X13 Server Solutions
Supporting 4th Gen Intel® Xeon® Scalable Processors
(Sapphire Rapids)

September 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
**ACCELERATE EVERYTHING**
Supermicro X13 workload-optimized systems with Intel® Accelerator Engines

Built-in Intel Accelerator Engines improve performance across AI, data analytics, networking, storage, and HPC. By making the best use of CPU core resources, built-in accelerators can result in more efficient utilization and power efficiency advantages, helping businesses achieve their sustainability goals.

### General purpose compute
- **53%** average performance gain over the prior generation

### Gen over gen
- **2.9x** average performance per watt efficiency improvement for targeted workloads utilizing built-in accelerators compared to the previous generation

### Using accelerators vs. not using accelerators on same platform
- **3.9x** average performance per watt efficiency improvement for targeted workloads utilizing built-in accelerators

---

#### Intel AMX
(Advanced Matrix Extensions)

**Deep Learning Inference**
- Up to **10x higher** PyTorch real-time inference performance (Intel® AMX) (BF16) vs. the prior generation (FP32)

**Deep Learning Training**
- Up to **10x higher** PyTorch training performance (Intel® AMX) (BF16) vs. the prior generation (FP32)

---

#### Intel DSA
(Data Streaming Accelerator)

**Storage**
- Up to **60% higher** IOPs and up to **37% latency reduction** for large packet sequential read vs. the prior generation

**Networking**
- Up to **95% higher** vSwitch throughput for packet sizes above ~800B for 200Gbps bi-directional switching compared to existing software only implementation

---

#### Intel QAT
(Quick Assist Technology)

**Networking Encryption**
- Up to **47% fewer cores** to achieve the same connections/second vs. the prior generation on NGINX key handshake

**Networking and Storage Compression**
- Up to **95% fewer cores** and 2x higher level 1 compression throughput vs. the prior generation

---

#### Intel IAA
(In-Memory Analytics Accelerator)

**Database**
- Up to **3x higher** RocksDB performance using Intel® IAA vs. the prior generation

---

10. See [D1] at intel.com/processorclaims: 4th Gen Intel® Xeon® Scalable processors. Results may vary.
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 Intel® Data Center GPU Max Series OAM and 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.

Key Applications

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

---

**Key Applications**

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

---

**Resource-Saving Architecture**

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

With both air and liquid cooling options available, SuperBlade® systems can be configured to maximize density and performance for a range of operating environments. The 6U SuperBlade® features a disaggregated design between the motherboard and I/O module, where each resource can be refreshed independently allowing datacenters to reduce refresh cycle costs and reuse components to reduce the Total Cost to the Environment (TCE).
**X13 GRANDTWIN™**
Multi-node Architecture with Front or Rear I/O

**Purpose-built Architecture for 1S**
Support max DIMM, E1.S, PCIe Gen5, and CXL
- Edge to Enterprise Datacenter Deployments
Field serviceable from front/cold aisle to reduce downtime for higher availability
Flexible Front & Rear I/O config designed to help reduce cable complexities

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

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

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

**Key Applications**
- MEC (Multi-Access Edge Computing)
- HPC
- Cloud Gaming
- Multi-Purpose CDN
- High-Availability Cache Cluster
- Telco Edge Cloud
- EDA (Electronic Design Automation)
- Mission-Critical Web Applications
**X13 BigTwin®**

Industry-leading Multi-node Architectures

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

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

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

16 DIMM slots per node supporting DDR5-4800MHz

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

Flexible networking with up to 400G Ethernet per node

**Key Applications**

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

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.
**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

---

**Key Applications**

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

---

**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.
X13 Hyper and Hyper-E
Best-in-class Performance and Flexibility Rackmount Server

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

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

NVMe SSD support with up to 24 drives in 2U

Optional 2.5”/E1.5 SSD hybrid configuration

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

PCIe 5.0 AIOM slots supporting up to 400G networking

Tool-less system for simplified maintenance

Ultimate Configurability for Enterprise and Telco Applications

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

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

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

Key Applications

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

Ultimate Configurability for Enterprise and Telco Applications
**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

**Key Applications**

- Cloud Computing
- Web Servers
- Hyper-Converged Storage
- Virtualization
- File Servers
- Head-Node Computing
- 5G Telco AI Inferencing
X13 All-Flash EDSFF
Revolutionary Petascale NVMe for Unprecedented Density and Capacity

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 EDSFF E1.S or 16 EDSFF E3.S drives in 1U
Up to 24 EDSFF E3.S drives in 2U

SSG-21E-NE324R
AIOM Ready

1U High-density All-Flash
SSG-121E-NE524R
24x EDSFF (E1.S 15mm) NVMe SSD

1U High-capacity All-Flash
SSG-121E-NE316R
16 EDSFF (E3.7.5mm NVMe SSD)

2U TCO Optimized All-Flash
SSG-221E-NE324R
Up to 24 EDSFF (E3.7.5mm NVMe SSD)

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

High Throughput, Low Latency All-flash Servers
Supermicro X13 All-Flash systems offer industry-leading storage density and performance with the latest PCIe Gen5 EDSFF drives, designed from the ground up for disaggregated storage applications. Systems feature a new symmetrical architecture which ensures the shortest data paths to reduce latency while also providing maximum airflow over internal components.

The advanced high-density server design paired with the unmatched efficiency of EDSFF flash media provides exceptional IOP-per-Watt performance. Selected models support the industry’s first PCIe Gen5 E3.S drives and CXL modules from leading manufacturers, providing maximum performance and flexibility for a range of throughput-intensive AI, HPC and database applications.
Cost-effective systems supporting up to 4 PCIe 5.0 devices

Single socket 4th Gen Intel® Xeon® Scalable processor

8 DIMM slots supporting DDR5-4800MHz

Hot-swappable 2.5” or 3.5” storage

Up to 10x NVMe hybrid storage supported (optional)

Wide-Ranging Flexibility for any Enterprise Workload

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

In addition to enabling customizable configurations and optimization for multiple application requirements, Supermicro WIO SuperServers® also provide attractive cost advantages and investment protection.
Data Center-Class Performance and Expandability at the Edge

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

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

The SuperEdge features an optimized airflow, providing an operating 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.
Expanding our Product Portfolio to address 5G, Edge Computing and Emerging IoT Systems

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

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

Key Applications

- Multi-Access Edge Computing
- Flex-RAN/Open RAN
- Edge AI Outdoor 5G
X13 MULTI-PROCESSOR SYSTEMS

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 12 double width GPU to enable even the most AI-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/6U chassis. Flexible networking is available via AIOM slots supporting OCP 3.0 NIC devices.

Key Applications

- Artificial Intelligence (AI)
- Business Intelligence
- ERP
- CRM
- Scientific Virtualization
- In-Memory Database
- HCI
- SAP HANA
Dual 4th Gen Intel® Xeon® Scalable processors
Flexible storage options with hot-swap support
DDR5 memory support
Onboard 1GbE or 10GbE LAN
Up to 6 next-generation PCIe 5.0 slots for accelerators and expansion

**Ideal for Small and Medium Businesses**
Supermicro X13 Mainstream systems are a balanced, all-in-one platform optimized for a wide range of enterprise applications. Available in both rackmount and tower form factors, these systems are the ideal entry point for organizations looking to move their everyday applications and VMs on-prem.

These powerful yet cost-effective systems provide excellent flexibility and value at entry-level price points.

**Key Applications**
- Virtualization
- Enterprise Server
- Application and Data Serving
- Compute Intensive Applications
Balanced Power and Efficiency for Intensive Visual Workloads

Supermicro X13 workstations bring data center CPU processing power and PCIe expandability to the desktop for AI, simulation, metaverse/Omniverse, and 3D media applications. Fuel your creative workflows and boost productivity with a single Intel® Xeon® W-3400 or W-2400 processor combined with lightning-fast M.2 NVMe PCIe 5.0 storage and up to 4TB of DDR5 RAM. The new Supermicro X13 SuperWorkstation offers configuration flexibility to meet your complex design and engineering demands.
Deploy Data Center Power in a Range of Environments

Unleash the full power of the data center in a portable form factor with Supermicro X13 DP workstations. Dual 4th Gen Intel Xeon Scalable processors deliver unrivalled compute power and support the industry’s latest double-width GPUs for the most demanding workloads.
## New! X13 Universal GPU

### 8U 8U Front IO

**Supported Processors**
- 4th Gen Intel® Xeon® Scalable processors
  - Dual Socket LGA-4677 (Socket E) supported
  - TDP up to 350W

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

### Outstanding Features
- 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

### Serverboard
- **Model** SYS-821GE-TNHR
- **Chipset** Intel® C741
- **System Memory (Max.)** 32 DIMM slots
  - Up to 8TB: 32x 256GB DRAM
- **Expansion Slots** 8 PCIe 5.0 x16 LP, 2 FHFL PCIe 5.0 x16 Slots
- **Onboard Storage Controller** Intel® SATA
- **Connectivity**
  - 2x 10GbE RJ45 with Intel® X550-AT2 (optional)
  - 2x 10GbE RJ45 with Intel® X710-AT2 (optional)
  - 2x 25GbE SFP28 with Broadcom® BCM57414 (optional)
- **VGA/Audio**
  - 1 VGA port
- **Management**
  - Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
- **Drive Bays**
  - 20x 2.5” hot-swap NVMe/SATA drive bays; 8x 2.5” NVMe dedicated;
- **Peripheral Bays** None
- **Power Supply**
  - 6x 3000W (3+3) Redundant Power Supplies, Titanium Level
- **Cooling System**
  - 10 heavy duty fan(s)
- **Form Factor**
  - 8U Rackmount
  - Enclosure: 437 x 355.6 x 843.28mm (17.2” x 14” x 33.2”)
  - Package: 698 x 750 x 1300mm (27.5” x 29.5” x 51.2”)

### Model Comparison

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-821GE-TNHR</th>
<th>SYS-821GE-FTNHR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>4th Gen Intel® Xeon® Scalable processors</td>
<td>4th Gen Intel® Xeon® Scalable processors</td>
</tr>
<tr>
<td>Outstanding Features</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>
</tr>
<tr>
<td>Chipset</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>
</tr>
<tr>
<td>Expansion Slots</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>Onboard Storage Controller</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2x 10GbE RJ45 with Intel® X550-AT2 (optional), 2x 10GbE RJ45 with Intel® X710-AT2 (optional), 2x 25GbE SFP28 with Broadcom® BCM57414 (optional)</td>
<td>2x 10GbE RJ45 with Intel® X550-AT2 (optional), 2x 10GbE RJ45 with Intel® X710-AT2 (optional), 2x 25GbE SFP28 with Broadcom® BCM57414 (optional)</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; OOB Management Package (SFT-OOB-LIC); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog</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>
</tr>
<tr>
<td>Drive Bays</td>
<td>20x 2.5” hot-swap NVMe/SATA drive bays; 8x 2.5” NVMe dedicated</td>
<td>20x 2.5” hot-swap NVMe/SATA drive bays; 8x 2.5” NVMe dedicated</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Power Supply</td>
<td>6x 3000W (3+3) Redundant Power Supplies, Titanium Level</td>
<td>6x 3000W (3+3) Redundant Power Supplies, Titanium Level</td>
</tr>
<tr>
<td>Cooling System</td>
<td>10 heavy duty fan(s)</td>
<td>10 heavy duty fan(s)</td>
</tr>
</tbody>
</table>
| Form Factor | 8U Rackmount
  - Enclosure: 437 x 355.6 x 843.28mm (17.2” x 14” x 33.2”)
  - Package: 698 x 750 x 1300mm (27.5” x 29.5” x 51.2”)
 | 8U Rackmount
  - Enclosure: 437 x 355.6 x 843.28mm (17.2” x 14” x 33.2”)
  - Package: 698 x 750 x 1300mm (27.5” x 29.5” x 51.2”)

---

*Note: The above information is subject to change without notice.*
## 4th Gen Intel® Xeon® Scalable processors Supported

### New!

**X13 Universal GPU**

### Models

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

---

**X13 Server Solutions - September 2023**

---

**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported
## X13 PCIe GPU

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

### NEW!

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-421GE-TNRT</th>
<th>SYS-421GE-TNRT3</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>
<td>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Diagnostic Imaging</td>
<td>• Diagnostic Imaging</td>
<td></td>
</tr>
<tr>
<td>• 3D Rendering</td>
<td>• 3D Rendering</td>
<td></td>
</tr>
<tr>
<td>• Design &amp; Visualization</td>
<td>• Design &amp; Visualization</td>
<td></td>
</tr>
<tr>
<td>• Animation and Modeling</td>
<td>• Animation and Modeling</td>
<td></td>
</tr>
<tr>
<td>• Cloud Gaming</td>
<td>• Cloud Gaming</td>
<td></td>
</tr>
<tr>
<td>• Media/Video Streaming</td>
<td>• Media/Video Streaming</td>
<td></td>
</tr>
<tr>
<td>• AI/Deep Learning Training</td>
<td>• AI/Deep Learning Training</td>
<td></td>
</tr>
<tr>
<td>• VDI</td>
<td>• VDI</td>
<td></td>
</tr>
<tr>
<td>• High Performance Computing</td>
<td>• High Performance Computing</td>
<td></td>
</tr>
<tr>
<td>• Flexible networking options</td>
<td>• Flexible networking options</td>
<td></td>
</tr>
<tr>
<td>• 8 NVMe for GPU direct storage</td>
<td>• 8 NVMe for GPU direct storage</td>
<td></td>
</tr>
<tr>
<td>• 2 M.2 NVMe for boot drive only</td>
<td>• 2 M.2 NVMe for boot drive only</td>
<td></td>
</tr>
</tbody>
</table>

| **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; SUM; SuperDoctor® 5; Watch Dog | Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC®); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog |
| **Drive Bays** | 24x 2.5" hot-swap NVMe/SATA/SAS drive bays; 8x 2.5" NVMe hybrid; 8x 2.5" NVMe dedicated; | 24x 2.5" hot-swap NVMe/SATA/SAS drive bays; 4x 2.5" NVMe hybrid; 4x 2.5" NVMe dedicated; |
| **Peripheral Bays** | None | None |
| **Power Supply** | 4x 2700W (2+2) Redundant Power Supplies, Titanium Level | 4x 2700W (2+2) Redundant Power Supplies, Titanium Level |
| **Cooling System** | 8 heavy duty fan(s) | 8 heavy duty fan(s) |
| **Form Factor** | 4U Rackmount Enclosure: 437 x 178 x 737mm (17.2" x 7" x 29") Package: (27" x 6.57" x 41") | 4U Rackmount Enclosure: 437 x 178 x 737mm (17.2" x 7" x 29") Package: (27" x 6.57" x 41") |
## X13 PCIe GPU

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

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

### Key Applications
- **Diagonal Imaging**
- **3D Rendering**
- **Animation and Modeling**
- **Cloud Gaming**
- **AI/Deep Learning Training**
- **Cloud Video Streaming**
- **AI/ML Researchers**
- **Product Data Management (CAD Design)**
- **Architecture, Engineering, and Construction (AEC)**
- **Scientific Research Labs**
- **Diagnostic Imaging**
- **4D Mapping**
- **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**
- **Perfomance Anywhere**
- **Innovate Faster**
- **Close-loop liquid cooled CPUs, GPUs, and memory**
- **Low Acoustic Level "Idle" under 32dBA & "100% Load" under 50dBA**
- **Flexible Solution: Workstation Tower or SU Rackmountable System**

### Serverboard
- **SUPER® X13DEG-OA**
- **SUPER® X13DEG-QT**
- **SUPER® X13DEG-QT**

### Chipset
- **Intel® C741**
- **Intel® C741**
- **Intel® C741**

### System Memory (Max.)
- **32 DIMM slots**
  - UP to 8TB: 32x 256GB DRAM
- **16 DIMM slots**
  - UP to 4TB: 16x 256GB DRAM
- **6 PCIe 5.0 x16 FHFL Slots**
  - 4 PCIe 5.0 x16 for double-width GPU cards, support up to 4 liquid-cooled A100 GPUs
  - 2 PCIe 5.0 x16 for single-width High-Speed Network or RAID card

### Expansion Slots
- **13 PCIe 5.0 X16 Slots**
- **7 PCIe 5.0 X16 FHFL Slots**
- **16 DIMM slots**
  - UP to 1TB: 16x 128GB DRAM

### Onboard Storage Controller
- **Intel® S ATA**
- **Intel® S ATA**
- **Intel® S ATA**

### Connectivity
- **2x 10Gbe RJ45 port(s) with Intel® Ethernet Controller X710-AT2**
- **2x 10Gbe RJ45 port(s) with Intel® Ethernet Controller X550-AT2**
- **1x 1Gbe RJ45 port(s) with ASPEED AST2600**

### VGA/Audio
- **1 VGA port**
- **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; SSD; 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; SSD; 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; SSD; 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 2.5” hot-swap NVMe/SATA drive bays; 8x 2.5” NVMe hybrid;**
- **8x 2.5” hot-swap NVMe/SATA drive bays; 8x 2.5” NVMe hybrid;**

### Peripheral Bays
- None
- None
- None

### Power Supply
- **4x 2700W (2+2) Redundant Power Supplies, Titanium Level**
- **2x 2000W (1+1) Redundant Power Supplies, Titanium Level**
- **1200W/2200W (1+1) Redundant Power Supplies, Titanium Level**

### Cooling System
- **8 heavy duty fan(s)**
- **4 heavy duty fan(s)**
- **3x 8, 12cm 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”**
- **4U 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")**
- **Tower or SU Rackmount**
  - **Enclosure: 454.7 x 218.4 x 701mm (17.9” x 8.6” x 27.6")**
  - **Package: 388 x 655 x 956mm (15.3” x 25.8" x 37.6")**

### SU13 PCie GPU
- **5U**
  - **10 PCIe GPUs**
- **4U Tower**
  - **4 PCIe GPUs**

### 4Th Gen Intel® Xeon® Scalable Processors
- Supported

### 4th Gen Intel® Xeon® Scalable Processors
- **Supported**

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

### Key Applications
- **Diagnostic Imaging**
- **3D Rendering**
- **Design & Visualization**
- **Animation and Modeling**
- **Cloud Gaming**
- **Media/Video Streaming**
- **AI/Deep Learning Training**
- **Cloud Video Streaming**
- **AI/ML Researchers**
- **Product Data Management (CAD Design)**
- **Architecture, Engineering, and Construction (AEC)**
- **Scientific Research Labs**
- **Diagnostic Imaging**
- **4D Mapping**
- **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**
- **Flexible Solution**

### Serverboard
- **SUPER® X13DEG-OA**
- **SUPER® X13DEG-QT**
- **SUPER® X13DEG-QT**

### Chipset
- **Intel® C741**
- **Intel® C741**
- **Intel® C741**

### System Memory (Max.)
- **32 DIMM slots**
  - UP to 8TB: 32x 256GB DRAM
- **16 DIMM slots**
  - UP to 4TB: 16x 256GB DRAM
- **16 DIMM slots**
  - UP to 1TB: 16x 128GB DRAM

### Expansion Slots
- **13 PCIe 5.0 X16 Slots**
- **7 PCIe 5.0 X16 FHFL Slots**
- **6 PCIe 5.0 x16 FHFL Slots**

### Onboard Storage Controller
- **Intel® S ATA**
- **Intel® S ATA**
- **Intel® S ATA**

### Connectivity
- **2x 10Gbe RJ45 port(s) with Intel® Ethernet Controller X710-AT2**
- **2x 10Gbe RJ45 port(s) with Intel® Ethernet Controller X550-AT2**
- **1x 1Gbe RJ45 port(s) with ASPEED AST2600**

### VGA/Audio
- **1 VGA port**
- **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; SSD; 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; SSD; 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; SSD; 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 2.5” hot-swap NVMe/SATA drive bays; 8x 2.5” NVMe hybrid;**
- **8x 2.5” hot-swap NVMe/SATA drive bays; 8x 2.5” NVMe hybrid;**

### Peripheral Bays
- None
- None
- None

### Power Supply
- **4x 2700W (2+2) Redundant Power Supplies, Titanium Level**
- **2x 2000W (1+1) Redundant Power Supplies, Titanium Level**
- **1200W/2200W (1+1) Redundant Power Supplies, Titanium Level**

### Cooling System
- **8 heavy duty fan(s)**
- **4 heavy duty fan(s)**
- **3x 8, 12cm 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”**
- **4U 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")**
- **Tower or SU Rackmount**
  - **Enclosure: 454.7 x 218.4 x 701mm (17.9” x 8.6” x 27.6")**
  - **Package: 388 x 655 x 956mm (15.3” x 25.8” x 37.6")**
### Model Specifications

<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><strong>Processor Support</strong></td>
<td>4th Gen Intel® Xeon® Scalable processors&lt;br&gt;Single Socket LGA-4677 (Socket E) supported TDP up to 300W</td>
<td>4th Gen Intel® Xeon® Scalable processors&lt;br&gt;Single Socket LGA-4677 (Socket E) supported TDP up to 300W</td>
<td>4th Gen Intel® Xeon® Scalable processors&lt;br&gt;Single Socket LGA-4677 (Socket E) supported TDP up to 300W</td>
<td>4th Gen Intel® Xeon® Scalable processors&lt;br&gt;Single Socket LGA-4677 (Socket E) supported TDP up to 300W</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enterprise Edge Computing&lt;br&gt;Telecom DRAN, CRAN, and Edge Core Application&lt;br&gt;Flex-RAN, Open-RAN vBBU&lt;br&gt;Multi-Access Edge Computing&lt;br&gt;Three front hot-swappable nodes with single CPU socket and 8 DIMM design&lt;br&gt;Front access IO design, and tool less serviceability&lt;br&gt;16.9” (430mm) chassis depth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X13SEED-F</td>
<td>SUPER® X13SEED-SF</td>
<td>SUPER® X13SEED-F</td>
<td>SUPER® X13SEED-SF</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C741</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td><strong>System Memory</strong>&lt;br&gt;(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><strong>Expansion Slots</strong></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><strong>Onboard Storage Controller</strong></td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td><strong>Connectivity</strong>&lt;br&gt;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>
<td></td>
</tr>
<tr>
<td><strong>VGA/Audio</strong>&lt;br&gt;1 VGA port</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
<td></td>
</tr>
<tr>
<td><strong>Management</strong>&lt;br&gt;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>
<td></td>
</tr>
<tr>
<td><strong>Drive Bays</strong>&lt;br&gt;N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong>&lt;br&gt;None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td><strong>Cooling System</strong>&lt;br&gt;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>
<td></td>
</tr>
<tr>
<td><strong>Form Factor</strong>&lt;br&gt;2U Rackmount&lt;br&gt;Enclosure: 449 x 88 x 430mm (17.7&quot; x 3.5&quot; x 16.9&quot;)&lt;br&gt;Package: 750 x 240 x 590mm (29.5&quot; x 9.5&quot; x 23.2&quot;)</td>
<td>2U Rackmount&lt;br&gt;Enclosure: 449 x 88 x 430mm (17.7&quot; x 3.5&quot; x 16.9&quot;)&lt;br&gt;Package: 750 x 240 x 590mm (29.5&quot; x 9.5&quot; x 23.2&quot;)</td>
<td>2U Rackmount&lt;br&gt;Enclosure: 449 x 88 x 430mm (17.7&quot; x 3.5&quot; x 16.9&quot;)&lt;br&gt;Package: 750 x 240 x 590mm (29.5&quot; x 9.5&quot; x 23.2&quot;)</td>
<td>2U Rackmount&lt;br&gt;Enclosure: 449 x 88 x 430mm (17.7&quot; x 3.5&quot; x 16.9&quot;)&lt;br&gt;Package: 750 x 240 x 590mm (29.5&quot; x 9.5&quot; x 23.2&quot;)</td>
<td></td>
</tr>
</tbody>
</table>
### X13 5G/EDGE

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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-111E-FWTR</th>
<th>SYS-111E-FDWTR</th>
<th>SYS-211E-FRN2T</th>
<th>SYS-211E-FRDN2T</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>
<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</td>
<td>Single Socket LGA-4677 (Socket E) supported</td>
<td>Single Socket LGA-4677 (Socket E) supported</td>
<td>Single Socket LGA-4677 (Socket E) supported</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Artificial Intelligence (AI) on Edge</td>
<td>Artificial Intelligence (AI) on Edge</td>
<td>Network Function Virtualization</td>
<td>Network Function Virtualization</td>
</tr>
<tr>
<td></td>
<td>Flex-RAN, Open-RAN v8BU</td>
<td>Flex-RAN, Open-RAN v8BU</td>
<td>AI Inference and Machine Learning</td>
<td>AI Inference and Machine Learning</td>
</tr>
<tr>
<td></td>
<td>Outdoor DU of 5G Application</td>
<td>Outdoor DU of 5G Application</td>
<td>5G Core and Edge</td>
<td>5G Core and Edge</td>
</tr>
<tr>
<td></td>
<td>Multi-Access Edge Computing</td>
<td>Multi-Access Edge Computing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Redundant Power Supplies Design</td>
<td>Redundant Power Supplies Design</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Front access IO design, 16.9” (430mm) chassis depth</td>
<td>Front access IO design, 16.9” (430mm) chassis depth</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SG Telecom, Flex-RAN, Open-RAN Optimized</td>
<td>SG Telecom, Flex-RAN, Open-RAN Optimized</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Redundant Power Supplies Design</td>
<td>Redundant Power Supplies Design</td>
<td>Design with compliance to NEBS-Level 3</td>
<td>Design with compliance to NEBS-Level 3</td>
</tr>
<tr>
<td></td>
<td>Front access IO design, 16.9” (430mm) chassis depth</td>
<td>Front access IO design, 16.9” (430mm) chassis depth</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SG Telecom, Flex-RAN, Open-RAN Optimized</td>
<td>SG Telecom, Flex-RAN, Open-RAN Optimized</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X13SEW-TF</td>
<td>SUPER® X13SEW-TF</td>
<td>SUPER® X13SEM-TF</td>
<td>SUPER® X13SEM-TF</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C741</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</td>
<td>8 DIMM slots</td>
<td>8 DIMM slots</td>
<td>8 DIMM slots</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>2 PCIe 5.0 x16 FHFL, PCIe 5.0 x16 LP</td>
<td>2 PCIe 5.0 x16 FHFL, PCIe 5.0 x16 LP</td>
<td>2x PCIe 5.0 x16 FHHL, 1x PCIe 5.0 x16 HHHL, 1x PCIe 5.0 x8 HHHL</td>
<td>2x PCIe 5.0 x16 FHHL, 1x PCIe 5.0 x16 HHHL, 1x PCIe 5.0 x8 HHHL</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>2x 10GbE port(s)</td>
<td>2x 10GbE port(s)</td>
<td>2x 100GbE QSFP28 with Intel® E810-CAM2 (optional)</td>
<td>2x 100GbE QSFP28 with Intel® E810-CAM2 (optional)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2x 100GbE QSFP28 with Intel® X710-BM2 (optional)</td>
<td>2x 100GbE QSFP28 with Intel® X710-BM2 (optional)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2x 200GbE QSFP56 with Mellanox® MT28908A0-XCCF-HVM (optional)</td>
<td>2x 200GbE QSFP56 with Mellanox® MT28908A0-XCCF-HVM (optional)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2x 25GbE QSFP28 with Intel® E810-CAM1 (optional)</td>
<td>2x 25GbE QSFP28 with Intel® E810-CAM1 (optional)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2x 25GbE QSFP28 with Intel® XXV710 (optional)</td>
<td>2x 25GbE QSFP28 with Intel® XXV710 (optional)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2x 40GbE QSFP+ with Intel® XL710-BM2 (optional)</td>
<td>2x 40GbE QSFP+ with Intel® XL710-BM2 (optional)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4x 10GbE RJ45 with Intel® i350 (optional)</td>
<td>4x 10GbE RJ45 with Intel® i350 (optional)</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>1 VGA port</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; 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; SuperDoctor® 5; Watch Dog</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>IPMI 2.0</td>
<td>IPMI 2.0</td>
<td>IPMI 2.0</td>
<td>IPMI 2.0</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>2x 2.5” SATA drive bays; 2x 2.5” SATA drive bays; 2x 2.5” hot-swap NVMe drive bays; 2x 2.5” hot-swap NVMe drive bays;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>800W AC Redundant PSU</td>
<td>600W DC Redundant PSU</td>
<td>Redundant 800W AC 100-240Vac input, Platinum level</td>
<td>None</td>
</tr>
<tr>
<td><strong>Cooling System</strong></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></td>
<td>1U Rackmount Enclosure: 436.88 x 44.5 x 429.3mm (17.2” x 1.7” x 16.9”)</td>
<td>2U Rackmount Enclosure: 436.88 x 88.9 x 298.8mm (17.2” x 3.5” x 11.8”)</td>
<td>2U Rackmount Enclosure: 436.88 x 88.9 x 298.8mm (17.2” x 3.5” x 11.8”)</td>
<td>2U Rackmount Enclosure: 436.88 x 88.9 x 298.8mm (17.2” x 3.5” x 11.8”)</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# X13 SUPERBLADE®

## 8U

### Processor Blade
- Up to 20 hot-swappable, half-height, single-width blade servers
- Up to 10 hot-swappable, half-height, double-width blade servers
- Up to 10 hot-swappable, full-height, single-width blade servers
- Mixed configuration supported

### LED Indicator
- Power LED, Fault LED

### InfinitBand Switch
- SBE-820H only:
  - Single 200G HDR InfiniBand switch
- SBE-820C only:
  - Single 100G EDR InfiniBand switch

### Ethernet Switch / Pass-Thru Module
- SBE-820C/H only:
  - Up to 2 hot-swappable 25G Ethernet switches
- SBE-820H/J2 only:
  - Up to 4 hot-swappable 25G Ethernet switches or pass-thru modules
- SBE-820L only:
  - Up to 2 hot-swappable 10G Ethernet switches or pass-thru modules

### Chassis Management Module (CMM)
- Single/Redundant CMM for remote system management with software
- SBE-820H/J2 only: Up to 2 hot-swappable CMMs for remote system management with software

### Models
- SBE-820C/H/J/J2/L/H-822:
  - Up to 8 hot-swappable 2200W Titanium (96% efficiency) power supplies
- SBE-820J2-830:
  - Up to 8 hot-swappable 3000W Titanium (96% efficiency) power supplies
- SBE-820J2-830(D):
  - Up to 8 hot-swappable 3000W DC power supplies

### Rack Unit
- 8 RU

### Form Factor
- 356 x 447 x 813mm (14” x 17.6” x 32”)

## 6U

### Processor Blade
- Up to 10 hot-swappable, single-width blade servers
- Up to 5 hot-swappable, double-width blade servers
- Mixed configuration supported

### LED Indicator
- Power LED, Fault LED

### InfinitBand Switch
- N/A

### Ethernet Switch / Pass-Thru Module
- SBE-610J/610J2-822:
  - Up to 8 hot-swappable 2200W Titanium (96% efficiency) power supplies
- SBE-610J2-830:
  - Up to 8 hot-swappable 3000W Titanium (96% efficiency)
- SBE-610J2-830(D):
  - Up to 8 hot-swappable 3000W DC power supplies

### Chassis Management Module (CMM)
- Up to 2 hot-swappable CMMs for remote system management with software

### Models
- SBE-610J/610J2-822:
  - Up to 8 hot-swappable 2200W Titanium (96% efficiency) power supplies
- SBE-610J2-830:
  - Up to 8 hot-swappable 3000W Titanium (96% efficiency)
- SBE-610J2-830(D):
  - Up to 8 hot-swappable 3000W DC power supplies

### Rack Unit
- 6 RU

### Form Factor
- 267 x 447 x 813mm (10.5” x 17.6” x 32”)

---

X13 Server Solutions - September 2023

---

26
## X13 SuperBlade®

### Server Nodes/Enclosure

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SBI-421E-1T3N</th>
<th>SBI-421E-5T3N</th>
<th>SBI-611E-1T2N</th>
<th>SBI-611E-5T2N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server Nodes/Enclosure</td>
<td>20</td>
<td>10</td>
<td>10</td>
<td>5</td>
</tr>
</tbody>
</table>

### Processor Support

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

### Chipset

- Intel® C741 chipset

### System Memory (Max.)

- Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s

### PCIe Expansion

- OCP 3.0 (PCIe 5.0 x16)

### Storage & RAID

- 4 M.2 NVMe with optional Mezzanine Card
- 2 Hot-swappable U.2 NVMe/SATA3 and 1 SATA3

### Networking

- OCP 3.0 network card with 400G NDR IB and other options

### 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")

### Enclosure

- SBE-820C/J/L-422
- SBE-820H/C/J/L-622/822
- SBE-820J2-630/830

---

**NEW!**

4th Gen Intel® Xeon® Scalable Processors Supported

**NEW!**

MODEL SBI-421E-1T3N SBI-421E-5T3N SBI-611E-1T2N SBI-611E-5T2N

Server Nodes/Enclosure 20 10 10 5

Processor Support Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP) Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP) Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP) Dual 4th Generation Intel® Xeon® Scalable Processors (Up to 350W TDP)

Chipset Intel® C741 chipset Intel® C741 chipset Intel® C741 chipset Intel® C741 chipset

System Memory (Max.) Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s Up to 4TB; 16 DDR5 DIMM slots, 1DPC speeds up to 4800 MT/s or 2DPC speeds up to 4400 MT/s

PCIe Expansion OCP 3.0 (PCIe 5.0 x16) OCP 3.0 (PCIe 5.0 x16) 1 PCIe 5.0 x16 slot 1 PCIe 5.0 x8 slot

Storage & RAID 4 M.2 NVMe with optional Mezzanine Card 1 M.2 NVMe drive 2 Hot-swappable U.2 NVMe/SATA3 and 1 SATA3 Intel® PCH 3.0 SATA Controller 2 Hot-swappable U.2 NVMe/SATA3 drive bays 3 M.2 NVMe drives 2 E1.S drives Intel® PCH 3.0 SATA Controller

Networking OCP 3.0 network card with 400G NDR IB and other options Mezzanine options for 200G HDR / 100G EDR IB or Dual 25GbE Dual 25GbE LOM OCP 3.0 network card with 400G NDR IB and other options Mezzanine options for 200G HDR / 100G EDR IB or Dual 25GbE Dual 25GbE LOM Standard IB or GbE PCIe cards Mezzanine option for Dual 25GbE Dual 25GbE LOM

Management Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust Open Industry Standard IPMI 2.0 / KVM over IP / Redfish API / TPM 2.0 / Signed Firmware / HW Root of Trust

LED Indicators Fault LED, Network Activity LED, Power LED, UID Fault LED, Network Activity LED, Power LED, UID Fault LED, Network Activity LED, Power LED, UID Fault LED, Network Activity LED, Power LED, UID

Form Factor 165 x 44.4 x 597mm (6.5" x 1.75" x 23.5") 165 x 88.9 x 597mm (6.5" x 3.5" x 23.5") 248 x 44.4 x 597mm (9.75" x 1.75" x 23.5") 248 x 88.9 x 597mm (9.75" x 3.5" x 23.5")

## 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**
- **Dual 4th Gen Intel® Xeon® Scalable Processors**
- **Dual 4th Gen Intel® Xeon® Scalable Processors**

### MODEL

<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>Server Nodes/Enclosure</td>
<td>10</td>
<td>10</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Processor</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>
<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>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C741 chipset</td>
<td>Intel® C741 chipset</td>
<td>Intel® C741 chipset</td>
<td>Intel® C741 chipset</td>
</tr>
<tr>
<td>System Memory (Max.)</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</td>
<td>Up to 4TB; 16 DDR5 DIMM slots, 2DPC speeds up to 4400 MT/s</td>
</tr>
<tr>
<td>PCIe Expansion</td>
<td>1 PCIe 5.0 x16 slot 1 PCIe 5.0 x8 slot</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Storage &amp; RAID</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>Networking</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>LED Indicators</td>
<td>Fault LED, Network Activity LED, Power LED, UID</td>
<td>Fault LED, Network Activity LED, Power LED, UID</td>
<td>Fault LED, Network Activity LED, Power LED, UID</td>
<td>Fault LED, Network Activity LED, Power LED, UID</td>
</tr>
<tr>
<td>Form Factor</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™

## Processor Support
- **SYS-211GT-HNTF**: 4th Gen Intel® Xeon® Scalable processors
  - Single Socket LGA 4677 (Socket E) supported
  - TDP up to 350W
- **SYS-211GT-HNC8F**: 4th Gen Intel® Xeon® Scalable processors
  - Single Socket LGA 4677 (Socket E) supported
  - TDP up to 350W

## Key Applications
- **SYS-211GT-HNTF**
  - 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
- **SYS-211GT-HNC8F**
  - 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
- **SYS-211GT-HNTF**
  - Single processor with 16 DIMM
  - Front I/O design
  - Four front access hot-swappable node in 2U
  - Flexible storage selection
- **SYS-211GT-HNC8F**
  - 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
- **SYS-211GT-HNTF**: SUPER® X13SET-G
- **SYS-211GT-HNC8F**: SUPER® X13SET-GC

## Chipset
- **SYS-211GT-HNTF**: Intel® C741
- **SYS-211GT-HNC8F**: Intel® C741

## System Memory (Max.)
- **SYS-211GT-HNTF**: 16 DIMM slots
  - UP to 4TB: 16x 256GB DRAM
- **SYS-211GT-HNC8F**: 16 DIMM slots
  - UP to 4TB: 16x 256GB DRAM

## Expansion Slots
- **SYS-211GT-HNTF**: 2 PCIe 5.0 x16 Aiom slot(s)
- **SYS-211GT-HNC8F**: 2 PCIe 5.0 x16 Aiom slot(s)

## Onboard Storage Controller
- **SYS-211GT-HNTF**: Intel® SATA
- **SYS-211GT-HNC8F**: Broadcom® Broadcom® 3808

## Connectivity
- **SYS-211GT-HNTF**: via Aiom
- **SYS-211GT-HNC8F**: via Aiom

## VGa/Audio
- **SYS-211GT-HNTF**: 1 VGA port
- **SYS-211GT-HNC8F**: 1 VGA port

## Management
- **SYS-211GT-HNTF**:
  - 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)
- **SYS-211GT-HNC8F**:
  - 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
- **SYS-211GT-HNTF**: 4x 2.5" hot-swap NVMe/SATA drive bays; 4x 2.5" NVMe dedicated; Optional RAID support via Intel® PCH
- **SYS-211GT-HNC8F**: 4x 2.5" hot-swap NVMe/SATA/SAS drive bays; 4x 2.5" NVMe dedicated; Optional RAID support via Broadcom® 3808 AOC

## Peripheral Bays
- **SYS-211GT-HNTF**: None
- **SYS-211GT-HNC8F**: None

## Power Supply
- **SYS-211GT-HNTF**: Redundant 2200W Titanium level (96%)
- **SYS-211GT-HNC8F**: Redundant 2200W Titanium level (96%)

## Cooling System
- **SYS-211GT-HNTF**: 2x 8cm heavy duty fan(s)
- **SYS-211GT-HNC8F**: 2x 8cm heavy duty fan(s)

## Form Factor
- **SYS-211GT-HNTF**: 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”)
- **SYS-211GT-HNC8F**: 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 - September 2023

29
## X13 GRANDTWIN™

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

### New Models
- **SYS-211GT-HNTR**
- **SYS-211GT-HNC8R**

<table>
<thead>
<tr>
<th><strong>MODEL</strong></th>
<th><strong>SYS-211GT-HNTR</strong></th>
<th><strong>SYS-211GT-HNC8R</strong></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>
</tr>
<tr>
<td>Key Applications</td>
<td>• 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</td>
<td>• 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</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Single processor with 16 DIMM • Four front access hot-swappable node in 2U • 6x NVMe/SATA drives per node</td>
<td>• Single processor with 16 DIMM • Four front access hot-swappable node in 2U • 6x NVMe/SAS/SATA drives per node</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X13SET-G</td>
<td>SUPER® X13SET-GC</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>2 PCIe 5.0 x16 AIOM slot(s)</td>
<td>2 PCIe 5.0 x16 AIOM slot(s)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® SATA</td>
<td>Broadcom® Broadcom® 3808</td>
</tr>
<tr>
<td>Connectivity</td>
<td>via AIOM</td>
<td>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>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)</td>
<td>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)</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>6x 2.5” hot-swap NVMe/SATA drive bays; 6x 2.5” NVMe dedicated; Optional RAID support via Intel® PCH</td>
<td>6x 2.5” hot-swap NVMe/SATA drive bays; 6x 2.5” NVMe dedicated; Optional RAID support via Broadcom® 3808 AOC</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 2200W Titanium level (96%)</td>
<td>Redundant 2200W Titanium level (96%)</td>
</tr>
<tr>
<td>Cooling System</td>
<td>2x 8cm heavy duty fan(s)</td>
<td>2x 8cm heavy duty fan(s)</td>
</tr>
<tr>
<td>Form Factor</td>
<td>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”)</td>
<td>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”)</td>
</tr>
</tbody>
</table>
### X13 BiGTWIN®

**2U 2-Node**

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-621BT-DNTR</th>
<th>SYS-621BT-DNC8R</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</td>
<td>Dual Socket LGA 4677 (Socket E) supported</td>
</tr>
<tr>
<td></td>
<td>TDP up to 300W</td>
<td>TDP up to 300W</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Back-up &amp; Recovery</td>
<td>• Back-up &amp; Recovery</td>
</tr>
<tr>
<td></td>
<td>• Scale-Out Object Storage</td>
<td>• Scale-Out Object Storage</td>
</tr>
<tr>
<td></td>
<td>• Hyperconverged Infrastructure</td>
<td>• 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>
<td>• Supports Liquid Cooling up to 350W TDP</td>
</tr>
<tr>
<td></td>
<td>• Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SATA per node (Drive Bays)</td>
<td>• Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SAS per node (Drive Bays)</td>
</tr>
<tr>
<td></td>
<td>• Optional TPM 1.2 or 2.0 module</td>
<td>• Optional TPM 1.2 or 2.0 module</td>
</tr>
<tr>
<td></td>
<td>• HW Boot Controller for NVMe M.2 drives</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>
<td>16 DIMM slots UP to 4TB: 16x 256GB DRAM</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>2 M.2 (22x110mm) slot(s) for boot drive or caching PCIe 5.0 x16 LP slot</td>
<td>2 M.2 (22x110mm) slot(s) for boot drive or caching PCIe 5.0 x16 LP slot</td>
</tr>
<tr>
<td></td>
<td>2 PCIe x8 LP slot(s)</td>
<td>2 PCIe x8 LP slot(s)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® SATA</td>
<td>Broadcom® 3808</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 onboard 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; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog</td>
<td>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</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>6x 3.5” hot-swap NVMe/SATA drive bays; RAID support via Intel® PCH</td>
<td>6x 3.5” hot-swap NVMe/SAS drive bays; HBA support via SAS3808 Adapter</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 2200W Redundant Power Supply Titanium with C14 inlet, 45(W) X 40(H) X 480(L)</td>
<td>1U 2200W Redundant Power Supply Titanium with C14 inlet, 45(W) X 480(L)</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>4x 14.9K RPM Heavy Duty 8cm Fan(s)</td>
<td>4x 14.9K RPM Heavy Duty 8cm Fan(s)</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>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”)</td>
<td>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”)</td>
</tr>
</tbody>
</table>
### X13 BigTwin®

**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported

---

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-221BT-DNC8R</th>
<th>SYS-221BT-DNTR</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>
<td>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 350W</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• All-Flash Object Storage • All-Flash Storage Area Network • All-Flash Hyperconverged Infrastructure</td>
<td>• Big Data Analytics and AI • Scale Out All-Flash NVMe Storage • Diskless HPC Clusters • High-Performance File System</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• 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</td>
<td>• 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</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>
<td>16 DIMM slots UP to 4TB: 16x 256GB DRAM</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>2 M.2 (22x110mm) slot(s) for boot drive or caching PCIe 5.0 x16 LP slot 2 PCIe x8 LP slot(s)</td>
<td>2 M.2 (22x110mm) slot(s) for boot drive or caching PCIe 5.0 x16 LP slot 2 PCIe x8 LP slot(s)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Broadcom® 3816</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 onboard VGA port</td>
<td>1 I/O module VGA port</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>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</td>
<td>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</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>12x 2.5” hot-swap NVMe/SAS drive bays; Optional HBA support via SAS3816 AOC</td>
<td>12x 2.5” hot-swap NVMe/SATA drive bays; RAID support via Intel® PCH</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 2200W Redundant Power Supply Titanium with C14 inlet, 45(W) X 40(H) X 480(L)</td>
<td>1U 2200W Redundant Power Supply Titanium with C14 inlet, 45(W) X 40(H) X 480(L)</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>4x 16.5K RPM Heavy Duty 8cm Fan(s)</td>
<td>4x 16.5K RPM Heavy Duty 8cm Fan(s)</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>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”)</td>
<td>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”)</td>
</tr>
</tbody>
</table>

---

**2U 2-Node**

---

**2U 2-Node**
**NEW!**
4th Gen Intel® Xeon® Scalable processors Supported

---

### MODELS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-621BT-HNC8R</th>
<th>SYS-621BT-HNTR</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 185W</td>
<td>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA 4677 (Socket E) supported TDP up to 185W</td>
</tr>
</tbody>
</table>
| **Key Applications** | • Container Storage  
• Scale-Out File Storage  
• Hyperconverged Infrastructure  
• Tool-less support for swapping AOC cards  
• Supports Liquid Cooling up to 350W TDP  
• 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 | • Scale-Out File Server  
• Container Storage  
• Hyperconverged Infrastructure  
• Tool-less support for swapping AOC cards  
• Supports Liquid Cooling up to 350W TDP  
• 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 |
| **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  
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** | | |
| **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; Supernico Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog | Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supernico Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog |
| **Drive Bays** | 3x 3.5" hot-swap NVMe/SAS drive bays; HBA support via SAS3808 Adapter | 3x 3.5" hot-swap NVMe/SATA drive bays; RAID support via Intel® PCH |
| **Peripheral Bays** | None | None |
| **Power Supply** | 1U 3000W Redundant Power Supply Titanium with C22 inlet, 45(W) X 40(h) X 480(L) | 1U 3000W Redundant Power Supply Titanium with C22 inlet, 45(W) X 40(h) X 480(L) |
| **Cooling System** | 4x 14.9K RPM Heavy Duty 8cm Fan(s) | 4x 14.9K RPM Heavy Duty 8cm Fan(s) |
| **Form Factor** | 2U Rackmount  
Enclosure: 449 x 88 x 774mm (17.68” x 3.47” x 30.5”)  
Package: 626 x 248 x 1150mm (24.65” x 9.76” x 45.28”) | 2U Rackmount  
Enclosure: 449 x 88 x 774mm (17.68” x 3.47” x 30.5”)  
Package: 626 x 248 x 1150mm (24.65” x 9.76” x 45.28”) |
### X13 BiGTwin®

**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported

---

#### MODEL | SYS-221BT-HNC8R | SYS-221BT-HNC9R
---|---|---
**Processor Support** | 4th Gen Intel® Xeon® Scalable processors | 4th Gen Intel® Xeon® Scalable processors |
Dual Socket LGA 4677 (Socket E) supported | Dual Socket LGA 4677 (Socket E) supported |
TDP up to 205W | TDP up to 205W |
**Key Applications** | • All-Flash Hyperconverged Infrastructure | • High-Density Storage RAID Array |
• Diskless HPC Clusters | • Virtualized Big Data Analytics |
• Container-as-a-Service; Application Accelerator | • Mission Critical HPC |
**Outstanding Features** | • Tool-less support for swapping AOC cards | • Tool-less support for swapping AOC cards |
• Supports Liquid Cooling up to 350W TDP | • Supports Liquid Cooling up to 350W TDP |
• Supports 2x PCIe 5.0 NVMe and 4x PCIe 4.0 NVMe/SAS per node (Drive Bays) | • 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 | • Optional TPM 1.2 or 2.0 module |
• HW Boot Controller for NVMe M.2 drives | • 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 M.2 (22x110mm) slot(s) for boot drive or caching |
| 2 PCIe 5.0 x16 LP slot(s) | PCIe 5.0 x16 LP slot |
**Onboard Storage Controller** | Broadcom® 3808 | Broadcom® 3908 |
**Connectivity via AIO** | via AIO | via AIO |
**VGA/Audio** | 1 onboard VGA port | 1 onboard VGA port |
**Management** | Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog | Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog |
**Drive Bays** | 6x 2.5" hot-swap NVMe/SAS drive bays; HBA support via SAS3808 Adapter | 6x 2.5" hot-swap NVMe/SAS drive bays; Optional RAID support via Broadcom® 3908 AOC |
**Peripheral Bays** | None | None |
**Power Supply** | 1U 3000W Redundant Power Supply Titanium with C22 inlet, 4S(W) X 40(H) X 480(L) | 1U 3000W Redundant Power Supply Titanium with C22 inlet, 4S(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 | 2U Rackmount |
Enclosure: 449 x 88 x 730mm (17.68” x 3.47” x 28.75”) | 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”) | Package: 626 x 248 x 1150mm (24.65” x 9.76” x 45.28”) |
## X13 BiGTwin®

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

### 2U 4-Node

![Image of 2U 4-Node Server](image)

*(Coming Soon All NVMe Gen 5)*

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-221BT-HNTR</th>
<th>SYS-221BT-HNR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>4th Gen Intel® Xeon® Scalable processors</td>
<td>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 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</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• Tool-less support for swapping AOC cards</td>
<td>• Supports Liquid Cooling up to 350W TDP</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>
<td>16 DIMM slots UP to 4TB: 16x 256GB DRAM</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>2 M.2 (22x110mm) slot(s) for boot drive or caching 2 PCIe 5.0 x16 LP slot(s)</td>
<td>2 M.2 (22x110mm) slot(s) for boot drive or caching 2 PCIe 5.0 x16 LP slot(s)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® SATA</td>
<td></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® 5; 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® 5; Watch Dog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>6x 2.5” hot-swap NVMe/SATA drive bays; RAID support via Intel® PCH</td>
<td>6x 2.5” 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” x 3.47” x 28.75”) Package: 626 x 248 x 1150mm (24.65” x 9.76” x 45.28”)</td>
<td>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”)</td>
</tr>
<tr>
<td>MODEL</td>
<td>SYS-F511E2-RT</td>
<td>SYS-F521E3-RTB</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Processor Support</td>
<td>4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 350W</td>
<td>4th Gen Intel® Xeon® Scalable processors Single Socket LGA-4677 (Socket E) supported TDP up to 350W</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Hyperscale / Hyperconverged • Telco Data Center and ETSI certified • Data Center Enterprise Applications • HPC and Big Data</td>
<td>• Hyperscale / Hyperconverged • Telco Data Center and ETSI certified • Data Center Enterprise Applications • HPC and Big Data</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Shared power architecture for best efficiency • Redundant cooling and power configurations for high availability • Optimized designs for storage and compute density • HDD hot-swap capability • 16 DIMMs Up to 4TB DDR5</td>
<td>• Shared power architecture for best efficiency • Redundant cooling and power configurations for high availability • Optimized designs for storage and compute density • HDD hot-swap capability • 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 Enclosure: 448 x 177 x 737mm (17.63&quot; x 6.96&quot; x 29&quot;) Package: (28.3&quot; x 15&quot; x 42.4&quot;)</td>
<td>4U Rackmount Enclosure: 448 x 177 x 737mm (17.63&quot; x 6.96&quot; x 29&quot;) Package: (28.3&quot; x 15&quot; x 42&quot;)</td>
</tr>
</tbody>
</table>
## X13 CloudDC

**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported

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

### Key Applications
- 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 5.0x16 and 4x PCIe 5.0x8 (convertible to 2x PCIe 5.0x16) slots
- Dual sockets up to 350W TDP
- Dual NVMe M.2 (2280)
- Dual FHLDW PCIe 4.0 GPUs supported
- Dual AIOM 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

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

### Serverboard
- **Chipset**: Intel® C741
- **System Memory (Max.)**: 16 DIMM slots
  - UP to 16x 256GB DRAM

### Expansion Slots
- **Slot 1**: PCIe 4.0 x8 FHHL (optional x16 by merging slot 2)
- **Slot 2**: PCIe 4.0 x8 FHHL
- **Slot 3**: PCIe 4.0x16 FHHL
- **Slot 4**: PCIe 4.0x8 FHHL
- **Slot 5**: PCIe 4.0x8 FHHL (optional x16 by merging slot 4)
- **Slot 6**: PCIe 4.0x16 FHHL
- **Slot A1**: PCIe 4.0x16 OCP 3.0 Mezzanine NIC
- **Slot A2**: PCIe 4.0x16 OCP 3.0 Mezzanine NIC

### Onboard Storage Controller
- **Intel® SATA**
- **Connectivity**: with VIA Advanced IO Module, AIOM (OCP 3.0 NIC, refer to AIOM Network Card(s) under Optional Parts List for NIC options) via AIOM

### VGA/Audio
- **1 on-board VGA port**

### Management
- **Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SCC; SPM; SUM; SuperDoctor® 5; Watch Dog**

### Drive Bays
- **Optional RAID support via RAID controller AOC**
- **12x 3.5" hot-swap NVMe/SATA/SAS hybrid drive bays**

### Peripheral Bays
- **None**

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

### Cooling System
- **3x 8cm heavy duty fans(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")

### Additional Details
- **Supermicro® X13DDW-A/SERIES**
- **Chipset**: Intel® C741
- **System Memory (Max.)**: 16 DIMM slots
  - UP to 16x 256GB DRAM
- **Expansion Slots**: 16 DIMM slots
  - UP to 4TB: 16x 256GB DRAM
  - Slot 1: PCIe 4.0x8 FHHL (optional x16 by merging slot 2)
  - Slot 2: PCIe 4.0x8 FHHL
  - Slot 3: PCIe 4.0x16 FHHL
  - Slot 4: PCIe 4.0x8 FHHL
  - Slot 5: PCIe 4.0x8 FHHL (optional x16 by merging slot 4)
  - Slot 6: PCIe 4.0x16 FHHL
  - Slot A1: PCIe 4.0x16 OCP 3.0 Mezzanine NIC
  - Slot A2: PCIe 4.0x16 OCP 3.0 Mezzanine NIC
- **Onboard Storage Controller**: Intel® SATA
- **Connectivity**: with VIA Advanced IO Module, AIOM (OCP 3.0 NIC, refer to AIOM Network Card(s) under Optional Parts List for NIC options) via AIOM
- **VGA/Audio**: 1 on-board VGA port
- **Management**: Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SCC; SPM; SUM; SuperDoctor® 5; Watch Dog
- **Drive Bays**: Optional RAID support via RAID controller AOC
- **Peripheral Bays**: None
- **Power Supply**: Redundant 1200W Titanium level (96%)
- **Cooling System**: 3x 8cm heavy duty fans(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")
## 4th Gen Intel® Xeon® Scalable processors Supported

**NEW! X13 CloudDC**

### Compact Cloud Compute

#### MODEL

<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></td>
<td>Dual Socket LGA-4677 (Socket E) supported TDP up to 270W; 4 UPI</td>
<td>Single Socket LGA 4677 (Socket E) supported TDP up to 350W</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CDN, Edge Nodes</td>
<td>HPC</td>
</tr>
<tr>
<td></td>
<td>DNS &amp; Gateway Servers, Firewall Application</td>
<td>Storage Headnode</td>
</tr>
<tr>
<td></td>
<td>Cloud Computing, Compact Server</td>
<td>Data Center Optimized</td>
</tr>
<tr>
<td></td>
<td>Data Center Optimized, Value IaaS</td>
<td>Cloud Computing</td>
</tr>
<tr>
<td></td>
<td>Web Server, Firewall Application</td>
<td>CDN, Edge Nodes</td>
</tr>
<tr>
<td></td>
<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>
</tr>
<tr>
<td></td>
<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>
</tr>
<tr>
<td></td>
<td>Dual NVMe M.2 (2280)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dual AIOM with NCSI (OCP 3.0 NIC)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Compact server with tool-less drive trays</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Balanced architecture in compact chassis (23.5&quot;)</td>
<td></td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Up to 10x NVMe/SATA/SAS hybrid tool-less drive bays</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dual sockets up to 270W TDP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dual NVMe M.2 (2280)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dual AIOM with NCSI (OCP 3.0 NIC)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Compact server with tool-less drive trays</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Balanced architecture in compact chassis (23.5&quot;)</td>
<td></td>
</tr>
</tbody>
</table>

### Serverboard

| | SUPER H® X13DDW-A | SUPER H® X13SEDW-F |
| **Chipset** | Intel® C741 | Intel® C741 |
| **System Memory (Max.)** | 16 DIMM slots | 16 DIMM slots |
| | UP to 4TB: 16x 256GB DRAM | UP to 4TB: 16x 256GB DRAM |
| **Expansion Slots** | 2 PCIe 5.0 x16 FHHL slot(s) | Slot 1: PCIe 5.0 x16 FHHL |
| | | Slot 2: PCIe 5.0 x16 FHHL |
| | | Slot A1: PCIe 5.0 x16 OCP 3.0 AIOM NIC |
| | | Slot A2: PCIe 5.0 x16 OCP 3.0 AIOM NIC |
| **Onboard Storage Controller** | Intel® SATA | Intel® SATA |
| **Connectivity** | with Via Advanced IO Module, AIOM (OCP 3.0 NIC, refer to AIOM Network Card(s) under Optional Parts List for NIC options) via AIOM | via AIOM |
| **VGA/Audio** | 1 VGA port | 1 onboard VGA port |
| **Management** | Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SCC; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog | Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM |
| **Drive Bays** | 10x 2.5" hot-swap NVMe/SATA/SAS hybrid drive bays; Optional RAID support via RAID controller AOC | 10x 2.5" NVMe/SATA/SAS drive bays; 10x 2.5" NVMe hybrid; |
| **Peripheral Bays** | None | None |
| **Power Supply** | Redundant 860W Platinum level (94%) | Redundant 860W Platinum level (94%) |
| **Cooling System** | 6x 4cm heavy duty fan(s) | 6x (4cm x 4cm x 5.6cm) heavy duty fan(s) |
| | 1U Rackmount | 1U Rackmount |
| **Form Factor** | Enclosure: 437 x 43 x 597mm (17.2" x 1.7" x 23.5") | Enclosure: 437 x 43 x 597mm (17.2" x 1.7" x 23.5") |
| | Package: 605 x 197 x 822mm (23.8" x 7.8" x 32.4") | Package: 602 x 195.6 x 807.7mm (23.7" x 7.7" x 31.8") |
## X13 CLOUDDC

**General Purpose Balanced**

**Compact Storage Optimized**

### NEW!

4th Gen Intel® Xeon® Scalable processors Supported

### Processor Support

**SYS-121C-TN2R**

- 4th Gen Intel® Xeon® Scalable processors
- Dual Socket LGA-4677 (Socket E) supported
- TDP up to 270W; 4UPI
- CDN, Edge Nodes
- DNS & Gateway Servers, Firewall Application
- Cloud Computing, Compact Server
- Data Center Optimized, Value IaaS
- Web Server, Firewall Application
- Up to 8x SATA/SAS w/ 2x NVME tool-less drive bays
- Optional DVD ROM support
- Dual sockets up to 270W TDP
- Dual NVMe M.2 (2280)
- Compact server with tool-less drive trays
- Balanced architecture in compact chassis (23.5")

**SYS-611C-TN4R**

- 4th Gen Intel® Xeon® Scalable processors
- Dual Socket LGA-4677 (Socket E) supported
- TDP up to 270W; 4UPI
- CDN, Edge Nodes
- DNS & Gateway Servers, Firewall Application
- Cloud Computing, Compact Server
- Data Center Optimized, Value IaaS
- Web Server, Firewall Application
- Up to 4x SATA/SAS/NVMe tool-less drive bays
- Optional fixed 2.5" 7 mm drive bays
- Dual sockets up to 270W TDP
- Dual NVMe M.2 (2280)
- 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

**SYS-121C-TN2R**

- Up to 8x SATA/SAS w/ 2x NVME tool-less drive bays
- Optional DVD ROM support
- Dual sockets up to 270W TDP
- Dual NVMe M.2 (2280)
- Compact server with tool-less drive trays
- Balanced architecture in compact chassis (23.5")

**SYS-611C-TN4R**

- Up to 4x SATA/SAS/NVMe tool-less drive bays
- Optional fixed 2.5" 7 mm drive bays
- Dual sockets up to 270W TDP
- Dual NVMe M.2 (2280)
- 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

### Serverboard

**SYS-121C-TN2R**

- SERVER® X13DDW-A

**SYS-611C-TN4R**

- SERVER® X13DDW-A

### Chipset

**SYS-121C-TN2R**

- Intel® C741

**SYS-611C-TN4R**

- Intel® C741

### System Memory

**SYS-121C-TN2R**

- 16 DIMM slots
- Up to 4TB: 16x 256GB DRAM

**SYS-611C-TN4R**

- 16 DIMM slots
- Up to 4TB: 16x 256GB DRAM

### Expansion Slots

**SYS-121C-TN2R**

- 2 PCIe 5.0 x16 FHHL slot(s)

**SYS-611C-TN4R**

- 2 PCIe 5.0 x16 FHHL slot(s)

### Onboard Storage Controller

**SYS-121C-TN2R**

- Intel® SATA

**SYS-611C-TN4R**

- Intel® SATA

### Connectivity

**SYS-121C-TN2R**

- 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

**SYS-611C-TN4R**

- with Via Advanced IO Module, AIOM (OCP 3.0 NIC, refer to AIOM Network Card(s) under Optional Parts List for NIC options) via AIOM

### VGA/Audio

**SYS-121C-TN2R**

- 1 VGA port

**SYS-611C-TN4R**

- 1 VGA port

### Management

**SYS-121C-TN2R**

- Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SCC; SPM; SUM; SuperDoctor® 5; Watch Dog

**SYS-611C-TN4R**

- Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SCC; SPM; SUM; SuperDoctor® 5; Watch Dog

### Drive Bays

**SYS-121C-TN2R**

- 8x 2.5" hot-swap NVMe/SATA/SAS hybrid drive bays;
  Optional RAID support via RAID controller AOC

**SYS-611C-TN4R**

- 4x 3.5" hot-swap NVMe/SATA/SAS hybrid drive bays;
  Optional RAID support via RAID controller AOC

### Peripheral Bays

**SYS-121C-TN2R**

- 1x DVD-ROM (optional)

**SYS-611C-TN4R**

- 2x 2.5" (optional)

### Power Supply

**SYS-121C-TN2R**

- Redundant 860W Platinum level (94%)

**SYS-611C-TN4R**

- Redundant 860W Platinum level (94%)

### Cooling System

**SYS-121C-TN2R**

- 6x 4cm heavy duty fan(s)

**SYS-611C-TN4R**

- 6x 4cm heavy duty fan(s)

### Form Factor

**SYS-121C-TN2R**

- 1U Rackmount
  - Enclosure: 437 x 43 x 597mm (17.2" x 1.7" x 23.5")
  - Package: 605 x 197 x 822mm (23.8" x 7.8" x 32.4")

**SYS-611C-TN4R**

- 1U Rackmount
  - Enclosure: 437 x 43 x 650mm (17.2" x 1.7" x 25.6")
  - Package: 605 x 197 x 878mm (23.8" x 7.8" x 34.6")
NEW! 4th Gen Intel® Xeon® Scalable processors Supported

X13 ALL-FLASH EDSFF

1U High-performance All-Flash

4th Gen Intel® Xeon® Scalable processors
Dual Socket LGA-4677 (Socket E) supported
TDP up to 270W; 4 UPI

Key Applications
- In-Memory Computing
- Software-defined Storage
- NVMe Over Fabrics Solution
- Private & Hybrid Cloud
- Data Intensive HPC

Outstanding Features
- Two PCIe 5.0 x16 slots & two AIOM connectors (OCP 3.0 SFF compliant)
- Supports 32 DIMMs with 2DPC, up to 12TB memory capacity with 16 DIMMs of 256GB 3DS RDIMM/RDIMM DDR5 ECC memory and 16 DIMMs of 512GB Intel® Optane PMem 300 Series
- Redundant Titanium 2000W Power Supplies
- Dual Socket E (LGA-4677) 4th Generation Intel® Xeon® Scalable processors. Up to 270W TDP.
- Composable Infrastructure Platform

Serverboard
- SUPER® X13DSF-A

Chipset
- Intel® C741

System Memory (Max.)
- 32 DIMM slots
- Up to 8TB: 32x 256GB DRAM

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

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 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
- 8x 4cm heavy duty fan(s)

Form Factor
- 1U Rackmount
- Enclosure: 438.4 x 43.6 x 773.25mm (17.2” x 1.7” x 30.4”)
- Package: 604.774 x 199.898 x 1029.97mm (23.81” x 7.87” x 40.55”)

---

MODEL | SSG-121E-NES24R | SSG-121E-NE316R | SSG-221E-NE324R
---|---|---|---
Processor Support | 4th Gen Intel® Xeon® Scalable processors | 4th Gen Intel® Xeon® Scalable processors | 4th Gen Intel® Xeon® Scalable processors |
Key Applications | In-Memory Computing | In-Memory Computing | In-Memory Computing |
Outstanding Features | Two PCIe 5.0 x16 slots & two AIOM connectors (OCP 3.0 SFF compliant) | Supports 32 DIMMs with 2DPC, up to 12TB memory capacity with 16 DIMMs of 256GB 3DS RDIMM/RDIMM DDR5 ECC memory and 16 DIMMs of 512GB Intel® Optane PMem 300 Series | Redundant Titanium 2000W Power Supplies |
Model | SSG-121E-NE316R | SSG-221E-NE324R |
## X13 HYPER-E

### 2U Hyper-E
**Optimized for 5G and Telco**

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

**NEW!** 2U Hyper-E Optimized for 5G and Telco

### Model Comparison

<table>
<thead>
<tr>
<th>MODEL</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 Dual Socket LGA-4677 (Socket E) supported TDP up to 350W; 4UPI</td>
<td>4th Gen Intel® Xeon® Scalable processors Dual Socket LGA-4677 (Socket E) supported TDP up to 350W; 4UPI</td>
</tr>
<tr>
<td>Key Applications</td>
<td>Cloud Computing, Network Function Virtualization, AI Inference and Machine Learning, Telecom Micro Data Center, 5G Core and Edge, Tool-less system design for easy maintenance, Storage configurations up to 6x 2.5&quot; hot-swap NVMe/SATA drive bays, Flexible networking options with 2 AIOM networking slots (OCP NIC 3.0 compatible)</td>
<td>Cloud Computing, Network Function Virtualization, AI Inference and Machine Learning, Telecom Micro Data Center, 5G Core and Edge, Tool-less system design for easy maintenance, Storage configurations up to 6x 2.5&quot; hot-swap NVMe/SATA drive bays, Flexible networking options with 2 AIOM networking slots (OCP NIC 3.0 compatible)</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td></td>
<td></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 SW PCIe 5.0 x8 (6 FHFL + 2 FHHL) or 4 DW PCIe 5.0 x16 (3 FHFL + FHHL)</td>
<td>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)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2x 100GbE QSFP28 with Broadcom® BCM57508 (optional) 2x 100GbE QSFP28 with Intel® E810-CAM2 (optional) 2x 100GbE QSFP28 with Mellanox® CX-6 DX (optional) 2x 25GbE SFP28 with Broadcom® BCM57414 (optional) 4x 10GbE RJ45 with Intel® X550 (optional) 4x 10GbE SFP+ with Intel® X710-BM2 (optional) via AIOM</td>
<td>2x 100GbE QSFP28 with Broadcom® BCM57508 (optional) 2x 100GbE QSFP28 with Intel® E810-CAM2 (optional) 2x 100GbE QSFP28 with Mellanox® CX-6 DX (optional) 2x 25GbE SFP28 with Broadcom® BCM57414 (optional) 4x 10GbE RJ45 with Intel® X550 (optional) 4x 10GbE SFP+ with Intel® X710-BM2 (optional) via AIOM</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; SSM; SUM; SuperDoctor® 5; Watch Dog</td>
<td>Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>6x 2.5&quot; hot-swap NVMe/SATA drive bays; 6x 2.5&quot; NVMe hybrid; Optional RAID support via RAID Controller AOC</td>
<td>6x 2.5&quot; hot-swap NVMe/SATA drive bays; 6x 2.5&quot; NVMe hybrid; 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 2000W Titanium level (96%)</td>
<td>2x 1300W -48Vdc single output</td>
</tr>
<tr>
<td>Cooling System</td>
<td>6 heavy duty fan(s)</td>
<td>6 heavy duty fan(s)</td>
</tr>
<tr>
<td>Form Factor</td>
<td>2U Rackmount Enclosure: 436.88 x 88.9 x 574mm (17.2&quot; x 3.5&quot; x 22.6&quot;) Package: 598 x 247 x 938mm (23.5&quot; x 9.7&quot; x 36.9&quot;)</td>
<td>2U Rackmount Enclosure: 436.88 x 88.9 x 574mm (17.2&quot; x 3.5&quot; x 22.6&quot;) Package: 598 x 247 x 938mm (23.5&quot; x 9.7&quot; x 36.9&quot;)</td>
</tr>
</tbody>
</table>

---

X13 Server Solutions - September 2023

---

41
## X13 Hyper

**Optimized for Storage Performance**

(Liquid Cooling options)

### Processor Support
- **SYS-221H-TNR**: 4th Gen Intel® Xeon® Scalable processors
  - Dual Socket LGA-4677 (Socket E) supported
  - TDP up to 350W; 4 UPI
- **SYS-221H-TN24R**: 4th Gen Intel® Xeon® Scalable processors
  - Dual Socket LGA-4677 (Socket E) supported
  - TDP up to 350W; 4 UPI

### Key Applications
- **SYS-221H-TNR**
  - Software-defined Storage
  - Virtualization
  - Enterprise Server
  - Cloud Computing
  - AI Inference and Machine Learning
- **SYS-221H-TN24R**
  - Software-defined Storage
  - Virtualization
  - Enterprise Server
  - Cloud Computing
  - AI Inference and Machine Learning

### Outstanding Features
- **SYS-221H-TNR**
  - Tool-less system design for easy maintenance
  - Storage configurations up to 16x 2.5” hot-swap NVMe/SATA/SAS drive bays
  - Flexible networking options with AIOM/OCP NIC 3.0 support
- **SYS-221H-TN24R**
  - Tool-less system design for easy maintenance
  - Flexible networking options with AIOM/OCP NIC 3.0 support
  - 24x 2.5” hot-swap NVMe/SATA/SAS drive bays

### Serverboard
- **SYS-221H-TNR**: SUPER® X13DEM
- **SYS-221H-TN24R**: SUPER® X13DEM

### Chipset
- **SYS-221H-TNR**: Intel® C741
- **SYS-221H-TN24R**: Intel® C741

### System Memory (Max.)
- **SYS-221H-TNR**: 32 DIMM slots
  - Up to 8TB: 32x 256GB DRAM
- **SYS-221H-TN24R**: 32 DIMM slots
  - Up to 8TB: 32x 256GB DRAM

### Expansion Slots
- **SYS-221H-TNR**: Configurable PCIe slot options up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 FH, 10.5”L
- **SYS-221H-TN24R**: Configurable PCIe slot options up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 FH, 10.5”L

### Onboard Storage Controller
- **SYS-221H-TNR**: Intel® SATA
- **SYS-221H-TN24R**: Intel® SATA

### Connectivity
- **SYS-221H-TNR**
  - 2x 10GbE QSFP28 with Broadcom® BCM57508 (optional)
  - 2x 10GbE RJ45 with Intel® X710-AT2 (optional)
  - 2x 10GbE SFP+ with Intel® X710-BM2 (optional)
  - 2x 1GbE RJ45 with Intel® i350-AM2 (optional)
  - 2x 25GbE SFP28 with Broadcom® BCM57414 (optional)
  - 4x 10GbE RJ45/SFP+ with Intel® X710-TM4 (optional)
  - 4x 10GbE SFP+ with Intel® XL710-BM1 (optional)
  - 4x 1GbE RJ45 or 4x 1GbE SFP with Intel® i350-AM4 (optional)
  - 4x 25GbE RJ45/SFP28 with Mellanox® CX-4 Lx EN Intel® X550-AT2 (optional) via AIOM
- **SYS-221H-TN24R**
  - 2x 10GbE QSFP28 with Broadcom® BCM57508 (optional)
  - 2x 10GbE RJ45 with Intel® X550-AT2 (optional)
  - 2x 10GbE SFP+ with Intel® X710-BM2 (optional)
  - 2x 1GbE RJ45 with Intel® i350-AM2 (optional)
  - 2x 25GbE SFP28 with Broadcom® BCM57414 (optional)
  - 4x 10GbE RJ45/SFP+ with Intel® X710-TM4 (optional)
  - 4x 10GbE SFP+ with Intel® XL710-BM1 (optional)
  - 4x 1GbE RJ45 or 4x 1GbE SFP with Intel® i350-AM4 (optional)
  - 4x 25GbE RJ45/SFP28 with Mellanox® CX-4 Lx EN Intel® X550-AT2 (optional) via AIOM

### VGA/Audio
- **SYS-221H-TNR**: 1 VGA port
- **SYS-221H-TN24R**: 1 VGA port

### Management
- **SYS-221H-TNR**: Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish APi; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
- **SYS-221H-TN24R**: Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish APi; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog

### Drive Bays
- **SYS-221H-TNR**: 8x 2.5” hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC
- **SYS-221H-TN24R**: 24x 2.5” hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC

### Peripheral Bays
- **SYS-221H-TNR**: None
- **SYS-221H-TN24R**: None

### Power Supply
- **SYS-221H-TNR**: Redundant 1200W Titanium level (96%)
- **SYS-221H-TN24R**: Redundant 1600W Titanium level (96%)

### Cooling System
- **SYS-221H-TNR**: 4x 8cm heavy duty fan(s)
- **SYS-221H-TN24R**: 4x 8cm heavy duty fan(s)

### Form Factor
- **SYS-221H-TNR**: 2U Rackmount
  - Enclosure: 437 x 88.9 x 760mm (17.2” x 3.5” x 29.9”)
  - Package: 605 x 263 x 1107mm (23.8” x 10.4” x 43.6”)
- **SYS-221H-TN24R**: 2U Rackmount
  - Enclosure: 437 x 88.9 x 760mm (17.2” x 3.5” x 29.9”)
  - Package: 605 x 263 x 1107mm (23.8” x 10.4” x 43.6”)

---

**NOTE**: X13 Server Solutions - September 2023

42
## X13 HYPER

**2U Hyper**  
Optimized for Storage Capacity

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

### Modeling

**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported

---

### Processor Support

- **SYS-621H-TN12R**: 4th Gen Intel® Xeon® Scalable processors  
  Dual Socket LGA-4677 (Socket E) supported  
  TDP up to 350W; 4UPI

- **SYS-121H-TNR**: 4th Gen Intel® Xeon® Scalable processors  
  Dual Socket LGA-4677 (Socket E) supported  
  TDP up to 350W; 4UPI

### Key Applications

- Software-defined Storage
- Virtualization
- Enterprise Server
- Cloud Computing
- AI Inference and Machine Learning

### Outstanding Features

- Tool-less system design for easy maintenance
- Flexible networking options with AIOM/OCP NIC 3.0 support
- 12x 3.5”/2.5” hot-swap NVMe/SATA/SAS drive bays

### Serverboard

- **SYS-621H-TN12R**: SUPER® X13DEM
- **SYS-121H-TNR**: SUPER® X13DEM

### Chipset

- **SYS-621H-TN12R**: Intel® C741
- **SYS-121H-TNR**: Intel® C741

### System Memory (Max.)

- **SYS-621H-TN12R**: 32 DIMM slots  
  UP to 8TB: 32x 256GB DRAM
- **SYS-121H-TNR**: 32 DIMM slots  
  UP to 8TB: 32x 256GB DRAM

### Expansion Slots

- Configurable PCIe slot options up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 FH, 10.5”L

### Onboard Storage Controller

- **SYS-621H-TN12R**: Intel® SATA
- **SYS-121H-TNR**: Intel® SATA

### Connectivity

- **SYS-621H-TN12R**: 2x 100Gbe QSFP28 with Broadcom® BCM57508 (optional)  
  2x 10Gbe RJ45 with Intel® X550-AT2 (optional)  
  2x 10Gbe SFP+ with Intel® X710-BM2 (optional)  
  2x 10Gbe RJ45 with Intel® X350-AM2 (optional)  
  2x 25Gbe SFP28 with Broadcom® BCM57414 (optional)  
  4x 10Gbe RJ45/SFP+ with Intel® X710-TM4 (optional)  
  4x 10Gbe SFP+ with Intel® XL710-BM1 (optional)  
  4x 10Gbe RJ45 or 4x 10Gbe SFP with Intel® X350-AM4 (optional)  
  4x 25Gbe RJ45/SFP28 with Mellanox® CX-4 Lx EN Intel® X550-AT2 (optional) via AIOM

### VGA/Audio

- **SYS-621H-TN12R**: 1 VGA port
- **SYS-121H-TNR**: 1 VGA port

### Management

- **SYS-621H-TN12R**: Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
- **SYS-121H-TNR**: Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog

### Drive Bays

- **SYS-621H-TN12R**: 12x 3.5” hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC
- **SYS-121H-TNR**: 8x 2.5” hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC

### Peripheral Bays

- **SYS-621H-TN12R**: None
- **SYS-121H-TNR**: None

### Power Supply

- **SYS-621H-TN12R**: Redundant 1200W Titanium level (96%)
- **SYS-121H-TNR**: Redundant 1200W Titanium level (96%)

### Cooling System

- **SYS-621H-TN12R**: 4x 8cm heavy duty fan(s)
- **SYS-121H-TNR**: 8x 4cm heavy duty fan(s)

### Form Factor

- **SYS-621H-TN12R**: 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”)
- **SYS-121H-TNR**: 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 - September 2023

43
<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 • Value IaaS • Entry GPU server • Data Center Optimized • Cloud Computing</td>
<td>• Virtualization • Entry GPU server • Database/Storage • Data Center Optimized • Cloud Computing</td>
<td>• Entry GPU server • Database/Storage • Network Appliance • 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. • Cost optimized 1U X13 solution</td>
<td>• Maximum I/O. Support 3 x16 expansion slots in 1U form factor • Max 10x PCIe 5.0 NVMe drives supported in 1U Form Factor</td>
<td>• Up to 4 expansion slots with optional riser card • Max 4x hybrid PCIe 5.0 NVMe drives supported at front • Flexible I/O expansion</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>Supermicro® X13SEW-F</td>
<td>Supermicro® X13SEW-F</td>
<td>Supermicro® 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 Slot 2: PCIe 5.0 x16 FHFL Slot 3: PCIe 5.0 x8 (in x16) LP</td>
<td>Slot 1: PCIe 5.0 x16 FHFL Slot 2: PCIe 5.0 x16 FHFL Slot 3: PCIe 5.0 x8 (in x16) LP</td>
<td>Slot 1: PCIe 5.0 x16 FHFL Slot 3: PCIe 5.0 x8 LP Slot 6: 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 1GB RJ45 port(s) with Intel® Ethernet Controller i210</td>
<td>2x 1GB RJ45 port(s) with Intel® Ethernet Controller i210</td>
<td>2x 1GB 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” SATA/SAS drive bays; 10x 2.5” NVMe/SATA/SAS drive bays; 10x 2.5” NVMe hybrid;</td>
<td>None</td>
<td>8x 3.5” NVMe/SATA/SAS drive bays; 4x 3.5” NVMe hybrid;</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>2x 2.5”</td>
<td>None</td>
<td>2x 2.5”</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

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

---

#### 2U 4-way Compute-optimized
![Image of 2U 4-way Compute-optimized server]

#### 2U 4-way Storage-optimized
![Image of 2U 4-way Storage-optimized server]

#### 6U 8-way GPU-optimized
![Image of 6U 8-way GPU-optimized server]

---

### Table of Specifications

<table>
<thead>
<tr>
<th><strong>MODEL</strong></th>
<th><strong>SYS-241H-TNRTTP</strong></th>
<th><strong>SYS-241E-TNRTTP</strong></th>
<th><strong>SYS-681E-TR</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>4th Gen Intel® Xeon® Scalable processors Quad Socket LGA-4677 (Socket E) supported TDP up to 350W; 3 UPI up to 16GT/s</td>
<td>4th Gen Intel® Xeon® Scalable processors Quad Socket LGA-4677 (Socket E) supported TDP up to 250W; 3 UPI up to 16GT/s</td>
<td>4th Gen Intel® Xeon® Scalable processors Octa Socket LGA-4677 (Socket E) supported TDP up to 350W; 4 UPI up to 16GT/s</td>
</tr>
</tbody>
</table>

| **Key Applications** | | | |
| • SAP HANA | • SAP HANA | • Scale-up HPC, Research Lab/National Lab, Virtualization, ERP, CRM, In-Memory Database |
| • HCI | • HCI | |
| • In-Memory Database | • In-Memory Database | |
| • Scientific Virtualization | • Scientific Virtualization | |
| • ERP, CRM | • ERP, CRM | |
| • Business Intelligence | • Business Intelligence | |
| • Artificial Intelligence (AI) | • Artificial Intelligence (AI) | |
| up to 12 PCIe expansion provides scalability as business grows | up to 8 PCIe expansion provides scalability as business grows | up to 26 PCIe expansion provides scalability as business grows |
| Support up to 2 double-width GPU/FPGA to accelerate AI workloads | Support up to 2 double-width GPU/FPGA to accelerate AI workloads | Support up to 12 double-width GPU/FPGA to accelerate AI workloads |
| Compute Optimized 4-Way Server | Storage Optimized 4-Way Server | |

| **Outstanding Features** | | | |
| up to 12 PCIe expansion provides scalability as business grows | Support up to 2 double-width GPU/FPGA to accelerate AI workloads | |
| Compute Optimized 4-Way Server | Storage Optimized 4-Way Server | |

| **Serverboard** | SUPER® X13QEH+ | SUPER® X13QEH+ | SUPER® X13OEi-CPU |
| **Chipset** | Intel® C741 | Intel® C741 | Intel® C741 |
| **System Memory (Max.)** | 64 DIMM slots UP to 16TB; 64x 256GB DRAM UP to 24TB: 32x 256GB DRAM and 32x 512GB Intel® Optane™ Persistent Memory | 64 DIMM slots UP to 16TB; 64x 256GB DRAM UP to 24TB: 32x 256GB DRAM and 32x 512GB Intel® Optane™ Persistent Memory | 128 DIMM slots UP to 32TB: 128x 256GB DRAM UP to 48TB: 64x 512GB Intel® Optane™ Persistent Memory and 64x 256GB DRAM |
| **Expansion Slots** | 2 PCIe 5.0 x8 FHFL slot(s) 2 PCIe 5.0 x8 FHFL slot(s) 2 PCIe 5.0 x16 FHFL slot(s) 2 PCIe 5.0 x16 FHFL slot(s) 2 PCIe 4.0/5 x8 LP optional slot(s) 2 PCIe 4.0/5 x16 LP optional slot(s) PCIe 5.0 x16 AIOM slot(s) PCIe 5.0 x16 AIOM slot(s) PCIe 5.0 x8 (x16 slot) AIOM slot(s) PCIe 5.0 x8 (x16 slot) AIOM slot(s) 2 M.2 SATA3/NVMe3 slot(s) 2 M.2 SATA3/NVMe3 slot(s) | 2 PCIe 5.0 x8 FHFL slot(s) 2 PCIe 5.0 x8 FHFL slot(s) 2 PCIe 5.0 x16 FHFL slot(s) 2 PCIe 5.0 x16 FHFL slot(s) 2 PCIe 0.0/5 x8 LP optional slot(s) 2 PCIe 0.0/5 x16 LP optional slot(s) PCIe 5.0 x16 AIOM slot(s) PCIe 5.0 x16 AIOM slot(s) PCIe 5.0 x8 (x16 slot) AIOM slot(s) PCIe 5.0 x8 (x16 slot) AIOM slot(s) 2 M.2 SATA3/NVMe3 slot(s) 2 M.2 SATA3/NVMe3 slot(s) | 12 PCIe 5.0 x4 FHFL slot(s) 12 PCIe 5.0 x4 FHFL slot(s) 2 PCIe 2.5” NVMe hybrid; Optional RAID support via RAID controller AOC 24x 2.5” NVMe hybrid; Optional RAID support via RAID controller AOC 24x 2.5” NVMe hybrid; Optional RAID support via RAID controller AOC |
| **Onboard Storage Controller** | Intel® SATA via AIOM | Intel® SATA via AIOM | Intel® SATA via AIOM |
| **Connectivity** | via AIOM | via AIOM | 1x 1GbE RJ45 port(s) |
| **VGA/Audio** | 1 VGA port(s), 1 DisplayPort(s) | 1 VGA port(s), 1 DisplayPort(s) | 1 VGA port(s), 1 DisplayPort(s) |
| **Management** | Intel® Node Manager; IPMI 2.0; NMI; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog | Intel® Node Manager; IPMI 2.0; NMI; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog | Intel® Node Manager; IPMI 2.0; NMI; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog |
| **Drive Bays** | 8x 2.5” hot-swap NVMe/SA53/SATA3 drive bays; Optional RAID support via RAID controller AOC | 24x 2.5” hot-swap NVMe/SA53/SATA3 drive bays; 24x 2.5” NVMe hybrid; Optional RAID support via RAID controller AOC | 24x 2.5” hot-swap NVMe/SA53/SATA3 drive bays; 24x 2.5” NVMe hybrid; Optional RAID support via RAID controller AOC |
| **Peripheral Bays** | None | None | None |
| **Power Supply** | Redundant 2700W Titanium level (96%) | Redundant 1600W Titanium level (96%) | Redundant 2600W Titanium level (96%) |
| **Cooling System** | 3x 8cm and 2x 6cm heavy duty fan(s) | 6x 6cm heavy duty fan(s) | 10x 8cm heavy duty fan(s) |
| **Form Factor** | 2U Rackmount: Enclosure: 438.4 x 87.9 x 812.9mm (17.3” x 3.5” x 32”) Package: 672 x 250 x 1100mm (26.5” x 9.75” x 43.5”) | 2U Rackmount: Enclosure: 438.4 x 87.9 x 849.3mm (17.3” x 3.5” x 33.4”) Package: 672 x 250 x 1100mm (26.5” x 9.75” x 43.5”) | 6U Rackmount: Enclosure: 449 x 265 x 841mm (17.68” x 10.4” x 33.1”) Package: 720 x 922 x 1080mm (28.34” x 36.3” x 42.5”) |
## X13 MAINSTREAM

###モデル| SYS-621P-TR | SYS-621P-TRT | SYS-221P-C9R | SYS-221P-C9RT
---|---|---|---|---
###プロセッササポーティング| 4th Gen Intel® Xeon® Scalable processors | 4th Gen Intel® Xeon® Scalable processors | 4th Gen Intel® Xeon® Scalable processors | 4th Gen Intel® Xeon® Scalable processors
| Dual Socket LGA-4677 (Socket E) supported | Dual Socket LGA-4677 (Socket E) supported | TDP up to 300W; 4 UPI | TDP up to 300W; 4 UPI
###キーアプリケーション| • Virtualization | • Virtualization | • Application and data serving | • Application and data serving
| • Compute Intensive Applications | • Compute Intensive Applications | • Enterprise Server | • Enterprise Server
###突出特性| • Cost effective all-purpose 2U rackmount server | • Cost effective all-purpose 2U rackmount server
###チップセット| Intel® C741 | Intel® C741 | Intel® C741 | Intel® C741
###システムメモリ（最大）| 16 DIMM slots | 16 DIMM slots | Up to 4TB: 16x 256GB DRAM | Up to 4TB: 16x 256GB DRAM
###拡張スロット| 4x PCIe 5.0 x16 LP slot(s); 2x PCIe 5.0 x8 LP slot(s) | 4x PCIe 5.0 x16 LP slot(s); 2x PCIe 5.0 x8 LP slot(s) |
###オンボードストレージコントローラー| Intel® C741 | Intel® C741 | Broadcom® 3908 | Intel® C741
###接続性| -TR: 2x 1GBE port(s); -TR: 2x 10GBE port(s) | -C9R: 2x 1GBE port(s); -C9RT: 2x 10GBE port(s) |
###VGA/Audio| 1 VGA port | 1 VGA port |
###管理| Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; Supermicro Out of Band (OOB) License | Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; Supermicro Out of Band (OOB) License |
###ドライブベイ| 8x 3.5" hot-swap drive bays; 4x 2.5" NVMe hybrid; | 16x 2.5" hot-swap drive bays; 4x 2.5" NVMe hybrid; |
###ペリフェラルベイ| 1x slim DVD (optional) | 1x (slim or 5.25") DVD (optional) |
###電源供給| Redundant 1200W Titanium level (96%) | Redundant 1200W Titanium level (96%) |
###クーリングシステム| 3x 8cm heavy duty fan(s) | 3x 8cm heavy duty fan(s) |
###フォームファクター| 2U Rackmount | 2U Rackmount |
| Enclosure: 437 x 89 x 647mm (17.2" x 3.5" x 25.5") | Enclosure: 437 x 89 x 630mm (17.2" x 3.5" x 24.8") |
| Package: 678 x 290 x 876mm (26.7" x 11.4" x 34.5") | Package: 737 x 279 x 983mm (29" x 11" x 38.7") |
### Processor Support
- 4th Gen Intel® Xeon® Scalable processors
- Dual Socket LGA-4677 (Socket E) supported
- TDP up to 300W; 4UPI

### Key Applications
- Virtualization
- Compute Intensive Applications
- Application and data serving
- Enterprise Server

### Outstanding Features
- Cost effective all-purpose Tower/rackmount server

### Serverboard
- **SYS-741P-TR**: SUPER® X13DEI
- **SYS-741P-TRT**: SUPER® X13DEI-T

### Chipset
- **SYS-741P-TR**: Intel® C741
- **SYS-741P-TRT**: Intel® C741

### System Memory (Max.)
- **SYS-741P-TR**: 16 DIMM slots
  - Up to 4TB: 16x 256GB DRAM
- **SYS-741P-TRT**: 16 DIMM slots
  - Up to 4TB: 16x 256GB DRAM

### Expansion Slots
- **SYS-741P-TR**: 4 PCIe 5.0 x16 Full-height slot(s); 2 PCIe 5.0 x8 Full-height slot(s)
- **SYS-741P-TRT**: 4 PCIe 5.0 x16 Full-height slot(s); 2 PCIe 5.0 x8 Full-height slot(s)

### Onboard Storage Controller
- **SYS-741P-TR**: Intel® C741
- **SYS-741P-TRT**: Intel® C741

### Connectivity
- **SYS-741P-TR**: 2x 1GbE port(s)
- **SYS-741P-TRT**: 2x 10GbE port(s)

### VGA/Audio
- **SYS-741P-TR**: 1 VGA port
- **SYS-741P-TRT**: 1 VGA port

### Management
- **SYS-741P-TR**: IPMI 2.0; KVM with dedicated LAN; Redfish API; Super Diagnostics Offline; SuperDoctor® 5; Supermicro Power Manager (SPM); Supermicro Server Manager (SSM); Supermicro Update Manager (SUM)
- **SYS-741P-TRT**: IPMI 2.0; KVM with dedicated LAN; Redfish API; Super Diagnostics Offline; SuperDoctor® 5; Supermicro Power Manager (SPM); Supermicro Server Manager (SSM); Supermicro Update Manager (SUM)

### Drive Bays
- **SYS-741P-TR**: 8x 3.5” hot-swap drive bays; 4x 2.5” NVMe hybrid
- **SYS-741P-TRT**: 8x 3.5” hot-swap drive bays; 4x 2.5” NVMe hybrid

### Peripheral Bays
- **SYS-741P-TR**: 3x 5.25” DVD (optional)
- **SYS-741P-TRT**: 3x 5.25” DVD (optional)

### Power Supply

### Cooling System
- **SYS-741P-TR**: 3x 8cm heavy duty fan(s)
- **SYS-741P-TRT**: 3x 8cm heavy duty fan(s)

### Form Factor
- **SYS-741P-TR**: Tower/4U Rackmount
  - Enclosure: 178 x 452 x 647mm (7” x 17.8” x 25.5”)
  - Package: 356 x 625 x 795mm (14” x 24.6” x 31.3”)
- **SYS-741P-TRT**: Tower/4U Rackmount
  - Enclosure: 178 x 452 x 647mm (7” x 17.8” x 25.5”)
  - Package: 356 x 625 x 795mm (14” x 24.6” x 31.3”)

---

X13 Server Solutions - September 2023
# X13 Workstations

## Processor Support
- **4th Gen Intel® Xeon® Scalable Processors**
  - Dual Socket LGA-4677 (Socket E)
  - Supported TDP up to 350W
  - 4 UPI
- **Intel® Xeon® W-2400 processors**
  - Single Socket LGA4677 (Socket E)
  - Supported TDP up to 250W
- **Intel® Xeon® W-3400 processors**
  - Single Socket LGA4677 (Socket E)
  - Supported TDP up to 350W

## Key Applications
- Engineering/Scientific research
- Multimedia/Digital Content creation
- CAD
- Rendering
- VR Content Development
- 2D/3D Content Creation
- Product Design and Engineering Simulation

## Outstanding Features
- PCIe 5.0 supporting up to 2 double width active GPU cards
- Dual PCIe Gen5 M.2 expansion slots
- Up to 4 PCIe Gen5 NVMe U.2 drives with optional cables and converter trays
- IPMI support
- Dual 10Gbps Ethernet ports
- Supports Xeon® W-2400 Processors with TDP up to 350W
- Supports optional closed-loop liquid cooling module
- 6 PCIe 5.0 x16 slots
- 2000W Platinum power supply
- 1x 10GBase-T and 1x 1GbE

## Serverboard
- **SUPER® X13DAI-T**
- **SUPER® X13SRA-TF**
- **SUPER® X13SWA-TF**

## Chipset
- Intel® C741
- Intel® W790
- Intel® W790

## System Memory (Max.)
- 16 DIMM slots
  - Up to 2TB: 16x 128GB DRAM
- 8 DIMM slots
  - Up to 1TB: 8x 128GB DRAM
- 16 DIMM slots
  - Up to 2TB: 16x 128GB DRAM

## Expansion Slots
- 1 PCIe 5.0 x8 FHHL slot(s)
- 5 PCIe 5.0 x16 FHFL slot(s)
- PCIe 3.0 x4 FHFL slot(s)
- 3 PCIe 3.0 x16 FHFL slot(s)
- 6 PCIe 3.0 x16 FHFL slot(s)

## Onboard Storage Controller
- Intel® SATA
- Intel® W790
- Intel® W790

## Connectivity
- 2x 10GbE port(s)
- 1x 10GbE Rj45 port(s) with Marvell AQC113
  - 1x 1GbE RJ45 port(s) with Intel® Ethernet Controller I210-AT

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

## Management
- IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SUM; SuperDoctor® 5; Watch Dog
- IPMI 2.0; SPM; SUM; SuperDoctor 5; Watch Dog
- IPMI 2.0; SPM; SUM; SuperDoctor 5; Watch Dog

## Drive Bays
- 4x 3.5” SATA/NVMe drive bays;
- 4x 2.5” NVMe hybrid;
- Optional RAID support via RAID controller AOC
- 4x 3.5” SATA drive bays;
- 2x 2.5” SATA drive bays;

## Peripheral Bays
- 2x 5.25” (optional)
- 2x 5.25”
- 2x 5.25”

## Power Supply
- 2000W Platinum level (92%)
- 1200W Platinum level (92%)
- 2000W Platinum level (92%)

## Cooling System
- 3x 12cm heavy duty fan(s)
- 2x 12cm heavy duty fan(s)
- 2x 120mm 2200 RPM Front intake fans; 1x 120mm 2200 RPM rear exhaust fan
- 5U/Full Tower Rackmount
- Mid-Tower Rackmount
- Tower or 5U Rackmount
- Enclosure: 221 x 536 x 574mm (8.7” x 21.1” x 22.6”)
- Package: 371 x 701 x 711mm (14.6” x 27.6” x 28.3”)
- Enclosure: 193 x 424 x 525.3mm (7.6” x 16.7” x 20.68”)
- Package: 304 x 543 x 642mm (11.97” x 21.38” x 25.28”)
- Enclosure: 222 x 535 x 573mm (8.74” x 21.06” x 22.56”)
- Package: 372 x 708 x 724mm (14.6” x 27.8” x 28.5”)

---

### MODEL | SYS-751A-I | SYS-531A-I | SYS-551A-T
--- | --- | --- | ---
Processor Support | 4th Gen Intel® Xeon® Scalable Processors | Intel® Xeon® W-2400 processors | Intel® Xeon® W-3400 processors
| | Dual Socket LGA-4677 (Socket E) | Single Socket LGA4677 (Socket E) | Single Socket LGA4677 (Socket E)
| | Supported TDP up to 350W | Supported TDP up to 250W | Supported TDP up to 350W
Key Applications | Engineering/Scientific research | VR Content Development | Product Design and Engineering Simulation
Outstanding Features | PCIe 5.0 supporting up to 2 double width active GPU cards | Supports Xeon® W-2400 Processors | Supports Xeon® W-2400 Processors with TDP up to 350W
| | Dual PCIe Gen5 M.2 expansion slots | 3 PCIe 5.0 x16 slots | Supports optional closed-loop liquid cooling module
| | Up to 4 PCIe Gen5 NVMe U.2 drives with optional cables and converter trays | 1x 10GBase-T and 1x 1GbE | 6 PCIe 5.0 x16 slots
| | IPMI support | 1200W Platinum power supply | 2000W Platinum power supply
| | Dual 10Gbps Ethernet ports | | 1x 10GBase-T and 1x 1GbE

---

4th Gen Intel® Xeon® Scalable processors Supported

[MORE](#)
### X13 DP Serverboards

**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported

<table>
<thead>
<tr>
<th>MODEL</th>
<th>X13DAI-T (4th Gen Intel® Xeon® Scalable processors)</th>
<th>X13DEI (4th Gen Intel® Xeon® Scalable processors)</th>
<th>X13DEI-T (4th Gen Intel® Xeon® Scalable processors)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor</strong></td>
<td>Dual Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP</td>
<td>Dual Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP</td>
<td>Dual Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 350W TDP</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C741</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>EATX, 12.1&quot; x 13.1&quot; (30.74cm 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><strong>Memory Capacity &amp; Slots</strong></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><strong>Expansion Slots</strong></td>
<td>Intel® C741 controller for 8 SATA3 ports; RAID N/A; via SlimSAS</td>
<td>Intel® C741 controller for 8 SATA3 ports; RAID N/A; Internal Port(s)</td>
<td>Intel® C741 controller for 8 SATA3 ports; via SlimSAS</td>
</tr>
<tr>
<td><strong>Onboard LAN</strong></td>
<td>Dual LAN with Broadcom BCM5720 10GBase-T Single LAN with Realtek RTL8211F PHY</td>
<td>Dual LAN with Broadcom BCM57416 10GBase-T Single LAN with Realtek RTL8211F PHY</td>
<td>Dual LAN with Broadcom BCM57416 10GBase-T Single LAN with Realtek RTL8211F PHY</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>
<td>1 VGA D-Sub Connector port(s)</td>
</tr>
<tr>
<td><strong>USB Ports</strong></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><strong>Other Onboard I/O Devices</strong></td>
<td>1x Realtek ALC8888 7.1 HD Audio port(s)</td>
<td>2 COM Port(s) (1 header; 1 rear)</td>
<td>2 COM Port(s) (1 header; 1 rear)</td>
</tr>
<tr>
<td><strong>Manageability</strong></td>
<td>SuperDoctor® 5, SPM, SUM, SSM, IPMI (Intelligent Platform Management Interface)</td>
<td>System temperature, PCH temperature, Memory temperature, CPU temperature, +5V standby, +5V, +3.3V, +12V, +3.3V standby, Vmem,</td>
<td>System temperature, PCH temperature, Memory temperature, CPU temperature, +5V standby, +5V, +3.3V, +12V, +3.3V standby, Vmem,</td>
</tr>
<tr>
<td><strong>PC Health Monitoring</strong></td>
<td>+5V standby, +5V, +3.3V, +12V, +3.3V standby, Vmem</td>
<td>Fan speed control</td>
<td>Fan speed control</td>
</tr>
<tr>
<td><strong>Thermal Control</strong></td>
<td>13x 4-pin fan headers (up to 13 fans)</td>
<td>8x 4-pin fan headers (up to 8 fans)</td>
<td>8x 4-pin fan headers (up to 8 fans)</td>
</tr>
<tr>
<td><strong>Other Features</strong></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><strong>BIOS</strong></td>
<td>AMI 32MB AMI UEFI</td>
<td>AMI 32MB AMI UEFI</td>
<td>AMI 32MB AMI UEFI</td>
</tr>
</tbody>
</table>

**X13 Server Solutions - September 2023**
## X13 UP Serverboards

**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported

**HPC, All PCIe 5.0 slots**

### Model Comparison

<table>
<thead>
<tr>
<th>Model</th>
<th>X13SEI-F</th>
<th>X13SEI-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 350W TDP</td>
<td>Single Socket LGA-4677 (Socket E) supported, CPU TDP supports Up to 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>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><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>2 PCIe 5.0 x16, 3 PCIe 5.0 x8, 2 PCIe 5.0 x8 PCIe5.0 MCIO connector, Form Factor: 2280/22110, 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, Form Factor: 2280/22110, M.2 Key: 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 VGA</strong></td>
<td>Dual LAN with 1GbE with Intel® I210</td>
<td>Dual LAN with 1GbE with Intel® XS50</td>
</tr>
<tr>
<td><strong>USB Ports</strong></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><strong>Other Onboard I/O Devices</strong></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><strong>Manageability</strong></td>
<td>SuperDoctor® 5, SPM, SUM, SSM, IPMCFG, IPMIView for Linux/Windows, SMCPITool, Trusted Platform Module (TPM), Chassis Intrusion Detection</td>
<td>SuperDoctor® 5, SPM, SUM, SSM, IPMCFG, IPMIView for Linux/Windows, 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, Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 6-pin status, +5V standby, +5V, +3.3V, +12V, Memory Voltages</td>
<td>VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 6-pin status, +5V standby, +5V, +3.3V, +12V, Memory Voltages</td>
</tr>
<tr>
<td><strong>Thermal Control</strong></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><strong>Other Features</strong></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>
</tr>
<tr>
<td><strong>BIOS</strong></td>
<td>AMI UEFI</td>
<td>AMI UEFI</td>
</tr>
</tbody>
</table>
# X13 UP Serverboards

**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported

![X13 Server Solutions - September 2023](image)

## X13SEW-F vs X13SEW-TF

<table>
<thead>
<tr>
<th>Model</th>
<th>X13SEW-F</th>
<th>X13SEW-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>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>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>1 PCIe 5.0 x8 Right Riser (in x16) slot, 1 PCIe 5.0 x32 Left Riser Slot, 5 PCIe 5.0 x8 PCIe3.0 MCIO connector</td>
<td>1 PCIe 5.0 x8 Right Riser (in x16) slot, 1 PCIe 5.0 x32 Left Riser Slot, 5 PCIe 5.0 x8 PCIe3.0 MCIO connector</td>
</tr>
<tr>
<td>M.2 Interface</td>
<td>1 PCIe 3.0 x2</td>
<td>1 PCIe 3.0 x2</td>
</tr>
<tr>
<td>M.2 Key</td>
<td>M-Key</td>
<td>M-Key</td>
</tr>
<tr>
<td>Onboard RAID Controller</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>Onboard LAN</td>
<td>Dual LAN with 1GbE with Intel® I210</td>
<td>Dual LAN with 10GbE-T with Intel® X550</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>
</tr>
<tr>
<td>USB Ports</td>
<td>5 USB 2 port(s) (2 via header; 2 rear; 1 Type A) 4 USB 3.2 Gen1 port(s) (2 via header; 2 rear) 2 COM Port(s) (1 header; 1 rear)</td>
<td>5 USB 2 port(s) (2 via header; 2 rear; 1 Type A) 4 USB 3.2 Gen1 port(s) (2 via header; 2 rear) 2 COM Port(s) (1 header; 1 rear)</td>
</tr>
<tr>
<td>Other Onboard I/O Devices</td>
<td>2 SATA DOM (Disk on Module) power connector support TPM 2 Header</td>
<td>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, SMCIPMIBTool, Trusted Platform Module (TPM), Chassis Intrusion Detection</td>
<td>SuperDoctor® 5, SPM, SUM, SSM, IPMICFG, IPMIView for Linux/Windows, SMCIPMIBTool, 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, -fan status, +5V standby, +3.3V, +12V, Memory Voltages</td>
<td>VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, -fan status, +5V standby, +3.3V, +12V, Memory Voltages</td>
</tr>
<tr>
<td>Thermal Control</td>
<td>6x 4-pin fan headers (up to 6 fans) Fan speed control 6 fans with tachometer status monitoring Overheat LED indication</td>
<td>6x 4-pin fan headers (up to 6 fans) Fan speed control 6 fans with tachometer status monitoring Overheat LED indication</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>
</tr>
<tr>
<td>BIOS</td>
<td>AMI UEFI</td>
<td>AMI UEFI</td>
</tr>
</tbody>
</table>
### X13 UP Serverboards

**HP Embedded SVR**

**NEW!**

4th Gen Intel® Xeon® Scalable processors Supported

![X13 Server Solution](image)

**MODEL**

<table>
<thead>
<tr>
<th>Feature</th>
<th>X13SEM-F</th>
<th>X13SEM-TF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>4th Gen Intel® Xeon® Scalable processors</td>
<td>4th Gen Intel® Xeon® Scalable processors</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C741</td>
<td>Intel® C741</td>
</tr>
<tr>
<td>Form Factor</td>
<td>microATX, 9.6&quot; x 9.6&quot; (24.38cm x 24.38cm)</td>
<td>microATX, 9.6&quot; x 9.6&quot; (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>
<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, 1 PCIe 5.0 x8</td>
<td>2 PCIe 5.0 x16, 1 PCIe 5.0 x8</td>
</tr>
<tr>
<td></td>
<td>2 PCIe 3.0 x4 NVMe Internal Port(s)</td>
<td>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>Form Factor:</strong> 2280/22110 <strong>M.2 Key:</strong> M-Key</td>
<td><strong>Form Factor:</strong> 2280/22110 <strong>M.2 Key:</strong> M-Key</td>
</tr>
<tr>
<td>Onboard RAID Controller</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>Onboard LAN</td>
<td>Dual LAN with 1Gbe with Intel® I350</td>
<td>Dual LAN with 10GBase-T with Intel® X550</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>
</tr>
<tr>
<td></td>
<td>1 Aspeed AST2600 BMC port(s)</td>
<td>1 Aspeed AST2600 BMC port(s)</td>
</tr>
<tr>
<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)</td>
<td>1 COM Port(s) (1 rear)</td>
</tr>
<tr>
<td></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>Manageability</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>SMCIPMI Tool, Trusted Platform Module (TPM), Chassis Intrusion Detection</td>
<td>SMCIPMI Tool, Trusted Platform Module (TPM), Chassis Intrusion Detection</td>
</tr>
<tr>
<td>PC Health Monitoring</td>
<td>VBAT, System level control, Supports system management utility,</td>
<td>VBAT, System level control, Supports system management utility,</td>
</tr>
<tr>
<td></td>
<td>Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 5 -fan</td>
<td>Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 5 -fan</td>
</tr>
<tr>
<td></td>
<td>status, +5V standby, +5V, +3.3V, +12V, Memory Voltages</td>
<td>status, +5V standby, +5V, +3.3V, +12V, Memory Voltages</td>
</tr>
<tr>
<td>Thermal Control</td>
<td>5x 4-pin fan headers (up to 5 fans)</td>
<td>5x 4-pin fan headers (up to 5 fans)</td>
</tr>
<tr>
<td></td>
<td>Fan speed control</td>
<td>Fan speed control</td>
</tr>
<tr>
<td></td>
<td>5 fans with tachometer status monitoring</td>
<td>5 fans with tachometer status monitoring</td>
</tr>
<tr>
<td>Other Features</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>
</tr>
<tr>
<td></td>
<td>ACPI power management</td>
<td>ACPI power management</td>
</tr>
<tr>
<td>BIOS</td>
<td>AMI UEFI</td>
<td>AMI UEFI</td>
</tr>
</tbody>
</table>

X13 Server Solutions - September 2023
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.

<table>
<thead>
<tr>
<th>Suite Bundle</th>
<th>Standard</th>
<th>Basic</th>
<th>Advanced</th>
<th>Enterprise</th>
</tr>
</thead>
<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, up-time, 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>
</tr>
<tr>
<td></td>
<td>System temperature monitoring</td>
<td>Remote BIOS management</td>
<td>Auto-discovery</td>
<td>POD &amp; Rack-level management</td>
</tr>
<tr>
<td></td>
<td>System power thresholds &amp; alerts</td>
<td>Out-of-Band systems checks</td>
<td>Power capping</td>
<td>SDI Lifecycle management</td>
</tr>
<tr>
<td></td>
<td>Component monitoring</td>
<td>TPM Provisioning</td>
<td>RAID monitoring and configuration</td>
<td>Manage Composable Dissaggregated Infrastructure</td>
</tr>
<tr>
<td></td>
<td>Email alerting</td>
<td>Mount/Unmount ISO images from Samba/HTTP</td>
<td>HHD monitoring</td>
<td>Zero-touch provisioning for network configuration</td>
</tr>
<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>
</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
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

Worldwide Headquarters
Super Micro Computer, Inc.
980 Rock Avenue, San Jose, CA 95131 USA
Tel: +1-408-503-8000
Fax: +1-408-503-8008
General Info: Marketing@Supermicro.com
Tech Support: Support@Supermicro.com
Webmaster: Webmaster@Supermicro.com

U.S. East Coast Office
Super Micro Computer, Inc.
525 Washington Blvd., 20th Floor
Jersey City, NJ 07310 USA
General Info: Marketing@Supermicro.com

U.K. Sales Office
Super Micro Computer, B.V.
77 New Cavendish Street,
The Harley Building,
London, W1W 6XB, UK
Tel: +44-73-640-0390 Ext. 2800
General Info: Sales_Europe@supermicro.com
Support: Support_Europe@supermicro.com

European Branch
Super Micro Computer, B.V.
Het Sterrenbeeld 28, 5215 ML,
’s-Hertogenbosch, The Netherlands
Tel: +31-73-640-0390
Fax: +31-73-641-6525
General Info: Sales_Europe@supermicro.com
Support: Support_Europe@supermicro.com

Taiwan Office
Super Micro Computer, Inc.
3F., No.150, Jiao 1st Rd., Zhonghe Dist.,
New Taipei City 235, Taiwan (R.O.C.)
Tel: +886-2-8226-1990
Fax: +886-2-8226-1992
Support: Support@Supermicro.com.tw

Beijing, China Office
Supermicro Technology (Beijing) Co., Ltd.
Suite 701, Tower D, Jiahua Building,
No.9, Shandong 3rd Street,
Haidian District, 100085,
Beijing, China
Tel: +86-10-62969165
E-mail: Sales-CH@supermicro.com

Japan Office
Supermicro Japan
21F Shibuya In foss Tower, 20-1,
Sakuragaoka-cho, Shibuya-Ku, Tokyo,
150-0001 Japan
Tel: +81-3-5728-5196
Fax: +81-3-5728-5197
Sales Inquiry: Sales_Inquiry_JP@Supermicro.com
Tech Support: Support_Japan@Supermicro.com

Korea Office
Super Micro Computer Holding B.V.
#1001, Trade Tower, ST1, Yeongdong-dong,
Gangnam-gu, Seoul, Korea, 06164
Tel: +82-2-554-0045
Fax: +82-2-554-0146
Sales Inquiry: Sales-Asia@supermicro.com.tw

Supermicro Science & Technology Park
Supermicro Science & Technology Park
Room 702, No 396, North Casui Road,
Huizhi Building, Xuhui District,
Shanghai, China 200030
Tel: +86-21-61152558
Tech Support: +86-21-61152556
E-mail: Sales-CN@supermicro.com
Support: Support-CN@supermicro.com

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
Better
Better Performance
Per Watt and Per Dollar

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

Greener
Reduced Environmental
Impact and Lower TCO

Worldwide Headquarters
Super Micro Computer, Inc.
980 Rock Ave.
San Jose, CA 95131, USA
Tel: +1-408-503-8000
Fax: +1-408-503-8008
E-mail: Marketing@Supermicro.com

EMEA Headquarters
Super Micro Computer, B.V.
Het Sterrenbeeld 28, 5215 ML,
’S-Hertogenbosch, The Netherlands
Tel: +31-73-640-0390
Fax: +31-73-641-6525
E-mail: Sales_Europe@supermicro.com

APAC Headquarters
Super Micro Computer, Taiwan Inc.
3F, No. 150, Jian 1st Rd., Zhonghe Dist.,
New Taipei City 235, Taiwan
Tel: +886-2-8226-3990
Fax: +886-2-8226-3991
E-mail: Marketing@Supermicro.com.tw

www.supermicro.com

©Super Micro Computer, Inc. Specifications subject to change without notice. All other brands and names are the property of their respective owners. All logos, brand names, campaign statements and product images contained herein are copyrighted and may not be reprinted and/or reproduced, in whole or in part, without express written permission by Supermicro Corporate Marketing.