3) MINI SAS HD(ST)-MINI SAS(RA-RS EXIT),6G,INT,55CM,SB,30AWG
Cable 7	CBL-SAST-0856-1	1	(NVMe 8-9) SLIMLINE SAS x8 (LS) to 2x MINI SAS HD x4,INT, 74CM,32AWG
Cable 8	CBL-SAST-0857-1	1	(NVMe 10-11) SLIMLINE SAS x8 (LS) to 2x MINI SAS HD x4,INT, 80CM,32AWG
Cable 9	CBL-SAST-0821-1	1	(NVMe 6-7) SLIMLINE x8 (LE) to 2x Oculink x4, 46/50CM,85 OHM
Cable 10	CBL-SAST-0822-1	1	(NVMe 0-1) SLIMLINE x8 (RE) to 2x Oculink x4, 63/63CM,85 OHM
Cable 11	CBL-SAST-1149-85	1	SLIMLINE SAS x8 (RE) to 2x Oculink x4,INT, 49CM, 85 OHM
Cable 12	CBL-SAST-1154-85	1	(NVMe 2-3) SLIMLINE x8 (RE) to 2x Oculink x4,INT, 54CM, 85 OHM
Drive Tray(s)	MCP-220-00178-0B	12	2.5 thin profile drive tray, Orange tab (for hotswap NVMe drive), for SC119UH
Air Shroud	MCP-310-11601-0B	1	(CPU2) Mylar air shroud for SC116U (X11 24DIMM, left side)
Air Shroud	MCP-310-11906-0B	1	(CPU1) Right side air shroud with foam air block
Riser Card	RSC-R1UW-2E16	1	1U LHS WIO Riser card with two PCI-E x16 slots
Riser Card	RSC-R1UW-E8R	1	1U RHS WIO Riser card with one PCI-E x8 slot
Heatsink / Retention	SNK-P0067PS	2	1U Passive CPU Heat Sink for X11 Purley Platform Equipped with a Narrow Retention Mechanism
* Power Supply	PWS-1K22A-1R	2	1U 1200W/800W Titanium Redundant Power Supply CRPS 73.5x203x40mm,RoHS/REACH
* Cable 13	CBL-0160L	2	NEMA5-15P to C13 US power cord 16AWG 6ft, PBF (default for high watt)
* Cable 14	CBL-CDAT-0218	1	CBL,CNTL PANEL CONVERTER,FOR 809H and CSE119UH,FFC,20PIN,15C
* Cable 15	CBL-CUSB-0996	1	USB 3.0(F) Type A, RA to USB3.0 20pin,60CM,26/30AWG,RoHS
* FAN 1	FAN-0141L4	8	40x40x56 mm 20.5K RPM / 17.6K RPM Counter-rotating Fan
* Front Panel	FPB-FP119UH	1	Front control board for 119UHTS 1U Ultra
* Rear Window	MCP-240-81916-0N	1	Rear window for SC819U, 119U tool-less chassis (No opening)
* Rail Set	MCP-290-00102-0N	1set	Outer rail, quick-release type, 25.6" to 33.05"
* Rail Set	MCP-290-00112-0N	1set	Inner rail, extension, long (quick) for 1U 17.2
* Rail Set	MCP-290-00120-0N	1set	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

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
Ultra Riser Card	AOC-URN4-m2TS & MCP-240-81915-0N	1	2-port 25GbE SFP28, Mellanox CX-4 Lx EN
	AOC-URN4-b2XT & MCP-240-81909-0N		2-port 10GbE RJ45, Broadcom BCM57416
	AOC-URN4		No Onboard NIC
Add-on Card for M.2	AOC-SLG3-2M2	1	Low Profile PCIe x8 add-on card supports 2 PCI-E 3.0 x4 M.2 NVMe Modules
	RSC-UMR-8 & 1 CBL-SAST-0538		1U RHS WIO Riser card with 1 PCI-E x8 slot and 1 M.2 NVMe slot and 1 M.2 SATA slot
Drive Trays	MCP-220-00178-0B	1~12	Tool-less black hot-swap 2.5" drive tray (orange tab)
	MCP-220-00187-0B		Tool-less black hot-swap 2.5" drive tray (red tab)
Storage Control Card and Cable(s)	AOC-S3008L-L8e & 2x CBL-SAST-0593	1	Std LP, 8 internal ports, 12Gb/s per port- Gen3, 122HDD, HBA; MINI SAS HD SATA,12G,INT,60CM,60CM SB,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-CV3108-1U1	-	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
	BTR-TFM8G-LSICVM02 & MCP-240-00127-0N	-	CacheVault for Broadcom 3108; Supercap mounting bracket for 2.5" HDD location
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	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)