

Ultra SuperServer SYS-620U-TNR



Key Applications

Virtualization
HPC
Cloud Computing
High End Enterprise Server
Software Defined Storage
Application Tier Service Provider
5G/Telco

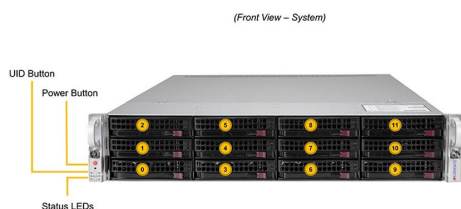
Key Features

- Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors;
- Intel® C621A Chipset;
- 32 DIMM Slots; Up to 8TB DRAM; Up to 8TB Intel® Optane™ Persistent Memory (up to 12TB with DRAM); 3200/2933/2666 ECC DDR4 LRDIMM; RDIMM; Intel® Optane™ Persistent Memory 200 series;
- Flexible networking options;
- 12x 3.5" hot-swap hybrid NVMe/SATA/SAS drive bays;
- 4 heavy duty fans with optimal fan speed control;
- 1200W redundant Titanium level power supplies;

[More details here](#)

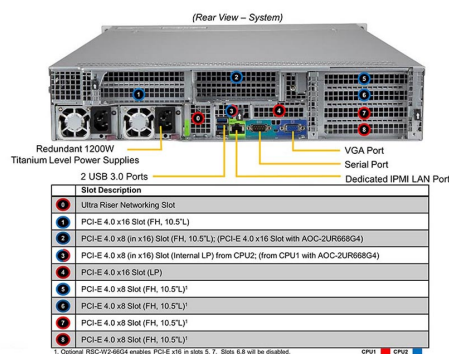


Form Factor	2U Rackmount Enclosure: 437 x 89 x 737.9mm (17.2" x 3.5" x 29.05") Package: 605 x 256 x 947mm (23.81" x 10.07" x 37.28")
Processor	3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 270W; 3 UPI
Drive Bays	12x 3.5" hot-swap NVMe/SATA/SAS drive bays; 12x 2.5" NVMe hybrid; Optional RAID support via RAID controller AOC
Expansion Slots	Slot 1: PCI-E 4.0 x16 FH, 10.5"L Slot 2: PCI-E 4.0 x8 FH, 10.5"L Slot 3: PCI-E 4.0 x8 Internal LP Slot 4: PCI-E 4.0 x16 LP Slot 5: PCI-E 4.0 x8 FH, 10.5"L Slot 6: PCI-E 4.0 x8 FH, 10.5"L Slot 7: PCI-E 4.0 x8 FH, 10.5"L Slot 8: PCI-E 4.0 x8 FH, 10.5"L Note: Optional RSC-W2-66G4 enables PCI-E x16 in slots 5, 7. Slots 6,8 will be disabled.
On-Board Devices	SATA: SATA3 (6Gbps) via Intel® PCH 621A; RAID 0/1/5/10 support NVMe: NVMe (16GT/s); RAID 0/1/5/10 support Chipset: Intel® C621A Network Connectivity: 2x 10GbE BaseT with Intel® X710-AT2 (optional) OR 2x 10GbE BaseT and 2x 10GbE SFP+ with Intel® X710-TM4 (optional) No NIC option supported IPMI: Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
Input / Output	LAN: 1 RJ45 Dedicated BMC LAN port USB: 2 USB 3.0 port(s) (2 rear) Video: 1 VGA port(s) Serial Port: 1 COM Port(s) (1 rear) DOM: 2 SuperDOM (Disk on Module) port



Slot	Description
1 – 10	3.5" Hot-swap NVMe/SAS3*/SATA3 Drive Bays (NVMe from CPU1)**
11 – 20	3.5" Hot-swap NVMe/SAS3*/SATA3 Drive Bays (NVMe from CPU2)**

*SAS3 support requires additional parts in optional parts list
**NVMe support requires additional parts in optional parts list



Cooling System	4x 8cm heavy duty fan(s)
Power Supply	1200W Redundant Power Supplies with PMBus Dimension (W x H x L): 73.5 x 40 x 203 mm Output Type: AC-Input
System BIOS	BIOS Type: AMI 32MB SPI Flash EEPROM
Management	SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; Intel® Node Manager; IPMI 2.0; Redfish API; Supermicro Out of Band (OOB) License (Included with Server)
PC Health Monitoring	CPU: Monitors for CPU Cores, Chipset Voltages, Memory 7 +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
Dimensions and Weight	Height: 3.5" (89 mm) Width: 17.2" (437 mm) Depth: 29.05" (737.9 mm) Gross Weight: 57.5 lbs (26.2 kg) Net Weight: 35.5 lbs (16.2 kg) Packaging: 10.07" (H) x 23.81" (W) x 37.28" (D) Available Color: Black Front & Silver Body
Operating Environment	Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F) Non-operating Temperature: -40°C to 60°C (-40°F to 140°F) Operating Relative Humidity: 8% to 90% (non-condensing) Non-operating Relative Humidity: 5% to 95% (non-condensing)
Motherboard	Super X12DPU-6
Chassis	CSE-829U3TS-R1K22P-T

Parts List - (Items Included)			
	Part Number	Qty	Description
Motherboard / Chassis	MBD-X12DPU-6	1	Super X12DPU-6 Motherboard
	CSE-829U3TS-R1K22P-T	1	2U Chassis
Backplane	BPN-SAS3-LA26A-N12	1	2U 12-Slot LFF Backplane Supports 12 x SAS3/SATA3/NVMe4 Storage Devices with 1x(2x4) + 4x(1x4) power connectors, co-lay with BPN-SAS3-LA26A-N12,HF,RoHS
Cable 1	CBL-PWEX-0923	1	2x4,P3.0 to 2x4,RAP4.2,YL,9.5A,38cm,16AWG,RoHS
Cable 2	CBL-SAST-1241F-100	1	Slimline x4 (STR) to Slimline x4 (STR),FFC,INT,41CM,100
Cable 3	CBL-SAST-1250F-100	2	Slimline x4 (STR) to Slimline x4 (STR),FFC,INT,50CM,100
Riser Card	RSC-W2-8888G4	1	2U LHS WIO Riser card with four PCI-E 4.0 x8 slots,HF,RoHS
Riser Card	RSC-WR-6	1	1U RHS WIO Riser card with one PCI-E 4.0 x16 slot,HF,RoHS
Software	SFT-OOB-LIC	1	License key for enabling OOB BIOS management
Heatsink / Retention	SNK-P0078P	2	2U Passive CPU Heat Sink for X12 Generation Intel Whitley and Cedar Island Platforms
*Power Supply	PWS-1K22A-1R	2	1U 1200W/800W Titanium Redundant Power Supply CRPS 73.5x203x40mm,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
2 Rear 2.5" Hot-swap SATA Drive Bays (Complete System Only)	MCP-240-82922-0N-OEM • eStore	1	Rear 2x 2.5" HDDs riser bracket kit for SC829U/219U, tool-less
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)
2U Front Bezel	MCP-210-82601-0B • eStore	1	Black Front Bezel Suitable for 829U and 219U chassis with standard thumbscrew handle.
Add-on card for M.2 support	AOC-SLG3-2H8M2-O	-	2x Hybrid NVMe/SATA M.2 RAID Carrier, Standard LP,RoHS
CacheVaults	BTR-CVPM05 + BKT-BBU-BRACKET-05	-	CacheVault for Broadcom 3908/3916 with Supercap
	BTR-CV3108-U1	-	CacheVault for Broadcom 3108 with Supercap mounting for 2U Ultra
Drive Tray	MCP-220-00138-0B • eStore	1 ~ 12	Black gen-5.5 tool-less NVMe 3.5-to-2.5 drive tray, Orange tab (For NVMe)
	MCP-220-00118-0B • eStore	1 ~ 12	Black gen-5.5 tool-less 3.5-to-2.5 drive tray, Red tab (For SATA/SAS)
Global Services & Support	OSNBD3/2/1	-	3/2/1-year onsite NBD service
	OS4HR3/2/1	-	3/2/1-year onsite 24x7x4 service
Intel® VROC RAID Key Options	AOC-VROCPREMOD	1	Intel VROC Premium, RAID 0, 1, 5, 10
	AOC-VROCSTNMOD	1	Intel VROC Standard, RAID 0, 1, 10
	AOC-VROCINTMOD	1	Intel VROC, RAID 0, 1, 5, 10 (Intel SSD Only)
Network Card(s)	AOC Compatibility Matrix	-	Standard Networking AOC Matrix
NVMe Support Kit	CBL-KIT-620U-TNR-12N +1 AOC-SLG4-2E4T-O	1	12 NVMe Kit for X12 Ultra 620U-TNR without NIC UIO
	CBL-KIT-620U-TNR-12 + 1 AOC-SLG4-2E4T-O	1	12 NVMe Kit for X12 Ultra 620U-TNR with NIC UIO
Optional Storage Controller Card + Cable(s)	AOC-S3816L-L16iT-O + 1x CBL-SAST-1264F-100, 1x CBL-SAST-1265F-100 or + 1x CBL-SAST-1264F-100, 1x CBL-SAST-1265F-100 (For system has 12 NVMe Support Kit with NIC UIO)	-	Standard LP, 16 internal ports (12Gb/s) Gen-4; HBA
	AOC-S3108L-H8iR-16DD + 1x CBL-SAST-1260-100 or + 2x CBL-SAST-1285-100 (For system has 12 NVMe Support Kit with NIC UIO)	-	Standard LP, 8 internal ports (12Gb/s) Gen-3; RAID 0, 1, 5, 6, 10, 50, 60
	AOC-S3908L-H8iR-16DD-O + 1x CBL-SAST-1276F-100 or + 1x CBL-SAST-1264F-100 (For system has 12 NVMe Support Kit with NIC UIO)	-	Standard LP, 8 internal ports (12Gb/s) Gen-4; RAID 0, 1, 5, 6, 10, 50, 60
	AOC-S3008L-L8i + 1x CBL-SAST-1260-100 or + 2x CBL-SAST-1285-100 (For system has 12 NVMe Support Kit with NIC UIO)	-	Standard LP, 8 internal ports (12Gb/s) Gen-3; RAID 0,1,1E
	AOC-S3916L-H16iR-32DD-O + 1x CBL-SAST-1265F-100, 1x CBL-SAST-1276F-100 or + 1x CBL-SAST-1264F-100, 1x CBL-SAST-1265F-100. (For system has 12 NVMe Support Kit with NIC UIO)	-	Standard LP, 16 internal ports (12Gb/s) Gen-4; RAID 0, 1, 5, 6, 10, 50, 60
	AOC-S3008L-L8E+-O + 1x CBL-SAST-1260-100 or + 2x CBL-SAST-1285-100 (For system has 12 NVMe Support Kit with NIC UIO)	-	Standard LP, 8 internal ports (12Gb/s) Gen-3; HBA + I2C
	AOC-S3008L-L8E + 1x CBL-SAST-1260-100 or + 2x CBL-SAST-1285-100 (For system has 12 NVMe Support Kit with NIC UIO)	-	Standard LP, 8 internal ports (12Gb/s) Gen-3; HBA
	AOC-S3808L-L8iT-O + 1x CBL-SAST-1264F-100 or + 1x CBL-SAST-1264F-100 (For system has 12 NVMe Support Kit with NIC UIO)	-	Standard LP, 8 internal ports (12Gb/s) Gen-4; HBA
Power Supply	PWS-1K62A-1R • eStore	2	1U 1600W, Titanium Level, Redundancy, AC Input: 90 - 264 VAC/47-63Hz
	PWS-1K30D-1R • eStore	2	1U 1300W, Redundancy, DC Input: -48Vdc
	PWS-2K08A-1R • eStore	2	1U 2000W, Titanium Level, Redundancy, AC Input: 90-264VAC/47-63Hz, and wide DC input 180Vdc~300Vdc
Riser Card	RSC-W2-66G4	1	2U LHS WIO Riser card with two PCI-E 4.0 x16 slots,HF,RoHS
	RSC-W2-688G4	1	2U LHS WIO Riser card with one PCI-E 4.0 x16 and two PCI-E 4.0 x8
Software	SFT-DCMS-Single	1	DataCenter Management Package (per node license)
Trusted Platform Module Options	AOM-TPM-9670V-O	1	SPI TPM 2.0 using SLB9670
	AOM-TPM-9671V-O	1	SPI Capable Vertical TPM 1.2 Module
	AOM-TPM-9670V-S-FIPS-P	1	AOM-TPM-9670V-S-FIPS TPM 2.0 support TAA and FIPS,RoHS
Ultra Riser Card Options + Rear Window	AOC-2UR668G4-O	1	2U Ultra Riser with 2x PCI-E 4.0 x16 and 1x PCI-E 4.0 x8 (internal, in x16),RoHS

AOC-2UR68G4-I2XT-O + MCP-240-82909-0N	1	2U Ultra Riser with 2-port 10G RJ45, Intel Carlsville X710-AT2, 1 PCI-E 4.0 x8 (in x16), 1 PCI-E 4.0 x16 and 1 PCI-E 4.0x8 (internal, in x16),RoHS
AOC-2UR68G4-I4XTS-O + MCP-240-82930-0N	1	2U Ultra Riser with 2-port 10G RJ45 & 2-port 10G SFP+, Intel Carlsville X710-TM4, with 1 PCI-E 4.0 x8 (in x16), 1 PCI-E 4.0 x16 and 1 PCI-E 4.0x8 (internal, in x16),RoHS
AOC-2UR68G4-M2TS + MCP-240-82914-0N	1	2U Ultra Riser 2-port 25GbE SFP28, Mellanox CX-6 LX, 1 PCIe 4.0 x8 (in x16), 1 PCIe 4.0 x16 and 1 PCIe 4.0x8 (internal, in x16),RoHS