# Ultra SuperServer SYS-220U-TNR

2U Ultra with 24 NVMe/SAS/SATA bays, 8 PCIe slots

More details here

## 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;
- 1 PCIe 4.0 x16 (LP)
  1 PCIe 4.0 x16 (FH, 10.5"L)
  5 PCIe 4.0 x8 (FH, 10.5"L)
  1 internal PCIe 4.0 x8 (in x16 slot, LP);
- Flexible networking options;
- 22x 2.5" hot-swap hybrid NVMe/SATA/SAS drive bays + 2x2.5" hot-swap SATA/SAS drive bays;
- 4 heavy duty fans with optimal fan speed control;
- 1600W redundant Titanium level power supplies;

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|---|---|
| Form Factor | 2U Rackmount<br>Enclosure: 437 x 89 x 717.2mm (17.2" x 3.5" x 28.2")<br>Package: 625 x 253 x 1154mm (24.6" x 9.96" x 45.43") |
| Processor | Dual Socket P+ (LGA-4189)<br>3rd Gen Intel® Xeon® Scalable processors<br>Up to 40C/80T; Up to 60MB Cache per CPU |
| GPU | Max GPU Count: Up to 4 double-width or 6 single-width GPU(s)<br>Supported GPU: NVIDIA PCIe: T4, RTX A6000, RTX A5000, A40, A30, A16, A2, A100, A10 |
| System Memory | Slot Count: 32 DIMM slots<br>Max Memory (2DPC): Up to 8TB 3200MT/s ECC DDR4 RDIMM/LRDIMM<br>Supports Intel® Optane™ persistent memory 200 series |
| Drive Bays Configuration | Default: Total 24 bay(s)<br>• 22 front hot-swap 2.5" NVMe/SAS*/SATA drive bay(s)<br>• 2 front hot-swap 2.5" SAS*/SATA drive bay(s)<br>(*SAS support may require additional storage controller and/or cables, please see the optional parts list for details) |
| Expansion Slots | Default<br>• 1 PCIe 4.0 x16 FH/10.5"L slot(s)<br>• 5 PCIe 4.0 x8 FH/10.5"L slot(s)<br>• 1 PCIe 4.0 x8 LP slot(s)<br>• 1 PCIe 4.0 x16 LP slot(s) |
| On-Board Devices | SATA: SATA (6Gbps) ; RAID 0/1/5/10 support<br>NVMe: NVMe; RAID 0/1/5/10 support<br>Chipset: Intel® C621A<br>Network Connectivity: 2 RJ45 10GBASE-T with Intel® X710-AT2 (optional)<br>2 RJ45 10GBASE-T with Intel® X710-TM4 (optional)<br>2 SFP+ 10GbE with Intel® X710-TM4 (optional)<br>No NIC option supported |
| Input / Output | LAN: 1 RJ45 1 GbE Dedicated BMC LAN port(s)<br>USB: 2 USB 3.0 port(s) (rear)<br>Video: 1 VGA port(s)<br>DOM: 2 SuperDOM (Disk on Module) port(s) |

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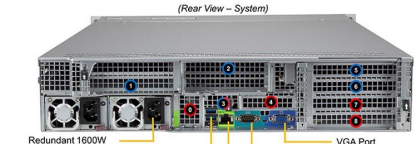
(Front View – System)




| Slot | Description |
|---|---|
| 0 – 1 | 2.5" Hot-swap SAS3*/SATA3 Drive Bays |
| 2 – 11 | 2.5" Hot-swap NVMe/SAS3*/SATA3 Drive Bays (NVMe from CPU1)** |
| 12 – 23 | 2.5" 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

(Rear View – System)




| | Slot Description |
|---|---|
| 0 | Ultra Riser Networking Slot |
| 1 | PCI-E 4.0 x16 Slot (FH, 10.5"L) |
| 2 | PCI-E 4.0 x8 (in x16) Slot (FH, 10.5"L); (PCI-E 4.0 x16 Slot with AOC-2UR668G4) |
| 3 | PCI-E 4.0 x8 (in x16) Slot (Internal LP) from CPU2; (from CPU1 with AOC-2UR668G4) |
| 4 | PCI-E 4.0 x16 Slot (LP) |
| 5 | PCI-E 4.0 x8 Slot (FH, 10.5"L)[1] |
| 6 | PCI-E 4.0 x8 Slot (FH, 10.5"L)[1] |
| 7 | PCI-E 4.0 x8 Slot (FH, 10.5"L)[1] |
| 8 | PCI-E 4.0 x8 Slot (FH, 10.5"L)[1] |

1: Optional RSC-W2-66G4 enables PCI-E x16 in slots 5, 7. Slots 6,8 will be disabled. CPU1 CPU2

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|---|---|
| System Cooling | Fans: 4x 8cm heavy duty fans with optimal fan speed control<br>Air Shroud: 2 Air Shroud(s) |
| Power Supply | 1x 1600W Redundant Titanium Level (96%) Hot-plug power supply |
| System BIOS | BIOS Type: AMI 32MB SPI Flash EEPROM |
| Management | SuperCloud Composer; Supermicro Server Manager (SSM); Supermicro Update Manager (SUM); Supermicro SuperDoctor® 5 (SD5); Super Diagnostics Offline (SDO); Supermicro Thin-Agent Service (TAS); SuperServer Automation Assistant (SAA) New! |
| PC Health Monitoring | CPU: Monitors for CPU Cores, Chipset Voltages, Memory<br>7 +1 Phase-switching voltage regulator<br>FAN: Fans with tachometer monitoring<br>Status monitor for speed control<br>Pulse Width Modulated (PWM) fan connectors<br>Temperature: Monitoring for CPU and chassis environment<br>Thermal Control for fan connectors |
| Dimensions and Weight | Weight: Gross Weight: 63 lbs (28.6 kg)<br>Net Weight: 37 lbs (16.8 kg)<br>Available Color: Black Front & Silver Body |
| Operating Environment | Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F)<br>Non-operating Temperature: -40°C to 60°C (-40°F to 140°F)<br>Operating Relative Humidity: 8% to 90% (non-condensing)<br>Non-operating Relative Humidity: 5% to 95% (non-condensing) |
| Motherboard | Super X12DPU-6 |
| Chassis | CSE-219U3TS-R1K62P-T |

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