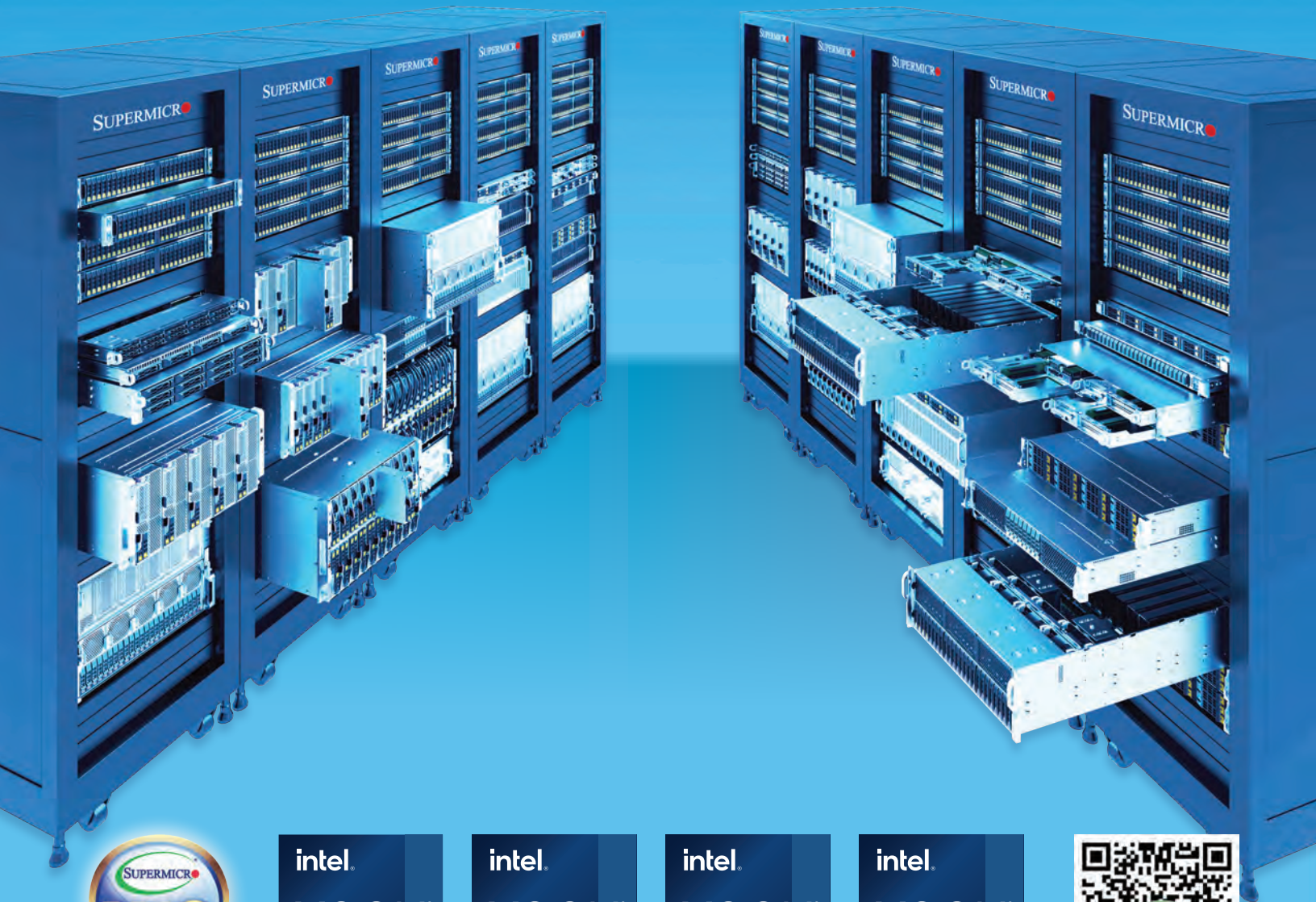




# X13 Server Solutions

Supporting 4th Gen Intel® Xeon® Scalable Processors  
*(Sapphire Rapids)*



January 2023



# INTRODUCING SUPERMICRO X13 GENERATION



Performance Redefined with 4th Gen Intel® Xeon® Scalable Processors  
*(Sapphire Rapids)*

## The Supermicro X13 Advantage

Supermicro's tried-and-tested Building Block Solutions® approach and industry-leading first-to-market advantage deliver optimized systems for the most demanding AI, Cloud, and 5G Edge workloads.

### Supermicro Total IT Solutions

- Industry's broadest portfolio of systems based on 4th Gen Intel Xeon Scalable processors
- Rack Scale plug-and-play service to deliver complete, validated solutions within weeks, not months
- Production capacity of up to 3,500 racks per month worldwide
- Made in the USA program with manufacturing in San Jose headquarters
- Industry standard compliance for hardware and silicon Root of Trust (RoT) and cryptographical attestation of components throughout the entire supply chain

### Optimized, Open Architectures

- More than 15 families of systems optimized for AI, Cloud, 5G Edge and more
- Resource saving architecture to reduce materials and energy usage
- Enhanced thermal capacity to support next-gen CPUs, GPUs and other components
- Flexible networking with Advanced I/O Modules (AIOM) up to 400G per card
- High ambient temperature operation up to 40°C with liquid cooling options
- Support for open and industry standards including OCP 3.0, OAM, ORV2, OSF, Open BMC and EDSFF

### 4th Gen Intel® Xeon® Scalable Processors

- Up to 60 cores and 350W TDP per CPU
- Support for Intel Xeon® Max Series CPUs with High Bandwidth Memory
- Support for PCIe 5.0, DDR5 and CXL 1.1
- Support for Next-gen Intel® Optane® Persistent Memory (Crow Pass)
- Built in accelerators:
  - Intel AMX
  - Intel® Dynamic Load Balancer
  - Intel® QuickAssist
  - Technology (QAT)
  - Intel vRAN Boost
- Built on the Intel® 7 process





# X13 PCIe GPU *Tailored for Omniverse and Metaverse* High Performance and Flexibility for AI/ML and HPC Applications



Dual socket 4th Gen Intel® Xeon® Scalable processors

32 DIMM slots supporting DDR5-4800MHz

Supports NVIDIA H100, A100, Intel® Ponte Vecchio (PVC) and Intel® Data Center GPU Flex Series (ATS-M) PCIe GPUs

Double the CPU to GPU throughput with PCIe 5.0

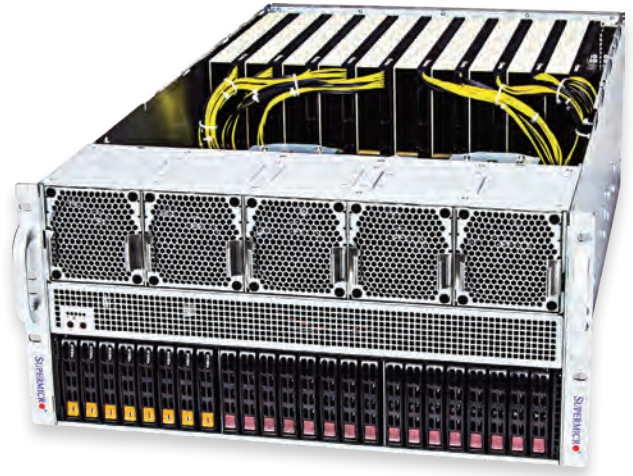
Single root, dual root and direct-connect GPU configurations available

5U option available for enhanced thermal capacity

Flexible storage with U.2 NVMe direct to CPU and storage options

NVIDIA-certified system supporting NVIDIA GPUs

5U 10-GPU



SYS-521GE-TNRT

AIOM Ready



SYS-521GE-TNRT (5U)

Up to 10 FHFL double-width PCIe GPUs  
8x 2.5" SAS/SATA hybrid + 8x 2.5" U.2 NVMe direct to CPU + 8x 2.5" U.2 NVMe direct to storage (optional)  
High Ambient Temperature: 38°C  
Dual-root



SYS-521GE-TNRT2 (5U)

Up to 10 FHFL double-width PCIe GPUs  
8x 2.5" SAS/SATA hybrid + 8x 2.5" U.2 NVMe direct to CPU + 8x 2.5" U.2 NVMe direct to storage (optional)  
High Ambient Temperature: 38°C  
Single-root



SYS-421GE-TNRT (4U)

Up to 10 FHFL double-width PCIe GPUs  
8x 2.5" SAS/SATA hybrid + 8x 2.5" U.2 NVMe direct to CPU + 8x 2.5" U.2 NVMe direct to storage (optional)  
Dual-root



SYS-421GE-TNRT3 (4U)

Up to 8 FHFL double-width direct connect PCIe GPUs,  
8x 2.5" SATA + 4x 2.5" U.2 NVMe direct to CPU  
Direct-Connect



SYS-741GE-TNRT (4U Tower)

Up to 4 double-width PCIe GPUs  
8x 3.5" SATA + 8x 2.5" U.2 NVMe direct to CPU

## Flexible Platform

Optimized for the next generation of HPC, action-oriented AI, 3D simulation, and advanced graphic design and rendering, Supermicro X13 PCIe accelerated solutions empower the creation of 3D worlds, digital twins, 3D simulation models and the Metaverse.

These systems support next-generation accelerators based on the industry-standard PCIe form factor, with up to 10 double-width GPUs in a 4U or 5U chassis.

Support for the latest industry-standard PCIe 5.0 provides unprecedented throughput for graphics accelerators, supporting the most demanding workloads, with CPU-direct U.2 NVMe bays ensuring maximum data throughput. Additional networking slots provide connectivity of up to 400Gb/s to create high performance clusters of up to 32 nodes. [Liquid Cooling options](#) are available for delivering superior efficiency for the most demanding performance.

## Key Applications

- AI model training
- Digital twins
- 3D simulation
- Real-time ray-tracing
- Animation and Modeling
- Cloud Gaming
- Design & Visualization
- 3D Rendering
- VDI
- Media/Video Streaming
- Diagnostic Imaging



# X13 UNIVERSAL GPU

Optimized Integrated Performance for AI/ML and HPC Applications



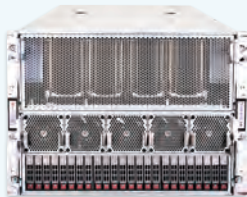
## 8U Universal GPU

- Most comprehensive AI building block platform
- Supercharged for the largest workloads with next-generation architecture
- All set to break through the barriers of AI at Scale
- Powered by NVIDIA HGX H100 8 SXM5 GPUs up to 700W TDP
- 9X more performance, 2X faster networking, and high-speed scalability
- AIOM Slot (OCP 3.0 compliant) Support
- Optional [Liquid Cooling](#) Support



SYS-821GE-TNHR

**AIOM**  
Ready



**SYS-821GE-TNHR (8U)**  
NVIDIA H100-8  
8 PCIe 5.0 networking slots + optional AOC/AIOM  
Up to 16x 2.5" U.2 NVMe drives



**SYS-821GE-FTNHR (8U Front IO)**  
NVIDIA H100-8  
8 PCIe 5.0 networking slots + optional AOC/AIOM  
Up to 16x 2.5" U.2 NVMe drives



**SYS-521GU-TNXR (5U)**  
NVIDIA H100-4  
5U 10 PCIe 5.0 networking slots  
10x 2.5" U.2 NVMe drives  
Thermal capacity up 700W per GPU



**SYS-421GU-TNXR (4U)**  
NVIDIA H100-4  
4U 8 PCIe 5.0 networking slots  
6x 2.5" U.2 NVMe drives  
Thermal capacity up 700W per GPU

## Open, Modular, Standards-Based Universal GPU System

Supermicro X13 Universal GPU systems feature an open, modular, standards-based architecture designed for maximum flexibility. Support for multiple industry-standard GPUs allows organizations to take advantage of different GPU configurations based on workload while only deploying a single server architecture, reducing infrastructure complexity and simplifying future upgrades.

Designed for serviceability with hot-swappable, tool-less components in a modular construction, the chassis are optimized for thermal capacity, supporting next-generation GPUs up to 700W TDP.

### Key Applications

- High Performance Computing
- AI/Deep Learning Training
- Industrial Automation
- Retail
- Healthcare
- Conversational AI
- Business Intelligence & Analytics
- Drug Discovery
- Climate and Weather Modeling
- Finance & Economics





# X13 SUPERBLADE®

Ultra High-Density Multi-Node Systems for Enterprise, Cloud, HPC, and AI Applications



8U 20-node and 6U 10-node SuperBlade® with integrated switches

Single or dual 4th Gen Intel® Xeon® Scalable processors with air-cooled support for up to 350W TDP CPUs

Up to 32 DIMM slots per node supporting DDR5-4800 and Intel® Optane™ Persistent Memory 300 Series

High-performance networking with 400G NDR InfiniBand and 400Gb Ethernet support up to 4 GPUs per server in a high-density, balanced architecture

High-performance NVMe support in E1.S, U.2 and M.2 form factors

**AIOM**  
Ready

## 8U SuperBlade®



SBE-820J2-830/630

High-density configuration with 20 hot-pluggable nodes in 8U, Optimized for performance and advanced networking



Liquid-Cooled SuperBlade

## 6U SuperBlade®



SBE-610J2-830/630

Up to 10 hot-pluggable nodes in 6U, Performance and memory optimized architecture

### 8U SuperBlade® 20/10 DP Nodes in 8U



SBI-421E-1T3N

3 SATA or 2 NVMe  
DP/16 DIMM



SBI-421E-5T3N

3 SATA or 2 NVMe  
DP/16 DIMM



SBI-621E-1C2N

SBI-621E-1T2N  
3 SAS/SATA/NVMe  
DP/32 DIMM



SBI-621E-5T2N

3 SAS/SATA/NVMe  
DP/32 DIMM



SBI-611E-1C2N

SBI-611E-1T2N  
2 SAS/SATA/NVMe  
UP/16 DIMM



SBI-611E-5T2N

2 SAS/SATA/NVMe  
UP/16 DIMM

## Resource-Saving Architecture

Supermicro's high performance, density-optimized, and energy-efficient SuperBlade® can significantly reduce initial capital and operational expenses for many organizations. SuperBlade® utilizes shared, redundant components including cooling fans, switches or passthrough modules and power supplies to deliver the compute performance of a full server rack in a much smaller physical footprint.

With both air and [liquid cooling options](#) available, SuperBlade® systems can be configured to maximize density and performance for a range of operating environments. The 6U SuperBlade® features a disaggregated design between the motherboard and I/O module, where each resource can be refreshed independently allowing datacenters to reduce refresh cycle costs and reuse components to reduce the Total Cost to the Environment (TCE).

## Key Applications

- AI/ML/DL
- HPC
- Cloud
- EDA
- Virtualization
- Health
- Financial Services



# X13 GRANDTWIN™

## Multi-node Architecture with Front or Rear I/O



### 2U 4-Node GrandTwin™

#### Purpose-built Architecture for 1S

Support max DIMM, E1.S, PCIe Gen5, and CXL

- Edge to Enterprise Datacenter Deployments

Field serviceable from front/cold aisle to reduce downtime for higher availability

Flexible Front & Rear I/O config designed to help reduce cable complexities



X13SET-G-GC



SYS-211GT-HNTF (Front View)

**AIOM**  
Ready

#### 2U 4-Node Front I/O GrandTwin™



SYS-211GT-HNTF

SYS-211GT-HNC8F

Up to 4 U.2 NVMe/SATA drives per node

Up to 4 U.2 NVMe/SAS/SATA drives per node

#### 2U 4-Node Rear I/O GrandTwin™



SYS-211GT-HNTR

SYS-211GT-HNC8R

Up to 6 U.2 NVMe/SATA drives per node

Up to 6 U.2 NVMe/SAS/SATA drives per node

### Highly Configurable Single Processor Systems with Front or Rear I/O

GrandTwin™ is an all-new architecture purpose-built for single-processor performance. The design maximizes compute, memory and efficiency to deliver maximum density. Powered by 4th Gen Intel® Xeon® Scalable processors, GrandTwin's flexible modular design can be easily adapted for a wide range of applications, with the ability to add or remove components as required, reducing cost.

For front configurations, all I/O and node trays are fully accessible from the cold aisle, simplifying installation and servicing in space-constrained environments. Flexible storage and networking options are available via front AIOM modules, allowing countless custom configurations.

#### Key Applications

- MEC (Multi-Access Edge Computing)
- HPC
- Cloud Gaming
- Multi-Purpose CDN
- High-Availability Cache Cluster
- Telco Edge Cloud
- EDA (Electronic Design Automation)
- Mission-Critical Web Applications





# X13 BIGTWIN®

## Industry-leading Multi-node Architectures



Highly configurable 2U 4-node and 2U 2-node systems optimized for density or storage

Optimized thermal design for dual socket 4th Gen Intel® Xeon® Scalable processors

Optional direct-to-chip liquid cooling for increased thermal capacity

16 DIMM slots per node supporting DDR5-4800MHz

All-hybrid hot-swappable NVMe/SAS/SATA drive bays - Up to 12 drives per node

Flexible networking with up to 400G Ethernet per node

### 2U 4-Node BigTwin®



Liquid Cooled Node

SYS-221BT-H Series

**AIOM**  
Ready

2U 4-Node BigTwin®



SYS-621BT-H Series  
3x 3.5" NVMe/SAS/SATA drives  
(per node)

2U 4-Node BigTwin®  
(Liquid cooling option)



SYS-221BT-H Series  
6x 2.5" NVMe/SAS/SATA drives  
(per node)

2U 2-Node BigTwin®



SYS-621BT-D Series  
6x 3.5" NVMe/SAS/SATA drives  
(per node)

2U 2-Node BigTwin®



SYS-221BT-D Series  
12x 2.5" NVMe/SAS/SATA drives  
(per node)

### Highly Modular Multi-Node Systems with Tool-Less Design

Supermicro X13 BigTwin® systems provide superior performance and serviceability with dual 4th Gen Intel® Xeon® Scalable processors per node and hot-swappable tool-less design.

Superior modular mid-plane design with NVMe Gen 5 storage controller options. Optimized for density (2U4N) or storage (2U2N), BigTwin® systems with shared components can be more cost effective than standard 1U servers.

### Key Applications

- HCI
- HPC
- CDN
- Hybrid Cloud
- Container-as-a-Service
- Cloud Computing
- Big Data Analytics
- Back-up and Recovery
- Scale-Out Storage



# X13 FATTWIN®

Advanced Multi-node 4U Twin Architecture with 4 or 8 Nodes



Highly configurable 4U 8-node and 4-node systems

Single socket 4th Gen Intel® Xeon® Scalable processors per node

16 DIMM slots per node supporting 4TB DDR5-4800MHz

Front accessible service design for cold-aisle serviceability

Hot-swappable drive bays – interchangeable NVMe, SAS or SATA

Improved thermal management with new, optimized airflow designs

## 4U 8-Node FatTwin®



X13SEFR-A



SYS-F511E2-RT

**AIOM**  
Ready

4U 8-Node



SYS-F511E2-RT (4U8N)  
6x 2.5" hot-swap drives per node

4U 4-Node



SYS-F521E3-RTB (4U4N)  
8x 3.5" hot-swap drives per node

## Innovative Twin Architecture to Maximize Serviceability and Reliability

Supermicro X13 FatTwin® systems offer an advanced multi-node 4U twin architecture with 8 or 4 nodes. Front-accessible service design allows cold-aisle serviceability, with highly configurable systems optimized for data center compute or storage density. Supports all-hybrid hot-swappable NVMe/SAS/SATA hybrid drive bays with up to 6 drives per node (8-node) and up to 8 drives per node (4-node).

Supermicro X13 FatTwin® systems provide superior density, performance and front serviceability with 4th Gen Intel® Xeon® Scalable processors per node and hot-swappable, tool-less design.

### Key Applications

- Hyperscale/Hyperconverged
- Cloud Optimized Servers
- Data Center Enterprise Applications
- Scale-out Storage Expansion
- Telcom Data Center
- Virtualization Server





# X13 HYPER AND HYPER-E

Best-in-class Performance and Flexibility Rackmount Server



1U and 2U optimized thermal designs for dual socket 4th Gen Intel® Xeon® Scalable processors with [liquid cooling options](#)

32 DIMM slots per node supporting DDR5-4800MHz and Intel® Optane™ Persistent Memory 300 Series

NVMe SSD support with up to 24 drives in 2U

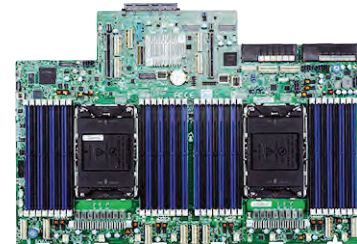
Optional 2.5"/E1.S SSD hybrid configuration

Up to 3 PCIe 5.0 slots in 1U or 8 PCIe 5.0 slots in 2U

PCIe 5.0 AIOM slots supporting up to 400G networking

Tool-less system for simplified maintenance

2U Hyper-E  
Optimized for 5G and Telco



X13DEM



SYS-221HE-FTNRD

AIOM  
Ready

2U Hyper-E  
Optimized for 5G and Telco



SYS-221HE-FTNR

6x 2.5" NVMe/SAS/SATA drives, short depth, front I/O, AC power

2U Hyper-E  
Optimized for 5G and Telco



SYS-221HE-FTNRD

6x 2.5" NVMe/SAS/SATA drives, short depth, front I/O, -48V DC power

2U Hyper  
Optimized for Storage Capacity



SYS-621H-TN12R

12x 3.5" NVMe/SAS/SATA drives

2U Hyper  
Optimized for Storage Performance  
(Liquid Cooling options)



SYS-221H-TNR  
SYS-221H-TN24R

Up to 24x 2.5" NVMe/SAS/SATA drives

1U Hyper  
Compute & Storage Powerhouse  
(Liquid Cooling options)



SYS-121H-TNR

12x 2.5" NVMe/SAS/SATA drives

## Ultimate Configurability for Enterprise and Telco Applications

The new X13 Hyper series brings next-generation performance to Supermicro's range of rackmount servers, built to take on the most demanding workloads along with the storage & I/O flexibility that provide a custom fit for a wide range of application needs.

Telco-optimized configurations include short depth carrier grade (NEBS Level 3) and optional DC power options on selected models.

Maintenance-friendly design innovations eliminate the need for tools when servicing the system to simplify rollout and installation.

## Key Applications

- 5G Core and Edge
- Telco Micro Data Center
- Enterprise Server
- Cloud Computing
- Big Data Analytics
- Hyperconverged Storage
- AI Inference and Machine Learning
- Network Function Virtualization



# X13 CLOUDDC

All-in-one Rackmount Platform for Cloud Data Centers



Single and dual socket 4th Gen Intel® Xeon® Scalable processors

16 DIMM slots per node supporting DDR5-4800MHz

Up to 12 U.2 NVMe/SAS/SATA drives with all-hybrid options

2 PCIe 5.0 slots in 1U or 6 PCIe 5.0 slots in 2U

Dual PCIe 5.0 AIOM slots supporting up to 400G networking



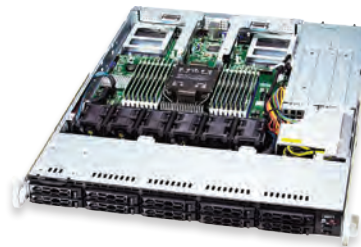
X13DDW-A (DP CloudDC)



X13SEDW-F (UP CloudDC)



SYS-121C-TN10R



SYS-111C-NR

**AIOM**  
Ready

## High Density Cloud Storage



SYS-621C-TN12R

2U/DP with 12x 3.5" NVMe/SAS/SATA drives and 6x PCIe 5.0 slots

SYS-521C-NR

2U/UP with 12x 3.5" SAS/SATA drives, 2x hybrid NVMe drives and 6x PCIe 5.0 slots

## Compact Cloud Compute



SYS-121C-TN10R

1U/DP with 10x 2.5" NVMe/SAS/SATA drives

SYS-111C-NR

1U/UP with 10x 2.5" NVMe/SAS/SATA drives

## General Purpose Balanced

## Compact Storage Optimized



SYS-121C-TN2R

1U/DP with 8x 2.5" SATA/SAS and 2x hybrid NVMe drives

SYS-611C-TN4R

1U/DP with 4x 3.5" NVMe/SAS/SATA drives

## High-density, Tool-less Mechanical Design for Rapid Cloud Deployment and Easy Maintenance

Ultimate flexibility on I/O and storage with 2 or 6 PCIe 5.0 slots and dual AIOM slots (PCIe 5.0; OCP 3.0 compliant) for maximum data throughput. Supermicro X13 CloudDC systems are designed for convenient serviceability with tool-less brackets, hot-swap drive trays and redundant power supplies that ensure a rapid deployment and more efficient maintenance in data centers. High-efficiency Titanium Level redundant power supplies provide resiliency and lower carbon footprint.

Rich Security Features include Intel® SGX, TPM 2.0, signed firmware, Silicon Root of Trust, Secure Boot, System Erase, Runtime FW protection, FIPS Compliance and Trusted Execution Environment.

## Key Applications

- Cloud Computing
- Web Servers
- Hyper-Converged Storage
- Virtualization
- File Servers
- Head-Node Computing
- 5G Telco AI Inferencing





# X13 ALL-FLASH EDSFF

Revolutionary Petascale NVMe for Unprecedented Density and Capacity



24x EDSFF (E1.S) NVMe SSD

Dual socket 4th Gen Intel® Xeon® Scalable processors

32 DIMM slots per node supporting DDR5-4800MHz

2x AIOM supporting PCIe 5.0 x16 and up to 2x PCIe 5.0 x16 slots

Up to 24 high-performance EDSFF Short (E1.S) drives in a 1U chassis

E1.S (9.5mm and 15mm) form factor support for maximum performance and storage density



SSG-121E-NES24R

**AIOM**  
Ready

1U High-performance All-Flash



SSG-121E-NES24R  
24 EDSFF (E1.S 15mm) NVMe SSD

1U High-capacity All-Flash



SSG-121E-NE316R  
16 EDSFF (E3 7.5mm NVMe SSD)

2U TCO Optimized All-Flash



SSG-221E-NE324R  
32 EDSFF (E3 7.5mm NVMe SSD)

## Extreme Density, High-performance All-flash Servers

Supermicro X13 All-Flash systems offer industry-leading storage density and performance with EDSFF drives allowing for Petabyte scale flash applications to run efficiently in fully symmetrical I/O optimized 1U & 2U servers.

The advanced high-density server design paired with the unmatched efficiency of EDSFF flash media provides exceptional IOP-per-Watt performance. This combination of performance and TCO value will accelerate the transition from legacy HDD for many large scale, capacity hungry applications used worldwide.

## Key Applications

- Data Intensive HPC/AI
- Private & Hybrid Cloud
- Software-Defined Storage
- NVMe Over Fabrics Solution
- In-Memory Computing
- Composable Infrastructure Platform



# X13 UP WIO

Industry's Widest Variety of I/O Optimized Servers



Cost-effective systems supporting up to 4 PCIe 5.0 devices

Single socket 4th Gen Intel® Xeon® Scalable processor

8 DIMM slots supporting DDR5-4800MHz

Hot-swappable 2.5" or 3.5" storage

Up to 10x NVMe hybrid storage supported (optional)

## 2U WIO with 4 PCIe Slots



X13SEW-F (WIO)



SYS-521E-WR

1U UP WIO



SYS-511E-WR

4x 3.5" SATA/SAS and 3 PCIe 5.0 slots

1U UP WIO



SYS-111E-WR

10x 2.5" SATA/SAS/NVMe with 3 PCIe 5.0 slots

2U UP WIO



SYS-521E-WR

8x 3.5" SATA/SAS/NVMe with 4 PCIe 5.0 slots

## Wide-Ranging Flexibility for any Enterprise Workload

Supermicro WIO systems offer a wide range of I/O options to deliver truly optimized systems for specific requirements. Users can optimize the storage and networking alternatives to accelerate performance, increase efficiency and find the perfect fit for their applications.

In addition to enabling customizable configurations and optimization for multiple application requirements, Supermicro WIO SuperServers® also provide attractive cost advantages and investment protection.

## Key Applications

- Enterprise Applications
- Networking Appliance
- Firewall/Security Appliances
- General Purpose Computing
- Cloud Computing
- Media Entertainment





# X13 SUPEREDGE

High-Density Computing and Flexibility at the Intelligent Edge



2U Short-depth (430mm), 3-node system

Single 4th Gen Intel® Xeon® Scalable processor per node

Front-access hot-swappable nodes

Up to 8 DIMMs slots per node supporting DDR5-4800 and Intel® Optane™ Persistent Memory 300 Series

Up to 3 PCIe 5.0 slots per node

Operating temperatures from -5°C to 55°C (CPU TDP-dependent)

2U 3-Node SuperEdge



SYS-211SE-31D

Redundant AC power



SYS-211SE-31A  
SYS-211SE-31AS

RJ45 or SFP management port options

Redundant DC power



SYS-211SE-31D  
SYS-211SE-31DS

RJ45 or SFP management port options

## Data Center-Class Performance and Expandability at the Edge

Supermicro's SuperEdge is designed to handle increasing compute and I/O density requirements of modern edge applications. With 3 customizable single-processor nodes, SuperEdge delivers high-class performance in a 2U, short-depth form factor. Each node is hot-swappable and offers front access I/O, making the system ideal for remote IoT, Edge, or Telco deployments.

Each node can accommodate three PCIe 5.0 slots, enabling a wide range of add-on cards that allow the SuperEdge to be outfitted for networking, FPGA, DPU, eASIC, and TimeSync Options.

The SuperEdge features an optimized airflow, providing an operating temperature range of -5°C to 55°C. Combined with the ability to withstand a wide range of humidity and other environmental conditions, this allows the server to be deployed in harsh conditions outside of a traditional data center.

## Key Applications

- 5G Open RAN/Flex-RAN
- C-RAN (vRAN)
- Telecom/Networking Appliance
- Multi-Access Edge Computing
- Edge Data Center
- Enterprise Edge Computing



# X13 5G/EDGE

Compact and short-depth rackmount systems for telco Edge deployments



High-density processing power in compact form factors suitable for Edge deployments

Flexible I/O with up to 3 PCIe 5.0 slots in 1U or 4 slots in 2U

Both AC and DC power configurations available with redundant power supplies

Enhanced operating temperatures from -5°C to 55°C (CPU TDP-dependent)



SYS-211E-FRDN2T

1U UP short-depth server with front I/O



SYS-111E-FWTR  
SYS-111E-FDWTR  
2x 2.5" internal SATA  
AC/DC power supply options

2U UP compact OpenRAN server



SYS-211E-FRN2T  
SYS-211E-FRDN2T  
2x 2.5" hot-swap NVMe  
AC/DC power supply options

## Expanding our Product Portfolio to address 5G, Edge Computing and Emerging IoT Systems

Supermicro provides innovative and first-to-market technologies that are the building blocks for today's embedded computing platforms. Rapid growth in embedded markets and open standards are driving the need for higher levels of product integration and optimization through virtualization, AI inferencing, network connectivity, remote management, mobile communication, expanded I/O, and device-to-device communications using space and power efficient configurations.

Supermicro's family of high-performance embedded products are optimized for a wide range of applications and solutions. Supermicro offers many flexible and customized solutions for critical OEM projects, as well as advanced designs for stringent environments, firmware customization, BOM enhancements, and a wide range of legacy IO support.

### Key Applications

- Multi-Access Edge Computing
- Flex-RAN/Open RAN
- Edge AI Outdoor 5G





# X13 MULTI-PROCESSOR SYSTEMS

Highest Performance and Flexibility for Enterprise Applications



## 2U 4-Way Compute-Optimized Hyper

4- and 8-way systems with 4th Gen Intel® Xeon® Scalable processors

Next-generation PCIe 5.0 for GPU/accelerator and high-speed network interface cards

Compute and hybrid storage-optimized configurations

Large memory footprint with up to 64 DIMMs in 2U and 128 DIMMs in 8U supporting DDR5-4800MHz and Intel® Optane™ Persistent Memory 300 Series



SYS-241H-TNRTTP

**AIOM**  
Ready

2U 4-way Compute-Optimized Hyper



SYS-241H-TNRTTP

64 DIMM/12 PCIe 5.0 (7 x16 + 5 x8)/8 NVMe hybrid

2U 4-way Storage-Optimized Hyper



SYS-241E-TNRTTP

64 DIMM/8 PCIe 5.0 (54 x16 + 3 x8)/24 NVMe hybrid

6U 8-way GPU-Optimized



SYS-681E-TR

128 DIMM/26 PCIe 5.0 x16/24 NVMe hybrid

## Maximum Configurability and Scalability

X13 multi-processor systems bring new levels of compute performance and flexibility with support for 4th Gen Intel® Xeon® Scalable processors to support mission-critical enterprise workloads.

A large memory footprint is ideal for large database and in-memory compute applications, with support for Intel® Optane™ persistent memory to enable even the most memory-intensive applications. Dynamic storage options support direct-attached full-hybrid all NVMe for lower latency with higher throughput and IOPS and up to 24x 2.5" hybrid NVMe/SAS3/SATA3 drive bays in a 2U chassis. Flexible networking is available via an AIOM slot supporting OCP 3.0 NIC devices.

## Key Applications

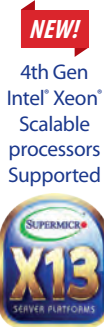
- Artificial Intelligence (AI)
- Business Intelligence
- ERP
- CRM
- Scientific Virtualization
- In-Memory Database
- HCI
- SAP HANA



# X13 UNIVERSAL GPU

8U

8U Front IO



MODEL	SYS-821GE-TNHR	SYS-821GE-FTNHR
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W
Key Applications	<ul style="list-style-type: none"> <li>• Finance &amp; Economics</li> <li>• Climate and Weather Modeling</li> <li>• Drug Discovery</li> <li>• Business Intelligence &amp; Analytics</li> <li>• Conversational AI</li> <li>• Healthcare</li> <li>• Industrial Automation, Retail</li> <li>• AI/Deep Learning Training</li> <li>• High Performance Computing</li> <li>• Highest GPU communication using NVIDIA® NVLINK™ + NVIDIA® NVSwitch™</li> </ul>	<ul style="list-style-type: none"> <li>• Finance &amp; Economics</li> <li>• Climate and Weather Modeling</li> <li>• Drug Discovery</li> <li>• Business Intelligence &amp; Analytics</li> <li>• Conversational AI</li> <li>• Healthcare</li> <li>• Industrial Automation, Retail</li> <li>• AI/Deep Learning Training</li> <li>• High Performance Computing</li> <li>• Highest GPU communication using NVIDIA® NVLINK™ + NVIDIA® NVSwitch™</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• High density 8U system with NVIDIA® HGX™ H100 8-GPU</li> <li>• 8 NVMe for GPU direct storage</li> <li>• 8 NIC for GPU direct RDMA (1:1 GPU Ratio)</li> <li>• 2 M.2 NVMe for boot drive only</li> </ul>	<ul style="list-style-type: none"> <li>• High density 8U system with NVIDIA® HGX™ H100 8-GPU</li> <li>• 8 NVMe for GPU direct storage</li> <li>• 8 NIC for GPU direct RDMA (1:1 GPU Ratio)</li> <li>• 2 M.2 NVMe for boot drive only</li> </ul>
Serverboard	SUPERMICRO® X13DEG-OAD	SUPERMICRO® X13DEG-OAD
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	32 DIMM slots UP to 8TB: 32x 256GB DRAM	32 DIMM slots UP to 8TB: 32x 256GB DRAM
Expansion Slots	8 PCIe 5.0 x16 LP, 2 FHFL PCIe 5.0 x16 Slots	8 PCIe 5.0 x16 LP, 2 FHFL PCIe 5.0 x16 Slots
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	2x 10GbE RJ45 with Intel® X550-AT2 (optional) 2x 10GbE RJ45 with Intel® X710-AT2 (optional) 2x 25GbE SFP28 with Broadcom® BCM57414 (optional)	2x 10GbE RJ45 with Intel® X550-AT2 (optional) 2x 10GbE RJ45 with Intel® X710-AT2 (optional) 2x 25GbE SFP28 with Broadcom® BCM57414 (optional)
VGA/Audio	1 VGA port	1 VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	20x 2.5" hot-swap NVMe/SATA drive bays; 8x 2.5" NVMe dedicated;	20x 2.5" hot-swap NVMe/SATA drive bays; 8x 2.5" NVMe dedicated;
Peripheral Bays	None	None
Power Supply	6x 3000W (3+3) Redundant Power Supplies, Titanium Level	6x 3000W (3+3) Redundant Power Supplies, Titanium Level
Cooling System	10 heavy duty fan(s)	10 heavy duty fan(s)
Form Factor	8U Rackmount Enclosure: 437 x 355.6 x 843.28mm (17.2" x 14" x 33.2") Package: 698 x 750 x 1300mm (27.5" x 29.5" x 51.2")	8U Rackmount Enclosure: 437 x 355.6 x 843.28mm (17.2" x 14" x 33.2") Package: 698 x 750 x 1300mm (27.5" x 29.5" x 51.2")



# X13 UNIVERSAL GPU

5U

4U



MODEL	SYS-521GU-TNXR	SYS-421GU-TNXR
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W
Key Applications	<ul style="list-style-type: none"> <li>AI/Deep Learning Training</li> <li>High Performance Computing</li> </ul>	<ul style="list-style-type: none"> <li>AI/Deep Learning Training</li> <li>High Performance Computing</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Highest GPU communication using NVIDIA® NVLINK™</li> <li>High density 5U Universal GPU system with NVIDIA® HGX™ H100 4-GPU</li> </ul>	<ul style="list-style-type: none"> <li>Highest GPU communication using NVIDIA® NVLINK™</li> <li>High density 4U Universal GPU system with NVIDIA® HGX™ H100 4-GPU</li> <li>8 NIC for GPU direct RDMA (1:1 GPU Ratio)</li> </ul>
Serverboard	SUPER● X13DGU	SUPER● X13DGU
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	32 DIMM slots UP to 8TB: 32x 256GB DRAM	32 DIMM slots UP to 8TB: 32x 256GB DRAM
Expansion Slots	10 PCIe 5.0 X16 LP Slots	8 PCIe 5.0 X16 LP Slots
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X710-AT2	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X710-AT2
VGA/Audio	1 VGA port	1 VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC ); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC ); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	10x 2.5" hot-swap NVMe/SATA drive bays; 10x 2.5" NVMe hybrid;	6x 2.5" hot-swap NVMe/SATA drive bays; 6x 2.5" NVMe hybrid;
Peripheral Bays	None	None
Power Supply	Redundant 3000W Titanium level (96%)	Redundant 3000W Titanium level (96%)
Cooling System	5 heavy duty fan(s)	5 heavy duty fan(s)
Form Factor	5U Rackmount Enclosure: 449 x 222.5 x 833mm (17.67" x 8.75" x 32.79") Package: 700 x 370 x 1260mm (27.55" x 14.57" x 49.6")	4U Rackmount Enclosure: 449 x 175.6 x 833mm (17.67" x 7.0" x 32.79") Package: 700 x 370 x 1260mm (27.55" x 14.57" x 49.6")

# X13 PCIe GPU

10 PCIe GPUs

8 PCIe GPUs



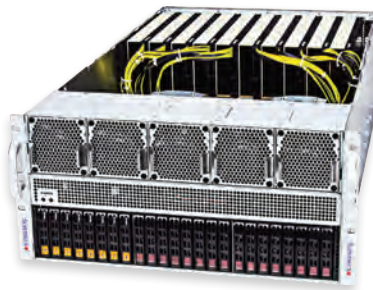
MODEL	SYS-421GE-TNRT	SYS-421GE-TNRT3
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W
Key Applications	<ul style="list-style-type: none"> <li>Diagnostic Imaging</li> <li>3D Rendering</li> <li>Design &amp; Visualization</li> <li>Animation and Modeling</li> <li>Cloud Gaming</li> <li>Media/Video Streaming</li> <li>AI/Deep Learning Training</li> <li>VDI</li> <li>High Performance Computing</li> <li>Flexible networking options</li> </ul>	<ul style="list-style-type: none"> <li>Diagnostic Imaging</li> <li>3D Rendering</li> <li>Design &amp; Visualization</li> <li>Animation and Modeling</li> <li>Cloud Gaming</li> <li>Media/Video Streaming</li> <li>AI/Deep Learning Training</li> <li>VDI</li> <li>High Performance Computing</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>8 NVMe for GPU direct storage</li> <li>2 M.2 NVMe for boot drive only</li> </ul>	<ul style="list-style-type: none"> <li>Flexible networking options</li> <li>2 M.2 NVMe for boot drive only</li> </ul>
Serverboard	SUPERMICRO X13DEG-OA	SUPERMICRO X13DEG-OA
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	32 DIMM slots UP to 8TB: 32x 256GB DRAM	32 DIMM slots UP to 8TB: 32x 256GB DRAM
Expansion Slots	13 PCIe 5.0 X16 Slots	8 PCIe 5.0 X16 Slots
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X710-AT2	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X710-AT2
VGA/Audio	1 VGA port	1 VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	24x 2.5" hot-swap NVMe/SATA/SAS drive bays; 8x 2.5" NVMe hybrid; 8x 2.5" NVMe dedicated;	24x 2.5" hot-swap NVMe/SATA/SAS drive bays; 4x 2.5" NVMe hybrid; 4x 2.5" NVMe dedicated;
Peripheral Bays	None	None
Power Supply	4x 2700W (2+2) Redundant Power Supplies, Titanium Level	4x 2700W (2+2) Redundant Power Supplies, Titanium Level
Cooling System	8 heavy duty fan(s)	8 heavy duty fan(s)
Form Factor	4U Rackmount Enclosure: 437 x 178 x 737mm (17.2" x 7" x 29") Package: (27" x 26.57" x 41")	4U Rackmount Enclosure: 437 x 178 x 737mm (17.2" x 7" x 29") Package: (27" x 26.57" x 41")



# X13 PCIe GPU

5U  
10 PCIe GPUs

4U Tower  
4 PCIe GPUs



MODEL	SYS-521GE-TNRT	SYS-741GE-TNRT
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W
Key Applications	<ul style="list-style-type: none"> <li>• Diagnostic Imaging</li> <li>• 3D Rendering</li> <li>• Design &amp; Visualization</li> <li>• Animation and Modeling</li> <li>• Cloud Gaming</li> <li>• Media/Video Streaming</li> <li>• AI/Deep Learning Training</li> <li>• VDI</li> <li>• High Performance Computing</li> </ul>	<ul style="list-style-type: none"> <li>• AI Training</li> <li>• Diagnostic Imaging</li> <li>• 3D Rendering</li> <li>• Design &amp; Visualization</li> <li>• Animation and Modeling</li> <li>• Cloud Gaming</li> <li>• Media/Video Streaming</li> <li>• AI/Deep Learning Training</li> <li>• VDI</li> <li>• High Performance Computing</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Flexible networking options</li> <li>• 8 NVMe for GPU direct storage</li> <li>• 2 M.2 NVMe for boot drive only</li> </ul>	<ul style="list-style-type: none"> <li>• Workstation or 4U Rackmountable System</li> <li>• Performance Anywhere</li> <li>• Innovate Faster</li> <li>• Flexible Solution</li> </ul>
Serverboard	SUPERMICRO X13DEG-OA	SUPERMICRO X13DEG-QT
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	32 DIMM slots UP to 8TB: 32x 256GB DRAM	16 DIMM slots UP to 4TB: 16x 256GB DRAM
Expansion Slots	13 PCIe 5.0 X16 Slots	7 PCIe 5.0 X16 FHFL Slots
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X710-AT2	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550-AT2
VGA/Audio	1 VGA port	1 VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC ); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC ); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	24x 2.5" hot-swap NVMe/SATA/SAS drive bays; 8x 2.5" NVMe hybrid; 8x 2.5" NVMe dedicated;	8x 3.5" hot-swap NVMe/SATA/SAS drive bays; 8x 2.5" NVMe hybrid;
Peripheral Bays	None	None
Power Supply	4x 2700W (2+2) Redundant Power Supplies, Titanium Level	2x 2000W (1+1) Redundant Power Supplies, Titanium Level
Cooling System	8 heavy duty fan(s)	4 heavy duty fan(s)
Form Factor	5U Rackmount Enclosure: 437 x 222.5 x 737mm (17.2" x 8.75" x 29") Package: (27" x 26.57" x 41")	TowerEnclosure: 437 x 178 x 737mm (17.2" x 7" x 29") Package: 330.2 x 685.8 x 965.2mm (13" x 27" x 38")

# X13 SUPEREDGE



Redundant AC power

Redundant AC power

Redundant DC power

Redundant DC power



MODEL	SYS-211SE-31A	SYS-211SE-31AS	SYS-211SE-31D	SYS-211SE-31DS
Processor Support	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 300W	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 300W	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 300W	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 300W
Key Applications	<ul style="list-style-type: none"> <li>Enterprise Edge Computing</li> <li>Telecom DRAN, CRAN, and Edge Core Application</li> <li>Flex-RAN, Open-RAN vBBU</li> <li>Multi-Access Edge Computing</li> <li>Three front hot-swappable nodes with single CPU socket and 8 DIMM design</li> </ul>	<ul style="list-style-type: none"> <li>Enterprise Edge Computing</li> <li>Telecom DRAN, CRAN, and Edge Core Application</li> <li>Flex-RAN, Open-RAN vBBU</li> <li>Multi-Access Edge Computing</li> <li>Three front hot-swappable nodes with single CPU socket and 8 DIMM design</li> </ul>	<ul style="list-style-type: none"> <li>Enterprise Edge Computing</li> <li>Telecom DRAN, CRAN, and Edge Core Application</li> <li>Flex-RAN, Open-RAN vBBU</li> <li>Multi-Access Edge Computing</li> <li>Three front hot-swappable nodes with single CPU socket and 8 DIMM design</li> </ul>	<ul style="list-style-type: none"> <li>Enterprise Edge Computing</li> <li>Telecom DRAN, CRAN, and Edge Core Application</li> <li>Flex-RAN, Open-RAN vBBU</li> <li>Multi-Access Edge Computing</li> <li>Three front hot-swappable nodes with single CPU socket and 8 DIMM design</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Front access IO design, and tool less serviceability</li> <li>16.9" (430mm) chassis depth</li> </ul>	<ul style="list-style-type: none"> <li>Front access IO design, and tool less serviceability</li> <li>16.9" (430mm) chassis depth</li> </ul>	<ul style="list-style-type: none"> <li>Front access IO design, and tool less serviceability</li> <li>16.9" (430mm) chassis depth</li> </ul>	<ul style="list-style-type: none"> <li>Front access IO design, and tool less serviceability</li> <li>16.9" (430mm) chassis depth</li> </ul>
Serverboard	SUPER® X13SEED-F	SUPER® X13SEED-SF	SUPER® X13SEED-F	SUPER® X13SEED-SF
Chipset	Intel® C741	Intel® C741	Intel® C741	Intel® C741
System Memory (Max.)	8 DIMM slots UP to 2TB: DDR5 ECC RDIMM/ RDIMM	8 DIMM slots UP to 2TB: DDR5 ECC RDIMM/ RDIMM	8 DIMM slots UP to 2TB: DDR5 ECC RDIMM/ RDIMM	8 DIMM slots UP to 2TB: DDR5 ECC RDIMM/ RDIMM
Expansion Slots	2 PCIe 5.0 x16 FHHL, PCIe 5.0 x16 LP	2 PCIe 5.0 x16 FHHL, PCIe 5.0 x16 LP	2 PCIe 5.0 x16 FHHL, PCIe 5.0 x16 LP	2 PCIe 5.0 x16 FHHL, PCIe 5.0 x16 LP
Onboard Storage Controller	Intel® SATA	Intel® SATA	Intel® SATA	Intel® SATA
Connectivity	1x 1GbE RJ45 port(s)	1x 1GbE SFP port(s)	1x 1GbE RJ45 port(s)	1x 1GbE SFP port(s)
VGA/Audio	1 VGA port	1 VGA port	1 VGA port	1 VGA port
Management	IPMI 2.0; SuperDoctor® 5	IPMI 2.0; SuperDoctor® 5	IPMI 2.0; SuperDoctor® 5	IPMI 2.0; SuperDoctor® 5
Drive Bays	N/A	N/A	N/A	N/A
Peripheral Bays	None	None	None	None
Power Supply	2000W AC Redundant PSU	2000W AC Redundant PSU	2000W DC Redundant PSU	2000W DC Redundant PSU
Cooling System	4 heavy duty fan(s)	4 heavy duty fan(s)	4 heavy duty fan(s)	4 heavy duty fan(s)
Form Factor	2U Rackmount Enclosure: 449 x 88 x 430mm (17.7" x 3.5" x 16.9") Package: 750 x 240 x 590mm (29.5" x 9.5" x 23.2")	2U Rackmount Enclosure: 449 x 88 x 430mm (17.7" x 3.5" x 16.9") Package: 750 x 240 x 590mm (29.5" x 9.5" x 23.2")	2U Rackmount Enclosure: 449 x 88 x 430mm (17.7" x 3.5" x 16.9") Package: 750 x 240 x 590mm (29.5" x 9.5" x 23.2")	2U Rackmount Enclosure: 449 x 88 x 430mm (17.7" x 3.5" x 16.9") Package: 750 x 240 x 590mm (29.5" x 9.5" x 23.2")

# X13 5G/EDGE

**NEW!**  
4th Gen Intel® Xeon® Scalable processors Supported



1U UP short-depth server with front I/O



1U UP short-depth server with front I/O



2U UP compact OpenRAN server



2U UP compact OpenRAN server



MODEL	SYS-111E-FWTR	SYS-111E-FDWTR	SYS-211E-FRN2T	SYS-211E-FRDN2T
Processor Support	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 270W	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 270W
Key Applications	<ul style="list-style-type: none"> <li>Machine Learning (ML)</li> <li>Artificial Intelligence (AI) on Edge</li> <li>Flex-RAN, Open-RAN vBBU</li> <li>Outdoor DU of 5G Application</li> <li>Multi-Access Edge Computing</li> </ul>	<ul style="list-style-type: none"> <li>Machine Learning (ML)</li> <li>Artificial Intelligence (AI) on Edge</li> <li>Flex-RAN, Open-RAN vBBU</li> <li>Outdoor DU of 5G Application</li> <li>Multi-Access Edge Computing</li> </ul>	<ul style="list-style-type: none"> <li>Cloud Computing</li> <li>Network Function Virtualization</li> <li>AI Inference and Machine Learning</li> <li>5G Core and Edge</li> </ul>	<ul style="list-style-type: none"> <li>Cloud Computing</li> <li>Network Function Virtualization</li> <li>AI Inference and Machine Learning</li> <li>5G Core and Edge</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Redundant Power Supplies Design</li> <li>Front access IO design, 16.9" (430mm) chassis depth</li> <li>5G Telecom, Flex-RAN, Open-RAN Optimized</li> <li>Redundant Power Supplies Design</li> <li>Front access IO design, 16.9" (430mm) chassis depth</li> <li>5G Telecom, Flex-RAN, Open-RAN Optimized</li> </ul>	<ul style="list-style-type: none"> <li>Redundant Power Supplies Design</li> <li>Front access IO design, 16.9" (430mm) chassis depth</li> <li>5G Telecom, Flex-RAN, Open-RAN Optimized</li> </ul>	<ul style="list-style-type: none"> <li>Design with compliance to NEBS-Level 3</li> </ul>	<ul style="list-style-type: none"> <li>Design with compliance to NEBS-Level 3</li> </ul>
Serverboard	SUPER● X13SEW-TF	SUPER● X13SEW-TF	SUPER● X13SEM-TF	SUPER● X13SEM-TF
Chipset	Intel® C741	Intel® C741	Intel® C741	Intel® C741
System Memory (Max.)	8 DIMM slots UP to 2TB: DDR5 ECC RDIMM/ RDIMM	8 DIMM slots UP to 2TB: DDR5 ECC RDIMM/ RDIMM	8 DIMM slots UP to 2TB: 8x 256GB DRAM	8 DIMM slots UP to 2TB: 8x 256GB DRAM
Expansion Slots	2 PCIe 5.0 x16 FHFL, PCIe 5.0 x16 LP	2 PCIe 5.0 x16 FHFL, PCIe 5.0 x16 LP	2x PCIe 5.0 x16 FHHL, 1x PCIe 5.0 x16 HHHL, 1x PCIe 5.0 x8 HHHL	2x PCIe 5.0 x16 FHHL, 1x PCIe 5.0 x16 HHHL, 1x PCIe 5.0 x8 HHHL
Onboard Storage Controller	Intel® SATA	Intel® SATA	Intel® SATA	Intel® SATA
Connectivity	2x 10GbE port(s)	2x 10GbE port(s)	2x 100GbE QSFP28 with Intel® E810-CAM2 (optional) 2x 10GbE SFP+ with Intel® X710-BM2 (optional) 2x 200GbE QSFP56 with Mellanox® MT28908A0-XCCF-HVM (optional) 2x 25GbE QSFP28 with Intel® E810-CAM1 (optional) 2x 25GbE QSFP28 with Intel® XXV710 (optional) 2x 40GbE QSFP+ with Intel® XL710-BM2 (optional) 4x 1GbE RJ45 with Intel® i350 (optional)	2x 100GbE QSFP28 with Intel® E810-CAM2 (optional) 2x 10GbE SFP+ with Intel® X710-BM2 (optional) 2x 200GbE QSFP56 with Mellanox® MT28908A0-XCCF-HVM (optional) 2x 25GbE QSFP28 with Intel® E810-CAM1 (optional) 2x 25GbE QSFP28 with Intel® XXV710 (optional) 2x 40GbE QSFP+ with Intel® XL710-BM2 (optional) 4x 1GbE RJ45 with Intel® i350 (optional)
VGA/Audio	1 VGA port	1 VGA port	1 VGA port	1 VGA port
Management	IPMI 2.0	IPMI 2.0	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	2x 2.5" SATA drive bays;	2x 2.5" SATA drive bays;	2x 2.5" hot-swap NVMe drive bays;	2x 2.5" hot-swap NVMe drive bays;
Peripheral Bays	None	None	None	None
Power Supply	800W AC Redundant PSU	600W DC Redundant PSU	Redundant 800W AC 100-240Vac input, Platinum level	2x 600W -48Vdc single output
Cooling System	4 heavy duty fan(s)	4 heavy duty fan(s)	4 heavy duty fan(s)	4 heavy duty fan(s)
Form Factor	1U Rackmount Enclosure: 436.88 x 44.5 x 429.3mm (17.2" x 1.7" x 16.9") Package: 685 x 203 x 609mm (27" x 8" x 24")	1U Rackmount Enclosure: 437 x 43 x 429mm (17.2" x 1.7" x 16.9") Package: 686 x 203 x 610mm (27" x 8" x 24")	2U Rackmount Enclosure: 436.88 x 88.9 x 298.8mm (17.2" x 3.5" x 11.8") Package: 490 x 188 x 590mm (19.3" x 7.4" x 23.3")	2U Rackmount Enclosure: 436.88 x 88.9 x 298.8mm (17.2" x 3.5" x 11.8") Package: 490 x 188 x 590mm (19.3" x 7.4" x 23.3")



# X13 SUPERBLADE®

8U

6U

**NEW!**

4th Gen  
Intel® Xeon®  
Scalable  
processors  
Supported



Enclosure	SBE-820 Series	SBE-610 Series
Processor Blade	<ul style="list-style-type: none"> <li>Up to 20 hot-swappable, half-height, single-width blade servers</li> <li>Up to 10 hot-swappable, half-height, double-width blade servers</li> <li>Up to 10 hot-swappable, full-height, single-width blade servers</li> <li>Mixed configuration supported</li> </ul>	<ul style="list-style-type: none"> <li>Up to 10 hot-swappable, single-width blade servers</li> <li>Up to 5 hot-swappable, double-width blade servers</li> <li>Mixed configuration supported</li> </ul>
LED Indicator	<ul style="list-style-type: none"> <li>Power LED, Fault LED</li> </ul>	<ul style="list-style-type: none"> <li>Power LED, Fault LED</li> </ul>
Infiniband Switch	<ul style="list-style-type: none"> <li>SBE-820H only: Single 200G HDR InfiniBand switch</li> <li>SBE-820C only: Single 100G EDR InfiniBand switch</li> </ul>	N/A
Ethernet Switch / Pass-Thru Module	<ul style="list-style-type: none"> <li>SBE-820C/H only: Up to 2 hot-swappable 25G Ethernet switches</li> <li>SBE-820J/J2 only: Up to 4 hot-swappable 25G Ethernet switches or pass-thru modules</li> <li>SBE-820L only: Up to 2 hot-swappable 10G Ethernet switches or pass-thru modules</li> </ul>	<ul style="list-style-type: none"> <li>Up to 4 hot-swappable 25G Ethernet switches, 10G Ethernet switches or pass-thru modules</li> </ul>
Chassis Management Module (CMM)	<ul style="list-style-type: none"> <li>Single/Redundant CMM for remote system management with software</li> <li>SBE-820J/J2 only: Up to 2 hot-swappable CMMs for remote system management with software</li> </ul>	<ul style="list-style-type: none"> <li>Up to 2 hot-swappable CMMs for remote system management with software</li> </ul>
Models	<ul style="list-style-type: none"> <li>SBE-820C/J/J2/L/H-822: Up to 8 hot-swappable 2200W Titanium (96% efficiency) power supplies</li> <li>SBE-820J2-830: Up to 8 hot-swappable 3000W Titanium (96% efficiency) power supplies</li> <li>SBE-820J2-830(D): Up to 8 hot-swappable 3000W DC power supplies</li> </ul>	<ul style="list-style-type: none"> <li>SBE-610J/610J2-822: Up to 8 hot-swappable 2200W Titanium (96% efficiency) power supplies</li> <li>SBE-610J2-830: Up to 8 hot-swappable 3000W Titanium (96% efficiency)</li> <li>SBE-610J2-830(D): Up to 8 hot-swappable 3000W DC power supplies</li> </ul>
Rack Unit	8 RU	6 RU
Form Factor	356 x 447 x 813mm (14" x 17.6" x 32")	267 x 447 x 813mm (10.5" x 17.6" x 32")

# X13 SUPERBLADE®

8U SuperBlade® X13 Servers  
Dual 4th Gen Intel® Xeon®  
Scalable Processors

8U SuperBlade® X13 Servers  
Dual 4th Gen Intel® Xeon®  
Scalable Processors

6U SuperBlade® X13 Servers  
Single 4th Gen Intel® Xeon®  
Scalable Processor

6U SuperBlade® X13 Servers  
Single 4th Gen Intel® Xeon®  
Scalable Processor



MODEL	SBI-421E-1T3N	SBI-421E-5T3N	SBI-611E-1T2N	SBI-611E-5T2N
Server Nodes/ Enclosure	20	10	10	5
Processor Support	Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP)	Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP)	Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP)	Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP)
Chipset	Intel® C741 chipset	Intel® C741 chipset	Intel® C741 chipset	Intel® C741 chipset
System Memory (Max.)	Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s	Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s	Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s	Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s or 2DPC speeds up to 4400 MT/s
PCIe Expansion	OCP 3.0 (PCIe 5.0 x16)	OCP 3.0 (PCIe 5.0 x16)	1 PCIe 5.0 x16 slot 1 PCIe 5.0 x8 slot	Up to 2 PCIe 5.0 x16 slot Up to 2 PCIe 5.0 x8 slot
Storage & RAID	4 M.2 NVMe with optional Mezzanine Card 1 M.2 NVMe drive 2 Hot-swappable U.2 NVMe/SATA3 and 1 SATA3 Intel® PCH 3.0 SATA Controller	4 M.2 NVMe with optional Mezzanine Card 1 M.2 NVMe drive 2 Hot-plug U.2 NVMe/SATA3 drive bays & 1 Hot-plug SATA3 drive bay; RAID 0, 1 (VROC) Intel® PCH 3.0 SATA Controller	2 Hot-swappable U.2 NVMe/SATA3 drive bays 3 M.2 NVMe drives 2 E1.S drives Intel® PCH 3.0 SATA Controller	2 Hot-swappable U.2 NVMe/SATA3 drive bays 3 M.2 NVMe drives 2 E1.S drives Intel® PCH 3.0 SATA Controller
Networking	OCP 3.0 network card with 400G NDR IB and other options Mezzanine options for 200G HDR / 100G EDR IB or Dual 25GbE Dual 25GbE LOM	OCP 3.0 network card with 400G NDR IB and other options Mezzanine options for 200G HDR / 100G EDR IB or Dual 25GbE Dual 25GbE LOM	Standard IB or GbE PCIe cards Mezzanine option for Dual 25GbE Dual 25GbE LOM	Standard IB or GbE PCIe cards Mezzanine option for Dual 25GbE Dual 25GbE LOM
Management	Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust	Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust	Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust	Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust
LED Indicators	Fault LED, Network Activity LED, Power LED, UID	Fault LED, Network Activity LED, Power LED, UID	Fault LED, Network Activity LED, Power LED, UID	Fault LED, Network Activity LED, Power LED, UID
Form Factor	165 x 44.4 x 597mm (6.5" x 1.75" x 23.5")	165 x 88.9 x 597mm (6.5" x 3.5" x 23.5")	248 x 44.4 x 597mm (9.75" x 1.75" x 23.5")	248 x 88.9 x 597mm (9.75" x 3.5" x 23.5")
Enclosure	SBE-820C/J/L-422 SBE-820H/C/J/L-622/822 SBE-820J2-630/830	SBE-820J2-630/830	SBE-610J-422/622/822 SBE-610J2-430/630/830	SBE-610J2-430/630/830

# X13 SUPERBLADE®

6U SuperBlade® X13 Servers  
Single 4th Gen Intel® Xeon® Scalable  
Processor

6U SuperBlade® X13 Servers  
Dual 4th Gen Intel® Xeon® Scalable  
Processors

6U SuperBlade® X13 Servers  
Dual 4th Gen Intel® Xeon® Scalable  
Processors

6U SuperBlade® X13 Servers  
Dual 4th Gen Intel® Xeon® Scalable  
Processors



MODEL	SBI-611E-1C2N	SBI-621E-1T3N	SBI-621E-5T3N	SBI-621E-1C3N
Server Nodes/ Enclosure	10	10	5	10
Processor	Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP)	Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP)	Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP)	Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP)
Chipset	Intel® C741 chipset	Intel® C741 chipset	Intel® C741 chipset	Intel® C741 chipset
System Memory (Max.)	Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s	Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s	Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s or 2DPC speeds up to 4400 MT/s	Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s or 2DPC speeds up to 4400 MT/s
PCIe Expansion	1 PCIe 5.0 x16 slot 1 PCIe 5.0 x8 slot	N/A	N/A	N/A
Storage & RAID	2 Hot-swappable U.2 NVMe/SAS/SATA3 1 M.2 NVMe drive Broadcom 3108 HW RAID	3 Hot-plug U.2 NVMe/SATA drive bays Intel® PCH 3.0 SATA Controller	3 Hot-plug U.2 NVMe/SATA drive bays Intel® PCH 3.0 SATA Controller	2 Hot-plug U.2 NVMe/SAS/SATA drive bays & 1 Hot-Plug SAS drive bay; HW RAID w/ 3108
Networking	Standard IB or GbE PCIe cards Mezzanine option for Dual 25GbE Dual 25GbE LOM	Mezzanine option for Dual 25GbE Dual 25GbE LOM	Mezzanine option for Dual 25GbE Dual 25GbE LOM	Mezzanine option for Dual 25GbE Dual 25GbE LOM
Management	Redundant Chassis Management Modules, Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust	Redundant Chassis Management Modules, Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust	Redundant Chassis Management Modules, Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust	Redundant Chassis Management Modules, Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust
LED Indicators	Fault LED, Network Activity LED, Power LED, UID	Fault LED, Network Activity LED, Power LED, UID	Fault LED, Network Activity LED, Power LED, UID	Fault LED, Network Activity LED, Power LED, UID
Form Factor	248 x 44.4 x 597mm (9.75" x 1.75" x 23.5")	248 x 44.4 x 597mm (9.75" x 1.75" x 23.5")	248 x 88.9 x 596.9mm (9.75" x 3.5" x 23.5")	248 x 44.4 x 597mm (9.75" x 1.75" x 23.5")
Enclosure	SBE-610J-422/622/822 SBE-610J2-430/630/830	SBE-610J-422/622/822 SBE-610J2-430/630/830	SBE-610J2-430/630/830	SBE-610J-422/622/822 SBE-610J2-430/630/830



# X13 GRANDTWIN™

2U 4-Node Front I/O



2U 4-Node Front I/O



MODEL	SYS-211GT-HNTF	SYS-211GT-HNC8F
Processor Support	4th Gen Intel® Xeon® Scalable processors Single Socket LGA 4677 (Socket E) supported TDP up to 350W	4th Gen Intel® Xeon® Scalable processors Single Socket LGA 4677 (Socket E) supported TDP up to 350W
Key Applications	<ul style="list-style-type: none"> <li>• HPC</li> <li>• Mission Critical Web Applications</li> <li>• EDA (Electric Design Automation)</li> <li>• Telco Edge Cloud</li> <li>• High-availability Cache Cluster</li> <li>• Multi-Purpose CDN</li> <li>• MEC (Multi-Access Edge Computing)</li> <li>• Cloud Gaming</li> </ul>	<ul style="list-style-type: none"> <li>• HPC</li> <li>• Mission Critical Web Applications</li> <li>• EDA (Electric Design Automation)</li> <li>• Telco Edge Cloud</li> <li>• High-availability Cache Cluster</li> <li>• Multi-Purpose CDN</li> <li>• MEC (Multi-Access Edge Computing)</li> <li>• Cloud Gaming</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Single processor with 16 DIMM</li> <li>• Front I/O design</li> <li>• Four front access hot-swappable node in 2U</li> <li>• Flexible storage selection</li> </ul>	<ul style="list-style-type: none"> <li>• Single processor with 16 DIMM</li> <li>• SAS controller built-in</li> <li>• Front I/O design</li> <li>• Four front access hot-swappable node in 2U</li> <li>• Flexible storage selection</li> </ul>
Serverboard	SUPER● X13SET-G	SUPER● X13SET-GC
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	16 DIMM slots UP to 4TB: 16x 256GB DRAM	16 DIMM slots UP to 4TB: 16x 256GB DRAM
Expansion Slots	2 PCIe 5.0 x16 AIOM slot(s)	2 PCIe 5.0 x16 AIOM slot(s)
Onboard Storage Controller	Intel® SATA	Broadcom® Broadcom® 3808
Connectivity	via AIOM	via AIOM
VGA/Audio	1 VGA port	1 VGA port
Management	SuperCloud Composer; SuperDoctor® 5 (SD5); Supermicro Diagnostics Offline (SDO); Supermicro Intelligent Mgmt (BMC Resources); Supermicro IPMI Utilities; Supermicro Power Manager (SPM); Supermicro Server Manager (SSM); Supermicro Server Mgmt (Redfish® API); Supermicro Thin-Agent Service (TAS); Supermicro Update Manager (SUM)	SuperCloud Composer; SuperDoctor® 5 (SD5); Supermicro Diagnostics Offline (SDO); Supermicro Intelligent Mgmt (BMC Resources); Supermicro IPMI Utilities; Supermicro Power Manager (SPM); Supermicro Server Manager (SSM); Supermicro Server Mgmt (Redfish® API); Supermicro Thin-Agent Service (TAS); Supermicro Update Manager (SUM)
Drive Bays	4x 2.5" hot-swap NVMe/SATA drive bays; 4x 2.5" NVMe dedicated; Optional RAID support via Intel® PCH	4x 2.5" hot-swap NVMe/SATA/SAS drive bays; 4x 2.5" NVMe dedicated; Optional RAID support via Broadcom® 3808 AOC
Peripheral Bays	None	None
Power Supply	Redundant 2200W Titanium level (96%)	Redundant 2200W Titanium level (96%)
Cooling System	2x 8cm heavy duty fan(s)	2x 8cm heavy duty fan(s)
Form Factor	2U Rackmount Enclosure: 449 x 88 x 711.2mm (17.67" x 3.46" x 28") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")	2U Rackmount Enclosure: 449 x 88 x 711.2mm (17.67" x 3.46" x 28") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")

# X13 GRANDTWIN™

2U 4-Node Rear I/O

2U 4-Node Rear I/O



MODEL	SYS-211GT-HNCR	SYS-211GT-HNC8R
Processor Support	4th Gen Intel® Xeon® Scalable processors Single Socket LGA 4677 (Socket E) supported TDP up to 300W	4th Gen Intel® Xeon® Scalable processors Single Socket LGA 4677 (Socket E) supported TDP up to 300W
Key Applications	<ul style="list-style-type: none"> <li>• HPC</li> <li>• Mission Critical Web Applications</li> <li>• EDA (Electric Design Automation)</li> <li>• Telco Edge Cloud</li> <li>• High-availability Cache Cluster</li> <li>• Multi-Purpose CDN</li> <li>• MEC (Multi-Access Edge Computing)</li> <li>• Cloud Gaming</li> </ul>	<ul style="list-style-type: none"> <li>• HPC</li> <li>• Mission Critical Web Applications</li> <li>• EDA (Electric Design Automation)</li> <li>• Telco Edge Cloud</li> <li>• High-availability Cache Cluster</li> <li>• Multi-Purpose CDN</li> <li>• MEC (Multi-Access Edge Computing)</li> <li>• Cloud Gaming</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Single processor with 16 DIMM</li> <li>• Four front access hot-swappable node in 2U</li> <li>• 6x NVMe/SATA drives per node</li> </ul>	<ul style="list-style-type: none"> <li>• Single processor with 16 DIMM</li> <li>• SAS controller built-in</li> <li>• Four front access hot-swappable node in 2U</li> <li>• 6x NVMe/SAS/SATA drives per node</li> </ul>
Serverboard	SUPER● X13SET-G	SUPER● X13SET-GC
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	16 DIMM slots UP to 4TB: 16x 256GB DRAM	16 DIMM slots UP to 4TB: 16x 256GB DRAM
Expansion Slots	2 PCIe 5.0 x16 AIOM slot(s)	2 PCIe 5.0 x16 AIOM slot(s)
Onboard Storage Controller	Intel® SATA	Broadcom® Broadcom® 3808
Connectivity	via AIOM	via AIOM
VGA/Audio	1 VGA port	1 VGA port
Management	SuperCloud Composer; SuperDoctor® 5 (SD5); Supermicro Diagnostics Offline (SDO); Supermicro Intelligent Mgmt (BMC Resources); Supermicro IPMI Utilities; Supermicro Power Manager (SPM); Supermicro Server Manager (SSM); Supermicro Server Mgmt (Redfish® API); Supermicro Thin-Agent Service (TAS); Supermicro Update Manager (SUM)	SuperCloud Composer; SuperDoctor® 5 (SD5); Supermicro Diagnostics Offline (SDO); Supermicro Intelligent Mgmt (BMC Resources); Supermicro IPMI Utilities; Supermicro Power Manager (SPM); Supermicro Server Manager (SSM); Supermicro Server Mgmt (Redfish® API); Supermicro Thin-Agent Service (TAS); Supermicro Update Manager (SUM)
Drive Bays	6x 2.5" hot-swap NVMe/SATA drive bays; 6x 2.5" NVMe dedicated; Optional RAID support via Intel® PCH	6x 2.5" hot-swap NVMe/SATA/SAS drive bays; 6x 2.5" NVMe dedicated; Optional RAID support via Broadcom® 3808 AOC
Peripheral Bays	None	None
Power Supply	Redundant 2200W Titanium level (96%)	Redundant 2200W Titanium level (96%)
Cooling System	2x 8cm heavy duty fan(s)	2x 8cm heavy duty fan(s)
Form Factor	2U Rackmount Enclosure: 449 x 88 x 711.2mm (17.67" x 3.46" x 28") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")	2U Rackmount Enclosure: 449 x 88 x 711.2mm (17.67" x 3.46" x 28") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")

# X13 BIGTWIN®

2U 2-Node

2U 2-Node



MODEL	SYS-621BT-DNTR	SYS-621BT-DNC8R
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 300W	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 300W
Key Applications	<ul style="list-style-type: none"> <li>• Back-up &amp; Recovery</li> <li>• Scale-Out Object Storage</li> <li>• Hyperconverged Infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Back-up &amp; Recovery</li> <li>• Scale-Out Object Storage</li> <li>• Hyperconverged Infrastructure</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Tool-less support for swapping AOC cards</li> <li>• Supports Liquid Cooling up to 350W TDP</li> <li>• Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SATA per node (Drive Bays)</li> <li>• Optional TPM 1.2 or 2.0 module</li> <li>• HW Boot Controller for NVMe M.2 drives</li> </ul>	<ul style="list-style-type: none"> <li>• Tool-less support for swapping AOC cards</li> <li>• Supports Liquid Cooling up to 350W TDP</li> <li>• Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SAS per node (Drive Bays)</li> <li>• Optional TPM 1.2 or 2.0 module</li> <li>• HW Boot Controller for NVMe M.2 drives</li> </ul>
Serverboard	SUPERMICRO® X13DET-B	SUPERMICRO® X13DET-B
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	16 DIMM slots UP to 4TB: 16x 256GB DRAM	16 DIMM slots UP to 4TB: 16x 256GB DRAM
Expansion Slots	2 M.2 (22x110mm) slot(s) for boot drive or caching PCIe 5.0 x16 LP slot 2 PCIe x8 LP slot(s)	2 M.2 (22x110mm) slot(s) for boot drive or caching PCIe 5.0 x16 LP slot 2 PCIe x8 LP slot(s)
Onboard Storage Controller	Intel® SATA	Broadcom® 3808
Connectivity	via AIOM	via AIOM
VGA/Audio	1 onboard VGA port	1 onboard VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog
Drive Bays	6x 3.5" hot-swap NVMe/SATA drive bays; RAID support via Intel® PCH	6x 3.5" hot-swap NVMe/SAS drive bays; HBA support via SAS3808 Adapter
Peripheral Bays	None	None
Power Supply	1U 2200W Redundant Power Supply Titanium with C14 inlet, 45(W) X 40(H) X 480(L)	1U 2200W Redundant Power Supply Titanium with C14 inlet, 45(W) X 40(H) X 480(L)
Cooling System	4x 14.9K RPM Heavy Duty 8cm Fan(s)	4x 14.9K RPM Heavy Duty 8cm Fan(s)
Form Factor	2U Rackmount Enclosure: 449 x 88 x 774mm (17.68" x 3.47" x 30.5") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")	2U Rackmount Enclosure: 449 x 88 x 774mm (17.68" x 3.47" x 30.5") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")



# X13 BIGTWIN®

2U 2-Node

2U 2-Node



MODEL	SYS-221BT-DNC8R	SYS-221BT-DNTR
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 350W	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 350W
Key Applications	<ul style="list-style-type: none"> <li>All-Flash Object Storage</li> <li>All-Flash Storage Area Network</li> <li>All-Flash Hyperconverged Infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Big Data Analytics and AI</li> <li>Scale Out All-Flash NVMe Storage</li> <li>Diskless HPC Clusters</li> <li>High-Performance File System</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Tool-less support for swapping AOC cards</li> <li>Supports Liquid Cooling up to 350W TDP</li> <li>Supports 2x PCIe 5.0 NVMe and 10x PCIe 4.0 NVMe/SAS per node (Drive Bays)</li> <li>Optional TPM 1.2 or 2.0 module</li> <li>HW Boot Controller for NVMe M.2 drives</li> </ul>	<ul style="list-style-type: none"> <li>Tool-less support for swapping AOC cards</li> <li>Supports Liquid Cooling up to 350W TDP</li> <li>Supports 2x PCIe 5.0 NVMe and 10x PCIe 4.0 NVMe/SATA per node (Drive Bays)</li> <li>Optional TPM 1.2 or 2.0 module</li> <li>HW Boot Controller for NVMe M.2 drives</li> </ul>
Serverboard	SUPER® X13DET-B	SUPER® X13DET-B
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	16 DIMM slots UP to 4TB: 16x 256GB DRAM	16 DIMM slots UP to 4TB: 16x 256GB DRAM
Expansion Slots	2 M.2 (22x110mm) slot(s) for boot drive or caching PCIe 5.0 x16 LP slot 2 PCIe x8 LP slot(s)	2 M.2 (22x110mm) slot(s) for boot drive or caching PCIe 5.0 x16 LP slot 2 PCIe x8 LP slot(s)
Onboard Storage Controller	Broadcom® 3816	Intel® SATA
Connectivity	via AIOM	via AIOM
VGA/Audio	1 onboard VGA port	1 I/O module VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog
Drive Bays	12x 2.5" hot-swap NVMe/SAS drive bays; Optional HBA support via SAS3816 AOC	12x 2.5" hot-swap NVMe/SATA drive bays; RAID support via Intel® PCH
Peripheral Bays	None	None
Power Supply	1U 2200W Redundant Power Supply Titanium with C14 inlet, 45(W) X 40(H) X 480(L)	1U 2200W Redundant Power Supply Titanium with C14 inlet, 45(W) X 40(H) X 480(L)
Cooling System	4x 16.5K RPM Heavy Duty 8cm Fan(s)	4x 16.5K RPM Heavy Duty 8cm Fan(s)
Form Factor	2U Rackmount Enclosure: 449 x 88 x 730mm (17.68" x 3.47" x 28.75") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")	2U Rackmount Enclosure: 449 x 88 x 730mm (17.68" x 3.47" x 28.75") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")

# X13 BIGTWIN®

2U 4-Node

2U 4-Node



**NEW!**

4th Gen  
Intel® Xeon®  
Scalable  
processors  
Supported



MODEL	SYS-621BT-HNC8R	SYS-621BT-HNTR
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 185W	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 185W
Key Applications	<ul style="list-style-type: none"> <li>• Container Storage</li> <li>• Scale-Out File Storage</li> <li>• Hyperconverged Infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Scale-Out File Server</li> <li>• Container Storage</li> <li>• Hyperconverged Infrastructure</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Tool-less support for swapping AOC cards</li> <li>• Supports Liquid Cooling up to 350W TDP</li> <li>• Supports 2x PCIe 5.0 NVMe and 1x PCIe 4.0 NVMe/SAS per node (Drive Bays)</li> <li>• Optional TPM 1.2 or 2.0 module</li> <li>• HW Boot Controller for NVMe M.2 drives</li> </ul>	<ul style="list-style-type: none"> <li>• Tool-less support for swapping AOC cards</li> <li>• Supports Liquid Cooling up to 350W TDP</li> <li>• Supports 2x PCIe 5.0 NVMe and 1x PCIe 4.0 NVMe/SATA per node (Drive Bays)</li> <li>• Optional TPM 1.2 or 2.0 module</li> <li>• HW Boot Controller for NVMe M.2 drives</li> </ul>
Serverboard	SUPERMICRO® X13DET-B	SUPERMICRO® X13DET-B
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	16 DIMM slots UP to 4TB: 16x 256GB DRAM	16 DIMM slots UP to 4TB: 16x 256GB DRAM
Expansion Slots	2 M.2 (22x110mm) slot(s) for boot drive or caching 2 PCIe 5.0 x16 LP slot(s)	2 M.2 (22x110mm) slot(s) for boot drive or caching 2 PCIe 5.0 x16 LP slot(s)
Onboard Storage Controller	Broadcom® 3808	Intel® SATA
Connectivity	via AIOM	via AIOM
VGA/Audio	1 I/O module VGA port	1 onboard VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog
Drive Bays	3x 3.5" hot-swap NVMe/SAS drive bays; HBA support via SAS3808 Adapter	3x 3.5" hot-swap NVMe/SATA drive bays; RAID support via Intel® PCH
Peripheral Bays	None	None
Power Supply	1U 3000W Redundant Power Supply Titanium with C22 inlet, 45(W) X 40(H) X 480(L)	1U 3000W Redundant Power Supply Titanium with C22 inlet, 45(W) X 40(H) X 480(L)
Cooling System	4x 14.9K RPM Heavy Duty 8cm Fan(s)	4x 14.9K RPM Heavy Duty 8cm Fan(s)
Form Factor	2U Rackmount Enclosure: 449 x 88 x 774mm (17.68" x 3.47" x 30.5") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")	2U Rackmount Enclosure: 449 x 88 x 774mm (17.68" x 3.47" x 30.5") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")

# X13 BIGTWIN®

2U 4-Node

2U 4-Node



**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported



MODEL	SYS-221 BT-HNC8R	SYS-221 BT-HNC9R
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 205W	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 205W
Key Applications	<ul style="list-style-type: none"> <li>All-Flash Hyperconverged Infrastructure</li> <li>Diskless HPC Clusters</li> <li>Container-as-a-Service; Application Accelerator</li> <li>Tool-less support for swapping AOC cards</li> <li>Supports Liquid Cooling up to 350W TDP</li> <li>Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SAS per node (Drive Bays)</li> <li>Optional TPM 1.2 or 2.0 module</li> <li>HW Boot Controller for NVMe M.2 drives</li> </ul>	<ul style="list-style-type: none"> <li>High-Density Storage RAID Array</li> <li>Virtualized Big Data Analytics</li> <li>Mission Critical HPC</li> <li>Tool-less support for swapping AOC cards</li> <li>Supports Liquid Cooling up to 350W TDP</li> <li>Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SAS per node (Drive Bays)</li> <li>Optional TPM 1.2 or 2.0 module</li> <li>HW Boot Controller for NVMe M.2 drives</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>All-Flash Hyperconverged Infrastructure</li> <li>Diskless HPC Clusters</li> <li>Container-as-a-Service; Application Accelerator</li> <li>Tool-less support for swapping AOC cards</li> <li>Supports Liquid Cooling up to 350W TDP</li> <li>Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SAS per node (Drive Bays)</li> <li>Optional TPM 1.2 or 2.0 module</li> <li>HW Boot Controller for NVMe M.2 drives</li> </ul>	<ul style="list-style-type: none"> <li>High-Density Storage RAID Array</li> <li>Virtualized Big Data Analytics</li> <li>Mission Critical HPC</li> <li>Tool-less support for swapping AOC cards</li> <li>Supports Liquid Cooling up to 350W TDP</li> <li>Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SAS per node (Drive Bays)</li> <li>Optional TPM 1.2 or 2.0 module</li> <li>HW Boot Controller for NVMe M.2 drives</li> </ul>
Serverboard	SUPERMICRO® X13DET-B	SUPERMICRO® X13DET-B
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	16 DIMM slots UP to 4TB: 16x 256GB DRAM	16 DIMM slots UP to 4TB: 16x 256GB DRAM
Expansion Slots	2 M.2 (22x110mm) slot(s) for boot drive or caching 2 PCIe 5.0 x16 LP slot(s)	2 M.2 (22x110mm) slot(s) for boot drive or caching PCIe 5.0 x16 LP slot
Onboard Storage Controller	Broadcom® 3808	Broadcom® 3908
Connectivity	via AIOM	via AIOM
VGA/Audio	1 onboard VGA port	1 onboard VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog
Drive Bays	6x 2.5" hot-swap NVMe/SAS drive bays; HBA support via SAS3808 Adapter	6x 2.5" hot-swap NVMe/SAS drive bays; Optional RAID support via Broadcom® 3908 AOC
Peripheral Bays	None	None
Power Supply	1U 3000W Redundant Power Supply Titanium with C22 inlet, 45(W) X 40(H) X 480(L)	1U 3000W Redundant Power Supply Titanium with C22 inlet, 45(W) X 40(H) X 480(L)
Cooling System	4x 16K RPM Counter Rotating 8cm Fan(s)	4x 16K RPM Counter Rotating 8cm Fan(s)
Form Factor	2U Rackmount Enclosure: 449 x 88 x 730mm (17.68" x 3.47" x 28.75") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")	2U Rackmount Enclosure: 449 x 88 x 730mm (17.68" x 3.47" x 28.75") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")



# X13 BIGTWIN®

2U 4-Node

2U 4-Node  
(Coming Soon All NVMe Gen 5)



MODEL	SYS-221BT-HNTR	SYS-221BT-HNR
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 205W	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 205W
Key Applications	<ul style="list-style-type: none"> <li>• Diskless HPC Clusters</li> <li>• High-Performance File System</li> <li>• Container-as-a-Service; Application Accelerator</li> <li>• All-Flash NVMe Hyperconverged Infrastructure</li> <li>• Tool-less support for swapping AOC cards</li> <li>• Supports Liquid Cooling up to 350W TDP</li> </ul>	<ul style="list-style-type: none"> <li>• Diskless HPC Clusters</li> <li>• High-Performance File System</li> <li>• Container-as-a-Service; Application Accelerator</li> <li>• All-Flash NVMe Hyperconverged Infrastructure</li> <li>• Tool-less support for swapping AOC cards</li> <li>• Supports Liquid Cooling up to 350W TDP</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SATA per node (Drive Bays)</li> <li>• Optional TPM 1.2 or 2.0 module</li> <li>• HW Boot Controller for NVMe M.2 drives</li> </ul>	<ul style="list-style-type: none"> <li>• Optional TPM 1.2 or 2.0 module</li> <li>• HW Boot Controller for NVMe M.2 drives</li> <li>• All NVMe PCIe 5.0 Flash</li> </ul>
Serverboard	SUPERMICRO X13DET-B	SUPERMICRO X13DET-B
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	16 DIMM slots UP to 4TB: 16x 256GB DRAM	16 DIMM slots UP to 4TB: 16x 256GB DRAM
Expansion Slots	2 M.2 (22x110mm) slot(s) for boot drive or caching 2 PCIe 5.0 x16 LP slot(s)	2 M.2 (22x110mm) slot(s) for boot drive or caching 2 PCIe 5.0 x16 LP slot(s)
Onboard Storage Controller	Intel® SATA	
Connectivity	via AIOM	via AIOM
VGA/Audio	1 I/O module VGA port	1 onboard VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog
Drive Bays	6x 2.5" hot-swap NVMe/SATA drive bays; RAID support via Intel® PCH	6x 2.5" hot-swap NVMe drive bays;
Peripheral Bays	None	None
Power Supply	1U 3000W Redundant Power Supply Titanium with C22 inlet, 45(W) X 40(H) X 480(L)	1U 3000W Redundant Power Supply Titanium with C22 inlet, 45(W) X 40(H) X 480(L)
Cooling System	4x 16K RPM Counter Rotating 8cm Fan(s)	4x 16K RPM Counter Rotating 8cm Fan(s)
Form Factor	2U Rackmount Enclosure: 449 x 88 x 730mm (17.68" x 3.47" x 28.75") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")	2U Rackmount Enclosure: 449 x 88 x 730mm (17.68" x 3.47" x 28.75") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")

# X13 FATTWIN®

4U8N

4U4N



MODEL	SYS-F511E2-RT	SYS-F521E3-RTB
Processor Support	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 350W	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 350W
Key Applications	<ul style="list-style-type: none"> <li>• Hyperscale / Hyperconverged</li> <li>• Telco Data Center and ETSI certified</li> <li>• Data Center Enterprise Applications</li> <li>• HPC and Big Data</li> </ul>	<ul style="list-style-type: none"> <li>• Hyperscale / Hyperconverged</li> <li>• Telco Data Center and ETSI certified</li> <li>• Data Center Enterprise Applications</li> <li>• HPC and Big Data</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Shared power architecture for best efficiency</li> <li>• Redundant cooling and power configurations for high availability</li> <li>• Optimized designs for storage and compute density</li> <li>• HDD hot-swap capability</li> <li>• 16 DIMMs Up to 4TB DDR5</li> </ul>	<ul style="list-style-type: none"> <li>• Shared power architecture for best efficiency</li> <li>• Redundant cooling and power configurations for high availability</li> <li>• Optimized designs for storage and compute density</li> <li>• HDD hot-swap capability</li> <li>• 16 DIMMs Up to 4TB DDR5</li> </ul>
Serverboard	SUPER●● X13SEFR-A	SUPER●● X13SEFR-A
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	16 DIMM slots UP to 4TB: 16x 256GB DRAM	16 DIMM slots UP to 4TB: 16x 256GB DRAM
Expansion Slots	M.2 slot(s) PCIe 5.0 x16 LP slot(s) 2 AIOM slot(s)	AIOM slot(s) M.2 slot(s) PCIe 5.0 x16 LP slot(s)
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	1x 1GbE RJ45 (BMC) port(s) via AIOM	1x 1GbE RJ45 (BMC) port(s) via AIOM
VGA/Audio	1 VGA port, Aspeed AST2600 BMC	1 VGA port, Aspeed AST2600 BMC
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	6x 2.5" hot-swap NVMe/SATA/SAS drive bays; 6x 2.5" NVMe hybrid; 6x 2.5" 7mm drive bays	8x 3.5" hot-swap NVMe/SATA/SAS drive bays; 8x 2.5" NVMe hybrid; 8x 2.5" 7mm drive bays
Peripheral Bays	None	None
Power Supply	Redundant 2000W Titanium level (96%)	Redundant 2000W Titanium level (96%)
Cooling System	3x 4cm heavy duty fan(s)	2x 8cm heavy duty fan(s)
Form Factor	4U Rackmount Enclosure: 448 x 177 x 737mm (17.63" x 6.96" x 29") Package: (28.3" x 15" x 42.4")	4U Rackmount Enclosure: 448 x 177 x 737mm (17.63" x 6.96" x 29") Package: (28.3" x 15" x 42")

# X13 CLOUDDC

High Density Cloud Storage

High Density Cloud Storage



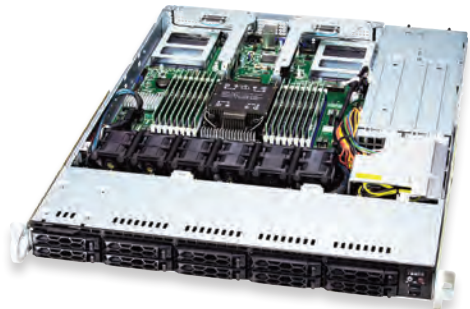
MODEL	SYS-621C-TN12R	SYS-521C-NR
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W; 4 UPI	4th Gen Intel® Xeon® Scalable processors Single Socket LGA 4677 (Socket E) supported TDP up to 350W
Key Applications	<ul style="list-style-type: none"> <li>• CDN, Edge Nodes</li> <li>• DNS &amp; Gateway Servers, Firewall Application</li> <li>• Cloud Computing, Compact Server</li> <li>• Data Center Optimized, Value IaaS</li> <li>• Web Server, Firewall Application</li> <li>• Up to 12x NVMe/SATA/SAS hybrid tool-less drive bays</li> <li>• Optional hot-swappable 2.5" rear drive bays</li> <li>• Flexible expansion with up to 2x PCIe 5.0 x16 and 4x PCIe 5.0 x8 (convertible to 2x PCIe 5.0 x16) slots</li> <li>• Dual sockets up to 350W TDP</li> </ul>	<ul style="list-style-type: none"> <li>• Database/Storage</li> <li>• AI inferencing, ML training</li> <li>• Network Appliance</li> <li>• Data Center Optimized</li> <li>• Cloud Computing</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Up to 12x NVMe/SATA/SAS hybrid tool-less drive bays</li> <li>• Optional hot-swappable 2.5" rear drive bays</li> <li>• Flexible expansion with up to 2x PCIe 5.0 x16 and 4x PCIe 5.0 x8 (convertible to 2x PCIe 5.0 x16) slots</li> <li>• Dual sockets up to 350W TDP</li> <li>• Dual NVMe M.2 (2280)</li> <li>• Dual FHFLDW PCIe 4.0 GPU support</li> <li>• Dual AIOM with NCSI (OCP 3.0 NIC)</li> <li>• Compact server with tool-less drive trays</li> <li>• Balanced architecture in compact chassis (25.6")</li> <li>• 3.5" tool-less drive trays also support 2.5" drives</li> </ul>	<ul style="list-style-type: none"> <li>• Support powerful double-width GPUs</li> <li>• Flexible Configurations. Support 6 PCIe 5.0 expansion slots + 2x AIOM slots in 2U</li> </ul>
Serverboard Chipset	SUPERMICRO® X13DDW-A Intel® C741	SUPERMICRO® X13SEDW-F Intel® C741
System Memory (Max.)	16 DIMM slots UP to 4TB: 16x 256GB DRAM	16 DIMM slots UP to 4TB: 16x 256GB DRAM
Expansion Slots	Slot 1: PCIe 4.0 x8 FHHL (optional x16 by merging slot 2) Slot 2: PCIe 4.0 x8 FHHL Slot 3: PCIe 4.0 x16 FHHL Slot 4: PCIe 4.0 x8 FHHL Slot 5: PCIe 4.0 x8 FHHL (optional x16 by merging slot 4) Slot 6: PCIe 4.0 x16 FHHL Slot A1: PCIe 4.0 x16 OCP 3.0 Mezzanine NIC Slot A2: PCIe 4.0 x16 OCP 3.0 Mezzanine NIC	Slot 1: PCIe 5.0 x8 FHFL (optional x16 by merging slot 2) Slot 2: PCIe 5.0 x8 FHFL Slot 3: PCIe 5.0 x16 FHHL Slot 4: PCIe 5.0 x8 FHFL Slot 5: PCIe 5.0 x8 FHFL (optional x16 by merging slot 4) Slot 6: PCIe 5.0 x16 FHHL Slot A1: PCIe 5.0 x16 OCP 3.0 AIOM NIC Slot A2: dummy AIOM slot
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	with Via Advanced IO Module, AIOM (OCP 3.0 NIC, refer to AIOM Network Card(s) under Optional Parts List for NIC options) via AIOM	via AIOM
VGA/Audio Management	1 VGA port Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SCC; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	1 onboard VGA port Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM
Drive Bays	12x 3.5" hot-swap NVMe/SATA/SAS hybrid drive bays; Optional RAID support via RAID controller AOC	12x 3.5" NVMe/SATA/SAS drive bays; 2x 3.5" NVMe hybrid;
Peripheral Bays	None	None
Power Supply	Redundant 1200W Titanium level (96%)	Redundant 1200W Titanium level (96%)
Cooling System	3x 8cm heavy duty fan(s)	3x (8cm x 8cm x 3.8cm) heavy duty fan(s)
Form Factor	2U Rackmount Enclosure: 437 x 89 x 648mm (17.2" x 3.5" x 25.5") Package: 678 x 290 x 876mm (26.7" x 11.4" x 34.5")	2U Rackmount Enclosure: 437 x 89 x 648mm (17.2" x 3.5" x 25.5") Package: 678 x 290 x 876mm (26.7" x 11.4" x 34.5")



# X13 CLOUDDC

Compact Cloud Compute

Compact Cloud Compute

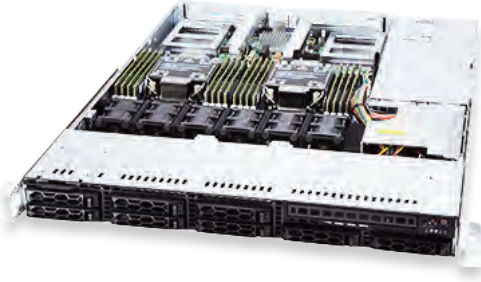


MODEL	SYS-121C-TN10R	SYS-111C-NR
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 270W; 4 UPI	4th Gen Intel® Xeon® Scalable processors Single Socket LGA 4677 (Socket E) supported TDP up to 350W
Key Applications	<ul style="list-style-type: none"> <li>• CDN, Edge Nodes</li> <li>• DNS &amp; Gateway Servers, Firewall Application</li> <li>• Cloud Computing, Compact Server</li> <li>• Data Center Optimized, Value IaaS</li> <li>• Web Server, Firewall Application</li> </ul>	<ul style="list-style-type: none"> <li>• HPC</li> <li>• Virtualization</li> <li>• Storage Headnode</li> <li>• Data Center Optimized</li> <li>• Cloud Computing</li> <li>• CDN, Edge Nodes</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Up to 10x NVMe/SATA/SAS hybrid tool-less drive bays</li> <li>• Dual sockets up to 270W TDP</li> <li>• Dual NVMe M.2 (2280)</li> <li>• Dual AIOM with NCSI (OCP 3.0 NIC)</li> <li>• Compact server with tool-less drive trays</li> <li>• Balanced architecture in compact chassis (23.5")</li> </ul>	<ul style="list-style-type: none"> <li>• Max 10x PCIe 5.0 NVMe drives supported in 1U Form Factor</li> <li>• Flexible Configurations. Support 2x 16 PCIe 5.0 expansion slots + 2x AIOM slots in 1U</li> </ul>
Serverboard	SUPER® X13DDW-A	SUPER® X13SEDW-F
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	16 DIMM slots UP to 4TB: 16x 256GB DRAM	16 DIMM slots UP to 4TB: 16x 256GB DRAM
Expansion Slots	2 PCIe 5.0 x16 FHHL slot(s)	Slot 1: PCIe 5.0 x16 FHHL Slot 2: PCIe 5.0 x16 FHHL Slot A1: PCIe 5.0 x16 OCP 3.0 AIOM NIC Slot A2: PCIe 5.0 x16 OCP 3.0 AIOM NIC
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	with Via Advanced IO Module, AIOM (OCP 3.0 NIC, refer to AIOM Network Card(s) under Optional Parts List for NIC options) via AIOM	via AIOM
VGA/Audio	1 VGA port	1 onboard VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SCC; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM
Drive Bays	10x 2.5" hot-swap NVMe/SATA/SAS hybrid drive bays; Optional RAID support via RAID controller AOC	10x 2.5" NVMe/SATA/SAS drive bays; 10x 2.5" NVMe hybrid;
Peripheral Bays	None	None
Power Supply	Redundant 860W Platinum level (94%)	Redundant 860W Platinum level (94%)
Cooling System	6x 4cm heavy duty fan(s)	6x (4cm x 4cm x 5.6cm) heavy duty fan(s)
Form Factor	1U Rackmount Enclosure: 437 x 43 x 597mm (17.2" x 1.7" x 23.5") Package: 605 x 197 x 822mm (23.8" x 7.8" x 32.4")	1U Rackmount Enclosure: 437 x 43 x 597mm (17.2" x 1.7" x 23.5") Package: 602 x 195.6 x 807.7mm (23.7" x 7.7" x 31.8")

# X13 CLOUDDC

General Purpose Balanced

Compact Storage Optimized



MODEL	SYS-121C-TN2R	SYS-611C-TN4R
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 270W; 4 UPI	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 270W; 4 UPI
Key Applications	<ul style="list-style-type: none"> <li>CDN, Edge Nodes</li> <li>DNS &amp; Gateway Servers, Firewall Application</li> <li>Cloud Computing, Compact Server</li> <li>Data Center Optimized, Value IaaS</li> <li>Web Server, Firewall Application</li> </ul>	<ul style="list-style-type: none"> <li>CDN, Edge Nodes</li> <li>DNS &amp; Gateway Servers, Firewall Application</li> <li>Cloud Computing, Compact Server</li> <li>Data Center Optimized, Value IaaS</li> <li>Web Server, Firewall Application</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Up to 8x SATA/SAS w/ 2x NVMe tool-less drive bays</li> <li>Optional DVD ROM support</li> <li>Dual sockets up to 270W TDP</li> <li>Dual NVMe M.2 (2280)</li> <li>Dual AIOM with NCSI (OCP 3.0 NIC)</li> <li>Compact server with tool-less drive trays</li> <li>Balanced architecture in compact chassis (23.5")</li> </ul>	<ul style="list-style-type: none"> <li>Up to 4x SATA/SAS/NVMe tool-less drive bays</li> <li>Optional fixed 2.5" 7 mm drive bays</li> <li>Dual sockets up to 270W TDP</li> <li>Dual NVMe M.2 (2280)</li> <li>Dual AIOM with NCSI (OCP 3.0 NIC)</li> <li>Compact server with tool-less drive trays</li> <li>Balanced architecture in compact chassis (25.6")</li> <li>3.5" tool-less drive trays also support 2.5" drives</li> </ul>
Serverboard	SUPERMICRO X13DDW-A	SUPERMICRO X13DDW-A
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	16 DIMM slots UP to 4TB: 16x 256GB DRAM	16 DIMM slots UP to 4TB: 16x 256GB DRAM
Expansion Slots	2 PCIe 5.0 x16 FHHL slot(s)	2 PCIe 5.0 x16 FHHL slot(s)
Onboard Storage Controller	Intel® SATA	
Connectivity	with Via Advanced IO Module, AIOM (OCP 3.0 NIC, refer to AIOM Network Card(s) under Optional Parts List for NIC options) via AIOM	with Via Advanced IO Module, AIOM (OCP 3.0 NIC, refer to AIOM Network Card(s) under Optional Parts List for NIC options) via AIOM
VGA/Audio	1 VGA port	1 VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SCC; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SCC; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	8x 2.5" hot-swap NVMe/SATA/SAS hybrid drive bays; Optional RAID support via RAID controller AOC	4x 3.5" hot-swap NVMe/SATA/SAS hybrid drive bays; Optional RAID support via RAID controller AOC
Peripheral Bays	1x DVD-ROM (optional)	2x 2.5" (optional)
Power Supply	Redundant 860W Platinum level (94%)	Redundant 860W Platinum level (94%)
Cooling System	6x 4cm heavy duty fan(s)	6x 4cm heavy duty fan(s)
Form Factor	1U Rackmount Enclosure: 437 x 43 x 597mm (17.2" x 1.7" x 23.5") Package: 605 x 197 x 822mm (23.8" x 7.8" x 32.4")	1U Rackmount Enclosure: 437 x 43 x 650mm (17.2" x 1.7" x 25.6") Package: 605 x 197 x 878mm (23.8" x 7.8" x 34.6")

# X13 ALL-FLASH EDSFF

# X13 HYPER-E

1U High-performance All-Flash

2U Hyper-E  
Optimized for 5G and Telco

2U Hyper-E  
Optimized for 5G and Telco

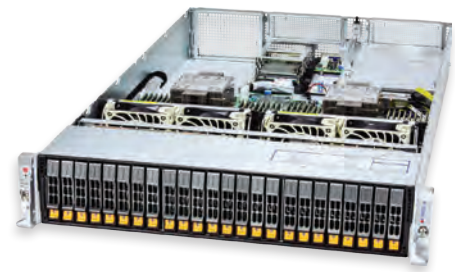
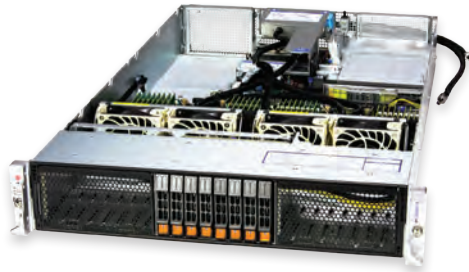


MODEL	SSG-121E-NES24R	SYS-221HE-FTNR	SYS-221HE-FTNRD
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 270W; 4 UPI	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W; 4 UPI	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W; 4 UPI
Key Applications	<ul style="list-style-type: none"> <li>In-Memory Computing</li> <li>Software-defined Storage</li> <li>NVMe Over Fabrics Solution</li> <li>Private &amp; Hybrid Cloud</li> <li>Data Intensive HPC</li> </ul>	<ul style="list-style-type: none"> <li>Cloud Computing</li> <li>Network Function Virtualization</li> <li>AI Inference and Machine Learning</li> <li>Telecom Micro Data Center</li> <li>5G Core and Edge</li> </ul>	<ul style="list-style-type: none"> <li>Cloud Computing</li> <li>Network Function Virtualization</li> <li>AI Inference and Machine Learning</li> <li>Telecom Micro Data Center</li> <li>5G Core and Edge</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Two PCIe 5.0 x16 slots &amp; two AIOM connectors (OCP 3.0 SFF compliant)</li> <li>Supports 32 DIMMs with 2DPC, up to 12TB memory capacity with 16 DIMMs of 256Gb 3DS RDIMM/ RDIMM DDR5 ECC memory and 16 DIMMs of 512Gb Intel® Optane PMem 300 Series</li> <li>Redundant Titanium 2000W Power Supplies</li> <li>Dual Socket E (LGA-4677) 4th Generation Intel® Xeon® Scalable processors. Up to 270W TDP.</li> <li>Composable Infrastructure Platform</li> <li>24x hot-swap E1.5 (9.5mm or 15mm) NVMe drive bays</li> </ul>	<ul style="list-style-type: none"> <li>Tool-less system design for east maintenance</li> <li>Storage configurations up to 6x 2.5" hot-swap NVMe/SATA drive bays</li> <li>Flexible networking options with 2 AIOM networking slots (OCP NIC 3.0 compatible)</li> </ul>	<ul style="list-style-type: none"> <li>Tool-less system design for east maintenance</li> <li>Storage configurations up to 6x 2.5" hot-swap NVMe/SATA drive bays</li> <li>Flexible networking options with 2 AIOM networking slots (OCP NIC 3.0 compatible)</li> </ul>
Serverboard	SUPER® X13DSF-A	SUPER® X13DEM	SUPER® X13DEM
Chipset	Intel® C741	Intel® C741	Intel® C741
System Memory (Max.)	32 DIMM slots UP to 8TB: 32x 256GB DRAM	32 DIMM slots UP to 8TB: 32x 256GB DRAM	32 DIMM slots UP to 8TB: 32x 256GB DRAM
Expansion Slots	2 PCIe 5.0 x16 AIOM slot(s) 2 PCIe 5.0 x16 FH slot(s)	Configurable PCIe slot options up to 8 SW PCIe 5.0 x8 (6 FHFL+ 2 FHHL) or 4 DW PCIe 5.0 x16 (3 FHFL + FHHL)	Configurable PCIe slot options up to 8 SW PCIe 5.0 x8 (6 FHFL+ 2 FHHL) or 4 DW PCIe 5.0 x16 (3 FHFL + FHHL)
Onboard Storage Controller	Intel® SATA	Intel® SATA	Intel® SATA
Connectivity	via AIOM	2x 100GbE QSFP28 with Broadcom® BCM57508 (optional) 2x 100GbE QSFP28 with Intel® E810-CAM2 (optional) 2x 100GbE QSFP28 with Mellanox® CX-6 DX (optional) 2x 25GbE SFP28 with Broadcom® BCM57414 (optional) 4x 10GbE RJ45 with Intel® X550 (optional) 4x 10GbE SFP+ with Intel® X710-BM2 (optional) via AIOM	2x 100GbE QSFP28 with Broadcom® BCM57508 (optional) 2x 100GbE QSFP28 with Intel® E810-CAM2 (optional) 2x 100GbE QSFP28 with Mellanox® CX-6 DX (optional) 2x 25GbE SFP28 with Broadcom® BCM57414 (optional) 4x 10GbE RJ45 with Intel® X550 (optional) 4x 10GbE SFP+ with Intel® X710-BM2 (optional) via AIOM
VGA/Audio	1 VGA port	1 VGA port	1 VGA port
Management	IPMI 2.0; NMI; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	24x 2.5" hot-swap NVMe drive bays; ,24x 2.5" hot-swap NVMe drive bays; 24x E1.5 Hot-swap NVMe (9.5mm or 15mm) drive slots	6x 2.5" hot-swap NVMe/SATA drive bays; 6x 2.5" NVMe hybrid; Optional RAID support via RAID Controller AOC	6x 2.5" hot-swap NVMe/SATA drive bays; 6x 2.5" NVMe hybrid; Optional RAID support via RAID Controller AOC
Peripheral Bays	None	None	None
Power Supply	2000W Redundant Power Supplies with PMBus	Redundant 2000W Titanium level (96%)	2x 1300W -48Vdc single output
Cooling System	8x 4cm heavy duty fan(s)	6 heavy duty fan(s)	6 heavy duty fan(s)
Form Factor	1U Rackmount Enclosure: 438.4 x 43.6 x 773.25mm (17.2" x 1.7" x 30.4") Package: 604.774 x 199.898 x 1029.97mm (23.81" x 7.87" x 40.55")	2U Rackmount Enclosure: 436.88 x 88.9 x 574mm (17.2" x 3.5" x 22.6") Package: 598 x 247 x 938mm (23.5" x 9.7" x 36.9")	2U Rackmount Enclosure: 436.88 x 88.9 x 574mm (17.2" x 3.5" x 22.6") Package: 598 x 247 x 938mm (23.5" x 9.7" x 36.9")

# X13 HYPER

2U Hyper  
Optimized for Storage Performance  
(Liquid Cooling options)

2U Hyper  
Optimized for Storage Performance



MODEL	SYS-221H-TNR	SYS-221H-TN24R
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W; 4 UPI	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W; 4 UPI
Key Applications	<ul style="list-style-type: none"> <li>• Software-defined Storage</li> <li>• Virtualization</li> <li>• Enterprise Server</li> <li>• Cloud Computing</li> <li>• AI Inference and Machine Learning</li> <li>• Tool-less system design for easy maintenance</li> </ul>	<ul style="list-style-type: none"> <li>• Software-defined Storage</li> <li>• Virtualization</li> <li>• Enterprise Server</li> <li>• Cloud Computing</li> <li>• AI Inference and Machine Learning</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Storage configurations up to 16x 2.5" hot-swap NVMe/SATA/SAS drive bays</li> <li>• Flexible networking options with AIOM/OCP NIC 3.0 support</li> </ul>	<ul style="list-style-type: none"> <li>• Tool-less system design for easy maintenance</li> <li>• Flexible networking options with AIOM/OCP NIC 3.0 support</li> <li>• 24x 2.5" hot-swap NVMe/SATA/SAS drive bays</li> </ul>
Serverboard	SUPERMICRO® X13DEM	SUPERMICRO® X13DEM
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	32 DIMM slots UP to 8TB: 32x 256GB DRAM	32 DIMM slots UP to 8TB: 32x 256GB DRAM
Expansion Slots	Configurable PCIe slot options up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 FH, 10.5"L	Configurable PCIe slot options up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 FH, 10.5"L
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	<ul style="list-style-type: none"> <li>2x 100GbE QSFP28 with Broadcom® BCM57508 (optional)</li> <li>2x 10GbE RJ45 with Intel® X550-AT2 (optional)</li> <li>2x 10GbE SFP+ with Intel® X710-BM2 (optional)</li> <li>2x 1GbE RJ45 with Intel® i350-AM2 (optional)</li> <li>2x 25GbE SFP28 with Broadcom® BCM57414 (optional)</li> <li>4x 10GbE RJ45/SFP+ with Intel® X710-TM4 (optional)</li> <li>4x 10GbE SFP+ with Intel® XL710-BM1 (optional)</li> <li>4x 1GbE RJ45 or 4x 1GbE SFP with Intel® i350-AM4 (optional)</li> <li>4x 25GbE RJ45/SFP28 with Mellanox® CX-4 Lx EN Intel® X550-AT2 (optional) via AIOM</li> </ul>	<ul style="list-style-type: none"> <li>2x 100GbE QSFP28 with Broadcom® BCM57508 (optional)</li> <li>2x 10GbE RJ45 with Intel® X550-AT2 (optional)</li> <li>2x 10GbE SFP+ with Intel® X710-BM2 (optional)</li> <li>2x 1GbE RJ45 with Intel® i350-AM2 (optional)</li> <li>2x 25GbE SFP28 with Broadcom® BCM57414 (optional)</li> <li>4x 10GbE RJ45/SFP+ with Intel® X710-TM4 (optional)</li> <li>4x 10GbE SFP+ with Intel® XL710-BM1 (optional)</li> <li>4x 1GbE RJ45 or 4x 1GbE SFP with Intel® i350-AM4 (optional)</li> <li>4x 25GbE RJ45/SFP28 with Mellanox® CX-4 Lx EN Intel® X550-AT2 (optional) via AIOM</li> </ul>
VGA/Audio	1 VGA port	1 VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	8x 2.5" hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC	24x 2.5" hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC
Peripheral Bays	None	None
Power Supply	Redundant 1200W Titanium level (96%)	Redundant 1600W Titanium level (96%)
Cooling System	4x 8cm heavy duty fan(s)	4x 8cm heavy duty fan(s)
Form Factor	2U Rackmount Enclosure: 437 x 88.9 x 760mm (17.2" x 3.5" x 29.9") Package: 605 x 263 x 1107mm (23.8" x 10.4" x 43.6")	2U Rackmount Enclosure: 437 x 88.9 x 760mm (17.2" x 3.5" x 29.9") Package: 605 x 263 x 1107mm (23.8" x 10.4" x 43.6")



# X13 HYPER

2U Hyper  
Optimized for Storage Capacity

1U Hyper  
Compute & Storage Powerhouse  
Liquid Cooling Options



MODEL	SYS-621H-TN12R	SYS-121H-TNR
Processor Support	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W; 4 UPI	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W; 4 UPI
Key Applications	<ul style="list-style-type: none"> <li>• Software-defined Storage</li> <li>• Virtualization</li> <li>• Enterprise Server</li> <li>• Cloud Computing</li> <li>• AI Inference and Machine Learning</li> </ul>	<ul style="list-style-type: none"> <li>• Software-defined Storage</li> <li>• Virtualization</li> <li>• Enterprise Server</li> <li>• Cloud Computing</li> <li>• AI Inference and Machine Learning</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Tool-less system design for easy maintenance</li> <li>• Flexible networking options with AIOM/OCP NIC 3.0 support</li> <li>• 12x 3.5"/2.5" hot-swap NVMe/SATA/SAS drive bays</li> </ul>	<ul style="list-style-type: none"> <li>• Tool-less system design for easy maintenance</li> <li>• Storage configurations up to 12x 2.5" hot-swap NVMe/SATA/SAS drive bays</li> <li>• Flexible networking options with AIOM/OCP NIC 3.0 support</li> </ul>
Serverboard	SUPERMICRO® X13DEM	SUPERMICRO® X13DEM
Chipset	Intel® C741	Intel® C741
System Memory (Max.)	32 DIMM slots UP to 8TB: 32x 256GB DRAM	32 DIMM slots UP to 8TB: 32x 256GB DRAM
Expansion Slots	Configurable PCIe slot options up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 FH, 10.5"L	2 PCIe 5.0 x16 FH, 10.5"L and 1 PCIe 5.0 x16, FH, 6.6"L
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	2x 100GbE QSFP28 with Broadcom® BCM57508 (optional) 2x 10GbE RJ45 with Intel® X550-AT2 (optional) 2x 10GbE SFP+ with Intel® X710-BM2 (optional) 2x 1GbE RJ45 with Intel® i350-AM2 (optional) 2x 25GbE SFP28 with Broadcom® BCM57414 (optional) 4x 10GbE RJ45/SFP+ with Intel® X710-TM4 (optional) 4x 10GbE SFP+ with Intel® XL710-BM1 (optional) 4x 1GbE RJ45 or 4x 1GbE SFP with Intel® i350-AM4 (optional) 4x 25GbE RJ45/SFP28 with Mellanox® CX-4 Lx EN Intel® X550-AT2 (optional) via AIOM	2x 100GbE QSFP28 with Broadcom® BCM57508 (optional) 2x 10GbE RJ45 with Intel® X550-AT2 (optional) 2x 10GbE SFP+ with Intel® X710-BM2 (optional) 2x 1GbE RJ45 with Intel® i350-AM2 (optional) 2x 25GbE SFP28 with Broadcom® BCM57414 (optional) 4x 10GbE RJ45/SFP+ with Intel® X710-TM4 (optional) 4x 10GbE SFP+ with Intel® XL710-BM1 (optional) 4x 1GbE RJ45 or 4x 1GbE SFP with Intel® i350-AM4 (optional) 4x 25GbE RJ45/SFP28 with Mellanox® CX-4 Lx EN Intel® X550-AT2 (optional) via AIOM
VGA/Audio	1 VGA port	1 VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	12x 3.5" hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC	8x 2.5" hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC
Peripheral Bays	None	None
Power Supply	Redundant 1200W Titanium level (96%)	Redundant 1200W Titanium level (96%)
Cooling System	4x 8cm heavy duty fan(s)	8x 4cm heavy duty fan(s)
Form Factor	2U Rackmount Enclosure: 437 x 88.9 x 803mm (17.2" x 3.5" x 31.6") Package: 605 x 263 x 1107mm (23.8" x 10.4" x 43.6")	1U Rackmount Enclosure: 437 x 43 x 747mm (17.2" x 1.7" x 29.4") Package: 605 x 206 x 1032mm (23.8" x 8.1" x 40.6")

# X13 UP WIO



1U UP WIO

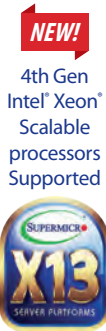
1U UP WIO

2U UP WIO



MODEL	SYS-511E-WR	SYS-111E-WR	SYS-521E-WR
Processor Support	4th Gen Intel® Xeon® Scalable processors Single Socket LGA 4677 (Socket E) supported TDP up to 300W	4th Gen Intel® Xeon® Scalable processors Single Socket LGA 4677 (Socket E) supported TDP up to 300W	4th Gen Intel® Xeon® Scalable processors Single Socket LGA 4677 (Socket E) supported TDP up to 300W
Key Applications	<ul style="list-style-type: none"> <li>Virtualization</li> <li>Value IaaS</li> <li>Entry GPU server</li> <li>Data Center Optimized</li> <li>Cloud Computing</li> </ul>	<ul style="list-style-type: none"> <li>Virtualization</li> <li>Entry GPU server</li> <li>Database/Storage</li> <li>Data Center Optimized</li> <li>Cloud Computing</li> </ul>	<ul style="list-style-type: none"> <li>Entry GPU server</li> <li>Database/Storage</li> <li>Network Appliance</li> <li>Data Center Optimized</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Maximum I/O. Support 3 x16 expansion slots in 1U form factor.</li> <li>Cost optimized 1U X13 solution</li> </ul>	<ul style="list-style-type: none"> <li>Maximum I/O. Support 3 x16 expansion slots in 1U form factor</li> <li>Max 10x PCIe 5.0 NVMe drives supported in 1U Form Factor</li> </ul>	<ul style="list-style-type: none"> <li>Up to 4 expansion slots with optional riser card</li> <li>Max 4x hybrid PCIe 5.0 NVMe drives supported at front</li> <li>Flexible I/O expansion</li> </ul>
Serverboard	SUPER® X13SEW-F	SUPER® X13SEW-F	SUPER® X13SEW-F
Chipset	Intel® C741	Intel® C741	Intel® C741
System Memory (Max.)	8 DIMM slots UP to 2TB: 8x 256GB DRAM	8 DIMM slots UP to 2TB: 8x 256GB DRAM	8 DIMM slots UP to 2TB: 8x 256GB DRAM
Expansion Slots	Slot 1: PCIe 5.0 x16 FHFL Slot 2: PCIe 5.0 x16 FHFL Slot 3: PCIe 5.0 x8 (in x16) LP	Slot 1: PCIe 5.0 x16 FHFL Slot 2: PCIe 5.0 x16 FHFL Slot 3: PCIe 5.0 x8 (in x16) LP	Slot 1: PCIe 5.0 x16 FHFL Slot 3: PCIe 5.0 x16 FHFL Slot 5: PCIe 5.0 x8 LP Slot 6: PCIe 5.0 x8 LP
Onboard Storage Controller	Intel® SATA	Intel® SATA	Intel® SATA
Connectivity	2x 1GbE RJ45 port(s) with Intel® Ethernet Controller i210	2x 1GbE RJ45 port(s) with Intel® Ethernet Controller i210	2x 1GbE RJ45 port(s) with Intel® Ethernet Controller i210
VGA/Audio	1 onboard VGA port	1 onboard VGA port	1 onboard VGA port
Management	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM
Drive Bays	4x 3.5" SATA/SAS drive bays;	10x 2.5" NVMe/SATA/SAS drive bays; 10x 2.5" NVMe hybrid;	8x 3.5" NVMe/SATA/SAS drive bays; 4x 3.5" NVMe hybrid;
Peripheral Bays	2x 2.5"	None	2x 2.5"
Power Supply	Redundant 860W Platinum level (94%)	Redundant 860W Platinum level (94%)	Redundant 920W platinum level
Cooling System	5x (4cm x 4cm x 5.6cm) heavy duty fan(s)	5x (4cm x 4cm x 5.6cm) heavy duty fan(s)	3x (8cm x 8cm x 3.8cm) heavy duty fan(s)
Form Factor	1U Rackmount Enclosure: 437 x 43 x 650mm (17.2" x 1.7" x 25.6") Package: 596.9 x 215.9 x 855.98mm (23.5" x 8.5" x 33.7")	1U Rackmount Enclosure: 437 x 43 x 597mm (17.2" x 1.7" x 23.5") Package: 609.6 x 203.2 x 812.8mm (24" x 8" x 32")	2U Rackmount Enclosure: 437 x 89 x 647mm (17.2" x 3.5" x 25.5") Package: 673.1 x 279.4 x 863.6mm (26.5" x 11" x 34")

# X13 MP SYSTEMS



2U 4-way Compute-optimized



2U 4-way Storage-optimized



6U 8-way GPU-optimized



MODEL	SYS-241H-TNRTP	SYS-241E-TNRTP	SYS-681E-TR
Processor Support	4th Gen Intel® Xeon® Scalable processors Quad Socket LGA-4677 (Socket E) supported TDP up to 350W; 3 UPI up to 16GT/s	4th Gen Intel® Xeon® Scalable processors Quad Socket LGA-4677 (Socket E) supported TDP up to 250W; 3 UPI up to 16GT/s	4th Gen Intel® Xeon® Scalable processors Octa Socket LGA-4677 (Socket E) supported TDP up to 350W; 4 UPI up to 16GT/s
Key Applications	<ul style="list-style-type: none"> <li>SAP HANA</li> <li>HCI</li> <li>In-Memory Database</li> <li>Scientific Virtualization</li> <li>ERP, CRM</li> <li>Business Intelligence</li> <li>Artificial Intelligence (AI)</li> <li>up to 12 PCIe expansion provides scalability as business grows</li> </ul>	<ul style="list-style-type: none"> <li>SAP HANA</li> <li>HCI</li> <li>In-Memory Database</li> <li>Scientific Virtualization</li> <li>ERP, CRM</li> <li>Business Intelligence</li> <li>Artificial Intelligence (AI)</li> <li>up to 8 PCIe expansion provides scalability as business grows</li> </ul>	<ul style="list-style-type: none"> <li>Scale -up HPC</li> <li>Research Lab/National Lab</li> <li>Virtualization, ERP, CRM</li> <li>In-Memory Database</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Support up to 2 double-width GPU/FPGA to accelerate AI workloads</li> <li>Compute Optimized 4-Way Server</li> </ul>	<ul style="list-style-type: none"> <li>Support up to 2 double-width GPU/FPGA to accelerate AI workloads</li> <li>Storage Optimized 4-Way Server</li> </ul>	<ul style="list-style-type: none"> <li>up to 26 PCIe expansion provides scalability as business grows</li> <li>Support up to 12 double-width GPU/FPGA to accelerate AI workloads</li> </ul>
Serverboard	SUPER® X13QE+	SUPER® X13QE+	SUPER® X13OEI-CPU
Chipset	Intel® C741	Intel® C741	Intel® C741
System Memory (Max.)	64 DIMM slots UP to 16TB: 64x 256GB DRAM UP to 24TB: 32x 256GB DRAM and 32x 512GB Intel® Optane™ Persistent Memory	64 DIMM slots UP to 16TB: 64x 256GB DRAM UP to 24TB: 32x 256GB DRAM and 32x 512GB Intel® Optane™ Persistent Memory	128 DIMM slots UP to 32TB: 128x 256GB DRAM UP to 48TB: 64x 512GB Intel® Optane™ Persistent Memory and 64x 256GB DRAM
Expansion Slots	2 PCIe 5.0 x8 FHFL slot(s) 2 PCIe 5.0 x16 FHFL slot(s) 2 PCIe 5.0 x16 FHHL slot(s) 2 PCIe 4.0/5 x8 LP optional slot(s) 2 PCIe 4.0/5 x16 LP optional slot(s) PCIe 5.0 x16 AIOM slot(s) PCIe 5.0 x8 (x16 slot) AIOM slot(s) 2 M.2 SATA3/NVMe3 slot(s)	2 PCIe 5.0 x8 FHFL slot(s) 2 PCIe 5.0 x16 FHFL slot(s) 2 PCIe 5.0 x16 FHHL slot(s) PCIe 5.0 x16 AIOM slot(s) PCIe 5.0 x8 (x16 slot) AIOM slot(s) 2 M.2 SATA3/NVMe3 slot(s)	12 PCIe 5.0 x16 FHFL slot(s) 12 PCIe 5.0 x16 FHFL optional slot(s) 2 PCIe 5.0 x16 LP internal optional slot(s) 2 M.2 SATA3/NVMe3 slot(s)
Onboard Storage Controller	Intel® SATA	Intel® SATA	Intel® SATA
Connectivity	via AIOM	via AIOM	1x 1GbE RJ45 port(s)
VGA/Audio	1 VGA port(s), 1 DisplayPort(s)	1 VGA port(s), 1 DisplayPort(s)	1 VGA port(s), 1 DisplayPort(s)
Management	Intel® Node Manager; IPMI 2.0; NMI; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; NMI; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; NMI; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	8x 2.5" hot-swap NVMe/SAS3/SATA3 drive bays; Optional RAID support via RAID controller AOC	24x 2.5" hot-swap NVMe/SAS3/SATA3 drive bays; 24x 2.5" NVMe hybrid; Optional RAID support via RAID controller AOC	24x 2.5" hot-swap NVMe/SAS3/SATA3 drive bays; 24x 2.5" NVMe hybrid; Optional RAID support via RAID controller AOC
Peripheral Bays	None	None	None
Power Supply	Redundant 2700W Titanium level (96%)	Redundant 1600W Titanium level (96%)	Redundant 2600W Titanium level (96%)
Cooling System	3x 8cm and 2x 6cm heavy duty fan(s)	6x 6cm heavy duty fan(s)	10x 8cm heavy duty fan(s)
Form Factor	2U Rackmount Enclosure: 438.4 x 87.9 x 812.9mm (17.3" x 3.5" x 32") Package: 672 x 250 x 1100mm (26.5" x 9.75" x 43.5")	2U Rackmount Enclosure: 438.4 x 87.9 x 849.3mm (17.3" x 3.5" x 33.4") Package: 672 x 250 x 1100mm (26.5" x 9.75" x 43.5")	6U Rackmount Enclosure: 449 x 265 x 841mm (17.68" x 10.4" x 33.1") Package: 720 x 922 x 1080mm (28.34" x 36.3" x 42.5")

# X13 DP SERVERBOARDS

**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported



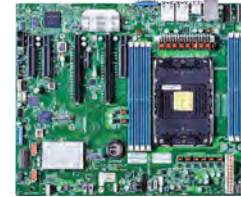
MODEL	X13DAI-T	X13DEI	X13DEI-T
Processor	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP	4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP
Chipset	Intel® C741	Intel® C741	Intel® C741
Form Factor	EATX, 12.1" x 13.1" (30.734cm x 33.274cm)	EATX, 12.1" x 13.05" (30.74cm x 33.15cm)	EATX, 12.1" x 13.05" (30.74cm x 33.15cm)
Memory Capacity & Slots	Up to 4TB 3DS ECC RDIMM, DDR5-4800MHz, in 16 DIMM slots	Up to 4TB 3DS ECC RDIMM, DDR5-4800MHz, in 16 DIMM slots	Up to 4TB 3DS ECC RDIMM, DDR5-4800MHz, in 16 DIMM slots
Expansion Slots	1 PCIe 5.0 x8, 5 PCIe 5.0 x16 2 PCIe 5.0 x4 NVMe <b>M.2 Interface:</b> 2 PCIe 5.0 x4 <b>Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key	2 PCIe 5.0 x8, 4 PCIe 5.0 x16 <b>M.2 Interface:</b> 2 PCIe 4.0 x2 <b>Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key	2 PCIe 5.0 x8, 4 PCIe 5.0 x16 <b>M.2 Interface:</b> 2 PCIe 4.0 x2 <b>Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key
Onboard RAID Controller	Intel® C741 controller for 8 SATA3 ports; RAID N/A; via SlimSAS Intel® C741 controller for 2 SATA3 ports; RAID N/A; Internal Port(s)	Intel® C741 controller for 8 SATA3 ports; via SlimSAS Intel® C741 controller for 2 SATA3 ports; Internal Port(s)	Intel® C741 controller for 8 SATA3 ports; via SlimSAS Intel® C741 controller for 2 SATA3 ports; Internal Port(s)
Onboard LAN	Dual LAN with Broadcom BCM57416 10GBase-T	Dual LAN with Broadcom BCM5720 10GBase-T Single LAN with Realtek RTL8211F PHY	Dual LAN with Broadcom BCM57416 10GBase-T Single LAN with Realtek RTL8211F PHY
Onboard VGA	1 VGA D-Sub Connector port(s)	1 VGA D-Sub Connector port(s)	1 VGA D-Sub Connector port(s)
USB Ports	1 USB 3.2 Gen2 port(s) (1 via header) 8 USB 3.2 Gen1 port(s) (4 rear type A; 2 via header; 2 via header)	6 USB 3.2 Gen1 port(s) (2 via header; 4 rear) 3 USB 2 port(s) (1 Type A; 2 via header)	3 USB 2 port(s) (2 via header; 1 Type A) 6 USB 3.2 Gen1 port(s) (2 via header; 4 rear)
Other Onboard I/O Devices	TPM Header 2 MCIO PCIe 5.0 x8  1x Realtek ALC888S 7.1 HD Audio port(s)Realtek ALC888S 7.1 HD Audio	2 COM Port(s) (1 header; 1 rear) TPM header 3 MCIO PCIe 5.0 x8	2 COM Port(s) (1 header; 1 rear) TPM header 3 MCIO PCIe 5.0 x8
Manageability	SuperDoctor® 5, SPM, SUM, SSM, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, Watchdog, SMCIPMITool, Trusted Platform Module (TPM), CPU thermal trip support for processor protection, Wake-on-LAN	SuperDoctor® 5, SPM, SUM, SSM, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, Watchdog, SMCIPMITool, Trusted Platform Module (TPM), CPU thermal trip support for processor protection, Wake-on-LAN	SuperDoctor® 5, SPM, SUM, SSM, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, Watchdog, SMCIPMITool, Trusted Platform Module (TPM), CPU thermal trip support for processor protection, Wake-on-LAN
PC Health Monitoring	+5V standby, +5V, +3.3V, +12V, +3.3V standby, Vmem	System temperature, PCH temperature, Memory temperature, CPU temperature, +5V standby, +5V, +3.3V, +12V, CPU thermal trip support, +3.3V standby, Veore, Vmem, Peripheral temperature, Platform Environment Control Interface (PECI)/(TSI)	System temperature, PCH temperature, Memory temperature, CPU temperature, +5V standby, +5V, +3.3V, +12V, CPU thermal trip support, +3.3V standby, Veore, Vmem, Peripheral temperature, Platform Environment Control Interface (PECI)/(TSI)
Thermal Control	13x 4-pin fan headers (up to 13 fans) Fan speed control, Overheat LED indication, CPU thermal trip support, 13x fans with tachometer monitoring, Thermal Monitor 2 (TM2) support, PECI, Monitoring for CPU and chassis environment	8x 4-pin fan headers (up to 8 fans) Fan speed control Overheat LED indication 8x fans with tachometer monitoring	8x 4-pin fan headers (up to 8 fans) Fan speed control Overheat LED indication 8x fans with tachometer monitoring
Other Features	Node Manager Support M.2 NGFF connector Control of power-on for recovery from AC power loss Chassis intrusion detection ACPI power management	UID, Node Manager Support, M.2 NGFF connector, Control of power-on for recovery from AC power loss, Chassis intrusion detection, ACPI power management	UID, Node Manager Support, M.2 NGFF connector, Control of power-on for recovery from AC power loss, Chassis intrusion detection, ACPI power management
BIOS	AMI 32MB AMI UEFI	AMI 32MB AMI UEFI	AMI 32MB AMI UEFI



# X13 UP SERVERBOARDS

HPC, All PCIe 5.0 slots

HPC, All PCIe 5.0 slots



MODEL	X13SEI-F	X13SEI-TF
Processor	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP
Chipset	Intel® C741	Intel® C741
Form Factor	ATX, 12.3" x 10.3" (31.24cm x 26.16cm)	ATX, 12.3" x 10.3" (31.24cm x 26.16cm)
Memory Capacity & Slots	Up to 2TB 3DS ECC RDIMM, DDR5-4800MHz, in 8 DIMM slots	Up to 2TB 3DS ECC RDIMM, DDR5-4800MHz, in 8 DIMM slots
Expansion Slots	2 PCIe 5.0 x16, 3 PCIe 5.0 x8, 2 PCIe 5.0 x8 PCIe5.0 MCIO connector <b>M.2 Interface:</b> 2 PCIe 5.0 x4 <b>Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key	2 PCIe 5.0 x16, 3 PCIe 5.0 x8, 2 PCIe 5.0 x8 PCIe5.0 MCIO connector <b>M.2 Interface:</b> 2 PCIe 5.0 x4 <b>Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key
Onboard RAID Controller	Intel® C741 controller for 10 SATA3 (6 Gbps) ports	Intel® C741 controller for 10 SATA3 (6 Gbps) ports
Onboard LAN	Dual LAN with 1GbE with Intel® I210	Dual LAN with 10GBase-T with Intel® X550
Onboard VGA	1 VGA D-Sub Connector port(s) 1 Aspeed AST2600 BMC port(s)	1 VGA D-Sub Connector port(s) 1 Aspeed AST2600 BMC port(s)
USB Ports	2 USB 2 port(s) (2 rear) 4 USB 3.2 Gen1 port(s) (2 rear; 1 type A; 1 via header)	2 USB 2 port(s) (2 rear) 4 USB 3.2 Gen1 port(s) (2 rear; 1 type A; 1 via header)
Other Onboard I/O Devices	1 COM Port(s) (1 header) 2 SATA DOM (Disk on Module) power connector support TPM 2 Header	1 COM Port(s) (1 header) 2 SATA DOM (Disk on Module) power connector support TPM 2 Header
Manageability	SuperDoctor® 5, SPM, SUM, SSM, IPMICFG, IPMIView for Linux/Windows, SMCIPMITool, Trusted Platform Module (TPM), Chassis Intrusion Detection	SuperDoctor® 5, SPM, SUM, SSM, IPMICFG, IPMIView for Linux/Windows, SMCIPMITool, Trusted Platform Module (TPM), Chassis Intrusion Detection
PC Health Monitoring	VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 6 -fan status, +5V standby, +5V, +3.3V, +12V, Memory Voltages	VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 6 -fan status, +5V standby, +5V, +3.3V, +12V, Memory Voltages
Thermal Control	7x 4-pin fan headers (up to 7 fans) Fan speed control Overheat LED indication 7 fans with tachometer status monitoring	7x 4-pin fan headers (up to 7 fans) Fan speed control Overheat LED indication 7 fans with tachometer status monitoring
Other Features	WOL, UID, Node Manager Support, M.2 NGFF connector, Control of power-on for recovery from AC power loss, Chassis intrusion detection, ACPI power management	WOL, UID, Node Manager Support, M.2 NGFF connector, Control of power-on for recovery from AC power loss, Chassis intrusion detection, ACPI power management
BIOS	AMI UEFI	AMI UEFI

# X13 UP SERVERBOARDS



WIO, 1U/3AOC



WIO, 1U/3AOC



MODEL	X13SEW-F	X13SEW-TF
Processor	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP
Chipset	Intel® C741	Intel® C741
Form Factor	Proprietary WIO, 8" x 13" (20.32cm x 33.02cm)	Proprietary WIO, 8" x 13" (20.32cm x 33.02cm)
Memory Capacity & Slots	Up to 2TB 3DS ECC RDIMM, DDR5-4800MHz, in 8 DIMM slots	Up to 2TB 3DS ECC RDIMM, DDR5-4800MHz, in 8 DIMM slots
Expansion Slots	1 PCIe 5.0 x8 Right Riser (in x16) slot, 1 PCIe 5.0 x32 Left Riser Slot, 5 PCIe 5.0 x8 PCIe5.0 MCIO connector <b>M.2 Interface:</b> 1 PCIe 3.0 x2 <b>Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key	1 PCIe 5.0 x8 Right Riser (in x16) slot, 1 PCIe 5.0 x32 Left Riser Slot, 5 PCIe 5.0 x8 PCIe5.0 MCIO connector <b>M.2 Interface:</b> 1 PCIe 3.0 x2 <b>Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key
Onboard RAID Controller	Intel® C741 controller for 10 SATA3 (6 Gbps) ports	Intel® C741 controller for 10 SATA3 (6 Gbps) ports
Onboard LAN	Dual LAN with 1GbE with Intel® I210	Dual LAN with 10GBase-T with Intel® X550
Onboard VGA	1 VGA D-Sub Connector port(s)	1 VGA D-Sub Connector port(s) 1 Aspeed AST2600 BMC port(s)
USB Ports	5 USB 2 port(s) (2 via header; 2 rear; 1 Type A) 4 USB 3.2 Gen1 port(s) (2 via header; 2 rear)	5 USB 2 port(s) (2 via header; 2 rear; 1 Type A) 4 USB 3.2 Gen1 port(s) (2 via header; 2 rear)
Other Onboard I/O Devices	2 COM Port(s) (1 header; 1 rear) 2 SATA DOM (Disk on Module) power connector support TPM 2 Header	2 COM Port(s) (1 header; 1 rear) 2 SATA DOM (Disk on Module) power connector support TPM 2 Header
Manageability	SuperDoctor® 5, SPM, SUM, SSM, IPMICFG, IPMIView for Linux/Windows, SMCIPMITool, Trusted Platform Module (TPM), Chassis Intrusion Detection	SuperDoctor® 5, SPM, SUM, SSM, IPMICFG, IPMIView for Linux/Windows, SMCIPMITool, Trusted Platform Module (TPM), Chassis Intrusion Detection
PC Health Monitoring	VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 6 -fan status, +5V standby, +5V, +3.3V, +12V, Memory Voltages	VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 6 -fan status, +5V standby, +5V, +3.3V, +12V, Memory Voltages
Thermal Control	6x 4-pin fan headers (up to 6 fans) Fan speed control 6 fans with tachometer status monitoring Overheat LED indication	6x 4-pin fan headers (up to 6 fans) Fan speed control 6 fans with tachometer status monitoring Overheat LED indication
Other Features	WOL, UID, Node Manager Support, M.2 NGFF connector, Control of power-on for recovery from AC power loss, Chassis intrusion detection, ACPI power management	WOL, UID, Node Manager Support, M.2 NGFF connector, Control of power-on for recovery from AC power loss, Chassis intrusion detection, ACPI power management
BIOS	AMI UEFI	AMI UEFI

# X13 UP SERVERBOARDS

**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported



HP Embedded SVR



HP Embedded SVR



MODEL	X13SEM-F	X13SEM-TF
Processor	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP	4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP
Chipset	Intel® C741	Intel® C741
Form Factor	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)
Memory Capacity & Slots	Up to 2TB 3DS ECC RDIMM, DDR5-4800MHz, in 8 DIMM slots	Up to 2TB 3DS ECC RDIMM, DDR5-4800MHz, in 8 DIMM slots
Expansion Slots	2 PCIe 5.0 x16, 1 PCIe 5.0 x8 2 PCIe 3.0 x4 NVMe Internal Port(s) 8 PCIe 5.0 x4 NVMe Internal Port(s) <b>M.2 Interface:</b> 2 PCIe 4.0 x2 <b>Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key	2 PCIe 5.0 x16, 1 PCIe 5.0 x8 2 PCIe 3.0 x4 NVMe Internal Port(s) 8 PCIe 5.0 x4 NVMe Internal Port(s) <b>M.2 Interface:</b> 2 PCIe 4.0 x2 <b>Form Factor:</b> 2280/22110 <b>M.2 Key:</b> M-Key
Onboard RAID Controller	Intel® C741 controller for 10 SATA3 (6 Gbps) ports	Intel® C741 controller for 10 SATA3 (6 Gbps) ports
Onboard LAN	Dual LAN with 1GbE with Intel® I350	Dual LAN with 10GBase-T with Intel® X550
Onboard VGA	1 VGA D-Sub Connector port(s) 1 Aspeed AST2600 BMC port(s)	1 VGA D-Sub Connector port(s) 1 Aspeed AST2600 BMC port(s)
USB Ports	6 USB 2 port(s) (2 rear; 4 via header) 5 USB 3.2 Gen1 port(s) (2 via header; 2 rear; 1 type A)	6 USB 2 port(s) (2 rear; 4 via header) 5 USB 3.2 Gen1 port(s) (2 via header; 2 rear; 1 type A)
Other Onboard I/O Devices	1 COM Port(s) (1 rear) 2 SATA DOM (Disk on Module) power connector support TPM 2 Header	1 COM Port(s) (1 rear) 2 SATA DOM (Disk on Module) power connector support TPM 2 Header
Manageability	SuperDoctor® 5, SPM, SUM, SSM, IPMICFG, IPMIView for Linux/Windows, SMCIPMITool, Trusted Platform Module (TPM), Chassis Intrusion Detection	SuperDoctor® 5, SPM, SUM, SSM, IPMICFG, IPMIView for Linux/Windows, SMCIPMITool, Trusted Platform Module (TPM), Chassis Intrusion Detection
PC Health Monitoring	VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 5 -fan status, +5V standby, +5V, +3.3V, +12V, Memory Voltages	VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 5 -fan status, +5V standby, +5V, +3.3V, +12V, Memory Voltages
Thermal Control	5x 4-pin fan headers (up to 5 fans) Fan speed control 5 fans with tachometer status monitoring Overheat LED indication	5x 4-pin fan headers (up to 5 fans) Fan speed control 5 fans with tachometer status monitoring Overheat LED indication
Other Features	WOL, UID, Node Manager Support, M.2 NGFF connector, Control of power-on for recovery from AC power loss, Chassis intrusion detection, ACPI power management	WOL, UID, Node Manager Support, M.2 NGFF connector, Control of power-on for recovery from AC power loss, Chassis intrusion detection, ACPI power management
BIOS	AMI UEFI	AMI UEFI

# SYSTEM MANAGEMENT SOFTWARE

## Leverage Supermicro's Management Software Suite to Meet Your IT Infrastructure Challenges

With a comprehensive range of high-end software solutions, Supermicro gives IT administrators the tools to optimize the management of IT systems and increase the utilization of computing and storage infrastructure. Whether you are looking to manage individual systems, optimize server lifecycle processes, or streamline operations for an entire data center, Supermicro has the right software to help you accomplish your goals.



- Obtain valuable insights in your infrastructure
- Monitor the health of servers and critical components
- Get proactive alerts



- Maintain system uptime to meet SLAs
- Early symptom detection to prevent component failure
- Remote management and troubleshooting



- Protect your IT infrastructure from external threats
- Centralized patch and BIOS management
- Extensive security features

## System Management Software Suite Bundles

Supermicro's System Management Software Suite consists of a set of specialized applications. These are available in the following bundles.

Suite Bundle	Standard	Basic	Advanced	Enterprise
<b>Description</b>	Covers all core functionality to effectively set up, manage, and monitor your Supermicro systems. These features are available to all Supermicro users.	Extends the core functionality and makes system management easier with additional features, such as remote BIOS management and system updates.	Delivers a broad set of tools to help administrators improve the performance, up-time, and monitoring of Supermicro systems.	Offers an extensive platform to manage large data centers and coordinate automated lifecycle management, software-defined infrastructure, and more in a single pane of glass.
<b>License</b>	<ul style="list-style-type: none"> <li>• No license required</li> </ul>	<ul style="list-style-type: none"> <li>• SFT-OOB-LIC</li> </ul>	<ul style="list-style-type: none"> <li>• SFT-DCMS-SINGLE</li> </ul>	<ul style="list-style-type: none"> <li>• SFT-DCMS-SINGLE +</li> <li>• SFT-SDDC-SINGLE</li> </ul>
<b>Key Features*</b>	<ul style="list-style-type: none"> <li>• Secure remote console (KVM/HTML5)</li> <li>• System temperature monitoring</li> <li>• System power thresholds &amp; alerts</li> <li>• Component monitoring</li> <li>• Email alerting</li> <li>• Remote configuration</li> <li>• Offline diagnostics</li> <li>• Crash dump</li> <li>• License management</li> </ul>	<ul style="list-style-type: none"> <li>• Remote BMC management</li> <li>• Remote BIOS management</li> <li>• Out-of-Band systems checks</li> <li>• TPM Provisioning</li> <li>• Mount/Unmount ISO images from Samba/HTTP</li> <li>• Basic Redfish APIs</li> <li>• CIM management</li> <li>• SysLog</li> </ul>	<ul style="list-style-type: none"> <li>• Remote OS deployment</li> <li>• Auto-discovery</li> <li>• Power capping</li> <li>• RAID monitoring and configuration</li> <li>• HDD monitoring</li> <li>• Advanced Redfish APIs</li> <li>• FW update policy</li> <li>• System lock down</li> <li>• Crash screen/video capture</li> </ul>	<ul style="list-style-type: none"> <li>• 3rd Party vendor support</li> <li>• POD &amp; Rack-level management</li> <li>• SDI Lifecycle management</li> <li>• Manage Composable Dissagregated Infrastructure</li> <li>• Zero-touch provisioning for network configuration</li> <li>• Single pane of glass for data center deployment</li> <li>• Rich analytics &amp; telemetry</li> <li>• User defined role-based access control</li> </ul>

\* For detailed information, please check with your Supermicro sales representative or refer to Supermicro website: <https://www.supermicro.com/en/solutions/management-software>



# World Class Total IT Solutions

## Rack Plug and Play

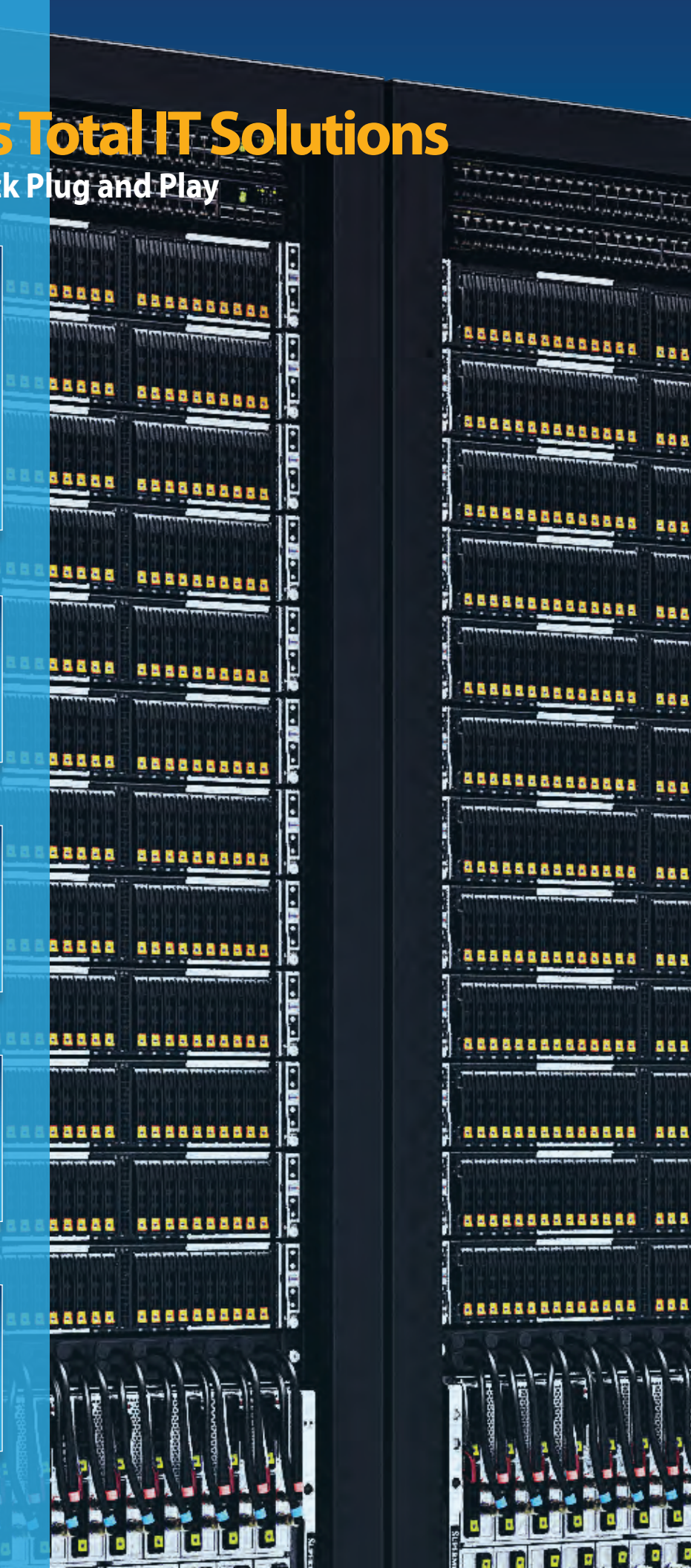
*Rack Scale Solutions/ Design/  
Production/Validation/  
Logistics and Service, The  
capacity of 3000 Integrated  
Rack Solutions per month,  
including up to 1000 Liquid  
Cooled Racks per month*

*Flexible AC Power  
(120/208/230/480VAC,  
Single/3-phase)  
48VDC Power*

*10/25/40/100/200/400 Gb/s  
Network Testing  
Environments*

*Air Cooling/Free Air Cooling/  
Liquid Cooling*

*Turnkey Data Center  
Solutions within two weeks*







# Global Expansion

Providing Greater Economies of Scale and Accelerated Support to Data Center, Cloud Computing, AI, Enterprise IT, HPC, 5G, Hyperscale, and Embedded Solutions Customers Worldwide



**Worldwide Headquarters**  
San Jose, California, USA



**America**

- Supermicro's Headquarters expansion: Over 1.5 million square foot **Green Computing Park** in San Jose, California signals the company's increasing leadership in the IT industry
- One of the largest high-tech R&D, manufacturing, and business hubs in Silicon Valley
- East Coast Sales and Service Office



**APAC**

Supermicro's **Asia Science and Technology Park** is a key milestone in the company's growth as a true global leader in the development of advanced, power saving computing technologies



**Silicon Valley**

Expanded manufacturing, command center



**EMEA**

Supermicro's system integration facility and services in The Netherlands serves the dynamic, rapidly growing EMEA market with localized supply and time-to-market advantages

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# Better

Better Performance  
Per Watt and Per Dollar



# Faster

First-to-Market Innovation with the  
Highest Performance Server Designs



# Greener

Reduced Environmental  
Impact and Lower TCO



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