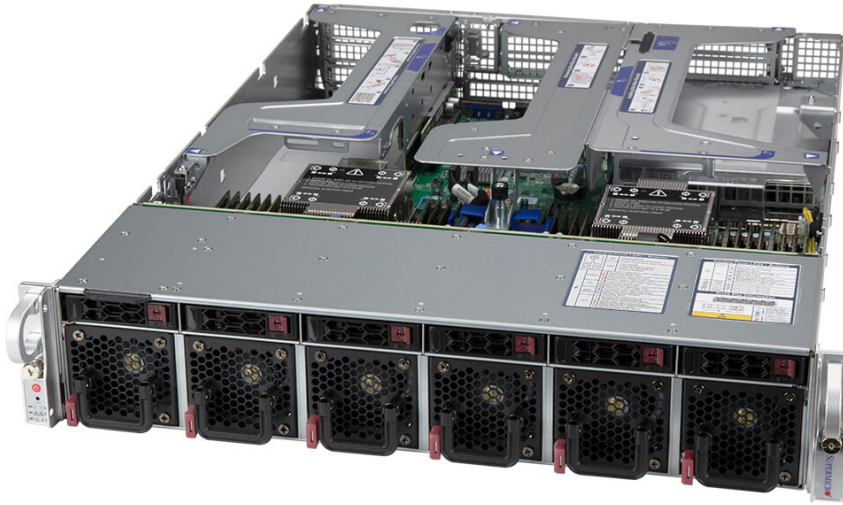


Ultra SuperServer SYS-220U-MTNR (Complete System Only)

NEW

Key Applications

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

Key Features

1. Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors
2. Intel® C621A Chipset
3. 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
4. 1 internal PCI-E 4.0 x8 (in x16 slot, LP)
1 PCI-E 4.0 x16 (FH, 10.5"L)
1 PCI-E 4.0 x16 (LP)
5 PCI-E 4.0 x8 (FH, 10.5"L)
5. Flexible networking options
6. 6x 2.5" hot-swap hybrid NVMe/SATA/SAS drive bays

...

Specifications

Product SKUs

- | | |
|----------------------|---|
| SYS-220U-MTNR | <ul style="list-style-type: none"> SuperServer SYS-220U-MTNR (Black Front & Silver Body) |
|----------------------|---|

Motherboard

Super X12DPU-6

Processor

- | | |
|--------------|---|
| CPU | <ul style="list-style-type: none"> Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable processors Support CPU TDP 270W * |
| Cores | <ul style="list-style-type: none"> Up to 40C/80T; Up to 60MB Cache |
| Note | <ul style="list-style-type: none"> *Certain CPUs with high TDP may be supported only under specific conditions. Please contact Supermicro Technical Support for additional information about specialized system optimization |

System Memory

- | | |
|------------------------|--|
| Memory | <ul style="list-style-type: none"> Memory Capacity: 32 DIMM slots Up to 8TB: 32x 256 GB DRAM Up to 12TB: 16x 512 GB PMem and 16x 256 GB DRAM Memory Type: 3200/2933/2666MHz ECC DDR4 RDIMM;LRDIMM Intel® Optane™ persistent memory 200 series |
| Memory Voltage | <ul style="list-style-type: none"> 1.2 V |
| Error Detection | <ul style="list-style-type: none"> ECC |

On-Board Devices

- | | |
|-----------------------------|--|
| SATA | <ul style="list-style-type: none"> SATA3 (6Gbps) via Intel® PCH 621A; RAID 0/1/5/10 support |
| NVMe | <ul style="list-style-type: none"> NVMe (16GT/s); RAID 0/1/5/10 support |
| Chipset | <ul style="list-style-type: none"> Intel® C621A |
| Network Connectivity | <ul style="list-style-type: none"> 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 | <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 |

Input / Output

- | | |
|------------|---|
| LAN | <ul style="list-style-type: none"> 1 RJ45 Dedicated BMC LAN port |
|------------|---|

Chassis

- | | |
|--------------------|--|
| Form Factor | <ul style="list-style-type: none"> 2U Rackmount |
| Model | <ul style="list-style-type: none"> CSE-219ULTS-R1K62P |

Dimensions and Weight

- | | |
|------------------------|--|
| Height | <ul style="list-style-type: none"> 3.5" (89mm) |
| Width | <ul style="list-style-type: none"> 17.2" (437mm) |
| Depth | <ul style="list-style-type: none"> 22.6" (574mm) |
| Package | <ul style="list-style-type: none"> 9.96" (H) x 24.6" (W) x 45.43" (D) |
| Weight | <ul style="list-style-type: none"> Net Weight: 40 lbs (18.2 kg) Gross Weight: 66 lbs (30 kg) |
| Available Color | <ul style="list-style-type: none"> Black Front & Silver Body |

Front Panel

- | | |
|----------------|---|
| Buttons | <ul style="list-style-type: none"> Power On/Off UID button |
| LEDs | <ul style="list-style-type: none"> HDD activity LAN1 activity LAN2 activity Power Fail Power status System information (overheat/UID) |

Expansion Slots

- | | |
|----------------------------|---|
| PCI-Express (PCI-E) | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> Optional RSC-W2-66G4 enables PCI-E x16 in slots 5, 7. Slots 6,8 will be disabled. |

Drive Bays / Storage

- | | |
|-----------------|---|
| Hot-swap | <ul style="list-style-type: none"> 6x 2.5" hot-swap NVMe/SATA/SAS drive bays (6x 2.5" NVMe hybrid) (SAS/NVMe support requires additional parts. Please see the Optional Parts list.) |
|-----------------|---|

System Cooling

- | | |
|-------------------|---|
| Fans | <ul style="list-style-type: none"> 6x 6cm heavy duty fans with optimal fan speed control |
| Air Shroud | <ul style="list-style-type: none"> 2 Air Shroud(s) |

Power Supply

- | |
|---|
| <ul style="list-style-type: none"> 1600W Redundant Power Supplies with PMBus |
|---|

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

System BIOS

BIOS Type	▪ AMI 32MB SPI Flash EEPROM
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Management

- Software**
- [Supermicro Out of Band \(OOB\) License](#) (Included with Server)
 - Redfish API
 - [IPMI 2.0](#)
 - Intel® Node Manager
 - KVM with dedicated LAN
 - [SUM](#)
 - NMI
 - Watch Dog
 - SuperDoctor® 5



Power Configurations	<ul style="list-style-type: none"> ▪ ACPI Power Management ▪ Power-on mode for AC power recovery
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PC Health Monitoring

- CPU**
- 7 +1 Phase-switching voltage regulator
 - Monitors for CPU Cores, Chipset Voltages, Memory

FAN	<ul style="list-style-type: none"> ▪ Fans with tachometer monitoring ▪ Pulse Width Modulated (PWM) fan connectors ▪ Status monitor for speed control
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Temperature	<ul style="list-style-type: none"> ▪ Monitoring for CPU and chassis environment ▪ Thermal Control for fan connectors
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Dimension (W x H x L)	▪ 73.5 x 40 x 203 mm
AC Input	<ul style="list-style-type: none"> ▪ 1000W: 100-127Vac / 50-60Hz ▪ 1600W: 200-240Vac / 50-60Hz
+12V	<ul style="list-style-type: none"> ▪ Max: 83A / Min: 0A (100Vac-127Vac) ▪ Max: 133A / Min: 0A (200Vac-240Vac)
12V SB	▪ Max: 2.1A / Min: 0A
Output Type	▪ AC-Input
Certification	  Titanium Level [Test Report]

Operating Environment

- Environmental Spec.**
- 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)

Parts List

Parts List - (Items Included)

	Part Number	Qty	Description
Motherboard / Chassis	MBD-X12DPU-6	1	Super X12DPU-6 Motherboard
	CSE-219ULTS-R1K62P	1	2U Chassis
Backplane	BPN-NVME4-HE211N-S6	1	1U 6-Slot BPN Supports 6 x SAS3/SATA3/NVMe4 Storage Device,HF,RoHS
Cable 1	CBL-PWEX-1147R-30	1	[NR] MicroHi,2x4,PH3.0 to 2x4,RA to MiniFit,PH4.2,30CM,9.5A/
Cable 2	CBL-SAST-1248LP-100	2	Slimline x4 (RE) to SlimlineLP x4 (STR),47CM,100 OHM,Ro
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-P0079P	2	1.5U Passive 55H mm CPU HS for X12 Whitley and Cedar Island
*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-0214L4	6	60x60x56 mm, 15.3K-15.3K RPM, Counter-rotating Cooling Fan for 2U Ultra-E Series Servers
*Front Panel	FPB-TB826-T	1	Chassis transfer board for SC826
*Drive Tray(s)	MCP-220-00187-0B	6	2.5 thin profile drive tray, standard color tab, for SC119UH
*Rail Set	MCP-290-00058-0N	1	Short rail set, quick release, 19.6";~26.9"; Extendable Length
*Rail Set	MCP-290-00114-0N	1	Outer rail, short, quick-release
*Rail Set	MCP-290-00116-0N	1	Inner rail, short, 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
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
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-220-00178-0B	1 ~ 6	2.5 thin profile drive tray, Orange tab (for hotswap NVMe drive)
Global Services & Support	<u>OSNBD3/2/1</u>	-	3/2/1-year onsite NBD service
	<u>OS4HR3/2/1</u>	-	3/2/1-year onsite 24x7x4 service
Intel® VROC RAID Key Options	<u>AOC-VROCPREMOD</u>	1	Intel VROC Premium, RAID 0, 1, 5, 10
	<u>AOC-VROCSTNMOD</u>	1	Intel VROC Standard, RAID 0, 1, 10
	<u>AOC-VROCINTMOD</u>	1	Intel VROC, RAID 0, 1, 5, 10 (Intel SSD Only)

Network Card(s)	<u>AOC Compatibility Matrix</u>	-	Standard Networking AOC Matrix
NVMe Support Kit	CBL-KIT-220U-MTNR	1	Cables Kit for X12 Ultra SYS-220U-MTNR
Optional Storage Controller Card + Cable(s)	<u>AOC-S3108L-H8iR-16DD</u> + 2x CBL-SAST-1250LP-100	-	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-1253P-100	-	Standard LP, 8 internal ports (12Gb/s) Gen-4; RAID 0, 1, 5, 6, 10, 50, 60
	AOC-S3008L-L8i + 2x CBL-SAST-1250LP-100	-	Standard LP, 8 internal ports (12Gb/s) Gen-3; RAID 0,1,1E
	AOC-S3008L-L8E+-O + 2x CBL-SAST-1250LP-100	-	Standard LP, 8 internal ports (12Gb/s) Gen-3; HBA + I2C
	<u>AOC-S3008L-L8E</u> + 2x CBL-SAST-1250LP-100	-	Standard LP, 8 internal ports (12Gb/s) Gen-3; HBA
	AOC-S3808L-L8iT-O + 1x CBL-SAST-1253LP-100	-	Standard LP, 8 internal ports (12Gb/s) Gen-4; HBA
Power Supply	PWS-1K30D-1R • <u>eStore</u>	2	1U 1300W, Redundancy, DC Input: -48Vdc
	PWS-2K08A-1R • <u>eStore</u>	2	1U 2000W, Titanium Level, Redundancy, AC Input: 90-264VAC/47-63Hz, and wide DC input 180Vdc~300Vdc
Riser Card	<u>RSC-W2-688G4</u>	1	2U LHS WIO Riser card with one PCI-E 4.0 x16 and two PCI-E4
	RSC-W2-66G4	1	2U LHS WIO Riser card with two PCI-E 4.0 x16 slots, HF, RoHS
Software	<u>SFT-DCMS-Single</u>	1	DataCenter Management Package (per node license)
Trusted Platform Module Options	AOM-TPM-9670V-S-FIPS-P	1	AOM-TPM-9670V-S-FIPS TPM 2.0 support TAA and FIPS, RoHS
	AOM-TPM-9671V-O	1	SPI Capable Vertical TPM 1.2 Module
	AOM-TPM-9670V-O	1	SPI TPM 2.0 using SLB9670
Ultra Riser Card Options + Rear Window	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
	AOC-2UR668G4-O + MCP-240-82925-0N	1	2U Ultra Riser with 2x PCI-E 4.0 x16 and 1x PCI-E 3.0 x8 (internal), 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-I2XT-O + MCP-240-82909-0N	1	2U Ultra Riser with 2-port 10G RJ45, Intel Carlsville X710-TM4, 1 PCI-E 4.0 x8 (in x16), 1 PCI-E 4.0 x16 and 1 PCI-E 4.0x8 (internal, in x16), RoHS