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
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

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

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.
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

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
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
Highly configurations 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

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

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
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.
**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

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**Key Applications**

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

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**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.
**X13 All-Flash EDSFF**

Revolutionary Petascale NVMe for Unprecedented Density and Capacity

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

**Key Applications**

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

**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.
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
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 temperate 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.

Data Center-Class Performance and Expandability at the 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

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

**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.

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Both AC and DC power configurations available with redundant power supplies

Enhanced operating temperatures from -5°C to 55°C (CPU TDP-dependent)
X13 Multi-Processor Systems
Highest Performance and Flexibility for Enterprise Applications

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 64 DIMMs in 2U and 128 DIMMs in 8U supporting DDR5-4800MHz and Intel® Optane™ Persistent Memory 300 Series

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

**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported

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## Model Comparison

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-821GE-TNHR</th>
<th>SYS-821GE-FTNHR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W</td>
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<td><strong>Key Applications</strong></td>
<td>• Finance &amp; Economics • Climate and Weather Modeling • Drug Discovery • Business Intelligence &amp; Analytics • Conversational AI • Healthcare • Industrial Automation, Retail • AI/Deep Learning Training • High Performance Computing</td>
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<td><strong>Outstanding Features</strong></td>
<td>• Highest GPU communication using NVIDIA® NVLink™ + NVIDIA® NVSwitch™ • High density 8U system with NVIDIA® HGX™ H100 8-GPU • 8 NVMe for GPU direct storage • 8 NIC for GPU direct RDMA (1:1 GPU Ratio) • 2 M.2 NVMe for boot drive only</td>
<td>• Highest GPU communication using NVIDIA® NVLink™ + NVIDIA® NVSwitch™ • High density 8U system with NVIDIA® HGX™ H100 8-GPU • 8 NVMe for GPU direct storage • 8 NIC for GPU direct RDMA (1:1 GPU Ratio) • 2 M.2 NVMe for boot drive only</td>
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<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X13DEG-OAD</td>
<td>SUPER® X13DEG-OAD</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>32 DIMM slots UP to 8TB: 32x 256GB DRAM</td>
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<tr>
<td><strong>Expansion Slots</strong></td>
<td>8 PCIe 5.0 x16 LP, 2 FHFL PCIe 5.0 x16 Slots</td>
<td>8 PCIe 5.0 x16 LP, 2 FHFL PCIe 5.0 x16 Slots</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>2x 10GbE RJ45 with Intel® X550-AT2 (optional) 2x 10GbE RJ45 with Intel® X710-AT2 (optional) 2x 25GbE SFP28 with Broadcom® BCMS7414 (optional)</td>
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<tr>
<td><strong>VGA/Audio</strong></td>
<td>1 VGA port</td>
<td>1 VGA port</td>
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<tr>
<td><strong>Management</strong></td>
<td>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</td>
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<td><strong>Drive Bays</strong></td>
<td>20x 2.5” hot-swap NVMe/SATA drive bays; 8x 2.5” NVMe dedicated;</td>
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<td><strong>Peripheral Bays</strong></td>
<td>None</td>
<td>None</td>
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<tr>
<td><strong>Power Supply</strong></td>
<td>6x 3000W (3+3) Redundant Power Supplies, Titanium Level</td>
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<tr>
<td><strong>Cooling System</strong></td>
<td>10 heavy duty fan(s)</td>
<td>10 heavy duty fan(s)</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>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”)</td>
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# X13 Universal GPU

![X13 Universal GPU](image)

## Processor Support
- **SYS-521GU-TNXR**: 4th Gen Intel® Xeon® Scalable processors
  - Dual Socket LGA-4677 (Socket E) supported
  - TDP up to 350W
- **SYS-421GU-TNXR**: 4th Gen Intel® Xeon® Scalable processors
  - Dual Socket LGA-4677 (Socket E) supported
  - TDP up to 350W

## Key Applications
- **SYS-521GU-TNXR**
  - AI/Deep Learning Training
  - High Performance Computing
- **SYS-421GU-TNXR**
  - AI/Deep Learning Training
  - High Performance Computing

## Outstanding Features
- **SYS-521GU-TNXR**
  - Highest GPU communication using NVIDIA® NVLINK™
  - High density 5U Universal GPU system with NVIDIA® HGX™ H100 4-GPU
  - 8 NIC for GPU direct RDMA (1:1 GPU Ratio)
- **SYS-421GU-TNXR**
  - Highest GPU communication using NVIDIA® NVLINK™
  - High density 4U Universal GPU system with NVIDIA® HGX™ H100 4-GPU

## Key Applications
- **SYS-521GU-TNXR**
  - Dual Socket LGA-4677 (Socket E) supported
  - TDP up to 350W
- **SYS-421GU-TNXR**
  - Dual Socket LGA-4677 (Socket E) supported
  - TDP up to 350W

## Serverboard
- **SYS-521GU-TNXR**: SUPER® X13DGU
- **SYS-421GU-TNXR**: SUPER® X13DGU

## Chipset
- **SYS-521GU-TNXR**: Intel® C741
- **SYS-421GU-TNXR**: Intel® C741

## System Memory (Max.)
- **SYS-521GU-TNXR**: 32 DIMM slots
  - UP to 8TB: 32x 256GB DRAM
- **SYS-421GU-TNXR**: 32 DIMM slots
  - UP to 8TB: 32x 256GB DRAM

## Expansion Slots
- **SYS-521GU-TNXR**: 10 PCIe 5.0 X16 LP Slots
- **SYS-421GU-TNXR**: 8 PCIe 5.0 X16 LP Slots

## Onboard Storage Controller
- **SYS-521GU-TNXR**: Intel® SATA
- **SYS-421GU-TNXR**: Intel® SATA

## Connectivity
- **SYS-521GU-TNXR**: 2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X710-AT2
- **SYS-421GU-TNXR**: 2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X710-AT2

## VGA/Audio
- **SYS-521GU-TNXR**: 1 VGA port
- **SYS-421GU-TNXR**: 1 VGA port

## Management
- **SYS-521GU-TNXR**: 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
- **SYS-421GU-TNXR**: 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
- **SYS-521GU-TNXR**: 10x 2.5” hot-swap NVMe/SATA drive bays; 10x 2.5” NVMe hybrid;
- **SYS-421GU-TNXR**: 6x 2.5” hot-swap NVMe/SATA drive bays; 6x 2.5” NVMe hybrid;

## Peripheral Bays
- **SYS-521GU-TNXR**: None
- **SYS-421GU-TNXR**: None

## Power Supply
- **SYS-521GU-TNXR**: Redundant 3000W Titanium level (96%)
- **SYS-421GU-TNXR**: Redundant 3000W Titanium level (96%)

## Cooling System
- **SYS-521GU-TNXR**: 5 heavy duty fan(s)
- **SYS-421GU-TNXR**: 5 heavy duty fan(s)

## Form Factor
- **SYS-521GU-TNXR**: SU 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”)
- **SYS-421GU-TNXR**: 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”)

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[X13 Server Solutions - January 2023](image)
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<th>SYS-421GE-TNRT</th>
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• 3D Rendering  
• Design & Visualization  
• Animation and Modeling  
• Cloud Gaming  
• Media/Video Streaming  
• AI/Deep Learning Training  
• VDI  
• High Performance Computing  
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| Serverboard | SUPER® X13DEG-OA | SUPER® 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; SIM; 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; SIM; 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”) |
### Key Applications
- Diagnostic Imaging
- 3D Rendering
- Design & Visualization
- Animation and Modeling
- Cloud Gaming
- Media/Video Streaming
- AI/Deep Learning Training
- VDI
- High Performance Computing

### Outstanding Features
- Flexible networking options
- 8 NVMe for GPU direct storage
- 2 M.2 NVMe for boot drive only
- Workstation or 4U Rackmountable System
- Performance Anywhere
- Innovate Faster
- Flexible Solution

### Processor Support
- 4th Gen Intel® Xeon® Scalable processors
- Dual Socket LGA-4677 (Socket E) supported
- TDP up to 350W
- AI Training
- Diagnostic Imaging
- 3D Rendering
- Design & Visualization
- Animation and Modeling
- Cloud Gaming
- Media/Video Streaming
- AI/Deep Learning Training
- VDI
- High Performance Computing

### 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; 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; 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”)
- Tower
  - Enclosure: 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”)

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

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**X13 Server Solutions - January 2023**

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**Model: SYS-521GE-TNRT**

- Processor Support: 4th Gen Intel® Xeon® Scalable processors
- Dual Socket LGA-4677 (Socket E) supported
- TDP up to 350W

**Model: SYS-741GE-TNRT**

- Processor Support: 4th Gen Intel® Xeon® Scalable processors
- Dual Socket LGA-4677 (Socket E) supported
- TDP up to 350W

---

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### X13 SUPEREDGE

#### 4th Gen Intel® Xeon® Scalable processors Supported

#### Redundant AC power

#### Redundant DC power

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-211SE-31A</th>
<th>SYS-211SE-31AS</th>
<th>SYS-211SE-31D</th>
<th>SYS-211SE-31DS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 300W</td>
<td>4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 300W</td>
<td>4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 300W</td>
<td>4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 300W</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Enterprise Edge Computing • Telecom DRAN, CRAN, and Edge Core Application • Flex-RAN, Open-RAN vBBU • Multi-Access Edge Computing</td>
<td>• Enterprise Edge Computing • Telecom DRAN, CRAN, and Edge Core Application • Flex-RAN, Open-RAN vBBU • Multi-Access Edge Computing</td>
<td>• Enterprise Edge Computing • Telecom DRAN, CRAN, and Edge Core Application • Flex-RAN, Open-RAN vBBU • Multi-Access Edge Computing</td>
<td>• Enterprise Edge Computing • Telecom DRAN, CRAN, and Edge Core Application • Flex-RAN, Open-RAN vBBU • Multi-Access Edge Computing</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Three front hot-swappable nodes with single CPU socket and 8 DIMM design • Front access IO design, and tool less serviceability • 16.9&quot; (430mm) chassis depth</td>
<td>• Three front hot-swappable nodes with single CPU socket and 8 DIMM design • Front access IO design, and tool less serviceability • 16.9&quot; (430mm) chassis depth</td>
<td>• Three front hot-swappable nodes with single CPU socket and 8 DIMM design • Front access IO design, and tool less serviceability • 16.9&quot; (430mm) chassis depth</td>
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</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X13SEED-F</td>
<td>SUPER® X13SEED-F</td>
<td>SUPER® X13SEED-F</td>
<td>SUPER® X13SEED-F</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td>System Memory (Max.)</td>
<td>8 DIMM slots UP to 2TB: DDR5 ECC RDIMM/RDIMM</td>
<td>8 DIMM slots UP to 2TB: DDR5 ECC RDIMM/RDIMM</td>
<td>8 DIMM slots UP to 2TB: DDR5 ECC RDIMM/RDIMM</td>
<td>8 DIMM slots UP to 2TB: DDR5 ECC RDIMM/RDIMM</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>2 PCIe 5.0 x16 FHHL, PCIe 5.0 x16 LP</td>
<td>2 PCIe 5.0 x16 FHHL, PCIe 5.0 x16 LP</td>
<td>2 PCIe 5.0 x16 FHHL, PCIe 5.0 x16 LP</td>
<td>2 PCIe 5.0 x16 FHHL, PCIe 5.0 x16 LP</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td>Connectivity</td>
<td>1x 1GbE RJ45 port(s)</td>
<td>1x 1GbE SFP port(s)</td>
<td>1x 1GbE RJ45 port(s)</td>
<td>1x 1GbE SFP port(s)</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
</tr>
<tr>
<td>Management</td>
<td>IPMI 2.0; SuperDoctor® 5</td>
<td>IPMI 2.0; SuperDoctor® 5</td>
<td>IPMI 2.0; SuperDoctor® 5</td>
<td>IPMI 2.0; SuperDoctor® 5</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Peripheral Bays</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Cooling System</td>
<td>4 heavy duty fan(s)</td>
<td>4 heavy duty fan(s)</td>
<td>4 heavy duty fan(s)</td>
<td>4 heavy duty fan(s)</td>
</tr>
<tr>
<td>Form Factor</td>
<td>2U Rackmount Enclosure: 449 x 88 x 430mm (17.7&quot; x 3.5&quot; x 16.9&quot;) Package: 750 x 240 x 590mm (29.5&quot; x 9.5&quot; x 23.2&quot;)</td>
<td>2U Rackmount Enclosure: 449 x 88 x 430mm (17.7&quot; x 3.5&quot; x 16.9&quot;) Package: 750 x 240 x 590mm (29.5&quot; x 9.5&quot; x 23.2&quot;)</td>
<td>2U Rackmount Enclosure: 449 x 88 x 430mm (17.7&quot; x 3.5&quot; x 16.9&quot;) Package: 750 x 240 x 590mm (29.5&quot; x 9.5&quot; x 23.2&quot;)</td>
<td>2U Rackmount Enclosure: 449 x 88 x 430mm (17.7&quot; x 3.5&quot; x 16.9&quot;) Package: 750 x 240 x 590mm (29.5&quot; x 9.5&quot; x 23.2&quot;)</td>
</tr>
</tbody>
</table>
### X13 5G/EDGE

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

- **Model**: SYS-111E-FWTR
- **Chipset**: Intel® C741
- **Expansion Slots**: 2 PCIe 5.0 x16 FHFL, PCIe 5.0 x16 LP
- **System Memory**: 8x 256GB DRAM (optional)
- **Onboard Storage Controller**: Intel® SATA
- **Connectivity**: 2x 10GbE port(s)
- **VGA/Audio**: 1 VGA port
- **Management**: IPMI 2.0
- **Drive Bays**: 2x 2.5" SATA drive bays;
- **Peripheral Bays**: None
- **Power Supply**: 800W AC Redundant PSU
- **Cooling System**: 4 heavy duty fans(s)
- **Form Factor**: 436.88 x 44.5 x 429.3mm (17.2" x 1.7" x 16.9")

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

- **Model**: SYS-111E-FDWTR
- **Chipset**: Intel® C741
- **Expansion Slots**: 2 PCIe 5.0 x16 FHFL, PCIe 5.0 x16 LP
- **System Memory**: 8x 256GB DRAM (optional)
- **Onboard Storage Controller**: Intel® SATA
- **Connectivity**: 2x 10GbE port(s)
- **VGA/Audio**: 1 VGA port
- **Management**: IPMI 2.0
- **Drive Bays**: 2x 2.5" SATA drive bays;
- **Peripheral Bays**: None
- **Power Supply**: 600W DC Redundant PSU
- **Cooling System**: 4 heavy duty fans(s)
- **Form Factor**: 437 x 43 x 429mm (17.3" x 1.7" x 16.9")

#### 2U UP compact OpenRAN server

- **Model**: SYS-211E-FRN2T
- **Chipset**: Intel® C741
- **Expansion Slots**: 2x PCIe 5.0 x16 FHFL, 1x PCIe 5.0 x8 HHHL
- **System Memory**: 8x 256GB DRAM (optional)
- **Onboard Storage Controller**: Intel® SATA
- **Connectivity**: 2x 10GbE port(s)
- **VGA/Audio**: 1 VGA port
- **Management**: IPMI 2.0
- **Drive Bays**: 2x 2.5" SATA drive bays;
- **Peripheral Bays**: None
- **Power Supply**: Redundant 800W AC 100-240Vac input, Platinum level
- **Cooling System**: 4 heavy duty fans(s)
- **Form Factor**: 436.88 x 88.9 x 298.8mm (17.2" x 3.5" x 11.8")

#### 2U UP compact OpenRAN server

- **Model**: SYS-211E-FRDN2T
- **Chipset**: Intel® C741
- **Expansion Slots**: 2x PCIe 5.0 x16 FHFL, 1x PCIe 5.0 x8 HHHL
- **System Memory**: 8x 256GB DRAM (optional)
- **Onboard Storage Controller**: Intel® SATA
- **Connectivity**: 2x 10GbE port(s)
- **VGA/Audio**: 1 VGA port
- **Management**: IPMI 2.0
- **Drive Bays**: 2x 2.5" SATA drive bays;
- **Peripheral Bays**: None
- **Power Supply**: Redundant 800W AC 100-240Vac input, Platinum level
- **Cooling System**: 4 heavy duty fans(s)
- **Form Factor**: 436.88 x 88.9 x 298.8mm (17.2" x 3.5" x 11.8")
# X13 SuperBlade®

**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported

---

## Enclosure Specifications

<table>
<thead>
<tr>
<th>Processor Blade</th>
<th>SBE-820 Series (8U)</th>
<th>SBE-610 Series (6U)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Up to 20 hot-swappable, half-height, single-width blade servers</td>
<td>• Up to 10 hot-swappable, single-width blade servers</td>
<td></td>
</tr>
<tr>
<td>• Up to 10 hot-swappable, half-height, double-width blade servers</td>
<td>• Up to 5 hot-swappable, double-width blade servers</td>
<td></td>
</tr>
<tr>
<td>• Up to 10 hot-swappable, full-height, single-width blade servers</td>
<td>• Mixed configuration supported</td>
<td></td>
</tr>
<tr>
<td>• Mixed configuration supported</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LED Indicator</th>
<th>Power LED, Fault LED</th>
<th>Power LED, Fault LED</th>
</tr>
</thead>
</table>

| Infiniband Switch | SBE-820H only: Single 200G HDR InfiniBand switch | SBE-820C only: Single 100G EDR InfiniBand switch | N/A |

<table>
<thead>
<tr>
<th>Ethernet Switch / Pass-Thru Module</th>
<th>SBE-820C/H only: Up to 2 hot-swappable 25G Ethernet switches</th>
<th>SBE-820J/J2 only: Up to 4 hot-swappable 25G Ethernet switches or pass-thru modules</th>
<th>Up to 4 hot-swappable 25G Ethernet switches, 10G Ethernet switches or pass-thru modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBE-820C/J/J2/L/H-822: Up to 8 hot-swappable 2200W Titanium (96% efficiency) power supplies</td>
<td>SBE-820J/J2-830: Up to 8 hot-swappable 3000W Titanium (96% efficiency) power supplies</td>
<td>SBE-610J/610J2-822: Up to 8 hot-swappable 2200W Titanium (96% efficiency) power supplies</td>
<td>SBE-610J2-830: Up to 8 hot-swappable 3000W Titanium (96% efficiency)</td>
</tr>
<tr>
<td>SBE-820J/J2-830: Up to 8 hot-swappable 3000W Titanium (96% efficiency) power supplies</td>
<td>SBE-820J/J2-830(D): Up to 8 hot-swappable 3000W DC power supplies</td>
<td>SBE-610J2-830(D): Up to 8 hot-swappable 3000W DC power supplies</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chassis Management Module (CMM)</th>
<th>Single/Redundant CMM for remote system management with software</th>
<th>Up to 2 hot-swappable CMMs for remote system management with software</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBE-820C/J/J2/L/H-822: Up to 8 hot-swappable 2200W Titanium (96% efficiency) power supplies</td>
<td></td>
<td>SBE-610J/610J2-822: Up to 8 hot-swappable 2200W Titanium (96% efficiency) power supplies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Models</th>
<th>SBE-820C/J/J2/L/H-822: Up to 2 hot-swappable 10G Ethernet switches or pass-thru modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Models</td>
<td>SBE-820J/J2-830: Up to 4 hot-swappable 25G Ethernet switches or pass-thru modules</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rack Unit</th>
<th>8 RU</th>
<th>6 RU</th>
</tr>
</thead>
</table>

| 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") |
## 4th Gen Intel® Xeon® Scalable Processors Supported

### Server Nodes/Enclosure

- **8U SuperBlade® X13 Servers**
  - Dual 4th Gen Intel® Xeon® Scalable Processors
- **6U SuperBlade® X13 Servers**
  - Single 4th Gen Intel® Xeon® Scalable Processor

### Processor Support
- Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP)
- Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s
- OCP 3.0 (PCIe 5.0 x16)
- Standard IB or GbE PCIe cards

### 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

### PCIe Expansion
- 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
- 2 M.2 NVMe drive
- 2 Hot-swappable U.2 NVMe/SATA3 and 1 SATA3
- 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
- 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

### LED Indicators
- 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-820J2-422
- SBE-820J2-630/830
- SBE-610J2-422/622/822
- SBE-610J2-430/630/830
# X13 SuperBlade®

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

- **6U SuperBlade® X13 Servers**
  - Single 4th Gen Intel® Xeon® Scalable Processor
  - Dual 4th Gen Intel® Xeon® Scalable Processors
- **6U SuperBlade® X13 Servers**
  - Dual 4th Gen Intel® Xeon® Scalable Processors

## Specifications

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SBI-611E-1C2N</th>
<th>SBI-621E-1T3N</th>
<th>SBI-621E-5T3N</th>
<th>SBI-621E-1C3N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Server Nodes/Enclosure</strong></td>
<td>10</td>
<td>10</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td><strong>Processor</strong></td>
<td>Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP)</td>
<td>Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP)</td>
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<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C741 chipset</td>
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<td>Intel® C741 chipset</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s</td>
<td>Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s</td>
<td>Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s or 2DPC speeds up to 4400 MT/s</td>
<td>Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s or 2DPC speeds up to 4400 MT/s</td>
</tr>
<tr>
<td><strong>PCIe Expansion</strong></td>
<td>1 PCIe 5.0 x16 slot</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Storage &amp; RAID</strong></td>
<td>2 Hot-swappable U.2 NVMe/SAS/SATA3 1 M.2 NVMe drive Broadcom 3108 HW RAID</td>
<td>3 Hot-plug U.2 NVMe/SATA drive bays Intel® PCH 3.0 SATA Controller</td>
<td>3 Hot-plug U.2 NVMe/SATA drive bays Intel® PCH 3.0 SATA Controller</td>
<td>2 Hot-plug U.2 NVMe/SAS/SATA drive bays &amp; 1 Hot-Plug SAS drive bay; HW RAID w/ 3108</td>
</tr>
<tr>
<td><strong>Networking</strong></td>
<td>Standard IB or GbE PCIe cards Mezzanine option for Dual 25GbE Dual 25GbE LOM</td>
<td>Mezzanine option for Dual 25GbE Dual 25GbE LOM</td>
<td>Mezzanine option for Dual 25GbE Dual 25GbE LOM</td>
<td>Mezzanine option for Dual 25GbE Dual 25GbE LOM</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Redundant Chassis Management Modules, Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust</td>
<td>Redundant Chassis Management Modules, Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust</td>
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<td><strong>LED Indicators</strong></td>
<td>Fault LED, Network Activity LED, Power LED, UID</td>
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<td>Fault LED, Network Activity LED, Power LED, UID</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>248 x 44.4 x 597mm (9.75” x 1.75” x 23.5”)</td>
<td>248 x 44.4 x 597mm (9.75” x 1.75” x 23.5”)</td>
<td>248 x 88.9 x 596.9mm (9.75” x 3.5” x 23.5”)</td>
<td>248 x 44.4 x 597mm (9.75” x 1.75” x 23.5”)</td>
</tr>
</tbody>
</table>
## X13 GRANDTWIN™

### 2U 4-Node Front I/O

**NEW!**

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

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**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** | • HPC • Mission Critical Web Applications • EDA (Electric Design Automation) • Telco Edge Cloud • High-availability Cache Cluster • Multi-Purpose CDN • MEC (Multi-Access Edge Computing) • Cloud Gaming | • HPC • Mission Critical Web Applications • EDA (Electric Design Automation) • Telco Edge Cloud • High-availability Cache Cluster • Multi-Purpose CDN • MEC (Multi-Access Edge Computing) • Cloud Gaming
**Outstanding Features** | • Single processor with 16 DIMM • Front I/O design • Four front access hot-swappable node in 2U • Flexible storage selection | • Single processor with 16 DIMM • SAS controller built-in • Front I/O design • Four front access hot-swappable node in 2U • Flexible storage selection
**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 drive bays; 4x 2.5" NVMe dedicated; Optional RAID support via Broadcom® 3808 ADC
**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 Server Solutions - January 2023
## Processor Support
- 4th Gen Intel® Xeon® Scalable processors
  - Single Socket LGA 4677 (Socket E) supported
  - TDP up to 300W

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

## Outstanding Features
- Single processor with 16 DIMM
- Four front access hot-swappable node in 2U
- 6x NVMe/SATA drives per node

## Serverboard
- SUPER® X13SET-G
- SUPER® X13SET-GC

## Chipset
- Intel® C741

## System Memory (Max.)
- 16 DIMM slots
- Upto 4TB: 16x256GB DRAM

## Expansion Slots
- 2 PCIe 5.0 x16 AIOM slot(s)

## Onboard Storage Controller
- Intel® SATA
- Broadcom® Broadcom® 3808

## Connectivity
- via AIOM

## VGA/Audio
- 1 VGA port

## Management
- SuperCloud Composer; SuperDoctor® 5 (SDS); 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

## Peripheral Bays
- None

## Power Supply
- Redundant 2200W Titanium level (96%)

## Cooling System
- 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")
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-621BT-DNTR</th>
<th>SYS-621BT-DNC8R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>4th Gen Intel® Xeon® Scalable processors (Socket E) supported TDP up to 300W</td>
<td>4th Gen Intel® Xeon® Scalable processors (Socket E) supported TDP up to 300W</td>
</tr>
</tbody>
</table>
| Key Applications      | - Back-up & Recovery  
- Scale-Out Object Storage  
- Hyperconverged Infrastructure  
- Tool-less support for swapping AOC cards  
- Supports Liquid Cooling up to 350W TDP  
- Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SATA per node (Drive Bays)  
- Optional TPM 1.2 or 2.0 module  
- HW Boot Controller for NVMe M.2 drives | - Back-up & Recovery  
- Scale-Out Object Storage  
- Hyperconverged Infrastructure  
- Tool-less support for swapping AOC cards  
- Supports Liquid Cooling up to 350W TDP  
- Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SAS per node (Drive Bays)  
- Optional TPM 1.2 or 2.0 module  
- HW Boot Controller for NVMe M.2 drives |
| Outstanding Features  |                                                                              |                                                                              |
| 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       | Intel® SATA                                                                  | Broadcom® 3808                                                                |
| Onboard Storage       |                                                                              |                                                                              |
| 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

#### Processor Support
- 4th Gen Intel® Xeon® Scalable processors
- Dual Socket LGA 4677 (Socket E) supported
- TDP up to 350W

#### Key Applications
- All-Flash Object Storage
- All-Flash Storage Area Network
- All-Flash Hyperconverged Infrastructure

#### Outstanding Features
- Tool-less support for swapping AOC cards
- Supports Liquid Cooling up to 350W TDP
- Supports 2x PCIe 5.0 NVMe and 10x PCIe 4.0 NVMe/SAS per node (Drive Bays)
- Optional TPM 1.2 or 2.0 module
- HW Boot Controller for NVMe M.2 drives

#### Serverboard
- SUPER® X13DET-B

#### Chipset
- Intel® C741

#### System Memory (Max.)
- 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)

#### Onboard Storage Controller
- Broadcom® 3816

#### Connectivity
- via AIOM

#### VGA/Audio
- 1 onboard VGA port

#### Management
- Intel® Node Manager: IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supermicro 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

#### Peripheral Bays
- None

#### Power Supply
- 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)

#### 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 2-Node

#### Processor Support
- 4th Gen Intel® Xeon® Scalable processors
- Dual Socket LGA 4677 (Socket E) supported
- TDP up to 350W

#### Key Applications
- Big Data Analytics and AI
- Scale Out All-Flash NVMe Storage
- Diskless HPC Clusters
- High-Performance File System

#### Outstanding Features
- Tool-less support for swapping AOC cards
- Supports Liquid Cooling up to 350W TDP
- Supports 2x PCIe 5.0 NVMe and 10x PCIe 4.0 NVMe/SATA per node (Drive Bays)
- Optional TPM 1.2 or 2.0 module
- HW Boot Controller for NVMe M.2 drives

#### Serverboard
- SUPER® X13DET-B

#### Chipset
- Intel® C741

#### System Memory (Max.)
- 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)

#### Onboard Storage Controller
- Intel® SATA

#### Connectivity
- via AIOM

#### VGA/Audio
- 1 I/O module VGA port

#### Management
- Intel® Node Manager: IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supermicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog

#### Drive Bays
- 12x 2.5" hot-swap NVMe/SATA drive bays;
- RAID support via Intel® PCH

#### Peripheral Bays
- None

#### Power Supply
- 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)

#### 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")
### X13 BiGTwin®

**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 | • Container Storage  
• Scale-Out File Storage  
• Hyperconverged Infrastructure  
• Tool-less support for swapping AOC cards  
• Supports Liquid Cooling up to 350W TDP | • Scale-Out File Server  
• Container Storage  
• Hyperconverged Infrastructure  
• Tool-less support for swapping AOC cards  
• Supports Liquid Cooling up to 350W TDP

Outstanding Features | • Supports 2x PCIe 5.0 NVMe and 1x PCIe 4.0 NVMe/SAS per node (Drive Bays)  
• Optional TPM 1.2 or 2.0 module  
• HW Boot Controller for NVMe M.2 drives | • Supports 2x PCIe 5.0 NVMe and 1x PCIe 4.0 NVMe/SATA per node (Drive Bays)  
• Optional TPM 1.2 or 2.0 module  
• HW Boot Controller for NVMe M.2 drives

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  
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; Supermicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog | Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supermicro 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")

---
### 2U 4-Node

#### New!

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

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#### SYSTEMS:

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-221BT-HNC8R</th>
<th>SYS-221BT-HNC9R</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Processor Support</th>
<th>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 205W</th>
<th>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 205W</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Key Applications</th>
<th>• All-Flash Hyperconverged Infrastructure • Disks less HPC Clusters • Container-as-a-Service; Application Accelerator</th>
<th>• High-Density Storage RAID Array • Virtualized Big Data Analytics • Mission Critical HPC • Tool-less support for swapping AOC cards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding Features</td>
<td>• Supports Liquid Cooling up to 350W TDP • Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SAS per node (Drive Bays) • Optional TPM 1.2 or 2.0 module • HW Boot Controller for NVMe M.2 drives</td>
<td>• Supports Liquid Cooling up to 350W TDP • Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SAS per node (Drive Bays) • Optional TPM 1.2 or 2.0 module • HW Boot Controller for NVMe M.2 drives</td>
</tr>
</tbody>
</table>

| 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 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 AIO M | via AIO M |

| VGA/Audio | 1 onboard VGA port | 1 onboard VGA port |

| Management | Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supermicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog | Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supermicro 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

**(Coming Soon All NVMe Gen 5)**

### NEW!

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

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<table>
<thead>
<tr>
<th><strong>MODEL</strong></th>
<th><strong>SYS-221BT-HNTR</strong></th>
<th><strong>SYS-221BT-HNR</strong></th>
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<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 205W</td>
<td>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 205W</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Diskless HPC Clusters • High-Performance File System • Container-as-a-Service; Application Accelerator • All-Flash NVMe Hyperconverged Infrastructure</td>
<td>• Tool-less support for swapping AOC cards • High-Performance File System • Container-as-a-Service; Application Accelerator • All-Flash NVMe Hyperconverged Infrastructure</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• Tool-less support for swapping AOC cards</td>
<td>• Tool-less support for swapping AOC cards</td>
</tr>
<tr>
<td></td>
<td>• Supports Liquid Cooling up to 350W TDP</td>
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<td></td>
<td>• Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SATA per node (Drive Bays)</td>
<td>• Optional TPM 1.2 or 2.0 module</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• HW Boot Controller for NVMe M.2 drives</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X13DET-B</td>
<td>SUPER® X13DET-B</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>16 DIMM slots UP to 4TB: 16x 256GB DRAM</td>
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<tr>
<td><strong>Expansion Slots</strong></td>
<td>2 M.2 (2x110mm) slot(s) for boot drive or caching 2 PCIe 5.0x16 LP slot(s)</td>
<td>2 M.2 (2x110mm) slot(s) for boot drive or caching 2 PCIe 5.0x16 LP slot(s)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>via AIOM</td>
<td>via AIOM</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>1 I/O module VGA port</td>
<td>1 onboard VGA port</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supermicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® S; Watch Dog</td>
<td>Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supermicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® S; Watch Dog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>6x 2.5&quot; hot-swap NVMe/SATA drive bays; RAID support via Intel® PCH</td>
<td>6x 2.5&quot; hot-swap NVMe drive bays;</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>1U 3000W Redundant Power Supply Titanium with C22 inlet, 45(W) X 480(L)</td>
<td>1U 3000W Redundant Power Supply Titanium with C22 inlet, 45(W) X 480(L)</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>4x 16K RPM Counter Rotating 8cm Fan(s)</td>
<td>4x 16K RPM Counter Rotating 8cm Fan(s)</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>2U Rackmount Enclosure: 449 x 88 x 730mm (17.68&quot; x 3.47&quot; x 28.75&quot;) Package: 626 x 248 x 1150mm (24.65&quot; x 9.76&quot; x 45.28&quot;)</td>
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</tr>
</tbody>
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X13 Server Solutions - January 2023
### X13 FatTwin®

#### MODEL
- **SYS-F511E2-RT**
- **SYS-F521E3-RTB**

<table>
<thead>
<tr>
<th>Processor Support</th>
<th>4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 350W</th>
<th>4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 350W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Applications</td>
<td>• Hyperscale / Hyperconverged&lt;br&gt;• Telco Data Center and ETSI certified&lt;br&gt;• Data Center Enterprise Applications&lt;br&gt;• HPC and Big Data</td>
<td>• Hyperscale / Hyperconverged&lt;br&gt;• Telco Data Center and ETSI certified&lt;br&gt;• Data Center Enterprise Applications&lt;br&gt;• HPC and Big Data</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Shared power architecture for best efficiency&lt;br&gt;• Redundant cooling and power configurations for high availability&lt;br&gt;• Optimized designs for storage and compute density&lt;br&gt;• HDD hot-swap capability&lt;br&gt;• 16 DIMMs Up to 4TB DDR5</td>
<td>• Shared power architecture for best efficiency&lt;br&gt;• Redundant cooling and power configurations for high availability&lt;br&gt;• Optimized designs for storage and compute density&lt;br&gt;• HDD hot-swap capability&lt;br&gt;• 16 DIMMs Up to 4TB DDR5</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X13SEFR-A</td>
<td>SUPER® X13SEFR-A</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td>System Memory (Max.)</td>
<td>16 DIMM slots UP to 4TB: 16x 256GB DRAM</td>
<td>16 DIMM slots UP to 4TB: 16x 256GB DRAM</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>M.2 slot(s) PCIe 5.0 x16 LP slot(s) 2 AIOM slot(s)</td>
<td>AIOM slot(s) M.2 slot(s) PCIe 5.0 x16 LP slot(s)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td>Connectivity</td>
<td>1x 1GbE RJ45 (BMC) port(s) via AIOM</td>
<td>1x 1GbE RJ45 (BMC) port(s) via AIOM</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>1 VGA port, Aspeed AST2600 BMC</td>
<td>1 VGA port, Aspeed AST2600 BMC</td>
</tr>
<tr>
<td>Management</td>
<td>Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog</td>
<td>Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>6x 2.5&quot; hot-swap NVMe/SATA/SAS drive bays; 6x 2.5&quot; NVMe hybrid; 6x 2.5&quot; 7mm drive bays</td>
<td>8x 3.5&quot; hot-swap NVMe/SATA/SAS drive bays; 8x 2.5&quot; NVMe hybrid; 8x 2.5&quot; 7mm drive bays</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 2000W Titanium level (96%)</td>
<td>Redundant 2000W Titanium level (96%)</td>
</tr>
<tr>
<td>Cooling System</td>
<td>3x 4cm heavy duty fan(s)</td>
<td>2x 8cm heavy duty fan(s)</td>
</tr>
<tr>
<td>Form Factor</td>
<td>4U Rackmount&lt;br&gt;Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”)&lt;br&gt;Package: (28.3” x 15” x 42.4”)</td>
<td>4U Rackmount&lt;br&gt;Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”)&lt;br&gt;Package: (28.3” x 15” x 42”)</td>
</tr>
</tbody>
</table>
# X13 CloudDC

**NEW!**

4th Gen Intel® Xeon® Scalable processors

## Processor Support
- 4th Gen Intel® Xeon® Scalable processors
- Dual Socket LGA-4677 (Socket E) supported
- TDP up to 350W; 4 UPI
  - CDN, Edge Nodes
  - DNS & Gateway Servers, Firewall Application
  - Cloud Computing, Compact Server
  - Data Center Optimized, Value IaaS
  - Web Server, Firewall Application
  - Up to 12x NVMe/SATA/SAS hybrid tool-less drive bays
  - Optional hot-swappable 2.5" rear drive bays
  - Flexible expansion with up to 2x PCIe 5.0 x16 and 4x PCIe 5.0 x8 (convertible to 2x PCIe 5.0 x16) slots
  - Dual sockets up to 350W TDP
  - Dual NVMe M.2 (2280)
  - Dual FHFLDW PCIe 4.0 GPU support
  - Dual AIOIM with NCSI (OCP 3.0 NIC)
  - Compact server with tool-less drive trays
  - Balanced architecture in compact chassis (25.6")
  - 3.5" tool-less drive trays also support 2.5" drives

### Key Applications
- CDN, Edge Nodes
- DNS & Gateway Servers, Firewall Application
- Cloud Computing, Compact Server
- Data Center Optimized, Value IaaS
- Web Server, Firewall Application

### Outstanding Features
- Support powerful double-width GPUs
- Flexible Configurations. Support 6 PCIe 5.0 expansion slots + 2x AIOIM slots in 2U

## System Memory (Max.)
- 16 DIMM slots
- UP to 4TB: 16x 256GB DRAM

## Expansion Slots
- Slot 1: PCIe 4.0 x8 FHFL (optional x16 by merging slot 2)
- Slot 2: PCIe 4.0 x8 FHFL
- Slot 3: PCIe 4.0 x16 FHHL
- Slot 4: PCIe 4.0 x8 FHFL
- Slot 5: PCIe 4.0 x8 FHFL (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

## Onboard Storage Controller
- Intel® SATA

## Connectivity
- with Via Advanced I/O Module, AIOIM (OCP 3.0 NIC, refer to AIOIM Network Card(s) under Optional Parts List for NIC options) via AIOIM

## VGA/Audio
- 1 VGA port

## Management
- Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish
- SCC; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
- 12x 3.5" hot-swap NVMe/SATA/SAS hybrid drive bays;
- Optional RAID support via RAID controller AOC

## Drive Bays
- None

## Peripheral Bays
- None

## Power Supply
- Redundant 1200W Titanium level (96%)

## Cooling System
- 3x 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”)

---

## X13 Server Solutions - January 2023
## X13 CloudDC

### Compact Cloud Compute

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

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X13 Server Solutions - January 2023
### Model Comparison

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-121C-TN2R</th>
<th>SYS-611C-TN4R</th>
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<tbody>
<tr>
<td>Processor Support</td>
<td>4th Gen Intel® Xeon® Scalable processors&lt;br&gt; Dual Socket LGA-4677 (Socket E) supported TDP up to 270W; 4 UPI</td>
<td>4th Gen Intel® Xeon® Scalable processors&lt;br&gt; Dual Socket LGA-4677 (Socket E) supported TDP up to 270W; 4 UPI</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• CDN, Edge Nodes&lt;br&gt; • DNS &amp; Gateway Servers, Firewall Application&lt;br&gt; • Cloud Computing, Compact Server&lt;br&gt; • Data Center Optimized, Value IaaS&lt;br&gt; • Web Server, Firewall Application&lt;br&gt; • Up to 8x SATA/SAS w/ 2x NVMe tool-less drive bays&lt;br&gt; • Optional DVD ROM support&lt;br&gt; • Dual sockets up to 270W TDP</td>
<td>• CDN, Edge Nodes&lt;br&gt; • DNS &amp; Gateway Servers, Firewall Application&lt;br&gt; • Cloud Computing, Compact Server&lt;br&gt; • Data Center Optimized, Value IaaS&lt;br&gt; • Web Server, Firewall Application&lt;br&gt; • Up to 4x SATA/SAS/NVMe tool-less drive bays&lt;br&gt; • Optional fixed 2.5” 7 mm drive bays&lt;br&gt; • Dual sockets up to 270W TDP</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Up to 8x SATA/SAS w/ 2x NVMe tool-less drive bays&lt;br&gt; • Optional DVD ROM support&lt;br&gt; • Dual sockets up to 270W TDP</td>
<td>• Dual NVMe M.2 (2280)&lt;br&gt; Dual AIOM with NCSI (OCP 3.0 NIC)&lt;br&gt; Compact server with tool-less drive trays&lt;br&gt; Balanced architecture in compact chassis (23.5”)&lt;br&gt; 8x 2.5” hot-swap NVMe/SATA/SAS hybrid drive bays; Optional RAID support via RAID controller AOC</td>
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<td>SUPER® X13DDW-A</td>
<td>SUPER® X13DDW-A</td>
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<tr>
<td>Chipset</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
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<td>System Memory (Max.)</td>
<td>16 DIMM slots&lt;br&gt; Up to 4TB: 16x 256GB DRAM</td>
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</tr>
<tr>
<td>Expansion Slots</td>
<td>2 PCIe 5.0 x16 FHHL slot(s)</td>
<td>2 PCIe 5.0 x16 FHHL slot(s)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® Sata</td>
<td>Intel® Sata</td>
</tr>
<tr>
<td>Connectivity</td>
<td>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</td>
<td>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</td>
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<td>VGA/Audio</td>
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<tr>
<td>Management</td>
<td>Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SCC; SPM; SSM; SUM; SuperDoctor®; Watch Dog</td>
<td>Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SCC; SPM; SSM; SUM; SuperDoctor®; Watch Dog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>8x 2.5” hot-swap NVMe/SATA/SAS hybrid drive bays; Optional RAID support via RAID controller AOC</td>
<td>8x 2.5” hot-swap NVMe/SATA/SAS hybrid drive bays; Optional RAID support via RAID controller AOC</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>1x DVD-ROM (optional)</td>
<td>2x 2.5” (optional)</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 860W Platinum level (94%)</td>
<td>Redundant 860W Platinum level (94%)</td>
</tr>
<tr>
<td>Cooling System</td>
<td>6x 4cm heavy duty fan(s)</td>
<td>6x 4cm heavy duty fan(s)</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U Rackmount&lt;br&gt; Enclosure: 437 x 43 x 597mm (17.2” x 1.7” x 23.5”)&lt;br&gt; Package: 605 x 197 x 822mm (23.8” x 7.8” x 32.4”)</td>
<td>1U Rackmount&lt;br&gt; Enclosure: 437 x 43 x 650mm (17.2” x 1.7” x 25.6”)&lt;br&gt; Package: 605 x 197 x 878mm (23.8” x 7.8” x 34.6”)</td>
</tr>
</tbody>
</table>

**X13 CloudDC**

**General Purpose Balanced**

**Compact Storage Optimized**
X13 ALL-FLASH EDSFF

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

### Outstanding Features

- **VGA/Audio**
  - Dual Socket LGA-4677 (Socket E) supported TDP up to 270W; 4UPI

- **Processor Support**
  - In-Memory Computing
  - Software-defined Storage
  - NVMe Over Fabrics Solution
  - Private & Hybrid Cloud
  - Data Intensive HPC
  - Two PCIe 5.0 x16 slots & two AIOM connectors
  - Supports 32 DIMMs with 2DPC, up to 1278 memory capacity with 16 DIMMs of 256GB 3DS RDIMM/RDIMM DDRI5 ECC memory and 16 DIMMs of 512GB
  - Intel® Optane PMem 300 Series
  - Redundant Titanium 2000W Power Supplies
  - 4th Generation Intel® Xeon® Scalable processors

- **Serverboard**
  - SuperDoctor® 5; Watch Dog

- **Chipset**
  - Intel® C741

- **System Memory (Max.)**
  - 32 DIMM slots

- **Expansion Slots**
  - 2 PCIe 5.0 x16 AIOM slot(s)
  - 2 PCIe 5.0 x16 FH slot(s)

- **Onboard Storage Controller**
  - Intel® SATA

- **Connectivity**
  - via AIOM

- **VGA/Audio**
  - 1 VGA port

- **Management**
  - IPMI 2.0; NMI; SUM; SuperDoctor® 5; Watch Dog

- **Drive Bays**
  - 24x 2.5” hot-swap NVMe drive bays; 24x E1.S Hot-swap NVMe (9.5mm or 15mm) drive slots

- **Peripheral Bays**
  - None

- **Power Supply**
  - 2000W Redundant Power Supplies with PMBus

- **Cooling System**
  - 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”)

### Key Applications

- **Serverboard SUPER® X13DSF-A**
  - SuperDoctor® 5; Watch Dog
  - Tool-less system design for east maintenance
  - 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)

- **Chipset**
  - Intel® C741

- **System Memory (Max.)**
  - 32 DIMM slots

- **Expansion Slots**
  - 2 PCIe 5.0 x16 AIOM slot(s)
  - 2 PCIe 5.0 x16 FH slot(s)

- **Onboard Storage Controller**
  - Intel® SATA

- **Connectivity**
  - via AIOM

- **Network**
  - Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPMI; SSD; SUM; SuperDoctor® 5; Watch Dog

- **Drive Bays**
  - 24x 2.5” hot-swap NVMe drive bays; 24x E1.S Hot-swap NVMe (9.5mm or 15mm) drive slots

- **Peripheral Bays**
  - None

- **Power Supply**
  - 2000W Redundant Power Supplies with PMBus

- **Cooling System**
  - 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”)

### Model Comparison

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SSG-121E-NES24R</th>
<th>SYS-221HE-FTNR</th>
<th>SYS-221HE-FTNRD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>4th Gen Intel® Xeon® Scalable processors supported TDP up to 270W; 4UPI</td>
<td>4th Gen Intel® Xeon® Scalable processors supported TDP up to 350W; 4UPI</td>
<td>4th Gen Intel® Xeon® Scalable processors supported TDP up to 350W; 4UPI</td>
</tr>
<tr>
<td>Key Applications</td>
<td>- In-Memory Computing</td>
<td>- Cloud Computing</td>
<td>- Cloud Computing</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>- Tool-less system design for east maintenance</td>
<td>- Flexible networking options with 2 AIOM networking slots (OCP NIC 3.0 compatible)</td>
<td>- Tool-less system design for east maintenance</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X13DSF-A</td>
<td>SUPER® X13DEM</td>
<td>SUPER® X13DEM</td>
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<tr>
<td>Chipset</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td>System Memory (Max.)</td>
<td>32 DIMM slots</td>
<td>32 DIMM slots</td>
<td>32 DIMM slots</td>
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<tr>
<td>Expansion Slots</td>
<td>2 PCIe 5.0 x16 AIOM slot(s)</td>
<td>2 PCIe 5.0 x16 FH slot(s)</td>
<td>2 PCIe 5.0 x16 FH slot(s)</td>
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<tr>
<td>Onboard Storage Controller</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
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<tr>
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<td>via AIOM</td>
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<tr>
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<td>Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPMI; SSD; SUM; SuperDoctor® 5; Watch Dog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>24x 2.5” hot-swap NVMe drive bays; 24x E1.S Hot-swap NVMe (9.5mm or 15mm) drive slots</td>
<td>6x 2.5” hot-swap NVMe/SATA drive bays; 6x 2.5” NVMe hybrid; Optional RAID support via RAID Controller AOC</td>
<td>6x 2.5” hot-swap NVMe/SATA drive bays; 6x 2.5” NVMe hybrid; Optional RAID support via RAID Controller AOC</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Power Supply</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Cooling System</td>
<td>8x 4cm heavy duty fan(s)</td>
<td>6 heavy duty fan(s)</td>
<td>6 heavy duty fan(s)</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U Rackmount Enclosure: 438.4 x 43.6 x 773.25mm (17.2” x 1.7” x 30.4”)</td>
<td>2U Rackmount Enclosure: 436.88 x 88.9 x 574mm (17.2” x 3.5” x 22.6”)</td>
<td>2U Rackmount Enclosure: 436.88 x 88.9 x 574mm (17.2” x 3.5” x 22.6”)</td>
</tr>
<tr>
<td>Package Size</td>
<td>604.774 x 199.898 x 1029.97mm (23.81” x 7.87” x 40.55”)</td>
<td>Package: 598 x 247 x 938mm (23.5” x 9.7” x 36.9”)</td>
<td>Package: 598 x 247 x 938mm (23.5” x 9.7” x 36.9”)</td>
</tr>
</tbody>
</table>
## X13 HYPER

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

### 4th Gen Intel® Xeon® Scalable processors Supported

### New! MODEL SYS-221H-TNR SYS-221H-TN24R

<table>
<thead>
<tr>
<th>Processor Support</th>
<th>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W; 4UPI</th>
<th>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W; 4UPI</th>
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<tbody>
<tr>
<td>Outstanding Features</td>
<td>- Tool-less system design for easy maintenance - Storage configurations up to 16x 2.5&quot; hot-swap NVMe/SATA/SAS drive bays - Flexible networking options with AIOM/OCP NIC 3.0 support</td>
<td>- Tool-less system design for easy maintenance - Flexible networking options with AIOM/OCP NIC 3.0 support - 24x 2.5&quot; hot-swap NVMe/SATA/SAS drive bays</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X13DEM</td>
<td>SUPER® X13DEM</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td>System Memory (Max.)</td>
<td>32 DIMM slots UP to 8TB: 32x 256GB DRAM</td>
<td>32 DIMM slots UP to 8TB: 32x 256GB DRAM</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>Configurable PCIe slot options up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 FH, 10.5&quot;L</td>
<td>Configurable PCIe slot options up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 FH, 10.5&quot;L</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td>Connectivty</td>
<td>2x 100GbE QSF28 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® X550-AT2 (optional) 2x 1GbE SFP+ with Intel® X710-BM2 (optional) 2x 25GbE SFP28 with Broadcom® BCM57414 (optional) 4x 10GbE RJ45/SFP+ with Intel® X710-TM4 (optional) 4x 10GbE SFP+ with Intel® X710-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</td>
<td>2x 100GbE QSF28 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® X710-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</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
</tr>
<tr>
<td>Management</td>
<td>Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSIM; SuperDoctor® S; Watch Dog</td>
<td>Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSIM; SuperDoctor® S; Watch Dog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>8x 2.5&quot; hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC</td>
<td>24x 2.5&quot; hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 1200W Titanium level (96%)</td>
<td>Redundant 1600W Titanium level (96%)</td>
</tr>
<tr>
<td>Cooling System</td>
<td>4x 8cm heavy duty fan(s)</td>
<td>4x 8cm heavy duty fan(s)</td>
</tr>
<tr>
<td>Form Factor</td>
<td>2U Rackmount Enclosure: 437 x 88.9 x 760mm (17.2&quot; x 3.5&quot; x 29.9&quot;) Package: 605 x 263 x 1107mm (23.8&quot; x 10.4&quot; x 43.6&quot;)</td>
<td>2U Rackmount Enclosure: 437 x 88.9 x 760mm (17.2&quot; x 3.5&quot; x 29.9&quot;) Package: 605 x 263 x 1107mm (23.8&quot; x 10.4&quot; x 43.6&quot;)</td>
</tr>
</tbody>
</table>
# X13 HYPER

**2U Hyper**
Optimized for Storage Capacity

**1U Hyper**
Compute & Storage Powerhouse
Liquid Cooling Options

---

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

---

## MODEL

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-621H-TN12R</th>
<th>SYS-121H-TNR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>4th Gen Intel® Xeon® Scalable processors</td>
<td>4th Gen Intel® Xeon® Scalable processors</td>
</tr>
<tr>
<td></td>
<td>Dual Socket LGA-4677 (Socket E) supported TDP up to 350W; 4 UPI</td>
<td>Dual Socket LGA-4677 (Socket E) supported TDP up to 350W; 4 UPI</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Software-defined Storage</td>
<td>• Software-defined Storage</td>
</tr>
<tr>
<td></td>
<td>• Virtualization</td>
<td>• Virtualization</td>
</tr>
<tr>
<td></td>
<td>• Enterprise Server</td>
<td>• Enterprise Server</td>
</tr>
<tr>
<td></td>
<td>• Cloud Computing</td>
<td>• Cloud Computing</td>
</tr>
<tr>
<td></td>
<td>• AI Inference and Machine Learning</td>
<td>• AI Inference and Machine Learning</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• Tool-less system design for easy maintenance</td>
<td>• Tool-less system design for easy maintenance</td>
</tr>
<tr>
<td></td>
<td>• Flexible networking options with AIOM/OCP NIC 3.0 support</td>
<td>• Storage configurations up to 12x 2.5&quot; hot-swap NVMe/SATA/SAS drive bays</td>
</tr>
<tr>
<td></td>
<td>12x 3.5&quot;/2.5&quot; hot-swap NVMe/SATA/SAS drive bays</td>
<td>• Flexible networking options with AIOM/OCP NIC 3.0 support</td>
</tr>
</tbody>
</table>

---

**Serverboard**

| Supermicro® X13DEM | Supermicro® X13DEM |

---

**Chipset**

| Intel® C741 | Intel® C741 |

---

**System Memory (Max.)**

<table>
<thead>
<tr>
<th>32 DIMM slots</th>
<th>32 DIMM slots</th>
</tr>
</thead>
</table>

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® C741 | Intel® C741 |

---

**Connectivity**

| Intel® SATA | Intel® SATA |

---

**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 Server Solutions - January 2023
## X13 UP WIO

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-511E-WR</th>
<th>SYS-111E-WR</th>
<th>SYS-521E-WR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>4th Gen Intel® Xeon® Scalable processors Single Socket LGA 4677 (Socket E) supported TDP up to 300W</td>
<td>4th Gen Intel® Xeon® Scalable processors Single Socket LGA 4677 (Socket E) supported TDP up to 300W</td>
<td>4th Gen Intel® Xeon® Scalable processors Single Socket LGA 4677 (Socket E) supported TDP up to 300W</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>- Virtualization</td>
<td>- Virtualization</td>
<td>- Entry GPU server</td>
</tr>
<tr>
<td></td>
<td>- Value IaaS</td>
<td>- Entry GPU server</td>
<td>- Database/Storage</td>
</tr>
<tr>
<td></td>
<td>- Entry GPU server</td>
<td>- Data Center Optimized</td>
<td>- Network Appliance</td>
</tr>
<tr>
<td></td>
<td>- Data Center Optimized</td>
<td>- Cloud Computing</td>
<td>- Data Center Optimized</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>- Maximum I/O. Support 3 x16 expansion slots in 1U form factor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Cost optimized 1U X13 solution</td>
<td>- Maximum I/O. Support 3 x16 expansion slots in 1U form factor.</td>
<td>- Up to 4 expansion slots with optional riser card</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Max 10x PCIe 5.0 NVMe drives supported in 1U Form Factor</td>
<td>- Max 4x hybrid PCIe 5.0 NVMe drives supported at front</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X13SEW-F</td>
<td>SUPER® X13SEW-F</td>
<td>SUPER® X13SEW-F</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C741</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>8 DIMM slots UP to 2TB: 8x 256GB DRAM</td>
<td>8 DIMM slots UP to 2TB: 8x 256GB DRAM</td>
<td>8 DIMM slots UP to 2TB: 8x 256GB DRAM</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>Slot 1: PCIe 5.0 x16 FHFL</td>
<td>Slot 1: PCIe 5.0 x16 FHFL</td>
<td>Slot 1: PCIe 5.0 x16 FHFL</td>
</tr>
<tr>
<td></td>
<td>Slot 2: PCIe 5.0 x16 FHFL</td>
<td>Slot 2: PCIe 5.0 x16 FHFL</td>
<td>Slot 2: PCIe 5.0 x16 FHFL</td>
</tr>
<tr>
<td></td>
<td>Slot 3: PCIe 5.0 x8 (in x16) LP</td>
<td>Slot 3: PCIe 5.0 x8 (in x16) LP</td>
<td>Slot 3: PCIe 5.0 x8 LP</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>2x 1GbE RJ45 port(s) with Intel® Ethernet Controller i210</td>
<td>2x 1GbE RJ45 port(s) with Intel® Ethernet Controller i210</td>
<td>2x 1GbE RJ45 port(s) with Intel® Ethernet Controller i210</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>1 onboard VGA port</td>
<td>1 onboard VGA port</td>
<td>1 onboard VGA port</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM</td>
<td>Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM</td>
<td>Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>4x 3.5&quot; SATA/SAS drive bays; 10x 2.5&quot; NVMe/SATA/SAS drive bays; 10x 2.5&quot; NVMe hybrid;</td>
<td>8x 3.5&quot; NVMe/SATA/SAS drive bays; 4x 3.5&quot; NVMe hybrid;</td>
<td></td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>2x 2.5&quot;</td>
<td>None</td>
<td>2x 2.5&quot;</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>Redundant 860W Platinum level (94%)</td>
<td>Redundant 860W Platinum level (94%)</td>
<td>Redundant 920W platinum level</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>5x (4cm x 4cm x 5.6cm) heavy duty fan(s)</td>
<td>5x (4cm x 4cm x 5.6cm) heavy duty fan(s)</td>
<td>3x (8cm x 8cm x 3.8cm) heavy duty fan(s)</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>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”)</td>
<td>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”)</td>
<td>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”)</td>
</tr>
</tbody>
</table>
### X13 MP SYSTEMS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-241H-TNRTTP</th>
<th>SYS-241E-TNRTTP</th>
<th>SYS-681E-TR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>4th Gen Intel® Xeon® Scalable processors&lt;br&gt;Quad Socket LGA-4677 (Socket E) supported&lt;br&gt;TDP up to 350W; 3 UPI up to 16GT/s</td>
<td>4th Gen Intel® Xeon® Scalable processors&lt;br&gt;Quad Socket LGA-4677 (Socket E) supported&lt;br&gt;TDP up to 250W; 3 UPI up to 16GT/s</td>
<td>4th Gen Intel® Xeon® Scalable processors&lt;br&gt;Octa Socket LGA-4677 (Socket E) supported&lt;br&gt;TDP up to 350W; 4 UPI up to 16GT/s</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td><strong>SAP HANA</strong>&lt;br&gt;<strong>HCl</strong>&lt;br&gt;<strong>In-Memory Database</strong>&lt;br&gt;<strong>ERP, CRM</strong>&lt;br&gt;<strong>Business Intelligence</strong>&lt;br&gt;<strong>Artificial Intelligence (AI)</strong>&lt;br&gt;<strong>up to 12 PCIe expansion provides scalability as business grows</strong>&lt;br&gt;<strong>Support up to 2 double-width GPU/FPGA to accelerate AI workloads</strong></td>
<td><strong>SAP HANA</strong>&lt;br&gt;<strong>HCl</strong>&lt;br&gt;<strong>In-Memory Database</strong>&lt;br&gt;<strong>ERP, CRM</strong>&lt;br&gt;<strong>Business Intelligence</strong>&lt;br&gt;<strong>Artificial Intelligence (AI)</strong>&lt;br&gt;<strong>up to 8 PCIe expansion provides scalability as business grows</strong>&lt;br&gt;<strong>Support up to 2 double-width GPU/FPGA to accelerate AI workloads</strong></td>
<td><strong>Scale - up HPC</strong>&lt;br&gt;<strong>Research Lab/National Lab</strong>&lt;br&gt;<strong>Virtualization, ERP, CRM</strong>&lt;br&gt;<strong>In-Memory Database</strong>&lt;br&gt;<strong>up to 26 PCIe expansion provides scalability as business grows</strong>&lt;br&gt;<strong>Support up to 12 double-width GPU/FPGA to accelerate AI workloads</strong></td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td><strong>Compute Optimized 4-Way Server</strong>&lt;br&gt;<strong>Storage Optimized 4-Way Server</strong>&lt;br&gt;<strong>GPU-optimized Server</strong></td>
<td><strong>Compute Optimized 4-Way Server</strong>&lt;br&gt;<strong>Storage Optimized 4-Way Server</strong>&lt;br&gt;<strong>GPU-optimized Server</strong></td>
<td><strong>Compute Optimized 6-Way Server</strong>&lt;br&gt;<strong>Storage Optimized 8-Way Server</strong>&lt;br&gt;<strong>GPU-optimized Server</strong></td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X13QEH+</td>
<td>SUPER® X13QEH+</td>
<td>SUPER® X13OEi-CPU</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C741</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong>&lt;br&gt;2 PCIe 5.0 x8 FHFL slot(s)&lt;br&gt;2 PCIe 5.0 x16 FHFL slot(s)&lt;br&gt;2 PCIe 5.0 x16 FHHL slot(s)&lt;br&gt;2 PCIe 4.0/5 x8 LP optional slot(s)&lt;br&gt;2 PCIe 5.0 x16 AIOM slot(s)&lt;br&gt;PCIe 5.0 x8 (x16 slot) AIOM slot(s)&lt;br&gt;2 M.2 SATA3/NVMe3 slot(s)</td>
<td>64 DIMM slots&lt;br&gt;Up to 16TB: 64x 256GB DRAM&lt;br&gt;Up to 24TB: 32x 256GB DRAM and 32x 512GB Intel® Optane™ Persistent Memory&lt;br&gt;2 PCIe 5.0 x8 FHFL slot(s)&lt;br&gt;2 PCIe 5.0 x16 FHFL slot(s)&lt;br&gt;2 PCIe 5.0 x16 FHHL slot(s)&lt;br&gt;2 PCIe 4.0/5 x8 LP optional slot(s)&lt;br&gt;PCIe 5.0 x16 AIOM slot(s)&lt;br&gt;PCIe 5.0 x8 (x16 slot) AIOM slot(s)&lt;br&gt;2 M.2 SATA3/NVMe3 slot(s)</td>
<td>128 DIMM slots&lt;br&gt;Up to 32TB: 128x 256GB DRAM&lt;br&gt;Up to 48TB: 64x 512GB Intel® Optane™ Persistent Memory and 64x 256GB DRAM&lt;br&gt;12 PCIe 5.0 x16 FHFL slot(s)&lt;br&gt;12 PCIe 5.0 x16 FHHL slot(s)&lt;br&gt;2 PCIe 5.0 x16 LP internal optional slot(s)&lt;br&gt;2 M.2 SATA3/NVMe3 slot(s)</td>
<td></td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>1 VGA port(s), 1 DisplayPort(s)</td>
<td>1 VGA port(s), 1 DisplayPort(s)</td>
<td>1 VGA port(s), 1 DisplayPort(s)</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>Redundant 2700W Titanium level (96%)</td>
<td>Redundant 1600W Titanium level (96%)</td>
<td>Redundant 2600W Titanium level (96%)</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>3x 8cm and 2x 6cm heavy duty fan(s)</td>
<td>6x 6cm heavy duty fan(s)</td>
<td>10x 8cm heavy duty fan(s)</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>2U Rackmount&lt;br&gt;Enclosure: 438.4 x 879 x 812.9mm (17.3” x 3.5” x 32”)&lt;br&gt;Package: 672 x 250 x 1100mm (26.5” x 9.75” x 43.5”)</td>
<td>2U Rackmount&lt;br&gt;Enclosure: 438.4 x 879 x 849.3mm (17.3” x 3.5” x 33.4”)&lt;br&gt;Package: 672 x 250 x 1100mm (26.5” x 9.75” x 43.5”)</td>
<td>6U Rackmount&lt;br&gt;Enclosure: 449 x 265 x 841mm (17.68” x 10.4” x 33.1”)&lt;br&gt;Package: 720 x 922 x 1080mm (28.34” x 36.3” x 42.5”)</td>
</tr>
</tbody>
</table>

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

2U 4-way Compute-optimized<br>2U 4-way Storage-optimized<br>6U 8-way GPU-optimized
<table>
<thead>
<tr>
<th>MODEL</th>
<th>X13DAI-T</th>
<th>X13DEI</th>
<th>X13DEI-T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP</td>
<td>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP</td>
<td>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td>Form Factor</td>
<td>EATX, 12.1&quot; x 13.1&quot; (30.734cm x 33.274cm)</td>
<td>EATX, 12.1&quot; x 13.05&quot; (30.74cm x 33.15cm)</td>
<td>EATX, 12.1&quot; x 13.05&quot; (30.74cm x 33.15cm)</td>
</tr>
<tr>
<td>Memory Capacity &amp; Slots</td>
<td>Up to 4TB 3DS ECC RDIMM, DDR5-4800MHz, in 16 DIMM slots</td>
<td>Up to 4TB 3DS ECC RDIMM, DDR5-4800MHz, in 16 DIMM slots</td>
<td>Up to 4TB 3DS ECC RDIMM, DDR5-4800MHz, in 16 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>Intel® C741 controller for 8 SATA3 ports; RAID N/A; via SlimSAS</td>
<td>Intel® C741 controller for 2 SATA3 ports; RAID N/A; Internal Port(s)</td>
<td>Intel® C741 controller for 8 SATA3 ports; via SlimSAS</td>
</tr>
<tr>
<td>Onboard LAN</td>
<td>Dual LAN with Broadcom BCM5720 1GBase-T</td>
<td>Dual LAN with Broadcom BCM5720 1GBase-T</td>
<td>Dual LAN with Broadcom BCM5720 1GBase-T</td>
</tr>
<tr>
<td>Onboard VGA</td>
<td>1 VGA D-Sub Connector port(s)</td>
<td>1 VGA D-Sub Connector port(s)</td>
<td>1 VGA D-Sub Connector port(s)</td>
</tr>
<tr>
<td>USB Ports</td>
<td>1 USB 3.2 Gen2 port(s) (1 via header)</td>
<td>6 USB 3.2 Gen1 port(s) (2 via header; 4 rear)</td>
<td>3 USB 2 port(s) (2 via header; 1 Type A)</td>
</tr>
<tr>
<td>Other Onboard I/O Devices</td>
<td>2 COM Port(s) (1 header; 1 rear)</td>
<td>3 MIO PCIe 5.0 x8</td>
<td>2 COM Port(s) (1 header; 1 rear)</td>
</tr>
<tr>
<td>Manageability</td>
<td>SuperDoctor® 5, 5PM, SUM, SSM, IPMI (Intelligent Platform Management Interface)</td>
<td>SuperDoctor® 5, 5PM, SUM, SSM, IPMI (Intelligent Platform Management Interface)</td>
<td>SuperDoctor® 5, 5PM, SUM, SSM, IPMI (Intelligent Platform Management Interface)</td>
</tr>
<tr>
<td>PC Health Monitoring</td>
<td>+5V standby, +5V, +3.3V, +12V, +3.3V standby, Vmem</td>
<td>+5V standby, +5V, +3.3V, +12V, +3.3V standby, Vmem</td>
<td>+5V standby, +5V, +3.3V, +12V, +3.3V standby, Vmem</td>
</tr>
<tr>
<td>Thermal Control</td>
<td>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, PCEI, Monitoring for CPU and chassis environment</td>
<td>8x 4-pin fan headers (up to 8 fans) Fan speed control Overheat LED indication 8x fans with tachometer monitoring</td>
<td>8x 4-pin fan headers (up to 8 fans) Fan speed control Overheat LED indication 8x fans with tachometer monitoring</td>
</tr>
<tr>
<td>Other Features</td>
<td>Node Manager Support M.2 NGFF connector, Control of power-on for recovery from AC power loss, Chassis intrusion detection, ACPI power management</td>
<td>UID, Node Manager Support, M.2 NGFF connector, Control of power-on for recovery from AC power loss, Chassis intrusion detection, ACPI power management</td>
<td>UID, Node Manager Support, M.2 NGFF connector, Control of power-on for recovery from AC power loss, Chassis intrusion detection, ACPI power management</td>
</tr>
<tr>
<td>BIOS</td>
<td>AMI 32MB AMI UEFI</td>
<td>AMI 32MB AMI UEFI</td>
<td>AMI 32MB AMI UEFI</td>
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</tbody>
</table>
### X13 UP Serverboards

**HPC, All PCIe 5.0 slots**

**NEW!**

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

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<table>
<thead>
<tr>
<th>MODEL</th>
<th>X13SEI-F</th>
<th>X13SEI-TF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP</td>
<td>4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td>Form Factor</td>
<td>ATX, 12.3” x 10.3” (31.24cm x 26.16cm)</td>
<td>ATX, 12.3” x 10.3” (31.24cm x 26.16cm)</td>
</tr>
<tr>
<td>Memory Capacity &amp; Slots</td>
<td>Up to 2TB 3DS ECC RDIMM, DDR5-4800MHz, in 8 DIMM slots</td>
<td>Up to 2TB 3DS ECC RDIMM, DDR5-4800MHz, in 8 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>2 PCIe 5.0 x16, 3 PCIe 5.0 x8, 2 PCIe 5.0 x8 PCIe5.0 MCIO connector M.2 Interface: 2 PCIe 5.0 x4 M.2 Key: M-Key</td>
<td>2 PCIe 5.0 x16, 3 PCIe 5.0 x8, 2 PCIe 5.0 x8 PCIe5.0 MCIO connector M.2 Interface: 2 PCIe 5.0 x4 M.2 Key: M-Key</td>
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<tr>
<td>Onboard RAID Controller</td>
<td>Intel® C741 controller for 10 SATA3 (6 Gbps) ports</td>
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<tr>
<td>Onboard VGA</td>
<td>Dual LAN with 1GbE with Intel® I210</td>
<td>Dual LAN with 1GbE with Intel® I210</td>
</tr>
<tr>
<td>USB Ports</td>
<td>2 USB 2 port(s) (2 rear), 4 USB 3.2 Gen1 port(s) (2 rear; 1 type A; 1 via header)</td>
<td>2 USB 2 port(s) (2 rear), 4 USB 3.2 Gen1 port(s) (2 rear; 1 type A; 1 via header)</td>
</tr>
<tr>
<td>Other Onboard I/O Devices</td>
<td>1 COM Port(s) (1 header), 2 SATA DOM (Disk on Module) power connector support TPM 2 Header</td>
<td>1 COM Port(s) (1 header), 2 SATA DOM (Disk on Module) power connector support TPM 2 Header</td>
</tr>
<tr>
<td>Manageability</td>
<td>SuperDoctor® 5, SPM, SUM, SSM, IPMICFG, IPMIView for Linux/Windows, SMCIPMlTool, Trusted Platform Module (TPM), Chassis Intrusion Detection</td>
<td>SuperDoctor® 5, SPM, SUM, SSM, IPMICFG, IPMIView for Linux/Windows, SMCIHMlTool, Trusted Platform Module (TPM), Chassis Intrusion Detection</td>
</tr>
<tr>
<td>PC Health Monitoring</td>
<td>VBAT, System level control, Supports system management utility, Monitors CPU voltages,Chipset Voltage, Chassis intrusion header, 6 -fan status, +5V standby, +5V, +12V, Memory Voltages</td>
<td>VBAT, System level control, Supports system management utility, Monitors CPU voltages,Chipset Voltage, Chassis intrusion header, 6 -fan status, +5V standby, +5V, +12V, Memory Voltages</td>
</tr>
<tr>
<td>Thermal Control</td>
<td>7x 4-pin fan headers (up to 7 fans) Fan speed control Overheat LED indication 7 fans with tachometer status monitoring</td>
<td>7x 4-pin fan headers (up to 7 fans) Fan speed control Overheat LED indication 7 fans with tachometer status monitoring</td>
</tr>
<tr>
<td>Other Features</td>
<td>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</td>
<td>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</td>
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<tr>
<td>BIOS</td>
<td>AMI UEFI</td>
<td>AMI UEFI</td>
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X13 Server Solutions - January 2023
# X13 UP Serverboards

<table>
<thead>
<tr>
<th>MODEL</th>
<th>X13SEW-F</th>
<th>X13SEW-TF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor</strong></td>
<td>4th Gen Intel® Xeon® Scalable processors</td>
<td>4th Gen Intel® Xeon® Scalable processors</td>
</tr>
<tr>
<td></td>
<td>Single Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to</td>
<td>Single Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to</td>
</tr>
<tr>
<td></td>
<td>350W TDP</td>
<td>350W TDP</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>Proprietary WIO, 8&quot; x 13&quot; (20.32cm x 33.02cm)</td>
<td>Proprietary WIO, 8&quot; x 13&quot; (20.32cm x 33.02cm)</td>
</tr>
<tr>
<td><strong>Memory Capacity &amp; Slots</strong></td>
<td>Up to 2TB 3DS ECC RDIMM, DDR5-4800MHz, in 8 DIMM slots</td>
<td>Up to 2TB 3DS ECC RDIMM, DDR5-4800MHz, in 8 DIMM slots</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>1 PCIe 5.0x8 Right Riser (in x16) slot,</td>
<td>1 PCIe 5.0x8 Right Riser (in x16) slot,</td>
</tr>
<tr>
<td></td>
<td>1 PCIe 5.0x8 Left Riser Slot,</td>
<td>1 PCIe 5.0x8 Left Riser Slot,</td>
</tr>
<tr>
<td></td>
<td>5 PCIe 5.0x8 PCIe5.0 MCIO connector</td>
<td>5 PCIe 5.0x8 PCIe5.0 MCIO connector</td>
</tr>
<tr>
<td></td>
<td><strong>M.2 Interface:</strong> 1 PCIe 3.0 x2</td>
<td><strong>M.2 Interface:</strong> 1 PCIe 3.0 x2</td>
</tr>
<tr>
<td></td>
<td><strong>Form Factor:</strong> 2280/22110</td>
<td><strong>Form Factor:</strong> 2280/22110</td>
</tr>
<tr>
<td></td>
<td><strong>M.2 Key:</strong> M-Key</td>
<td><strong>M.2 Key:</strong> M-Key</td>
</tr>
<tr>
<td><strong>Onboard RAID Controller</strong></td>
<td>Intel® C741 controller for 10 SATA3 (6 Gbps) ports</td>
<td>Intel® C741 controller for 10 SATA3 (6 Gbps) ports</td>
</tr>
<tr>
<td><strong>Onboard LAN</strong></td>
<td>Dual LAN with 1GbE with Intel® I210</td>
<td>Dual LAN with 10GbE with Intel® X550</td>
</tr>
<tr>
<td><strong>Onboard VGA</strong></td>
<td>1 VGA D-Sub Connector port(s)</td>
<td>1 VGA D-Sub Connector port(s)</td>
</tr>
<tr>
<td></td>
<td>1 Aspeed AST2600 BMC port(s)</td>
<td>1 Aspeed AST2600 BMC port(s)</td>
</tr>
<tr>
<td><strong>USB Ports</strong></td>
<td>5 USB 2 port(s) (2 via header; 2 rear; 1 Type A)</td>
<td>5 USB 2 port(s) (2 via header; 2 rear; 1 Type A)</td>
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<tr>
<td></td>
<td>4 USB 3.2 Gen1 port(s) (2 via header; 2 rear)</td>
<td>4 USB 3.2 Gen1 port(s) (2 via header; 2 rear)</td>
</tr>
<tr>
<td></td>
<td>2 COM Port(s) (1 header; 1 rear)</td>
<td>2 COM Port(s) (1 header; 1 rear)</td>
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<tr>
<td><strong>Other Onboard I/O Devices</strong></td>
<td>2 SATA DOM (Disk on Module) power connector support</td>
<td>2 SATA DOM (Disk on Module) power connector support</td>
</tr>
<tr>
<td></td>
<td>TPm 2 Header</td>
<td>TPm 2 Header</td>
</tr>
<tr>
<td><strong>Manageability</strong></td>
<td>SuperDoctor® 5, SPM, SUM, SSM, IPMICFG, IPMIView for Linux/Windows,</td>
<td>SuperDoctor® 5, SPM, SUM, SSM, IPMICFG, IPMIView for Linux/Windows,</td>
</tr>
<tr>
<td></td>
<td>SMCPITool, Trusted Platform Module (TPM), Chassis Intrusion Detection</td>
<td>SMCPITool, Trusted Platform Module (TPM), Chassis Intrusion Detection</td>
</tr>
<tr>
<td><strong>PC Health Monitoring</strong></td>
<td>VBAT, System level control, Supports system management utility,</td>
<td>VBAT, System level control, Supports system management utility,</td>
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<tr>
<td></td>
<td>Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 6-fan</td>
<td>Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 6-fan</td>
</tr>
<tr>
<td></td>
<td>status, +5V standby, +3.3V, +12V, Memory Voltages</td>
<td>status, +5V standby, +3.3V, +12V, Memory Voltages</td>
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<tr>
<td><strong>Thermal Control</strong></td>
<td>6x 4-pin fan headers (up to 6 fans)</td>
<td>6x 4-pin fan headers (up to 6 fans)</td>
</tr>
<tr>
<td></td>
<td>Fan speed control</td>
<td>Fan speed control</td>
</tr>
<tr>
<td></td>
<td>6 fans with tachometer status monitoring</td>
<td>6 fans with tachometer status monitoring</td>
</tr>
<tr>
<td></td>
<td>Overheat LED indication</td>
<td>Overheat LED indication</td>
</tr>
<tr>
<td><strong>Other Features</strong></td>
<td>WOL, UID, Node Manager Support, M.2 NGFF connector, Control of</td>
<td>WOL, UID, Node Manager Support, M.2 NGFF connector, Control of</td>
</tr>
<tr>
<td></td>
<td>power-on for recovery from AC power loss, Chassis intrusion detection,</td>
<td>power-on for recovery from AC power loss, Chassis intrusion detection,</td>
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<td>ACPI power management</td>
<td>ACPI power management</td>
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<tr>
<td><strong>BIOS</strong></td>
<td>AMI UEFI</td>
<td>AMI UEFI</td>
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<tr>
<td>MODEL</td>
<td>X13SEM-F</td>
<td>X13SEM-TF</td>
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<td>--------------</td>
<td>--------------------------------------------------------------------------</td>
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<td>350W TDP</td>
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<tr>
<td>Chipset</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td>Form Factor</td>
<td>microATX, 9.6” x 9.6” (24.38cm x 24.38cm)</td>
<td>microATX, 9.6” x 9.6” (24.38cm x 24.38cm)</td>
</tr>
<tr>
<td>Memory Capacity &amp; Slots</td>
<td>Up to 2TB 3DS ECC RDIMM, DDR5-4800MHz, in 8 DIMM slots</td>
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</tr>
<tr>
<td>Expansion Slots</td>
<td>2 PCIe 5.0 x16, 1 PCIe 5.0 x8, 2 PCIe 3.0 x4 NVMe Internal Port(s)</td>
<td>2 PCIe 5.0 x16, 1 PCIe 5.0 x8, 2 PCIe 3.0 x4 NVMe Internal Port(s)</td>
</tr>
<tr>
<td></td>
<td>8 PCIe 5.0 x4 NVMe Internal Port(s)</td>
<td>8 PCIe 5.0 x4 NVMe Internal Port(s)</td>
</tr>
<tr>
<td></td>
<td><strong>M.2 Interface</strong>: 2 PCIe 4.0 x2</td>
<td><strong>M.2 Interface</strong>: 2 PCIe 4.0 x2</td>
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<tr>
<td></td>
<td><strong>Form Factor</strong>: 2280/22110 <strong>M.2 Key</strong>: M-Key</td>
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<td>Dual LAN with 10GbE-T with Intel® X550</td>
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<td>USB Ports</td>
<td>6 USB 2 port(s) (2 rear; 4 via header)</td>
<td>6 USB 2 port(s) (2 rear; 4 via header)</td>
</tr>
<tr>
<td></td>
<td>5 USB 3.2 Gen1 port(s) (2 via header; 2 rear; 1 type A)</td>
<td>5 USB 3.2 Gen1 port(s) (2 via header; 2 rear; 1 type A)</td>
</tr>
<tr>
<td>Other Onboard I/O Devices</td>
<td>1 COM Port(s) (1 rear) 2 SATA DOM (Disk on Module) power connector support</td>
<td>1 COM Port(s) (1 rear) 2 SATA DOM (Disk on Module) power connector support</td>
</tr>
<tr>
<td>Manageability</td>
<td>SuperDoctor® 5, SPM, SUM, SSM, IPMICFG, IPMIView for Linux/Windows,</td>
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<td>SMICPMITool, Trusted Platform Module (TPM), Chassis Intrusion Detection</td>
</tr>
<tr>
<td>PC Health Monitoring</td>
<td>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</td>
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</tbody>
</table>
**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.

### 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.

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<th>Suite Bundle</th>
<th>Standard</th>
<th>Basic</th>
<th>Advanced</th>
<th>Enterprise</th>
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<tbody>
<tr>
<td>Description</td>
<td>Covers all core functionality to effectively set up, manage, and monitor your Supermicro systems. These features are available to all Supermicro users.</td>
<td>Extends the core functionality and makes system management easier with additional features, such as remote BIOS management and system updates.</td>
<td>Delivers a broad set of tools to help administrators improve the performance, uptime, and monitoring of Supermicro systems.</td>
<td>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.</td>
</tr>
<tr>
<td>License</td>
<td>No license required</td>
<td>SFT-OOB-LIC</td>
<td>SFT-DCMS-SINGLE</td>
<td>SFT-DCMS-SINGLE + SFT-SDDC-SINGLE</td>
</tr>
<tr>
<td>Key Features*</td>
<td>Secure remote console (KVM/HTML5)</td>
<td>Remote BMC management</td>
<td>Remote OS deployment</td>
<td>3rd Party vendor support</td>
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<td>System temperature monitoring</td>
<td>Remote BIOS management</td>
<td>Auto-discovery</td>
<td>POD &amp; Rack-level management</td>
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<td>System power thresholds &amp; alerts</td>
<td>Out-of-Band systems checks</td>
<td>Power capping</td>
<td>SDI Lifecycle management</td>
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<tr>
<td></td>
<td>Component monitoring</td>
<td>TPM Provisioning</td>
<td>RAID monitoring and configuration</td>
<td>Manage Composable Dissagregated Infrastructure</td>
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<td>Email alerting</td>
<td>Mount/Unmount ISO images from Samba/HTTP</td>
<td>HDD monitoring</td>
<td>Zero-touch provisioning for network configuration</td>
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<tr>
<td></td>
<td>Remote configuration</td>
<td>Basic Redfish APIs</td>
<td>Advanced Redfish APIs</td>
<td>Single pane of glass for data center deployment</td>
</tr>
<tr>
<td></td>
<td>Offline diagnostics</td>
<td>CIM management</td>
<td>FW update policy</td>
<td>Rich analytics &amp; telemetry</td>
</tr>
<tr>
<td></td>
<td>Crash dump</td>
<td>SysLog</td>
<td>System lock down</td>
<td>User defined role-based access control</td>
</tr>
<tr>
<td></td>
<td>License management</td>
<td>Crash screen/video capture</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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

Supermicro Worldwide

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Support: Support@Supermicro.com.tw

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Fax: +886-3-362-8266
Support: Support@Supermicro.com.tw

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