

Ultra SuperServer SYS-120U-TNR

1U Ultra with 12 NVMe/SAS/SATA bays

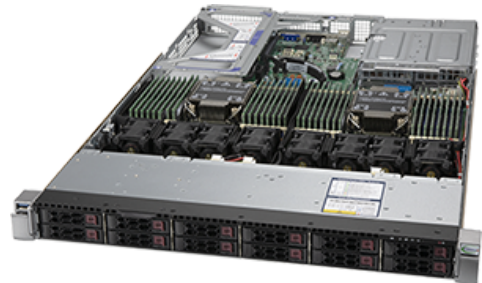


Key Applications

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;
- 2 PCIe 4.0 x16 (FH, 10.5"L)
1 PCIe 4.0 x16 (LP)
1 Internal PCIe 4.0 x16;
- 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	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 2 double-width or 2 single-width GPUs Supported GPU: NVIDIA PCIe: A100, A16, A2, L4, 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 12 bays • 12 front hot-swap 2.5" NVMe/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 LP slot • 1 PCIe 4.0 x16 LP slot • 2 PCIe 4.0 x16 FH/10.5"L slots
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) 1 USB 3.0 port (front) Video: 1 VGA port DOM: 2 SuperDOM (Disk on Module) ports

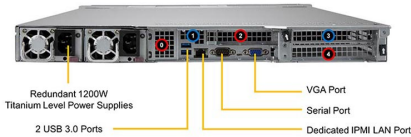
(Front View – System)



Slot	Description
1 – 6	2.5" Hot-swap NVMe/SAS3/SATA3 Drive Bays (NVMe from CPU1)**
7 – 12	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
1	Ultra Riser Networking Slot
2	PCI-E 4.0 x16 Slot (Internal LP)
3	PCI-E 4.0 x16 Slot (LP)
4	PCI-E 4.0 x16 Slot (FH, 10.5")
5	PCI-E 4.0 x16 Slot (FH, 10.5")

CPU1 CPU2

System Cooling

Fans: Up to 8x 4cm heavy duty fans with optimal fan speed control
 Air Shroud: 2 Air Shrouds

Power Supply

1x 1200W 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: 41 lbs (18.6 kg)
 Net Weight: 26.5 lbs (12.2 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-119UH3TS-R1K22P-T