



Ultra SuperServer SYS-220U-TNR

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

Key Applications

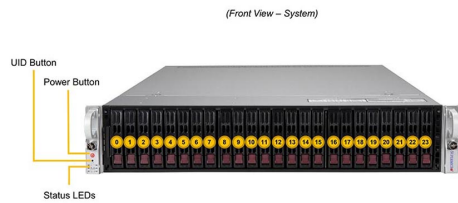
Virtualization, HPC, Cloud Computing, High End Enterprise Server, Software Defined Storage, Application Tier Service Provider, 5G/Telco,

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;

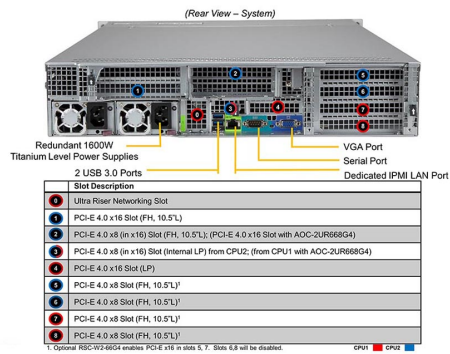


Form Factor	2U Rackmount Enclosure: 437 x 89 x 717.2mm (17.2" x 3.5" x 28.2") Package: 625 x 253 x 1154mm (24.6" x 9.96" x 45.43")
Processor	Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable processors Up to 40C/80T; Up to 60MB Cache per CPU
GPU	Max GPU Count: Up to 4 double-width or 6 single-width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



Slot	Description
1 – 11	2.5" Hot-swap SAS3/SATA3 Drive Bays
12 – 22	2.5" Hot-swap NVMe/SAS3/SATA3 Drive Bays (NVMe from CPU1)**
23 – 33	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



Slot Description
1 Ultra Riser Networking Slot
2 PCI-E 4.0 x16 Slot (FH, 10.5" L)
3 PCI-E 4.0 x8 (in x16) Slot (FH, 10.5" L); (PCI-E 4.0 x16 Slot with AOC-2UR68G4)
4 PCI-E 4.0 x8 (in x16) Slot (Internal LP) from CPU2; (from CPU1 with AOC-2UR68G4)
5 PCI-E 4.0 x16 Slot (LP)
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
9 PCI-E 4.0 x8 Slot (FH, 10.5" L) ¹

¹ Optional RSC-W2-68G4 enables PCI-E x16 in slots 5, 7. Slots 6,8 will be disabled.

System Cooling	Fans: Up to 4x 8cm heavy duty fans with optimal fan speed control Air Shroud: 2 Air Shrouds
Power Supply	1x 1600W Redundant Titanium Level (96%) Hot-plug power supply
System BIOS	BIOS Type: AMI 32MB SPI Flash EEPROM
Management	SuperCloud Composer® (SCC); 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: 7 +1 Phase-switching voltage regulator Monitors for CPU Cores, Chipset Voltages, Memory Fan: Fans with tachometer monitoring Pulse Width Modulated (PWM) fan connectors Status monitor for speed control Temperature: Monitoring for CPU and chassis environment Thermal Control for fan connectors
Dimensions and Weight	Weight: Gross Weight: 63 lbs (28.6 kg) Net Weight: 37 lbs (16.8 kg) Available Color: Black Front & Silver Body
Operating Environment	Operating Temperature: 10°C to 35°C (50°F to 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-219U3TS-R1K62P-T