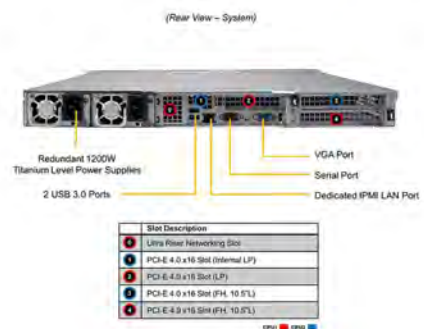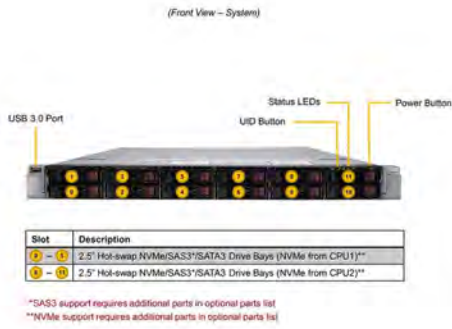# Ultra SuperServer SYS-120U-TNR

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;
- 1 PCIe 4.0 x16 (LP); 1 Internal PCIe 4.0 x16; 2 PCIe 4.0 x16 (FH, 10.5"L);
- Flexible networking options;
- 12x2.5" hot-swap hybrid NVMe/SATA/SAS drive bays;
- 8 heavy duty fans with optimal fan speed control;
- 1200W redundant Titanium level power supplies;

Form Factor	1U Rackmount Enclosure: 437 x 43 x 739mm (17.2" x 1.7" x 29.1") Package: 605 x 203 x 950mm (23.81" x 7.99" x 37.4")
Processor	3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 270W; 3 UPI (Certain CPUs with high TDP may be supported only under specific conditions. Please contact Supermicro Technical Support for additional information about specialized system optimization)
Drive Bays	12x 2.5" hot-swap NVMe/SATA/SAS drive bays (12x 2.5" NVMe hybrid)(SAS/NVMe support requires additional parts. Please see the Optional Parts list.)
Expansion Slots	1 PCIe 4.0 x16 Internal LP slot(s) 1 PCIe 4.0 x16 LP slot(s) 2 PCIe 4.0 x16 FH, 10.5"L slot(s)
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: 3 USB 3.0 port(s) (2 rear; 1 front) Video: 1 VGA port(s) Serial Port: 1 COM Port(s) (1 rear) DOM: 2 SuperDOM (Disk on Module) port

(Front View – System)

(Rear View – System)

System Cooling	8x 4cm 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: 1.7" (43 mm) Width: 17.2" (437 mm) Depth: 29.1" (739 mm) Gross Weight: 41 lbs (18.6 kg) Net Weight: 26.5 lbs (12.2 kg) Packaging: 7.99" (H) x 23.81" (W) x 37.4" (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-119UH3TS-R1K22P-T