Mission Critical Server Solutions

Supporting 3rd Gen Intel® Xeon® Scalable Processors (Ice Lake)

SYS-220BT-H
- Highly configurable 2U 4-node and 2U 2-node systems
- 3rd Gen Intel® Xeon® Scalable processors, 2 per node, up to 270W TDP
- All-hybrid hot-swappable drive bays - NVMe, SAS or SATA (2.5” or 3.5” drives) - Up to 12 NVMe drives per node.
- 16 DIMMs + 4 Intel Optane Persistent Memory 200 series per node
- PCIe-E 4.0 AIOM (OCP 3.0 compliant) networking - 1 per node

SYS-420GP-TNAR(+)
- Dense and scalable multi-GPU powerhouse supports the latest HGK A100 8 SXM4 GPUs
- Next generation of NVIDIA NVLink™, which doubles the GPU-to-GPU direct bandwidth, almost 10X higher than PCIe Gen 4.
- New NVIDIA NVSwitch that is 2X faster than the previous generation.
- Networking up to 200G, GPUDirect RDMA and GPUDirect Storage.
- Flexible AIOM slots (OCP 3.0 compliant) support
- NVIDIA certified system

SSG-640SP-E1CR90 - 4U 90x Top Loading
- New generation top-loading server optimized for field serviceability and field replacement.
- Tool-less Hot-swappable drive bays supporting 3.5” and 2.5” media.
- Flexible mix of hybrid HDD and SSD drive bays for best performance and TCO.
- Superior pullout drive drawer design.
- Hot swappable nodes, expanders, drives, power supplies and fans.
INTRODUCING
SUPERMICRO X12 GENERATION

Better
Better Performance Per Watt and Per Dollar

Faster
40%-60% Better Performance on Cloud Workloads

Greener
Reduced Environmental Impact & Lower TCO

OPTIMIZED SYSTEMS FOR YOUR WORKLOAD
- Over 100 Building Block Optimized Designs
- Maximum Processor, Memory and I/O Performance
- Max Performance, High Volume Cloud, High Efficiency Multi-Node, Mainstream

OPEN ARCHITECTURES
- OpenBMC, OCP v3.0 SFF Cards
- New Supermicro AIOM Cards Provide I/O Flexibility with OCP Superset

SECURE
- Enhanced Security with Hardware Root of Trust, Total Memory Encryption, Software Guard Extension

MANAGEABLE & SERVICEABLE
- New Web Management Interface
- Tool-less Designs
- Global Service & Support
- Performance, High Volume Cloud, High Efficiency Multi-Node, Mainstream

FIRST-TO-MARKET WITH MAXIMUM PERFORMANCE
- Thermal Capacity Supports Highest Clock Speeds
- Support for Full Memory Configuration and Bandwidth

CPU & MEMORY
- On Average 62% Better Performance on Network and 5G Workloads
- Web (Crypto) Acceleration
- DDR4-3200MHz
- 1.6x Memory Bandwidth
- 2.66x Memory Capacity

I/O
- PCI-E 4.0
- 2x I/O Bandwidth

SUPERBLADE®:
- Advanced Networking with 200G InfiniBand Switch, and up to 4x 25GbE Switches

BEST-IN-CLASS WORKLOAD PERFORMANCE
- Market-Leading GPU Servers for AI/ML and HPC

MAXIMUM POWER EFFICIENCY
- Both Free Air and Water Cooled
- Titanium-Level (96%) Power Supplies

MULTI-NODE SYSTEMS
- 15-20% Lower Power Costs with Optimized Shared Resource Designs

LONGEVITY
- Multi-Generation Infrastructure for up to 65% CAPEX Savings

SYSTEM REFRESH
- Modular Upgrades for Maximum Performance and Efficiency
- Select Component Refresh Reduces e-Waste
**X12 BigTwin®**

Leading Multi-Node Architecture

Highly configurable 2U 4-node and 2U 2-node systems

3rd Gen Intel® Xeon® Scalable processors, 2 per node, up to 270W TDP

All-hybrid hot-swappable drive bays - NVMe, SAS or SATA (2.5” or 3.5” drives) - Up to 12 NVMe drives per node.

16 DIMMs + 4 Intel Optane Persistent Memory 200 series per node

PCI-E 4.0 AIOM (OCP 3.0 compliant) networking - 1 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 X12 BigTwin® systems provide superior performance and serviceability with dual 3rd Gen Intel Xeon Scalable processors per node and hot swappable tool-less design.

Superior modular mid-plane design with PCI-E 4.0 Storage Controller Options.

Multi-node BigTwin® systems with shared components can offer more cost effective compute & storage arrays compared to entry-level 1U All-Flash/NVMe Arrays. With security in mind, each node has a dedicated BMC port, requiring unique credentials to access management controls, monitoring capabilities, analytics, and event logs.
X12 Ultra and Ultra-E
High Performance & Flexible Systems for Enterprise Applications

Optimized for highest processor TDPs
Up to 22 hybrid NVMe
Up to 3 double-width GPUs
PCI-E 4.0 support with 64 lanes per socket; Total 128 lanes
Dual 3rd Gen Intel® Xeon® Scalable processors up to 270W and 32 DIMM slots for maximum memory capacity

Key Applications
- Enterprise Server
- Hyper-converged Storage
- Virtualization
- AI Training/Inferencing
- Big Data Analytic
- Cloud Computing
- CDN
- In-memory Database

Supermicro X12 Ultra system are designed to deliver the highest performance, flexibility, scalability and serviceability to demanding IT environments, and to power mission-critical Enterprise workloads, including support for 3rd Gen Intel Xeon Scalable processors.

With best-in-class server features including all NVMe, hybrid storage and low latency optimization, Ultra Servers feature an uncompromised performance design with 2 CPU sockets optimized for supporting the highest processor TDPs and 32 DIMMs.
X12 CloudDC
All-in-one Rackmount Platform for Cloud Data Centers

Tool-less design, configurable I/O and 16 DDR4-3200MHz DIMMs up to 4TB

Dual AIOM slots (OCP 3.0 compliant) for flexible networking plus 4-12 SATA/SAS drive bays with optional full NVMe support in selected SKUs

Highly versatile and compact 2U system that supports up to two double-width GPUs in a 25.5” (648 mm) chassis

Rich security features with TPM 1.2/2.0, silicon root of trust, secured boot and Runtime FW Protection

Key Applications
- Cloud Computing
- Web Servers
- Hyper-converged Storage
- Virtualization
- File Servers
- Head-node Computing
- 5G Telco AI Inferencing

Redundant high-efficiency Platinum/Titanium Level power supplies ensure resiliency and a lower carbon footprint.

Rich Security Features include: TPM 1.2/2.0, signed firmware, Silicon Root of Trust, Secure Boot, System Erase, Runtime FW protection, FIPS Compliance, and Trusted Execution Environment.
Resource Saving Architecture

A shared cooling, power and networking infrastructure is key to the high density and server efficiency offered by blade solutions. Supermicro’s high performance, density optimized, and energy-efficient SuperBlade® can significantly reduce initial capital and operational expenses for many organizations.

In particular, Supermicro’s new generation blade product portfolio has been designed to optimize the TCO of key components for today’s data centers, such as free-air cooling, power efficiency, node density and networking management.

* Contact Supermicro for more information
High density systems for double-width, full length PCI-E GPUs

Supermicro offers a comprehensive range of GPU servers featuring NVMe for lower latency with higher throughput and 3rd Gen Intel® Xeon® Scalable processors including:

- 1U: supporting up to four PCI-E GPUs
- 2U: supporting up to six PCI-E GPUs
- 4U: supporting up to ten PCI-E GPUs

High performance AI/ML and HPC-optimized solution

Optimized for graphics and rendering applications

Double the CPU to GPU throughput with PCI-E 4.0

Dual socket Intel® Xeon® Scalable processors up to 270W

NVIDIA GPUs supported

NVIDIA certified system

Key Applications

- AI/ML
- Deep Learning Training and Inference
- High-performance Computing (HPC)
- Rendering Platform for High-end Professional Graphics
- Best-in-Class VDI Infrastructure Platform
**X12 GPU WITH HGX**
High Performance and Flexibility for AI/ML and HPC Applications

Dense and scalable multi-GPU powerhouse supports the latest HGX A100 8 SXM4 GPUs

Next generation of NVIDIA NVLink™, with double the GPU-to-GPU direct bandwidth, almost 10X higher than PCI-E 4.0

New NVIDIA NVSwitch that is 2X faster than the previous generation

Networking up to 200G, GPUDirect RDMA and GPUDirect Storage

AIOM slot (OCP 3.0 compliant) support

NVIDIA certified system

**Maximum Acceleration X12 GPU System**

With Supermicro’s advanced architecture and thermal design, including liquid cooling and custom heatsinks, our 4U GPU system drive NVIDIA’s latest HGX A100 4-GPU or 8-GPU respectively, can deliver up to 6x AI Training Performance and 7x Inference Workload Capacity and Highest Density in a Flexible 2U or 4U system respectively.

Supermicro’s unique AIOM slots (OCP 3.0 compliant in 4U option only) and a slew of PCI-E 4.0 slots of these systems enhance the multi-GPU communication and high-speed data flow between systems at a large scale.

The X12 GPU systems feature the latest technology stacks such as 200G networking, NVIDIA NVLink and NVSwitch, 1:1 GPUDirect RDMA, GPUDirect Storage, and NVMe-oF on InfiniBand.

**Key Applications**
- AI/ML
- Deep Learning Training and Inference
- High-performance Computing (HPC)
- Building Block for Scalable AI Infrastructure
X12 SUPERSTORAGE
Application-optimized High-Performance Storage Solution

New generation top-loading server optimized for field serviceability and field replacement

PCI-E 4.0 storage controller with hardware RAID and IT mode

Tool-less hot-swappable drive bays supporting 3.5 and 2.5” media

Flexible mix of hybrid HDD and SSD drive bays for best performance and TCO

Superior pullout drive drawer design

Hot swappable nodes, expanders, drives, power supplies and fans

Three Families of Storage Servers

Enterprise Optimized:
- Open standards based x86 systems

Cloud Density:
- Highest density 3.5” servers with up to 90x HDDs and dual server nodes

Petascale:
- All Flash servers with up to 32 NVMe supporting U.2 and EDSFF form factor media

These powerful yet cost-effective systems provide excellent flexibility and value at entry-level price points. Designed for ease of deployment maintenance with data center operations in mind, X12 server are optimized for data availability with a new drawer design and hot swappable drivers, power supplies and fans.
X12 MAINSTREAM
Versatile Entry Level and Volume Servers for Enterprise Applications

Highly versatile servers to enable a wide variety of enterprise server applications

Choices of multiple form factors including rackmount and tower

A rich selection of storage and memory speed support

4 PCI-E 4.0 x16 and 2 PCI-E 4.0 x8 expansion slots

Dual 3rd Gen Intel® Xeon® Scalable processors up to 270W and Up to 16 DIMM slots

Mainstream Application Optimized
The X12 Mainstream Application Optimized product family from Supermicro is a series of servers designed for entry level or volume selections. Enterprise IT managers can choose the exact model for their applications, with a precise set of integrated features needed for their applications.

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

Key Applications
• SMB
• Virtualization
• Web Server
• AI - Inference
• Cloud Computing
• Head-node Computing

SYS-220P-C9R(T)
8x 2.5” SAS3, 8x 2.5” SATA3, 5x PCI-E slots

SYS-620P-TR(T)
8x 3.5” SATA, 6x PCI-E slots

SYS-740P-TR(T)
8x 3.5” SATA3, 6x PCI-E slots
X12 Hyper-E and Hyper
Best-in-class Performance and Flexibility Rackmount Server

High performance 1U & 2U systems with rear I/O and front I/O configurations to meet today’s data center requirements

Dual 3rd Gen Intel® Xeon® Scalable processors up to 270W and 32 DIMM slots for maximum memory capacity

Lightning-fast storage with the latest generation PCI-E 4.0 NVMe SSDs and networking flexibility with AIOM (OCP 3.0 compliant) NIC support

Tool-less system design features intended to simplify field serviceability and lower maintenance time

Ultimate Configurability for Enterprise and Telco Applications

The all-new Hyper series represents the latest generation of Supermicro rackmount servers built with the highest performance features to take on the most demanding workloads along with the storage & I/O flexibility that provide a custom fit to your application needs.

Telco optimized configurations include short depth, carrier grade (NEBS Level 3) Hyper-E servers with AC & DC power options.

Maintenance-friendly design innovations eliminate the need for tools when servicing the system.

Key Applications
- 5G Core and Edge
- Telecom 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
**X12 FatTwin®**
Advanced Multi-node 4U Twin Architecture with 8 and 4 Nodes

Highly configurable 4U 8-node and 4-node systems
Front accessible service design for cold-aisle serviceability
Hot-swappable drive bays – interchangeable NVMe, SAS or SATA
Better thermal with new optimized airflow designs for up to 165W processors
Dual 3rd Gen Intel® Xeon® Scalable processors up to 270W and 16 DIMM slots

**Innovative Twin Architecture to Maximize Serviceability and Reliability**

The FatTwin® architecture provides flexibility and system accessibility for unique data center requirements.

Unique one-half width nodes provide for 2 nodes per rack unit, which allows for modularized left and right nodes with redundant power supplies for maximum reliability.

These highly modular multi-node systems feature a tool-less design and each node supports dual 3rd Gen Intel Xeon Scalable processors for improved performance.

**Key Applications**
- Hyperscale / Hyperconverged
- Cloud Optimized Servers
- Data Center Enterprise Applications
- Scale out of Storage expansion
- Telco Data Center & ETSI certified
- Virtualization Server
**X12 TwinPro®**  
Cost-effective 2U Multi-node Platforms

Dual socket supported with TDP up to 185W  
16 DIMM slots for up to 4TB ECC RDIMM/LRDIMM DDR4-3200MHz  
Up to 6 hot-swappable SAS/SATA and 2 internal M.2 NVMe SSDs per node  
Onboard dual 10GbE RJ45 ports with Intel® X710-AT2 controller  
2 PCI-E 4.0 x16 LP expansion slots and 1 PCI-E 4.0 x8 (M.2)  
Redundant 2200W Titanium Level (96%) power supplies

**Cost-Effective 2U 4-Node Rackmount Server**

TwinPro® systems are designed for simplified deployment and maintenance, and are assembled with the highest quality to ensure continuous operation even at maximum capacity. In addition, these 4-node systems feature an optimized thermal design for maximum power efficiency.

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**Key Applications**
- Enterprise Mission-critical Applications  
- Data Center Cloud Computing  
- HPC  
- Virtualization  
- Big Data  
- Financial Analysis
X12 MP 4-WAY SERVER
Highest Performance and Flexibility for Enterprise Applications

Large memory footprint for up to 18TB
All hybrid hot-swappable drive bays - NVMe, SAS, or SATA
Supports 3rd Gen Intel® Xeon® Scalable (Cooper Lake) processors
Supports OCP3.0 and AIOIM form factor networking cards
SAP HANA Certified System – SAP HANA 1.0 SPS 12, SAP HANA 2.0

Highest Performance and Flexibility
This new 2U server delivers new levels of compute performance and flexibility with support for 3rd Gen Intel® Xeon® Scalable processors.

This dynamic storage platform supports direct-attached full-hybrid all NVMe for lower latency with higher throughput and IOPS with up to 24x 2.5” hybrid NVMe/SAS3/ SATA3 drive bays.

In addition, the flexible on-board networking with up to dual 10GBase-T and dual SFP+ ports enables cost-effective data communications.

Key Applications
- Artificial Intelligence (AI)
- Business Intelligence
- ERP
- CRM
- Scientific Virtualization
- In-Memory Database
- HCI
- SAP HANA
SuperWorkstation server-grade features include hot-swap storage bays, IPMI, and redundant Titanium-level power supplies.

Key Applications
- Rendering
- CAD
- Multimedia Digital Content Creation
- Engineering/Scientific Research

**Server-grade workstations for high-performance workloads**

Supermicro’s SuperWorkstations are optimized for applications requiring powerful compute and graphics capabilities.

These systems support the latest Intel® Xeon® Scalable processors and multiple NVIDIA GPUs to boost productivity and creativity for professional artists, designers, and engineers across industries such as manufacturing, media and entertainment, and energy.

SuperWorkstation server-grade features include hot-swap storage bays, IPMI, and redundant Titanium-level power supplies.

Mid-tower and 4U tower with support for 3rd Gen Intel® Xeon® Scalable processors

Mid-tower with up to 4 internal 3.5” SATA drives and 2 onboard M.2 slots, optional 4x 2.5” drive carrier (for total of 8 drives) and optional NVMe drive support

4U tower with 8 hot-swappable 3.5”/2.5” SATA drive bays and 2 onboard M.2 slots, optional SAS and NVMe drive support
X12 WIO
Industry’s Widest Variety of I/O Optimized Servers

Cost-effective systems supporting up to 6 PCI-E 4.0 devices

Hot-swappable 2.5” or 3.5” SATA3 storage

Onboard dual 10 Gigabit Ethernet

Optional support up to 4 NVMe storage drives

3rd Gen Intel® Xeon® Scalable processors up to 270W and 8 DIMM slots

Supermicro WIO SuperServer®

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

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

Key Applications
- Enterprise Applications
- Networking Appliance
- Firewall / Security Appliances
- General Purpose Computing
- Cloud Computing
- Media Entertainment
High-density processing power at the Edge

Connecting the intelligent world from devices to the cloud

Low-power high-efficiency computing

Long life cycle

Compact form factors

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.
SuperCloud Composer is a composable cloud management platform that provides a unified dashboard to administer software-defined data centers.

Supermicro's cloud infrastructure management software brings speed, agility, and simplicity to IT administration by integrating data center tasks into a single intelligent management solution.

Our robust composer engine can orchestrate cloud workloads through a streamlined industry standard Redfish API.

SuperCloud Composer monitors and manages the broad portfolio of multi-generation Supermicro servers and third-party systems through its data center lifecycle management feature set from a single unified console.

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Savings - Capital Expenditure (CapEx), Operating Expense (OPEX) • Expands on optimized Supermicro building block solutions • Third Party Vendor Support</td>
<td>Intelligent Data Center Management • Call Home Management • POD &amp; Rack-level Management (including ToR switch) • Asset Management (Monitoring, Updates)</td>
</tr>
<tr>
<td>Frictionless Deployments • Zero Touch Provisioning for Network Configuration • Hardware Life Cycle Management for Software Define Data Center • Northbound Redfish APIs provides seamless integration</td>
<td>Dynamically Configured Servers • Zero Touch OS Deployment in Seconds</td>
</tr>
<tr>
<td>Device Scaling of Resources • Monitor/Manage Resource Pools in a Composable Disaggregated Infrastructure • Software Defined Node Composer • Expands storage and accelerators capacities to existing compute nodes • Support for 3rd party devices expands available resource selection</td>
<td>Unified End User Experience • Single Pane of Glass for Data Center Deployment • Rich Analytics &amp; Telemetry Data Driven Decisions</td>
</tr>
<tr>
<td>Compliance &amp; Governance • (SoT) Manage Silicon Root of Trust • SSL Security Compliance • User Define Role Based Access Control</td>
<td>• P0D View’s rack management solution provides flexibility to organize data center requirements based on common workloads assigned to a rack deployment either at the edge or physical appliances with a Data Center that are miles away</td>
</tr>
</tbody>
</table>

Dashboard aggregates the view of POD health, visualized system data analytics, activity event timeline tracking, providing at-a-glance awareness of data center operations, as well as detailed system status, composed node status, and allocated storage.
### SuperServer® X12DPT-B6 (For Complete System Only)

6x 2.5" drives/node x 4 Nodes

### Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-220BT-HNC8R</th>
<th>SYS-220BT-HNC9R</th>
<th>SYS-220BT-HNTR</th>
</tr>
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<tbody>
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<td><strong>Processor Support</strong></td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA 4189 (Socket P+) supported TDP up to 205W;</td>
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<td><strong>Key Applications</strong></td>
<td>• Container-as-a-Service; Application Accelerator</td>
<td>• Mission Critical HPC</td>
<td>• All-Flash NVMe Hyperconverged Infrastructure; Container-as-a-Service; Application Accelerator; High-Performance File System; Diskless HPC Clusters</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• 20 Memory slots (16 DIMM + 4 Intel® Optane™ Persistent Memory)</td>
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<td>• Supports NVMe/SATA/SAS storage devices</td>
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<td>• 1 AIMO card support (PCI-E 4.0)</td>
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<td>• 1 AIOM card support (PCI-E 4.0)</td>
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<td>• Tool-less support for swapping AOC cards; HW Boot Controller for NVMe M.2 drives; Liquid Cooling Support; HW RAID Support for Hot-Swapable SAS/ SATA Drives</td>
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<td></td>
<td>• Up to 2 Nvidia T4 GPU support, with limited CPU selection</td>
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<tr>
<td></td>
<td>• 4 Hot-Swap Nodes in 2U</td>
<td>• 4 Hot-Swap Nodes in 2U, Shared Power and Cooling Design</td>
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<td>• 2 low-profile PCI-E 4.0 slots</td>
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<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X12DPT-B6</td>
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</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C621A</td>
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</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>16 DIMM slots Up to 4TB ECC RDIMM, DDR4-3200MHz</td>
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<td><strong>Expansion Slots</strong></td>
<td>M.2 slots(s)</td>
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<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® SATA Broadcom® 3808</td>
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<td>Intel® SATA</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>1 onboard VGA port</td>
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<tr>
<td><strong>Management</strong></td>
<td>SuperDoctor® S; Watch Dog; SUM; IPMI 2.0; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; SuperCloud Composer</td>
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<td><strong>Drive Bays</strong></td>
<td>6x 2.5&quot; hot-swap NVMe/SATA/SAS drive bays; 6x 2.5&quot; NVMe hybrid; Optional HBA support via SAS3808 Adapter</td>
<td>6x 2.5&quot; hot-swap NVMe/SATA/SAS drive bays; 6x 2.5&quot; NVMe hybrid; Optional RAID support via Broadcom® 3908 AOC</td>
<td>6x 2.5&quot; hot-swap NVMe/SATA drive bays; 6x 2.5&quot; NVMe hybrid; Optional RAID support via Intel® PCH</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>Redundant 2600W Titanium level (96%)</td>
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<td><strong>Cooling System</strong></td>
<td>4 cooling fans per 2U enclosure, 16.5K RPM; Shared cooling design</td>
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<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>
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**SuperServer® Solutions - June 2021**

**X12 BigTWIN®**
(For Complete System Only)

3x 3.5" drives/node x 4 Nodes

3x 3.5" drives/node x 4 Nodes

12x 2.5" drives/node x 2 Nodes

---

### Features

**Outstanding Features**

- 20 Memory slots (16 DIMM + 4 Intel® Optane™ Persistent Memory)
- Supports NVMe/SATA/SAS storage devices
- 1 AOM card support (PCI-E 4.0)
- Tool-less support for swapping AOC cards
- HW Boot Controller for NVMe M.2 drives
- Liquid Cooling Support
- 4 Hot-Swap Nodes in 2U, Shared Power and Cooling Design
- 2 low-profile PCI-E 4.0 slots

---

### Serverboard

**MODEL** | **SYS-620BT-HNC8R** | **SYS-620BT-HNTR** | **SYS-220BT-DNC8R**
--- | --- | --- | ---
**Processor Support** | 3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA 4189 (Socket P+) supported TDP up to 185W; | 3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA 4189 (Socket P+) supported TDP up to 185W; | 3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA 4189 (Socket P+) supported TDP up to 270W;
**Key Applications** | • Hyperconverged Infrastructure | • Hyperconverged Infrastructure | • All-Flash Hyperconverged Infrastructure
• Scale-Out File Storage | • Container Storage | • All-Flash Scale-Out Storage Area Network | • All-Flash Object Storage
• Container Storage | | |
**Outstanding Features** | | | |
• 20 Memory slots (16 DIMM + 4 Intel® Optane™ Persistent Memory) | • 20 Memory slots (16 DIMM + 4 Intel® Optane™ Persistent Memory) | • 20 Memory slots (16 DIMM + 4 Intel® Optane™ Persistent Memory)
• Supports NVMe/SATA/SAS storage devices | • 1 AOM card support (PCI-E 4.0) | • Supports NVMe/SATA/SAS storage devices
• Tool-less support for swapping AOC cards | • Tool-less support for swapping AOC cards | • Tool-less support for swapping AOC cards
• HW Boot Controller for NVMe M.2 drives | • HW Boot Controller for NVMe M.2 drives | • HW Boot Controller for NVMe M.2 drives
• Liquid Cooling Support | • Liquid Cooling Support | • Liquid Cooling Support
• 4 Hot-Swap Nodes in 2U, Shared Power and Cooling Design | • 4 Hot-Swap Nodes in 2U, Shared Power and Cooling Design | • 2 Hot-Swap Nodes in 2U, Shared Power and Dedicated Cooling Per Node
• 2 low-profile PCI-E 4.0 slots | • 2 low-profile PCI-E 4.0 slots | • 3 low-profile PCI-E 4.0 slots

---

### System Memory

**Model** | **SYS-620BT-HNC8R** | **SYS-620BT-HNTR** | **SYS-220BT-DNC8R**
--- | --- | --- | ---
**System Memory (Max.)** | 16 DIMM slots Up to 4TB ECC DDR4, DDR4-3200MHz | 16 DIMM slots Up to 4TB ECC DDR4, DDR4-3200MHz | 16 DIMM slots Up to 4TB ECC DDR4, DDR4-3200MHz
**Expansion Slots** | M.2 slot(s) 2 PCI-E 4.0 x16 LP slot(s) | M.2 slot(s) 2 PCI-E 4.0 x16 LP slot(s) | M.2 slot(s) PCI-E 4.0 x16 LP slot(s) PCI-E 4.0 x8 LP slot(s)

---

### Onboard Storage Controller

**Model** | **SYS-620BT-HNC8R** | **SYS-620BT-HNTR** | **SYS-220BT-DNC8R**
--- | --- | --- | ---
**Onboard Storage Controller** | Intel® SATA Broadcom® 3808 | Intel® SATA | Intel® SATA Broadcom® 3816

---

### Connectivity

**Model** | **SYS-620BT-HNC8R** | **SYS-620BT-HNTR** | **SYS-220BT-DNC8R**
--- | --- | --- | ---
**VGA/Audio** | 1 onboard VGA port | 1 onboard VGA port | 1 onboard VGA port
**Management** | SuperDoctor® 5; Watch Dog; SUM; IPMI 2.0; KVM with dedicated LAN; SPM; Intel® Node Manager; SSIM; SuperCloud Composer | SuperDoctor® 5; Watch Dog; SUM; IPMI 2.0; KVM with dedicated LAN; SPM; Intel® Node Manager; SSIM; SuperCloud Composer | SuperDoctor® 5; Watch Dog; SUM; IPMI 2.0; KVM with dedicated LAN; SPM; Intel® Node Manager; SSIM; SuperCloud Composer
**Drive Bays** | 3x 3.5" hot-swap NVMe/SATA/SAS drive bays; 3x 3.5" NVMe Hybrid; Optional HBA support via SAS3808 Adapter | 3x 3.5" hot-swap NVMe/SATA drive bays; 3x 3.5" NVMe Hybrid; Optional RAID support via Intel® PCH | 12x 2.5" hot-swap NVMe/SATA/SAS drive bays; 12x 2.5" NVMe Hybrid; Optional HBA support via SAS3816 AOC
**Peripheral Bays** | None | None | None
**Power Supply** | Redundant 2600W Titanium level (96%) | Redundant 2600W Titanium level (96%) | Redundant 2200W Titanium level (96%)
**Cooling System** | 4 cooling fans per 2U enclosure, 16.5K RPM; Shared cooling design | 4 cooling fans per 2U enclosure, 16.5K RPM; Shared cooling design | 2 cooling fans per 2U enclosure, 16.5K RPM
**Form Factor** | 2U rackmount Enclosure: 449 x 88 x 774mm (17.68" x 3.47" x 30.5") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28") | 2U rackmount Enclosure: 449 x 88 x 774mm (17.68" x 3.47" x 30.5") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28") | 2U 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")
## X12 BigTWIN®

(For Complete System Only)

### 12x 2.5” Drives/Node x 2 Nodes
![Image](image1.png)

### 6x 3.5” Drives/Node x 2 Nodes
![Image](image2.png)

### 6x 3.5” Drives/Node x 2 Nodes
![Image](image3.png)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-220BT-DNTR</th>
<th>SYS-620BT-DNTR</th>
<th>SYS-620BT-DNCR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA 4189 (Socket P+) supported TDP up to 270W;</td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA 4189 (Socket P+) supported TDP up to 250W;</td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA 4189 (Socket P+) supported TDP up to 250W;</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• High-Performance File System • Diskless HPC Clusters • Scale Out All-Flash NVMe Storage • Big Data Analytics and AI</td>
<td>• Hyperconverged Infrastructure • Scale-Out Object Storage • Back-up &amp; Recovery</td>
<td>• Hyperconverged Infrastructure • Scale-Out Object Storage • Back-up &amp; Recovery</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• 20 Memory slots (16 DIMM + 4 Intel® Optane™ Persistent Memory) • Supports NVMe/SATA/SAS storage devices • 1 AIOM card support (PCI-E 4.0) • Tool-less support for swapping AOC cards • HW Boot Controller for NVMe M.2 drives • Liquid Cooling Support • Up to 2 Nvidia T4 GPU support, with limited CPU selection • Balanced IO performance for up to 12 NVMe Gen4 drives • 2 Hot-Swap Nodes in 2U, Shared Power and Dedicated Cooling Per Node • 3 low-profile PCI-E 4.0 slots</td>
<td>• 20 Memory slots (16 DIMM + 4 Intel® Optane™ Persistent Memory) • 1 AIOM card support (PCI-E 4.0) • Tool-less support for swapping AOC cards • HW Boot Controller for NVMe M.2 drives • Liquid Cooling Support • 2 Hot-Swap Nodes in 2U, Shared Power and Dedicated Cooling Per Node • 3 low-profile PCI-E 4.0 slots</td>
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</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X12DPT-B6</td>
<td>SUPER® X12DPT-B6</td>
<td>SUPER® X12DPT-B6</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
</tr>
<tr>
<td>System Memory (Max.)</td>
<td>16 DIMM slots Up to 4TB ECC RDIMM, DDR4-3200MHz Up to 4TB Intel® Optane™ Persistent Memory, DDR4-3200MHz</td>
<td>16 DIMM slots Up to 4TB ECC RDIMM, DDR4-3200MHz Up to 4TB Intel® Optane™ Persistent Memory, DDR4-3200MHz</td>
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</tr>
<tr>
<td>Expansion Slots</td>
<td>M.2 slot(s) 2 PCI-E 4.0 x16 LP slot(s) 2 PCI-E 4.0 x8 LP slot(s)</td>
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</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td>Connectivity</td>
<td></td>
<td></td>
<td>Broadcom® 3808</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>1 onboard VGA port</td>
<td>1 onboard VGA port</td>
<td>1 onboard VGA port</td>
</tr>
<tr>
<td>Management</td>
<td>SuperDoctor® 5; Watch Dog; SUM; IPMI 2.0; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; SuperCloud Composer</td>
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<td>SuperDoctor® 5; Watch Dog; SUM; IPMI 2.0; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; SuperCloud Composer</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>12x 2.5” hot-swap NVMe/SATA drive bays; 12x 2.5” NVMe hybrid; Optional RAID support via Intel® PCH</td>
<td>6x 3.5” hot-swap NVMe/SATA drive bays; 6x 3.5” NVMe hybrid; 6x 2.5” NVMe hybrid; Optional RAID support via Intel® PCH</td>
<td>6x 3.5” hot-swap NVMe/SATA/SAS drive bays; 6x 3.5” NVMe hybrid; 6x 2.5” NVMe hybrid; Optional HBA support via SAS3808 Adapter</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>None</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>
<td>Redundant 2200W Titanium level (96%)</td>
</tr>
<tr>
<td>Cooling System</td>
<td>2 cooling fans per 2U enclosure, 16.5K RPM</td>
<td>2 cooling fans per 2U enclosure, 14.9K RPM</td>
<td>2 cooling fans per 2U enclosure, 14.9K RPM</td>
</tr>
<tr>
<td>Form Factor</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>
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</tbody>
</table>
### SuperServer Specifications

#### Model Information
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-2029BT-HER</th>
<th>SYS-2029BT-DNC0R</th>
<th>SYS-2029BT-DNR</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Memory (Max.)*</td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz†</td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz†</td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz†</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>2 PCI-E x3.0 (x16) Low-profile slots; 1 SIM card support Note: Must bundle with Network Card</td>
<td>2 PCI-E x3.0 x8; 1 PCI-E x3.0 x16; 1 SIM card support Note: Must bundle with Network Card</td>
<td>2 PCI-E x3.0 x8; 1 PCI-E x3.0 x16; 1 SIM card support Note: Must bundle with Network Card</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® C621 controller</td>
<td>Intel® C621 controller</td>
<td>Intel® C621 chipset</td>
</tr>
<tr>
<td>Connectivity</td>
<td>SIOM Networking Card For Flexible Networking Options</td>
<td>SIOM Networking Card For Flexible Networking Options</td>
<td>SIOM Networking Card For Flexible Networking Options</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
</tr>
<tr>
<td>Management</td>
<td>Intel® Node Manager; PI:MI2.0: KVM with dedicated LAN; SPiM; SSM; SUM; SuperDoctor® 5; Watchdog</td>
<td>Intel® Node Manager; PI:MI2.0: KVM with dedicated LAN; SPiM; SSM; SUM; SuperDoctor® 5; Watchdog</td>
<td>Intel® Node Manager; PI:MI2.0: KVM with dedicated LAN; SPiM; SSM; SUM; SuperDoctor® 5; Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>Support up to 40* Intel EDSFF (E1.S) Devices per system</td>
<td>4 Hot-swap 2.5” NVMe/SAS drive bays + 8 Hot-swap 2.5” SAS drive bays per node</td>
<td>12 Hot-swap 2.5” NVMe drive bays per node</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 2600W Titanium Level high-efficiency power supplies</td>
<td>Redundant 2200W Titanium Level high-efficiency power supplies with 12C&amp;P/Mbus</td>
<td>Redundant 2200W Titanium Level high-efficiency power supplies with 12C&amp;P/Mbus</td>
</tr>
<tr>
<td>Cooling System</td>
<td>4x 8cm heavy duty PWM fans with air shroud</td>
<td>4x 8cm heavy duty PWM fans with air shroud</td>
<td>4x 8cm heavy duty PWM fans with air shroud</td>
</tr>
<tr>
<td>Form Factor</td>
<td>447 x 88 x 730mm (17.6” x 3.47” x 28.75”)</td>
<td>2U (2-node) Rackmount; Enclosure: 432 x 88 x 711mm (17.6” x 3.47” x 28.75”)</td>
<td>2U (2-node) Rackmount; Enclosure: 447 x 76 x 730mm (17.6” x 3.47” x 28.75”)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details.

† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
### Features

**Key Applications**

- Compute Intensive Application
- Data Center
- HPC
- Hyperconverged Solutions
- Hyperscale

**HPC**

- Data Center
- Enterprise Server
- Compute Intensive Application
- Hyperconverged Solutions
- Hyperscale

### Specifications

#### Processor Support

- 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.
- Dual Socket P (LGA 3647) supported, CPU TDP support 165W, 2 up to 10.4 GT/s.
- Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).

#### System Memory

- Chipset Intel® C621 chipset Intel® C621 chipset Intel® C621 chipset
- 24 DIMMs per node
- Up to 6TB DDR4-2933 MHz††
- **†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.**

#### Expansion Slots

- 2 PCI-E 3.0 X16(LP), 1 SIOM card support Note:
- 1 PCi-E 3.0 X16(LP), 1 SIOM card support Note:
- 1 PCI-E 3.0 X16(LP), 1 SIOM card support Note:
- Must bundle with Network Card

#### Onboard Storage Controller

- Broadcom 3008 SAS3 (12Gbps) controller; IT mode
- Broadcom 3018 SAS3 (12Gbps) RAID controller; RAID 0, 1, 5, 6, 10, 50, 60
- Broadcom 3018 SAS3 (12Gbps) RAID controller; RAID 0, 1, 5, 6, 10, 50, 60

#### Connectivity

- SIOM Networking Card For Flexible Networking Options
- SIOM Networking Card For Flexible Networking Options
- SIOM Networking Card For Flexible Networking Options
- **Note:** BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).

#### Power Supply

- Redundant 2200W Titanium Level high-efficiency power supplies with I2C&PMbus
- Redundant 2200W Titanium Level high-efficiency power supplies with I2C&PMbus
- Redundant 2200W Titanium Level high-efficiency power supplies with I2C&PMbus

#### Cooling System

- 4x 8cm heavy duty PWM fans with air shroud
- 4x 8cm heavy duty PWM fans with air shroud
- 4x 8cm heavy duty PWM fans with air shroud

#### Form Factor

- Package: 248 x 626 x 1150mm (9.76" x 24.65" x 45.28")
- Package: 248 x 626 x 1150mm (9.76" x 24.65" x 45.28")
- Package: 248 x 626 x 1150mm (9.76" x 24.65" x 45.28")

---

* Please check with your Supermicro sales representative and website for compatibility and configuration details.

†† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
## Key Applications

- Hybridscale and Hyperconverged Solutions
- Compute Intensive Application
- Enterprise Server
- Data Center
- HPC

## Outstanding Features

- 4 Nodes in 2U
- 24 DIMMs per node
- NVMe Support
- 2 Low-profile PCI-E X16 slot
- 1 SIOI card support

## Serverboard

**SuperServer® X11DPT-B**

- **Processor Support**: 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 165W, 2UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable Processors (codenamed Cascade Lake Refresh).
- **System Memory (Max.)**: 24 DIMMs slots; Up to 6TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)
- **Expansion Slots**: 2 PCI-E 3.0 X16(LP), 1 SIOI card support; Must bundle with Network Card
- **Onboard Storage Controller**: Intel® C621 controller for SATA3 (6 Gbps) ports; RAID 0,1,5,10
- **NVMe Support**: 24 NVMe Drive Bays
- **VGA/Audio**: Aspeed AST2500 BMC
- **Management**: Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; SPM; SSIM; SUM; SuperDoctor® 5; Watchdog
- **Drive Bays**: 4 Hot-swap 2.5” NVMe/SATA3 drive bays + 2 Hot-swap 2.5” SATA3 drive bays per node
- **Peripheral Bays**: N/A
- **Power Supply**: Redundant 2200W Titaniium Level high-efficiency power supplies with I2C&PCbus
- **Cooling System**: 4x8cm heavy duty PWM fans with air shroud
- **Form Factor**: 24 Hybrid NVMe/SATA3 Drive Bays

**SuperServer® X11DPT-BH**

- **Processor Support**: 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 165W, 2UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable Processors (codenamed Cascade Lake Refresh).
- **System Memory (Max.)**: 24 DIMMs slots; Up to 6TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)
- **Expansion Slots**: 2 PCI-E 3.0 X16(LP), 1 SIOI card support; Must bundle with Network Card
- **Onboard Storage Controller**: Intel® C621 controller for SATA3 (6 Gbps) ports; RAID 0,1,5,10
- **NVMe Support**: 24 SATA Drive Bays
- **VGA/Audio**: Aspeed AST2500 BMC
- **Management**: Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; SPM; SSIM; SUM; SuperDoctor® 5; Watchdog
- **Drive Bays**: 4 Hot-swap 2.5” NVMe/SATA3 drive bays + 2 Hot-swap 2.5” SATA3 drive bays per node
- **Peripheral Bays**: N/A
- **Power Supply**: Redundant 2200W Titaniium Level high-efficiency power supplies with I2C&PCbus
- **Cooling System**: 4x8cm heavy duty PWM fans with air shroud
- **Form Factor**: 24 SATA Drive Bays

**SuperServer® X100-4U**

- **Processor Support**: 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 165W, 2UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable Processors (codenamed Cascade Lake Refresh).
- **System Memory (Max.)**: 24 DIMMs slots; Up to 6TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)
- **Expansion Slots**: 2 PCI-E 3.0 X16(LP), 1 SIOI card support; Must bundle with Network Card
- **Onboard Storage Controller**: Intel® C621 controller for SATA3 (6 Gbps) ports; RAID 0,1,5,10
- **NVMe Support**: 24 SATA Drive Bays
- **VGA/Audio**: Aspeed AST2500 BMC
- **Management**: Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; SPM; SSIM; SUM; SuperDoctor® 5; Watchdog
- **Drive Bays**: 4 Hot-swap 2.5” NVMe/SATA3 drive bays + 2 Hot-swap 2.5” SATA3 drive bays per node
- **Peripheral Bays**: N/A
- **Power Supply**: Redundant 2600W Titanium Level high-efficiency power supplies with I2C&PCbus
- **Cooling System**: 4x405x66m heavy duty PWM fans per node with air shroud
- **Form Factor**: 2U (4-node) Rackmount; Enclosure: 447 x 88 x 730mm (17.6” x 3.47” x 28.75”)
### Model Comparison

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6029BT-DNC0R</th>
<th>SYS-6029BT-HNC0R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Hyperscale and Hyperconverged Solutions Compute Intensive Application Enterprise Server Data Center HPC</td>
<td>• Hyperscale and Hyperconverged Solutions Compute Intensive Application Enterprise Server Data Center HPC</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>2 Nodes in 2U 24 DIMMs per node NVMe Support 2 M.2 SATA3 or NVMe support 3 PCI-E Add-on cards 1 SIOM card support</td>
<td>4 Nodes in 2U 24 DIMMs per node NVMe Support 2 M.2 SATA3 or NVMe support 2 Low-profile PCI-E 3.0 x16 slot 1 SIOM card support</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X11DPT-B</td>
<td>SUPER® X11DPT-B</td>
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<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
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<tr>
<td>System Memory (Max.)*</td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>2 PCI-E 3.0 x8; 1 PCI-E 3.0 x16; 1 SIOM card support Note: Must bundle with Network Card</td>
<td>2 PCI-E 3.0 x16(LP), 1 SIOM card support Note: Must bundle with Network Card</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Broadcom 3008 SAS3 (12 Gbps) controller; IT mode</td>
<td>Broadcom 3008 SAS3 (12Gbps) controller; IT mode</td>
</tr>
<tr>
<td>Connectivity</td>
<td>SIOM Networking Card For Flexible Networking Options</td>
<td>SIOM Networking Card For Flexible Networking Options</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
</tr>
<tr>
<td>Management</td>
<td>Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watchdog</td>
<td>Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>3 Hot-swap 3.5” NVMe/SAS drive bays + 3 Hot-swap 3.5” SAS drive bays per node</td>
<td>3 Hot-swap 3.5” NVMe/SAS drive bays per node</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 2200W Titanium Level high-efficiency power supplies with I2C&amp;PMBus</td>
<td>Redundant 2200W Titanium Level high-efficiency power supplies with I2C&amp;PMBus</td>
</tr>
<tr>
<td>Cooling System</td>
<td>4x 8cm heavy duty PWM fans with air shroud</td>
<td>4x 8cm heavy duty PWM fans with air shroud</td>
</tr>
<tr>
<td>Form Factor</td>
<td>2U (2-node) Rackmount; Enclosure: 447 x 88 x 765mm (17.6” x 3.47” x 30.11”)</td>
<td>2U (4-node) Rackmount; Enclosure: 447 x 88 x 765mm (17.6” x 3.47” x 30.11”) Gross Weight: 86.5lbs (39.24kg) Net Weight: 56lbs (25.4kg)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
BIGTWIN®
(For Complete System Only)

2U BigTwin™
4 hot swappable nodes in 2U,
Redundant Titanium Level power supplies

Rear View

### MODEL

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-2028BT-HNC0R+</th>
<th>SYS-2028BT-HNC1R+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4 product family with UPI up to 9.6 GT/s</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4 product family with QPI up to 9.6 GT/s</td>
</tr>
</tbody>
</table>
| Key Applications  | • Hyperscale and Hyperconverged Solutions  
• Compute Intensive Application  
• Data Center  
• Enterprise Server  
• Financial Analysis  
• HPC  
• Mission-critical applications  
• 24x SAS3 Support (16 can be NVMe)  
• 4 hot swappable nodes in 2U  
• 2 low profile PCI-E x16 slot  
• 24 DIMMs per node  
• 1 SIOM card support  
• 2 low-profile PCI-E x16 slots  
• 2200W High-Efficiency (96%) Redundant Power Supplies |  
| Outstanding Features  |  
• SAS3 and NVMe support  
24 DIMMs per node  
2 Low-profile PCI-E x16 slot  
1 SATA DOM support  
1 SIOM card support  
4 Nodes in 2U  
• 24 x SAS3 Support (16 can be NVMe)  
• 4 hot swappable nodes in 2U  
• 2 low-profile PCI-E x16 slots  
• 2200W High-Efficiency (96%) Redundant Power Supplies  
| Serverboard       | Quad set of SUPER® X10DRT-B+                                                        | Quad set of SUPER® X10DRT-B+                                                        |
| Chipset           | Quad set of Intel® C612 chipset                                                     | Quad set of Intel® C612 chipset                                                     |
| System Memory (Max.)* | Up to 3TB ECC 3DS LRDIMM, 768GB ECC RDIMM 2400MHz, in 24 DIMM slots per Node. | Up to 3TB ECC 3DS LRDIMM, 768GB ECC RDIMM 2400MHz, in 24 DIMM slots per Node. |
| Expansion Slots   | Quad set of 2 PCI-E 3.0 x16(LP) 1 SIOM card support Note: Must bundle with Network card. | Quad set of 2 PCI-E 3.0 x16 (LP) 1 SIOM card support Note: Must bundle with Network Card |
| Onboard Storage Controller | Quad set of Broadcom 3008 support RAID 0,1,10 per Node. | Quad set of 3008 SAS controller for 6 SAS3 (12 Gbps) ports per node (4 can be NVMe) |
| Connectivity      | Quad set of SIOM Networking AOC Matrix                                              | Quad set of SIOM Networking AOC Matrix                                              |
| VGA/Audio         | Quad set of Aspeed AST2400 BMC                                                     | Quad set of Aspeed AST2400 BMC                                                     |
| Management        | Quad set of IPMI2.0+KVM with dedicated LAN, Intel Node Manger, SUM, SPiM, SSM, SuperDoctor 5, Watchdog | Quad set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor® 5, Watchdog |
| Drive Bays        | Quad set of 6x 2.5” hot-swap SAS drive bays; or 4x NVMe + 2x 2.5” SAS drive bays   | Quad set of 6x 2.5” hot-swap SAS3/NVMe drive bays                                  |
| Peripheral Bays   | N/A                                                                                | N/A                                                                                |
| Power Supply      | Redundant 2200W Titanium Level high-efficiency power supplies with I²C & PMbus     | Redundant 2200W Titanium Level high-efficiency power supplies with I²C & PMbus     |
| Cooling System    | 4x8cm heavy duty PWM fans with air shroud, N/A                                     | 4x8cm heavy duty PWM fans with air shroud                                          |
| Form Factor       | 2U Rackmount                                                                       | 2U (4-node) Rackmount                                                             |

* Please check with your Supermicro sales representative and website for compatibility and configuration details
### MODEL

<table>
<thead>
<tr>
<th></th>
<th>SYS-2028BT-HNR+</th>
<th>SYS-2028BT-HNTR+</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4 product family with QPI up to 9.6 GT/s</td>
<td>Quad set of Dual Intel® Xeon® processor ES-2600 v4/v3 family3, Socket R3 (LGA 2011) supported; QPI up to 9.6GT/s</td>
</tr>
</tbody>
</table>
| **Key Applications** | • Compute Intensive Application  
• Data Center  
• Enterprise Server  
• Financial Analysis  
• HPC  
• Mission-critical applications | • Hyperscale and Hyperconverged Solutions  
Compute Intensive Application  
Enterprise Server  
Data Center  
HPC |
| **Outstanding Features** | • 4 hot swappable nodes in 2U  
• 2 low profile PCI-E x16 slot  
• 24 DIMMs per node  
• 1 SIOM card support  
• 2 low-profile PCI-E x16 slots  
• 2200W High-Efficiency (96%) Redundant Power Supplies  
• 24x NVMe Support | • NVMe Support  
24 DIMMs per node  
1 M.2 SATA3 or NVMe support  
2 Low-profile PCI-E 3.0 x16 slot  
1 SIOM card support  
4 Nodes in 2U |
| **Serverboard** | Quad set of SUPER® X10DRT-B+ | Quad set of SUPER® X10DRT-B+ |
| **Chipset** | Quad set of Intel® C612 chipset | Quad set of Intel® C612 chipset |
| **System Memory (Max.)* | Up to 3TB ECC 3DS LRDIMM, 768GB ECC RDIMM 2400MHz, in 24 DIMM slots per Node | Up to 3TB ECC 3DS RDIMM/LRDIMM, DDR4 up to 2400MHz, in 24 DIMM slots per Node |
| **Expansion Slots** | Quad set of 2 PCI-E 3.0 x16 (LP) 1 SIOM card support  
Note: Must bundle with Network Card | Quad set of 2 PCI-E 3.0 x16(LP), 1 SIOM card support.  
Note: Must bundle with Network Card |
| **Onboard Storage Controller** | Quad set of Intel® C612 controller for M.2, NVMe from CPU | Quad set of Intel® C612 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10 |
| **Connectivity** | Quad set of SIOM Networking AOC Matrix | Quad set of SIOM Networking Card For Flexible Networking Options |
| **VGA/Audio** | Quad set of Aspeed AST2400 BMC | Quad set of Aspeed AST2400 BMC |
| **Management** | Quad set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor® 5, Watchdog | Quad set of Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; SPM; SSM; SuperDoctor® 5; Watchdog |
| **Drive Bays** | Quad set of 6x 2.5” hot-swap NVMe drive bays | Quad set of 6 SATA3 or 4 NVMe + 2 SATA3 Hot-swap 2.5” drive bays |
| **Peripheral Bays** | N/A | N/A |
| **Power Supply** | Redundant 2200W Titanium Level high-efficiency power supplies with I2C & PMbus | Redundant 2200W Titanium Level high-efficiency power supplies with I2C & PMbus |
| **Cooling System** | 4x 8cm heavy duty PWM fans with air shroud | 4x 8cm heavy duty PWM fans with air shroud |
| **Form Factor** | 2U (4-node) Rackmount | 2U (4-node) Rackmount; Enclosure: 447 x 88 x 730mm (17.6” x 3.47” x 28.75”)  
Package: 248 x 626 x 1150mm (9.76” x 24.65” x 45.28”)  
Gross Weight: 85lbs (38.56kg)  
Net Weight: 54.5lbs (24.72kg) |

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
# BIGTWIN®

*(For Complete System Only)*

**2U BigTwin™**

| 4 hot swappable nodes in 2U |
|---------------------------|---|

## SuperServer® Solutions - June 2021

### 2U BigTwin™

- 4 hot swappable nodes in 2U
- Redundant Titanium Power

---

### MODEL | SYS-2028BT-HTR+ | SYS-6028BT-HNC0R+
---|---|---
**Processor Support** | Quad set of Dual Intel® Xeon® Processor E5-2600 V4 product family with UPI up to 9.6 GT/s | Quad set of Intel® Xeon® processor E5-2600 V3 Intel® Xeon® processor E5-2600 V4 with UPI up to 9.6GT/s

### Key Applications

- Hyperscale and Hyperconverged Solutions
- Compute Intensive Application
- Enterprise Server
- Data Center
- HPC

### Outstanding Features

- 4 hot swappable nodes in 2U
- 24 DIMMs per node
- 1 SIOM card support
- 2 low-profile PCI-E x16 slots
- 2000w High Efficiency (96%) Redundant Power Supplies

### Serverboard

- Quad set of SUPER® X10DRT-B+

### Chipset

- Quad set of Intel® C612 chipset

### System Memory (Max.)*

- Quad set of Up to 3TB ECC 3DS LRDIMM, 768GB ECC RDIMM 2400MHz, in 24 DIMM slots per Node.

### Expansion Slots

- Quad set of 2 PCI-E 3.0 x16(LP) 1 SIOM card support Note: Must bundle with Network Card

### Onboard Storage Controller

- Quad set of Intel C612 controller for 6 SATA3(6 Gbps) ports; RAID 0,1,5,10

### Connectivity

- Quad set of SIOM Networking AOC Matrix

### VGA/Audio

- Aspeed AST2400 BMC

### Management

- Quad set of IPMI 2.0+KVM with dedicated LAN, Intel Node Manger, SUM, SPM, SSM, SuperDoctor 5, Watchdog

### Drive Bays

- Quad set of Quad set of 6x 2.5" hot-swap SATA3 drive bays

### Peripheral Bays

- N/A

### Power Supply

- Redundant 2200W Titanium Level high-efficiency power supplies with I2C & PMbus

### Cooling System

- 4x8cm heavy duty PWM fans with air shroud

### Form Factor

- 2U Rackmount

---

### MODEL | SYS-2028BT-HTR+ | SYS-6028BT-HNC0R+
---|---|---
**Processor Support** | Quad set of Dual Intel® Xeon® Processor E5-2600 V4 product family with UPI up to 9.6 GT/s | Quad set of Intel® Xeon® processor E5-2600 V3 Intel® Xeon® processor E5-2600 V4 with UPI up to 9.6GT/s

### Key Applications

- Hyperscale and Hyperconverged Solutions
- Compute Intensive Application
- Enterprise Server
- Data Center
- HPC

### Outstanding Features

- SAS3 and NVMe support
- 24 DIMMs per node
- 2 PCI-E 3.0 x16 Low Profile slots
- 1 SIOM card support
- 1 SATA DOM support
- 4 Nodes in 2U

### Serverboard

- Quad set of SUPER® X10DRT-B+

### Chipset

- Quad set of Intel® C612 chipset

### System Memory (Max.)*

- Quad set of Up to 3TB ECC 3DS LRDIMM, 768GB ECC RDIMM 2400MHz, in 24 DIMM slots per Node.

### Expansion Slots

- Quad set of 2 PCI-E 3.0 (X16) Low Profile slots 1 SIOM card support Note: Must bundle with Network card.

### Onboard Storage Controller

- Quad set of SAS3 support via Broadcom 3008 ; IT mode

### Connectivity

- Quad set of SIOM Networking AOC Matrix

### VGA/Audio

- Aspeed AST2400 BMC

### Management

- Quad set of SIOM Networking AOC Matrix

### Drive Bays

- Quad set of 3x 3.5" hot-swap SAS drive bays or 3x NVMe drive bay

### Peripheral Bays

- N/A

### Power Supply

- Redundant 2200W Titanium Level high-efficiency power supplies with I2C & PMbus

### Cooling System

- 4x8cm heavy duty PWM fans with air shroud, N/A

### Form Factor

- 2U Rackmount

---

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
# X12 FatTwin®

(For Complete System Only)

## Processor Support

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
</tr>
<tr>
<td></td>
<td>Dual Socket LGA-4189 (Socket P+) supported</td>
<td>Dual Socket LGA-4189 (Socket P+) supported</td>
</tr>
<tr>
<td></td>
<td>TDP up to 165W; 3 UPI</td>
<td>TDP up to 165W; 3 UPI</td>
</tr>
</tbody>
</table>

## Key Applications

<table>
<thead>
<tr>
<th></th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyperscale / Hyperconverged</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>HPC and Big Data</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Data Center Enterprise Applications</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Telco Data Center and ETSI certified</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Scale-Out Storage</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Virtualization Server</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Outstanding Features

<table>
<thead>
<tr>
<th></th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>4U 8-node architecture with front serviceability from cold aisle for all nodes</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Optimized designs for storage and compute density</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>HDD hot-swap capability</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Shared power architecture for best efficiency</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Redundant cooling and power configurations for high availability</td>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>

## Serverboard

<table>
<thead>
<tr>
<th></th>
<th>SUPER® X12DPFR-AN6</th>
<th>SUPER® X12DPFR-AN6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chipset</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
</tr>
</tbody>
</table>

## System Memory (Max.)

<table>
<thead>
<tr>
<th></th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16 DIMM slots Up to 4TB Intel® Optane™ Persistent Memory, DDR4-3200MHz Up to 2TB RDIMM/LRDIMM, DDR4-3200MHz</td>
<td>16 DIMM slots Up to 4TB Intel® Optane™ Persistent Memory, DDR4-3200MHz Up to 2TB RDIMM/LRDIMM, DDR4-3200MHz</td>
</tr>
</tbody>
</table>

## Expansion Slots

<table>
<thead>
<tr>
<th></th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.2 slot(s)</td>
<td>PCI-E 4.0 x8 LP slot(s)</td>
<td>AIOM slot(s) HBA slot(s) PCI-E 4.0 x16 LP slot(s)</td>
</tr>
</tbody>
</table>

## Onboard Storage Controller

<table>
<thead>
<tr>
<th></th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
<td></td>
</tr>
</tbody>
</table>

## Connectivity

<table>
<thead>
<tr>
<th></th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x 1GbE RJ45 (BMC) port(s)</td>
<td>1x 1GbE RJ45 (BMC) port(s)</td>
<td></td>
</tr>
</tbody>
</table>

## VGA/Audio

<table>
<thead>
<tr>
<th></th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 VGA port, Aspeed AST2600 BMC</td>
<td>1 VGA port, Aspeed AST2600 BMC</td>
<td></td>
</tr>
</tbody>
</table>

## Management

<table>
<thead>
<tr>
<th></th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SuperDoctor® 5; Watch Dog; SUM; IPMI 2.0; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM</td>
<td>SuperDoctor® 5; Watch Dog; SUM; IPMI 2.0; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM</td>
</tr>
</tbody>
</table>

## Drive Bays

<table>
<thead>
<tr>
<th></th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>6x 2.5” hot-swap NVMe/SATA/SAS drive bays; 8x 2.5” NVMe hybrid; 8x 2.5” 7mm hot-swap hybrid NVMe/SATA drive bays</td>
<td>6x 2.5” hot-swap NVMe/SATA drive bays; 8x 2.5” NVMe hybrid; 8x 2.5” 7mm hot-swap hybrid NVMe/SATA drive bays</td>
<td></td>
</tr>
</tbody>
</table>

## Peripheral Bays

<table>
<thead>
<tr>
<th></th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

## Power Supply

<table>
<thead>
<tr>
<th></th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2200W Titanium level (96%)</td>
<td>2200W Titanium level (96%)</td>
<td></td>
</tr>
</tbody>
</table>

## Cooling System

<table>
<thead>
<tr>
<th></th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>3x 4cm heavy duty fan(s)</td>
<td>2x 8cm heavy duty fan(s)</td>
<td></td>
</tr>
</tbody>
</table>

## Form Factor

<table>
<thead>
<tr>
<th></th>
<th>SYS-F610P2-RTN</th>
<th>SYS-F620P3-RTBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>4U rackmount Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”) Package: (28.3” x 15” x 42.4”)</td>
<td>4U rackmount Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”) Package: (28.3” x 15” x 42.4”)</td>
<td></td>
</tr>
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</table>
## X12 TwinPro®

(For Complete System Only)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-220TP-HTTR</th>
<th>SYS-220TP-HC0TR</th>
<th>SYS-220TP-HC1TR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 185W, 2UPI up to 11.2GT/s</td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 185W, 2UPI up to 11.2GT/s</td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 185W, 2UPI up to 11.2GT/s</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• High Performance Computing</td>
<td>• High Performance Computing</td>
<td>• High Performance Computing</td>
</tr>
<tr>
<td></td>
<td>• Hyper-Converged Infrastructure</td>
<td>• Hyper-Converged Infrastructure</td>
<td>• Hyper-Converged Infrastructure</td>
</tr>
<tr>
<td></td>
<td>• Big Data / Big Science</td>
<td>• Big Data / Big Science</td>
<td>• Big Data / Big Science</td>
</tr>
<tr>
<td></td>
<td>• Oil immersion, Liquid Cooling</td>
<td>• Oil immersion, Liquid Cooling</td>
<td>• Oil immersion, Liquid Cooling</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• The most cost optimized 2U, 4 node solution</td>
<td>• The most cost optimized 2U, 4 node solution</td>
<td>• The most cost optimized 2U, 4 node solution</td>
</tr>
</tbody>
</table>

**Serverboard**
- SUPER® X12DPT-PT6
- SUPER® X12DPT-PT6
- SUPER® X12DPT-PT6

**Chipset**
- Intel® C621A
- Intel® C621A
- Intel® C621A

**System Memory (Max.)**
- 16 DIMM slots Up to 4TB ECC RDIMM, DDR4-3200MHz
- 16 DIMM slots Up to 4TB ECC RDIMM, DDR4-3200MHz
- 16 DIMM slots Up to 4TB ECC RDIMM, DDR4-3200MHz

**Expansion Slots**
- M.2 slot(s) 2 PCI-E 4.0 x16 LP slot(s)
- M.2 slot(s) 2 PCI-E 4.0 x16 LP slot(s)
- M.2 slot(s) 2 PCI-E 4.0 x16 LP slot(s)

**Onboard Storage Controller**
- Intel® SATA
- Broadcom® 3008
- Broadcom® 3108

**Connectivity**
- 2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X710-AT2
- 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
- 1 VGA port

**Management**
- SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; IPMI 2.0; Redfish API; Supermicro Out of Band (OOB) Software License Key
- SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; IPMI 2.0; Redfish API; Supermicro Out of Band (OOB) Software License Key
- SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; IPMI 2.0; Redfish API; Supermicro Out of Band (OOB) Software License Key

**Drive Bays**
- 6x 2.5” hot-swap SATA drive bays
- 6x 2.5” hot-swap SATA/SAS drive bays
- 6x 2.5” hot-swap SATA/SAS drive bays

**Peripheral Bays**
- None
- None
- None

**Power Supply**
- 2200W Titanium level (96%)
- 2200W Titanium level (96%)
- 2200W Titanium level (96%)

**Cooling System**
- 4x 8cm heavy duty fan(s)
- 4x 8cm heavy duty fan(s)
- 4x 8cm heavy duty fan(s)

**Form Factor**
- 2U rackmount
  - Enclosure: 438 x 88 x 730mm (17.25” x 3.47” x 28.75”)
  - Package: 622 x 254 x 1143mm (24.5” x 10” x 45”)
- 2U rackmount
  - Enclosure: 438 x 88 x 730mm (17.25” x 3.47” x 28.75”)
  - Package: 622 x 254 x 1143mm (24.5” x 10” x 45”)
- 2U rackmount
  - Enclosure: 438 x 88 x 730mm (17.25” x 3.47” x 28.75”)
  - Package: 622 x 254 x 1143mm (24.5” x 10” x 45”)

**SuperServer® Solutions - June 2021**
**Processor Support**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-F619H6-FT</th>
<th>SYS-F619P2-FT</th>
<th>SYS-F619P2-FT+</th>
<th>SYS-F619P2-RC0</th>
<th>SYS-F619P2-RTN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Applications</td>
<td>Quad set of 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 125W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>Quad set of 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 125W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>Octal set of 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 165W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>Octal set of 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 256W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>Octal set of 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 256W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
</tr>
</tbody>
</table>

**Chipset**

- Quad set of Intel® C621 chipset
- Octal set of Intel® C621 chipset
- Octal set of Intel® C621 chipset
- Octal set of Intel® C621 chipset
- Octal set of Intel® C621 chipset

**System Memory (Max.)*

- Quad set of 12 DIMM slots; Up to 3TB DDR4-2933 MHz* with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DC PMM (128/256/512GB)
- Octal set of 12 DIMM slots; Up to 3TB DDR4-2933 MHz* with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DC PMM (128/256/512GB)
- Octal set of 12 DIMM slots; Up to 3TB DDR4-2933 MHz* with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DC PMM (128/256/512GB)
- Octal set of 12 DIMM slots; Up to 3TB DDR4-2933 MHz* with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DC PMM (128/256/512GB)
- Octal set of 12 DIMM slots; Up to 3TB DDR4-2933 MHz* with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DC PMM (128/256/512GB)

**Expansion Slots**

- Quad set of 1 PCI-E 3.0 x16(LP); 1 PCI-E 3.0 x8(LP); 1 PCI-E 3.0 x16(SIOM)
- Octal set of 1 PCI-E 3.0 x16(OMI); 1 PCI-E 3.0 x16(SIOM)
- Octal set of 1 PCI-E 3.0 x16(LP); 1 PCI-E 3.0 x8(LP)
- Octal set of 1 PCI-E 3.0 x16(LP)
- Octal set of 1 PCI-E 3.0 x16(LP)

**Onboard Storage Controller**

- Quad set of Intel C621 controller with 14 SATA3 ports & Onboard NVMe
- Octal set of Intel C621 controller with 14x SATA3 ports and on-board NVMe
- Octal set of Intel C621 controller with 14x SATA3 ports and on-board NVMe
- Octal set of Intel C621 controller with 14x SATA3 ports and on-board NVMe
- Octal set of Intel C621 controller with 14x SATA3 ports and on-board NVMe

**Connectivity**

- Quad set of 1Gb Ethernet Connectivity
- Octal set of 1Gb Ethernet Connectivity
- Octal set of 1Gb Ethernet Connectivity
- Octal set of 1Gb Ethernet Connectivity
- Octal set of 1Gb Ethernet Connectivity

**VGA/Audio**

- Quad set of 1 VGA, Aspeed AST2500 BMC
- Octal set of 1 VGA, Aspeed AST2500 BMC
- Octal set of 1 VGA, Aspeed AST2500 BMC
- Octal set of 1 VGA, Aspeed AST2500 BMC
- Octal set of 1 VGA, Aspeed AST2500 BMC

**Management**

- Quad set of Intel Node Manager, IPMI2.0, SuperDoctor, Watchdog, Rear UID LED.
- Octal set of Intel Node Manager, IPMI2.0, SuperDoctor, Watchdog, Rear UID LED.
- Octal set of Intel Node Manager, IPMI2.0, SuperDoctor, Watchdog, Rear UID LED.
- Octal set of Intel Node Manager, IPMI2.0, SuperDoctor, Watchdog, Rear UID LED.
- Octal set of Intel Node Manager, IPMI2.0, SuperDoctor, Watchdog, Rear UID LED.

**Drive Bays**

- Octal set of 12x 3.5” internal HDD SATA3 per node
- Octal set of 2x 2.5” SATA3/NVMe
- Octal set of 2-4x 2.5” SATA drives
- Octal set of 2-4x 2.5” SATA drives
- Octal set of 2-4x 2.5” SATA drives

**Peripheral Bays**

- N/A
- N/A
- N/A
- N/A
- N/A

**Power Supply**

- Dual set of 2200W high-efficiency Titanium Level power supply w/ PMBus
- Four (4x) 2200W high-efficiency Titanium Level power supply w/ PMBus per enclosure
- 2200W high-efficiency Titanium Level redundant power supply w/ PMBus
- 2200W high-efficiency Titanium Level redundant power supply w/ PMBus
- 2200W high-efficiency Titanium Level redundant power supply w/ PMBus

**Cooling System**

- 8x 8cm rear fans per chassis
- Eight (8x) 8cm 13.5K RPM rear fans per enclosure
- 3x 4cm 20K RPM middle fans per node
- Supermicro Fat Twin 4U 8 node; Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”)
- Supermicro Fat Twin 4U 8 node; Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”)
- Supermicro Fat Twin 4U 8 node; Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”)
- Supermicro Fat Twin 4U 8 node; Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”)
- Supermicro Fat Twin 4U 8 node; Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”)

**Form Factor**

- Supermicro Twin 4U 8 Node; Rear I/O 6x 2.5” Drive Bays per Node
- Supermicro Twin 4U 8 Node; Rear I/O 6x 2.5” Drive Bays per Node
- Supermicro Twin 4U 8 Node; Rear I/O 6x 2.5” Drive Bays per Node
- Supermicro Twin 4U 8 Node; Rear I/O 6x 2.5” Drive Bays per Node
- Supermicro Twin 4U 8 Node; Rear I/O 6x 2.5” Drive Bays per Node

* Please check with your Supermicro sales representative and website for compatibility and configuration details.

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
**SuperServer® X11DPFR-SN**

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-F619P2-RC1</th>
<th>SYS-F619P2-RT</th>
<th>SYS-F619P3-FT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Dual Socket P (LGA 3647) supported, CPU TDP support 165W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors</td>
<td>Dual Socket P (LGA 3647) supported, CPU TDP support 165W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors</td>
<td>Dual Socket P (LGA 3647) supported, CPU TDP support 165W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors</td>
</tr>
<tr>
<td><strong>System Memory</strong></td>
<td>Octal set of 12 DIMM slots; Up to 3TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ 128/256/512GB</td>
<td>Octal set of 12 DIMM slots; Up to 3TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ 128/256/512GB</td>
<td>Octal set of 12 DIMM slots; Up to 3TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ 128/256/512GB</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>2200W high-efficiency Titanium Level redundant power supply with PMBus</td>
<td>2200W high-efficiency Titanium Level redundant power supply with PMBus</td>
<td>Four (4x) 2200W high-efficiency Titanium Level power supply with PMBus per enclosure</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>3x 4cm 20k RPM midfan modules per node</td>
<td>3x 4cm 20k RPM midfan modules per node</td>
<td>Eight (8x) 8cm 13.5k RPM rear fans per enclosure</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>Supermicro Fat Twin 4U 8 node; Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”)</td>
<td>Supermicro Fat Twin 4U 8 node; Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”)</td>
<td>Supermicro Fat Twin 4U 8 node; Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”)</td>
</tr>
<tr>
<td><strong>Net Weight</strong></td>
<td>150lbs (68.04kg)</td>
<td>150lbs (68.04kg)</td>
<td>150lbs (68.04kg)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details

2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh/Cascade Lake) only. Contact your Supermicro sales rep for more info.
### SuperServer Solutions - June 2021

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-F629P3-RCOB</th>
<th>SYS-F629P3-RC1B</th>
<th>SYS-F629P3-RTBN</th>
<th>SYS-F629P3-RTB</th>
</tr>
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<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Quad set of 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 165W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>Quad set of 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 165W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
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</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>High-end and high-performance solutions for cloud computing</td>
<td>Cloud Computing</td>
<td>Cluster Node</td>
<td>Cluster Node</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>6x 3.5” SATA 3 &amp; 2x NVMe U.2 support up to 28 cores</td>
<td>6x 3.5” SATA 3 &amp; 2x NVMe U.2 support up to 28 cores</td>
<td>6x 3.5” SATA 3 &amp; 2x NVMe U.2 support up to 28 cores</td>
<td>6x 3.5” SATA 3 &amp; 2x NVMe U.2 support up to 28 cores</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>Quad set of SUPER® X11DPFR-S</td>
<td>Quad set of SUPER® X11DPFR-S</td>
<td>Quad set of SUPER® X11DPFR-S</td>
<td>Quad set of SUPER® X11DPFR-S</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Quad set of Intel® C621 chipset</td>
<td>Quad set of Intel® C621 chipset</td>
<td>Quad set of Intel® C621 chipset</td>
<td>Quad set of Intel® C621 chipset</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>Quad set of 12 DIMM slots; Up to 3TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
<td>Quad set of 12 DIMM slots; Up to 3TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
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</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>Quad set of 1 PCI-E 3.0 x16(LP); 1 PCI-E 3.0 x16(SIOM)</td>
<td>Quad set of 1 PCI-E 3.0 x16(LP); 1 PCI-E 3.0 x16(SIOM)</td>
<td>Quad set of 1 PCI-E 3.0 x16(LP); 1 PCI-E 3.0 x16(SIOM)</td>
<td>Quad set of 1 PCI-E 3.0 x16(LP); 1 PCI-E 3.0 x16(SIOM)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>-RC0B: Quad set of Broadcom 3008 12Gb/s SAS Controller</td>
<td>Must bundle with at least one SIOM network card</td>
<td>Quad set of Intel® C621 controller with 14 SATA3 ports &amp; Onboard NVMe</td>
<td>Must bundle with at least one SIOM network card</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>Intel Node Manager, IPMI2.0, SuperDoctor, Watchdog, Rear UID LED.</td>
<td>Intel Node Manager, IPMI2.0, SuperDoctor, Watchdog, Rear UID LED.</td>
<td>Intel Node Manager, IPMI2.0, SuperDoctor, Watchdog, Rear UID LED.</td>
<td>Intel Node Manager, IPMI2.0, SuperDoctor, Watchdog, Rear UID LED.</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>Quad set of 1 VGA, Aspeed AST2500 BMC</td>
<td>Quad set of 1 VGA, Aspeed AST2500 BMC</td>
<td>Quad set of 1 VGA, Aspeed AST2500 BMC</td>
<td>Quad set of 1 VGA, Aspeed AST2500 BMC</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Intel Node Manager, IPMI2.0, SuperDoctor</td>
<td>Intel Node Manager, IPMI2.0, SuperDoctor</td>
<td>Intel Node Manager, IPMI2.0, SuperDoctor</td>
<td>Intel Node Manager, IPMI2.0, SuperDoctor</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>Quad set of 8x 3.5” Hot Swap SAS 3 &amp; 6x 3.5” SAS 3 &amp; 6x 3.5” SAS 3 &amp; 6x 3.5” SAS 3 &amp; 6x 3.5” SAS 3 &amp; 6x 3.5” SAS 3 &amp; 6x 3.5” SAS 3</td>
<td>Quad set of 8x 3.5” Hot Swap SATA 3 &amp; 6x 3.5” Hot Swap SATA 3 &amp; 6x 3.5” Hot Swap SATA 3 &amp; 6x 3.5” Hot Swap SATA 3 &amp; 6x 3.5” Hot Swap SATA 3 &amp; 6x 3.5” Hot Swap SATA 3</td>
<td>Quad set of 8x 3.5” Hot Swap SATA 3</td>
<td>Quad set of 8x 3.5” Hot Swap SATA 3</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>1200W high-efficiency Titanium Level redundant power supply w/ PMBus</td>
<td>1200W high-efficiency Titanium Level redundant power supply w/ PMBus</td>
<td>1200W high-efficiency Titanium Level redundant power supply w/ PMBus</td>
<td>1200W high-efficiency Titanium Level redundant power supply w/ PMBus</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>2x 8cm 14k RPM middle fans per node</td>
<td>2x 8cm 14k RPM middle fans per node</td>
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<td>2x 8cm 14k RPM middle fans per node</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>Supermicro Fat Twin 4U 4 node; Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”) Package: 719 x 381 x 1077mm (28.3” x 15” x 42.4”)</td>
<td>Supermicro Fat Twin 4U 4 node; Enclosure: 448 x 177 x 737mm (17.63” x 6.96” x 29”) Package: 719 x 381 x 1077mm (28.3” x 15” x 42.4”)</td>
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† †† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
# SuperServer® Solutions - June 2021

**FatTwin™**

HADOOP, 4-Node, 12x 3.5" HDD per node
Front I/O, 16 DIMMs

## MODEL

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-F618H6-FT+</th>
<th>SYS-F618H6-FTL+</th>
<th>SYS-F618H6-FTPT+</th>
<th>SYS-F618H6-FTPL+</th>
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</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Quad set of Dual Intel® Xeon® processor E5-2600 v4, Intel® Xeon® processor E5-2600 v4: Dual Socket R3 (LGA 2011) supported, CPU TDP support Up to 145W, 1 QPI up to 9.6GT/s</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; Dual Socket R3 (LGA 2011) supported, CPU TDP support Up to 145W, QPI up to 9.6GT/s</td>
<td></td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Hadoop</td>
<td>• Hadoop</td>
<td>• Hadoop</td>
<td>• Hadoop</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• 4 nodes in 4U • 12x 3.5&quot; drives • IPMI 2.0 + KVM with dedicated LAN • Tool free drive trays and top cover • Enhance internal chassis airflow • Fan LED indicator</td>
<td>• 4 nodes in 4U • 12x 3.5&quot; drives • IPMI 2.0 + KVM with dedicated LAN</td>
<td>• 4 nodes in 4U • 12x 3.5&quot; drives • IPMI 2.0 + KVM with dedicated LAN</td>
<td>• 4 nodes in 4U • 12x 3.5&quot; drives • IPMI 2.0 + KVM with dedicated LAN</td>
</tr>
<tr>
<td>Serverboard</td>
<td>Quad set of SUPER® X10DRFF-CG</td>
<td>Quad set of SUPER® X10DRFF-CG</td>
<td>Quad set of SUPER® X10DRFF-CTG</td>
<td></td>
</tr>
<tr>
<td>Chipset</td>
<td>Quad set of Intel® C612 chipset</td>
<td>Quad set of Intel® C612 chipset</td>
<td>Quad set of Intel® C612 chipset</td>
<td></td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td>Quad set of 1TB Registered ECC, DDR3-1866MHz 128GB Unbuffered ECC/non-ECC, DDR3-1866MHz in 16 DIMM slots</td>
<td>Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td></td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>Quad set of 2 PCI-E 3.0 x8 LP</td>
<td>Quad set of 2 PCI-E 3.0 x8(LP)</td>
<td>Quad set of 2 PCI-E 3.0 x8 LP</td>
<td></td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Quad set of Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,10, 3008 SW controller for 8 SAS3 (12Gbs) ports; RAID 0,1,10</td>
<td>Quad set of Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,10, Broadcom® 3008 SW controller for 8 SAS3 (12Gbs) ports; RAID 0,1,10</td>
<td>Quad set of Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,10, 3008 SW controller for 8 SAS3 (12Gbs) ports; RAID 0,1,10</td>
<td></td>
</tr>
<tr>
<td>Connectivity</td>
<td>Quad set of Dual LAN ports with Intel® i350 Gigabit Ethernet controller</td>
<td>Quad set of Intel® I350 Dual Port Gigabit Ethernet</td>
<td>Quad set of Dual 10GBase-T with Intel® X540 10GBe controller</td>
<td></td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Quad set of Aspeed AST2400 BMC</td>
<td>Quad set of AST2400 VGA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>Quad set of IMPI2.0, SPM, SUM, SuperDoctor®, Watchdog</td>
<td>Quad set of IMPI2.0, SPM, SUM, SuperDoctor® 5, Watchdog</td>
<td>Quad set of IMPI2.0, V+ KVM with dedicated LAN, SuperDoctor®, Watch Dog</td>
<td></td>
</tr>
<tr>
<td>Drive Bays</td>
<td>Quad set of Up to 8 Fixed 3.5&quot; SAS3/SATA3 + 4 Fixed 3.5&quot; SATA3 HDDs per U and optional 2.5&quot; drives mounted in the PCI-e slot</td>
<td>Quad set of Up to 8 Fixed 3.5&quot; SAS3/SATA3 + 4 Fixed 3.5&quot; SATA3 HDDs per U and optional 2.5&quot; drives mounted in the PCI-e slot</td>
<td>Quad set of Up to 8 Fixed 3.5&quot; SAS3/SATA3 + 4 Fixed 3.5&quot; SATA3 HDDs per U and optional 2.5&quot; drives mounted in the PCI-e slot</td>
<td></td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>Optional 2.5&quot; drives mounted in the PCI-E slots</td>
<td>Optional 2.5&quot; drives mounted in the PCIe slots</td>
<td>Optional 2.5&quot; drives mounted in the PCI-E slots</td>
<td></td>
</tr>
<tr>
<td>Power Supply</td>
<td>2x 2000W Redundant Titanium Level (96%+) power supplies with I²C &amp; PMBus</td>
<td>2x 2000W high-efficiency titanium redundant power supply w/ PMBus</td>
<td>2x 2000W Redundant Titanium Level (96%+) power supplies with I²C &amp; PMBus</td>
<td></td>
</tr>
<tr>
<td>Cooling System</td>
<td>8x 80mm heavy duty fans with air shroud and PWM fan speed control</td>
<td>8x 8cm heavy duty fans with air shroud and PWM fan speed control</td>
<td>8x 80mm heavy duty fans with air shroud and PWM fan speed control</td>
<td></td>
</tr>
<tr>
<td>Form Factor</td>
<td>4U Rackmount (Recommend 48” depth rack) 448 x 177 x 889mm (17.63” x 6.96” x 35”)</td>
<td>4U, 4 Node system; Enclosure: 448 x 177 x 889mm (17.63” x 6.96” x 35”)</td>
<td>4U Rackmount (Recommend 48” depth rack) 448 x 177 x 889mm (17.63” x 6.96” x 35”)</td>
<td></td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
**FatTwin™**
8-Node, Front I/O
2x 2.5" HDD per Node

**Key Applications**
- Data Center
- HPC cluster computer nodes
- Compute Intensive Application
- Data Center
- Compute Intensive Application

**Outstanding Features**
- 1 Low-profile PCI-E x16 slot
- 2 Gigabit Ethernet Ports
- IPMI 2.0 + KVM with dedicated LAN
- SAS 3.0 (12 Gbps) support (-FC0)

**Processor Support**
Octal set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s

**System Memory**
Octal set of up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots

**Expansion Slots**
Octal set of 1 PCI-E 3.0 x16 (low-profile)

**Onboard Storage Controller**
Octal set of 3008 controller for 4 SAS 3.0 (12Gbps) ports; RAID 0, 1, 10;

**Connectivity**
Octal set of Dual Intel® i210 single port Gigabit Ethernet LAN

**VGA/Audio**
Octal set of AST2400 VGA

**Management**
Octal set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor®, Watchdog

**Drive Bays**
Octal set of 2x 2.5" hot-swap SAS3 drive bays

**Peripheral Bays**
N/A

**Power Supply**
4x Redundant 1620W Platinum Level power supplies with I²C & PMBus

**Cooling System**
8x 80mm heavy duty fans with air shroud & PWM fan speed control

**Form Factor**
4U Rackmount

---

**MODEL** | **SYS-F618R2-FC0** | **SYS-F618R2-FT** | **SYS-F618R2-F72+** | **SYS-F618R2-FT+**
---|---|---|---|---
Processor Support | Octal set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s | Octal set of Intel® Xeon® processor E5-2600 V4 with LPI up to 9.6GT/s | Octal set of Dual Intel® Xeon® processor E5-2600 V4 with LPI up to 9.6GT/s | Octal set of Dual Intel® Xeon® processor E5-2600 V4 with LPI up to 9.6GT/s
Key Applications | Cluster Node | Data Center | Data Center | Compute Intensive Application
Outstanding Features | 1 Low-profile PCI-E x16 slot | 1 Low-profile PCI-E x16 slot | Support up to 22 cores | 1 Low-profile PCI-E x16 slot
| 2 Gigabit Ethernet Ports | IPMI 2.0 + KVM with dedicated LAN | IPMI 2.0 + KVM with dedicated LAN | IPMI 2.0 + KVM with dedicated LAN | IPMI 2.0 + KVM with dedicated LAN
| SAS 3.0 (12 Gbps) support (-FC0) | SAS 3.0 (12 Gbps) support | 1620W Redundant Platinum Level high-efficiency power supplies | 1620W Redundant Platinum Level high-efficiency power supplies | 1620W Redundant Platinum Level high-efficiency power supplies
Serverboard | SUPER® X10DRFF-C | SUPER® X10DRFF | SUPER® X10DRFF-JG | SUPER® X10DRFF-JG
Chipset | Intel® C612 Chipset | Intel® C612 chipsets | Intel® C612 chipsets | Intel® C612 chipsets
System Memory (Max.)* | Octal set of up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots | Octal set of Up to 512GB, DDR4-2400MHz in 8 DIMM slots | Octal set of 512GB Registered ECC, DDR4-2400MHz in 16 DIMM slots | Octal set of 512GB Registered ECC, DDR4-2400MHz in 16 DIMM slots
Expansion Slots | Octal set of 1 PCI-E 3.0 x16 (low-profile) | 1 PCI-E 3.0 x16(LP) | Octal set of 1 PCI-E 3.0 x16, 1 PCI-E 2.0 x4, and 2 PCI-E 3.0 x8(optional) | Octal set of 1 PCI-E 3.0 x16, 1 PCI-E 2.0 x4, and 2 PCI-E 3.0 x8(optional)
Onboard Storage Controller | Octal set of 3008 controller for 4 SAS 3.0 (12Gbps) ports; RAID 0, 1, 10; | -FT: Octal set of Intel® C612 chipsets supports SATAd 3.0 (6Gbps) with RAID 0, 1, 5, 10 | Octal set of Intel® C612 chipsets supports SATAd 3.0 (6Gbps) with RAID 0, 1, 5, 10 | Octal set of Intel® C612 chipsets supports SATAd 3.0 (6Gbps) with RAID 0, 1, 5, 10
Connectivity | Octal set of Dual Intel® i210 single port Gigabit Ethernet LAN | Octal set of 2x 1GigE LAN Ports | Octal set of 2x GbE LAN ports and 1x Dedicated IPMI port | Octal set of Aspeed AST2400 BMC
VGA/Audio | Octal set of AST2400 VGA | Octal set of 1x VGA, Matrox® G200eW video controller | Octal set of Aspeed AST2400 BMC | Octal set of Aspeed AST2400 BMC
Management | Octal set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor®, Watchdog | Octal set of IPMI 2.0+v with dedicated LAN, SuperDoctor®, Watchdog | Octal set of IPMI 2.0, SPM, SUM, SuperDoctor®, Watchdog | Octal set of IPMI 2.0, SPM, SUM, SuperDoctor®, Watchdog
Drive Bays | Octal set of 2x 2.5" hot-swap SAS3 drive bays | Octal set of 2x 2.5" | Octal set of 4x 2.5" HDD | Octal set of 4x 2.5" HDD
Peripheral Bays | N/A | N/A | N/A | N/A
Power Supply | 4x Redundant 1620W Platinum Level power supplies with I²C & PMBus | 1620W high-efficiency redundant power supply with PMBus | 4x 2000W Redundant Power Supplies Titanium Level (96%) | 4x 2000W Redundant Power Supplies Titanium Level (96%)
Cooling System | 8x 80mm heavy duty fans with air shroud & PWM fan speed control | 8x 8cm 9.5k RPM rear fans | 8x 8cm 9.5k RPM rear fans | 8x 8cm 9.5k RPM rear fans
Form Factor | 4U Rackmount | 448 x 177 x 737mm (17.63" x 6.96" x 29") | 448 x 177 x 737mm (17.63" x 6.96" x 29") | 448 x 177 x 737mm (17.63" x 6.96" x 29")

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-F618R2-FTPT+</th>
<th>SYS-F618R2-R72+</th>
<th>SYS-F618R2-R72PT+</th>
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</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Octal set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Octal set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Octal set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Data Center</td>
<td>• Cloud and Virtualization</td>
<td>• Cloud and Virtualization</td>
</tr>
<tr>
<td></td>
<td>• HPC cluster computer nodes</td>
<td>• Cloud Computing</td>
<td>• Cloud Computing</td>
</tr>
<tr>
<td></td>
<td>• Compute Intensive Application</td>
<td>• Cluster Node</td>
<td>• Cluster Node</td>
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<tr>
<td></td>
<td></td>
<td>• Data Center</td>
<td>• Data Center</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• HPC cluster computer nodes</td>
<td>• HPC cluster computer nodes</td>
</tr>
<tr>
<td>Outstanding</td>
<td>1x8 and 1 x 4 PCI-E slots</td>
<td>Octal set of 1 Low-profile PCI-E x6 &amp; 1 MicroLP PCI-E x8 slots</td>
<td>Octal set of 1 Low-profile PCI-E x6 &amp; 1 MicroLP PCI-E x8 slots</td>
</tr>
<tr>
<td>Features</td>
<td>4x 2.5” HDD per node</td>
<td>1620W Redundant Platinum Level high-efficiency power supplies</td>
<td>1620W Redundant Platinum Level high-efficiency power supplies</td>
</tr>
<tr>
<td></td>
<td>16 DIMM slots</td>
<td>IPMI 2.0 + KVM with dedicated LAN</td>
<td>IPMI 2.0 + KVM with dedicated LAN</td>
</tr>
<tr>
<td></td>
<td>IPMI 2.0 + KVM with dedicated LAN</td>
<td>2000W Titanium Level redundant high-efficiency power supplies</td>
<td>16 DIMM slots</td>
</tr>
<tr>
<td></td>
<td>2000W Titanium Level redundant high-efficiency power supplies</td>
<td>6x 2.5” hot-swap SAS2/SATA drive bays per node</td>
<td>6x 2.5” hot-swap SAS2/SATA drive bays per node</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10DRFF-ITG</td>
<td>SUPER® X10DRFR</td>
<td>SUPER® X10DRFR-NT</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
</tr>
<tr>
<td>System Memory</td>
<td>Octal set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td>Octal set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td>Octal set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>Octal set of 1 PCI-E 3.0 x8 (low-profile) and 1 PCI-E 2.0 x4 or 2 PCI-E 3.0 x8 (optional)</td>
<td>Octal set of 1 PCI-E 3.0 x16 (low-profile) and 1 PCI-E 3.0 x8 (MicroLP)</td>
<td>Octal set of 1 PCI-E 3.0 x16 (low-profile) and 1 PCI-E 3.0 x8 (MicroLP)</td>
</tr>
<tr>
<td>Onboard Storage</td>
<td>Octal set of Intel® C612 controller for 10 SATA3 (6Gbps) ports; RAID 0,1,5,10</td>
<td>-R72+: Octal set of 2208 controller for 6 SAS 2.0 (6Gbps) ports; RAID 0,1,5,10</td>
<td>-R72PT+: Octal set of 2208 controller for 6 SAS 2.0 (6Gbps) ports; RAID 0,1,5,10</td>
</tr>
<tr>
<td>Controller</td>
<td>Octal set of Dual 10Gb Ethernet LAN with Intel® X540 10GbBase-T Ethernet Controller</td>
<td>Octal set of Dual 10Gb Ethernet LAN with Intel® X540 10GbBase-T Ethernet Controller</td>
<td>Octal set of Dual 10Gb Ethernet LAN with Intel® X540 and 10GbBase-T Connector</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Octal set of Dual LAN with Intel® X540 10GbBase-T Ethernet Controller</td>
<td>Octal set of Dual LAN with Intel® I350 Gigabit Ethernet controller</td>
<td>Octal set of Dual 10Gb Ethernet LAN with Intel® X540 and 10GbBase-T Connector</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Octal set of AST2400 VGA</td>
<td>Octal set of AST2400 VGA</td>
<td>Octal set of AST2400 VGA</td>
</tr>
<tr>
<td>Management</td>
<td>Octal set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSMM, SuperDoctor® 5, Watchdog</td>
<td>Octal set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSMM, SuperDoctor® 5, Watchdog</td>
<td>Octal set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSMM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>Octal set of 4x 2.5” SATA3 fixed drive bays</td>
<td>Octal set of 6x 2.5” hot-swap SAS2/SATA3 drive bays</td>
<td>Octal set of 6x 2.5” hot-swap SAS2/SATA3 drive bays</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Octal set of 4x Redundant 2000W Titanium Level (96%+) Digital power supplies with I²C &amp; PMBus</td>
<td>Octal set of 4x Redundant 1620W Platinum Level (94%+) power supplies with I²C &amp; PMBus</td>
<td>Octal set of 4x Redundant 1620W Platinum Level (94%+) power supplies with I²C &amp; PMBus</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Octal set of 8x 80mm heavy duty fans with air shroud &amp; PWM fan speed control</td>
<td>Octal set of 3x 40mm counter-rotating fans with air shroud &amp; PWM fan speed control</td>
<td>Octal set of 3x 40mm counter-rotating fans with air shroud &amp; PWM fan speed control</td>
</tr>
<tr>
<td>Form Factor</td>
<td>4U Rackmount 448 x 177 x 737mm (17.63” x 6.96” x 29”)</td>
<td>4U Rackmount 448 x 177 x 737mm (17.63” x 6.96” x 29”)</td>
<td>4U Rackmount 448 x 177 x 737mm (17.63” x 6.96” x 29”)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
### MODEL

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-F618R2-RC0PT+</th>
<th>SYS-F618R2-RC1PT+</th>
<th>SYS-F618R2-RTN+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Octal set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Octal set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Octal set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
</tbody>
</table>
| Key Applications | • Cloud and Virtualization  
• Cloud Computing  
• Cluster Node  
• Data Center  
• HPC cluster computer nodes | • Cloud and Virtualization  
• Cloud Computing  
• Cluster Node  
• Data Center  
• HPC cluster computer nodes | • Cloud and Virtualization  
• Cloud Computing  
• Cluster Node  
• Data Center  
• HPC cluster computer nodes |
| Outstanding Features | • 145W CPU support  
• Supports 16 DIMM DDR4 up to 2400MHz  
• 2000W High-Efficiency (96%) Titanium Level Redundant Power Supplies  
• 6 x 2.5” Hot-Swap SAS/SATA drives (Per Node)  
• Optional NVMe support  
• 3008 controller onboard | • 1 Low-profile PCI-E x16 slot  
• 145W CPU support  
• 16 DIMM slots  
• 2000W Redundant Titanium Level (96%+) high-efficiency power supplies  
• 2x 1G or 10G Ethernet  
• NVMe Support | • 145W CPU support  
• Supports 16 DIMM DDR4 up to 2400MHz  
• 2000W High-Efficiency (96%) Titanium Level Redundant Power Supplies  
• 6 x 2.5” Hot-Swap SAS/SATA drives (Per Node)  
• Optional NVMe support |
| Serverboard | SUPER® X10DRFR-N | SUPER® X10DRFR-N | SUPER® X10DRFR-NT |
| Chipset | Intel® C612 Chipset | Intel® C612 Chipset | Intel® C612 Chipset |
| System Memory (Max.)* | Octal set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots | Octal set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots | Octal set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots |
| Expansion Slots | Octal set of 1 PCI-E 3.0 x16 (LP) and 1 PCI-E 3.0 x8 (MicroLP) | Octal set of 1 PCI-E 3.0 x16 (LP) and 1 PCI-E 3.0 x8 (MicroLP) | Octal set of 1 PCI-E 3.0 x16 (LP) and 1 PCI-E 3.0 x8 (MicroLP) |
| Onboard Storage Controller | -RC0+: Octal set of 3008 controller for 6 SAS 3.0 (12Gbps) ports; RAID 0,1,10;  
-RC1+: Octal set of 6 SAS3 (12Gbps) ports; or 4x SAS3 + 2x NVMe optional SSDs; SAS3 support via 3108; RAID 0,1,5,6,10,50 | Octal set of Intel® C612 controller for 10 SATA3 (6Gbps) ports; RAID 0,1,5,10 | Octal set of Intel® C612 controller for 10 SATA3 (6Gbps) ports; RAID 0,1,5,10 |
| Connectivity | Octal set of Dual LAN ports with Intel® i350 Gigabit Ethernet controller | Octal set of Dual LAN ports with Intel® i350 Gigabit Ethernet controller | Octal set of Dual 10Gb Ethernet LAN with Intel® X540 and 10GBase-T Connector |
| VGA/Audio | Octal set of AST2400 VGA | Octal set of AST2400 VGA | Octal set of AST2400 VGA |
| Management | Octal set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | Octal set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | Octal set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog |
| Drive Bays | Octal set of 6x SAS3/SATA3; or, 4x SAS3/SATA3 | Octal set of 6x 2.5” hot-swap SATA3 drive bays; or, 4x SATA3 | Octal set of 6x SAS3/SATA3 or 4x SAS3/SATA3 |
| Peripheral Bays | Octal set of 2x NVMe optional | Octal set of 2x NVMe optional | Octal set of 2x NVMe optional |
| Power Supply | 4x Redundant 2000W Titanium Level (96%+) power supplies with 1C & PMBus | 4x Redundant 2000W Titanium Level (96%+) power supplies with 1C & PMBus | 4x Redundant 2000W Titanium Level (96%+) power supplies with 1C & PMBus |
| Cooling System | Octal set of 3x 40mm counter-rotating fans with air shroud & PWM fan speed control | Octal set of 3x 40mm counter-rotating fans with air shroud & PWM fan speed control | Octal set of 3x 40mm counter-rotating fans with air shroud & PWM fan speed control |
| Form Factor | 4U Rackmount  
448 x 177 x 737mm (17.63” x 6.96” x 29”) | 4U Rackmount  
448 x 177 x 737mm (17.63” x 6.96” x 29”) | 4U Rackmount  
448 x 177 x 737mm (17.63” x 6.96” x 29”) |

* Please check with your Supermicro sales representative and website for compatibility and configuration details
### Technical Specifications

#### Processor Support
- **Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s**

#### Key Applications
- **3D Rendering**
- **CAD/CAM/CAE**
- **Compute Intensive Application**
- **GPU server**
- **High-performance computing**

#### Outstanding Features
- **Up to 3 GPUs per node** (*2x K80 per node*)
- **145W CPU support**
- **IPMI 2.0 + KVM with dedicated LAN**
- **Up to 2 add-on cards**
- **SAS3 (12Gbps) support**

#### Serverboard
- **SYS-F628G2-FC0+**: SUPER® X10DRFF-CG
- **SYS-F628G2-FC0PT+**: SUPER® X10DRFF-CTG
- **SYS-F628G2-FT+**: SUPER® X10DRFF-iG
- **SYS-F628G2-FTPT+**: SUPER® X10DRFF-ITG

#### Chipset
- **Intel® C612 Chipset**

#### System Memory
- **Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots**

#### Expansion Slots
- **Quad set of 3 PCI-E 3.0 x16 FH/FL Double Width + 2 PCI-E 3.0 x8 LP**

#### Onboard Storage Controller
- **Quad set of 3008 SW controller for 8 SAS3 (12 Gbps) ports; RAID 0,1,10**

#### Connectivity
- **Quad set of Dual LAN with Intel® i350 Gigabit Ethernet Controller**
- **Quad set of Dual 10GBase-T with Intel® X540 10GbE Controller**

#### VGA/Audio
- **Quad set of AST2400 VGA**

#### Management
- **Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog**

#### Drive Bays
- **Quad set of 6x 2.5" hot-swap SATATA3/SAS3 drive bays**

#### Peripheral Bays
- N/A

#### Power Supply
- **4x Redundant 2000W Titanium Level power supplies with I²C & PMBus**

#### Cooling System
- **8x 80mm heavy duty fans with air shroud and PWM fan speed control and additional fans available**

#### Form Factor
- **4U Rackmount: 448 x 177 x 889mm (17.63" x 6.96" x 35")**

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*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-F628G3-FC0+</th>
<th>SYS-F628G3-FC0PT+</th>
<th>SYS-F628G3-FT+</th>
<th>SYS-F628G3-FTPT+</th>
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</thead>
<tbody>
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<td>Processor Support</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
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<td></td>
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<tr>
<td>Key Applications</td>
<td>3D Rendering, CAD/CAM/CAE, Compute Intensive Application, Digital Content Creation, GPU server, High-performance computing</td>
<td>3D Rendering, CAD/CAM/CAE, Compute Intensive Application, Digital Content Creation, GPU server, High-performance computing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>Up to 3 GPUs per node* (*2x K80 per node)</td>
<td>Up to 3 GPUs per node* (*2x K80 per node)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serverboard</td>
<td>-FC0+: SUPER® X10DRFF-CG -FC0PT+: SUPER® X10DRFF-CTG</td>
<td>-FT+: SUPER® X10DRFF-IG -FTPT+: SUPER® X10DRFF-ITG</td>
<td></td>
<td></td>
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<tr>
<td>Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td>Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>Quad set of 3 PCI-E 3.0 x16 FH/FL Double Width + 2 PCI-E 3.0 x8 LP</td>
<td>Quad set of 3 PCI-E 3.0 x16 FH/FL Double Width + 2 PCI-E 3.0 x8 LP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Quad set of 3008 SW controller for 8 SAS3 (12 Gbps) ports; RAID 0,1,10</td>
<td>Quad set of Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
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<td></td>
</tr>
<tr>
<td>Connectivity</td>
<td>-FC0+: Quad set of Dual LAN with Intel® i350 Gigabit Ethernet Controller; -FC0PT+: Quad set of Dual LAN with Intel® X540 10GBase-T Ethernet Controller</td>
<td>-FT+: Quad set of Dual LAN with Intel® i350 Gigabit Ethernet Controller; -FTPT+: Quad set of Dual LAN with Intel® X540 10GBase-T Ethernet Controller</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Quad set of AST2400 VGA</td>
<td>Quad set of AST2400 VGA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor®, Watchdog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor®, Watchdog</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drive Bays</td>
<td>Quad set of 2x 3.5” hot-swap SATA3/SAS3 drive bays</td>
<td>Quad set of 2x 3.5” hot-swap SATA3/SAS3 drive bays</td>
<td></td>
<td></td>
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<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Supply</td>
<td>4x Redundant 2000W Titanium Level power supplies with I²C &amp; PMBus</td>
<td>4x Redundant 2000W Titanium Level power supplies with I²C &amp; PMBus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooling System</td>
<td>8x 80mm heavy duty fans with air shroud and PWM fan speed control and additional fans available</td>
<td>8x 80mm heavy duty fans with air shroud and PWM fan speed control and additional fans available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form Factor</td>
<td>4U Rackmount : 448 x 177 x 889mm (17.63” x 6.96” x 35”)</td>
<td>4U Rackmount : 448 x 177 x 889mm (17.63” x 6.96” x 35”)</td>
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</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details

4 DP Nodes, 3 GPUs per Node, Front I/O, 16 DIMMs

40 SuperServer® Solutions - June 2021
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SY5-F628R2-FC0</th>
<th>SY5-F628R2-FC0+</th>
<th>SY5-F628R2-FT+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
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<tr>
<td>Key Applications</td>
<td>Cluster Node</td>
<td>Data Center</td>
<td>Data Center</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>1 Low-profile PCI-E x16 slot</td>
<td>2x PCI-E Gen 3.0 x8 (LP)</td>
<td>2x PCI-E Gen 3.0 x8 (LP)</td>
</tr>
<tr>
<td></td>
<td>1280W Platinum Level redundant high-efficiency power supplies</td>
<td>16 DIMM slots</td>
<td>16 DIMM slots</td>
</tr>
<tr>
<td></td>
<td>2 Gigabit Ethernet Ports</td>
<td>1280W Platinum Level redundant high-efficiency power supplies</td>
<td>1280W Platinum Level redundant high-efficiency power supplies</td>
</tr>
<tr>
<td></td>
<td>IPMI 2.0 + KVM with dedicated LAN</td>
<td>IPMI 2.0 + KVM with dedicated LAN</td>
<td>IPMI 2.0 + KVM with dedicated LAN</td>
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<tr>
<td></td>
<td>3008 SAS 3.0 (12 Gbps) support (FC0)</td>
<td>SAS3 (12 Gbps) support</td>
<td>SAS3 (12 Gbps) support</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10DRFF-C</td>
<td>-FC0+ SUPER® X10DRFF-CG</td>
<td>-FT+ SUPER® X10DRFF-IG</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Quad set of 12 PCI-E 3.0 x16 (low-profile)</td>
<td>Quad set of 12 PCI-E 3.0 x16 (low-profile)</td>
</tr>
<tr>
<td>System Memory</td>
<td>Quad set of up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots</td>
<td>Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td>Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>Quad set of 2 PCI-E 3.0 x8 (low-profile)</td>
<td>Quad set of 2 PCI-E 3.0 x8 (low-profile)</td>
<td>Quad set of 2 PCI-E 3.0 x8 (low-profile)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Quad set of 3008 controller for 8 SAS 3.0 (12Gbps) ports; RAID 0,1,10</td>
<td>Quad set of 3008 controller for 8 SAS3 (12 Gbps) ports; RAID 0,1,10</td>
<td>Quad set of Intel® C612 controller for 10 SATA3 (6Gbps) ports; RAID 0,1,5,10</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Quad set of Dual Intel® I210 single port Gigabit Ethernet LAN</td>
<td>-FCO+: Quad set of Dual 1GbE LAN ports and 1x Dedicated IPMI port</td>
<td>-FT+: Quad set of Dual 1GbE LAN ports and 1x Dedicated IPMI port</td>
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<tr>
<td></td>
<td>-FCOPT+: Quad set of Dual LAN with Intel® X540 10GbE Base-T Ethernet Controller</td>
<td>-FOPT+: Quad set of Dual LAN with Intel® X540 10GbE Base-T Ethernet Controller</td>
<td>-FPTPT+: Quad set of Dual LAN with Intel® X540 10GbE Base-T Ethernet Controller</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Quad set of AST2400 VGA</td>
<td>Quad set of AST2400 VGA</td>
<td>Quad set of AST2400 VGA</td>
</tr>
<tr>
<td>Management</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN; Intel® Node Manager; SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN; Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN; Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>Quad set of 8x 2.5” hot-swap SAS3 drive bays</td>
<td>Quad set of 6x 2.5” SAS3/SATA3 drive bays</td>
<td>Quad set of 6x 2.5” SAS3/SATA3 drive bays</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>4x Redundant 1280W Platinum Level (95%+) Digital power supplies with I²C &amp; PMBus</td>
<td>4x Redundant 1280W Platinum Level (95%+) Digital power supplies with I²C &amp; PMBus</td>
<td>4x Redundant 1280W Platinum Level (95%+) Digital power supplies with I²C &amp; PMBus</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Quad set of 8x 80mm heavy duty fans with air shroud &amp; PWM fan speed control</td>
<td>Quad set of 8x 80mm heavy duty fans with air shroud &amp; PWM fan speed control</td>
<td>Quad set of 8x 80mm heavy duty fans with air shroud &amp; PWM fan speed control</td>
</tr>
<tr>
<td>Form Factor</td>
<td>4U Rackmount</td>
<td>4U Rackmount</td>
<td>4U Rackmount</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
### Twin

**4 DP Nodes, 12x 2.5” HDD/Node**

4 DP Nodes, Front I/O, Serviceability & Efficiency!

**4 DP Nodes, 8-Node Front I/O, 16 DIMMs**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-F628R2-RT+</th>
<th>SYS-F628R2-RTB+</th>
<th>SYS-F628R3-FC0</th>
<th>SYS-F628R3-FC0PT+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Quad set of Intel® Xeon® processor E5-2600 V3 with UPI up to 9.6GT/s</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Cluster Node Data Center Storage Nodes</td>
<td>• Cluster Node</td>
<td>• Data Center</td>
<td>• Data Center</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• 1280W Platinum Level redundant high-efficiency power supplies 16 DIMM sockets 2 Gigabit Ethernet Ports IPMI 2.0 + KVM with dedicated LAN Broadcom® 2208 controller onboard RAID 0,1,5,6,10,50,60</td>
<td>• 1 Low-profile PCI-E x16 slot 1280W Platinum Level redundant high-efficiency power supplies 2 Gigabit Ethernet Ports 4x 3.5” SATA or SAS drives per node IPMI 2.0 + KVM with dedicated LAN 3008 SAS 3.0 (12 Gbps) support (-FC0)</td>
<td>• 2x PCI-E Gen 3.0 x8 (LP) RAID 0,1</td>
<td>Supports 16 DIMM DDR4 up to 2400MHz IPMI 2.0 + KVM with dedicated LAN 1280W Platinum Level redundant high-efficiency power supplies 3008 controller</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10DRFR</td>
<td>SUPER® X10DRFF-C</td>
<td>-FC0+: SUPER® X10DRFF-CG -FCOPT+: SUPER® X10DRFF-CT</td>
<td></td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
<td></td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Quad set of Up to 1TB Registered ECC, DDR4-2133MHz in 16 DIMM slots</td>
<td>Quad set of up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots</td>
<td>Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td></td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>-RT+: Quad set of 1 PCI-E 3.0 x16; 1 PCI-E 3.0 x8 connector for SMC add-on cards; 1 PCI-E 3.0 x8 (Micro Low Profile); -RTB+: Quad set of 1x PCI-E 3.0 x16 (LP) + 1x Micro LP</td>
<td>Quad set of 1 PCI-E 3.0 x16 (low-profile)</td>
<td>Quad set of 2 PCI-E 3.0 x8 (low-profile)</td>
<td></td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Quad set of Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10</td>
<td>Quad set of 3008 controller for 4 SAS 3.0 (12Gbps) ports; RAID 0,1,10</td>
<td>Quad set of 3008 controller for 4 SAS 3.0 (12Gbps) ports; RAID 0,1,10</td>
<td>Quad set of Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; 3008 SW controller for 8 SAS3 (12Gbps) ports; RAID 0,1,10 -FC0+: Quad set of Dual 1GbE LAN ports and 1x Dedicated IPMI port -FCOPT+: Quad set of Dual 10GBase-T LAN ports and 1x Dedicated IPMI port</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Quad set of 2x 1GigE LAN Ports</td>
<td>Quad set of Dual Intel® I210 single port Gigabit Ethernet LAN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Quad set of 1 VGA, 1 Aspeed AST2400 BMC;</td>
<td>Quad set of AST2400 VGA</td>
<td>Quad set of AST2400 VGA</td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>Quad set of Intel® Node Manager; IPMI2.0; NMI; SM CBU and SMM; SuperDoctor V; Watch Dog;</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SP M, SS M, SuperDoctor® 5, Watchdog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SP M, SS M, SuperDoctor® 5, Watchdog</td>
<td></td>
</tr>
<tr>
<td>Drive Bays</td>
<td>Quad set of 12x 2.5&quot;</td>
<td>Quad set of 4x 3.5&quot; hot-swap SAS3 drive bays</td>
<td>Quad set of 4x 3.5&quot; hot-swap SAS3 drive bays</td>
<td>Quad set of 4x 3.5&quot; SAS3/SATA3 drive bays</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Power Supply</td>
<td>1280W Redundant High-efficiency Digital Power Supplies w/ PMBus 1.2</td>
<td>4x Redundant 1280W Platinum Level (95%+) Digital power supplies with I²C &amp; PMBus</td>
<td>4x Redundant 1280W Platinum Level (95%+) Digital power supplies with I²C &amp; PMBus</td>
<td>4x Redundant 1280W Platinum Level (95%+) Digital power supplies with I²C &amp; PMBus</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Quad set of 2x 8cm 11k RPM middle fans per node</td>
<td>Quad set of 8x 80mm heavy duty hot-swap fans with air shroud &amp; PWM fan speed control</td>
<td>Quad set of 8x 80mm heavy duty fans with air shroud &amp; PWM fan speed control</td>
<td>4U Rackmount 448 x 177 x 737mm (17.63” x 6.96” x 29&quot;)</td>
</tr>
<tr>
<td>Form Factor</td>
<td>null</td>
<td>4U Rackmount 448 x 177 x 737mm (17.63” x 6.96” x 29&quot;)</td>
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</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
### Twin

#### Features

- **Outstanding Features**
  - 1 Low-profile PCI-E x16 slot
  - 1280W Platinum Level redundant high-efficiency power supplies
  - 2 Gigabit Ethernet Ports
  - 4x 3.5” Sata or SAS drives per node
  - IPMI 2.0 + KVM with dedicated LAN
  - 1280W Platinum Level redundant high-efficiency power supplies

- **Serverboard**
  - Super® X10DRFF
  - Super® X10DRFF-iG
  - Super® X10DRFR-NT

- **Chipset**
  - Intel® C612 Chipset

- **System Memory (Max)**
  - Quad set of up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots

- **Expansion Slots**
  - Quad set of 1 PCI-E 3.0 x16 (low-profile)
  - Quad set of 2 PCI-E 3.0 x8 (low-profile)

- **Onboard Storage Controller**
  - Quad set of Intel® C612 controller for 4 SATA3 (6Gbps) ports; RAID 0,1,5,10;
  - Quad set of Intel® C612 controller; RAID 0,1

- **Connectivity**
  - Quad set of Dual Intel® I210 single port Gigabit Ethernet LAN
  - Quad set of Dual 1GbE LAN ports and 1x Dedicated IPMI port
  - Quad set of Dual 10GbBased-T LAN ports and 1x Dedicated IPMI port

- **VGA/Audio**
  - Quad set of AST2400 VGA

- **Management**
  - Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog

- **Drive Bays**
  - Quad set of 4x 3.5” hot-swap SATA3 drive bays
  - Quad set of 2x 3.5” SATA3 drive bays

- **Peripheral Bays**
  - N/A

- **Power Supply**
  - 4x Redundant 1280W Platinum Level (95%+), Digital power supplies with iC & PMBus

- **Cooling System**
  - Quad set of 8x 80mm heavy duty hot-swap fans with air shroud & PWM fan speed control

- **Form Factor**
  - 4U Rackmount

*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-F628R3-RC0B+</th>
<th>SYS-F628R3-RC0BPT+</th>
<th>SYS-F628R3-RTBN+</th>
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</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
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<td>Key Applications</td>
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<td>Outstanding Features</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10DRFR-N</td>
<td>SUPER® X10DRFR-NT</td>
<td>SUPER® X10DRFR-N</td>
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<tr>
<td>Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
</tr>
<tr>
<td>System Memory</td>
<td>Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td>Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td>Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>Quad set of 1 PCI-E 3.0 x16 (low-profile) and 1 Micro LP PCI-E 3.0 x8</td>
<td>Quad set of 1 PCI-E 3.0 x16 (low-profile) and 1 Micro LP PCI-E 3.0 x8</td>
<td>Quad set of 1 PCI-E 3.0 x16 (low-profile) and 1 Micro LP PCI-E 3.0 x8</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>-RC0B+: Quad set of Broadcom 3008 SAS 3.0 (12Gbps); SW RAID 0, 1, 10 support</td>
<td>-RC1B+: Quad set of Broadcom 3008 SAS 3.0 (12Gbps); SW RAID 0, 1, 10 support</td>
<td>-RTBN+: Quad set of Intel® i350-AM2 Dual Port Gigabit Ethernet</td>
</tr>
<tr>
<td></td>
<td>-RC0BPT+: Quad set of Broadcom 3008 SAS 3.0 (12Gbps); HW RAID 0, 1, 5, 6, 10, 50, 60</td>
<td>-RC1BPT+: Quad set of Broadcom 3008 SAS 3.0 (12Gbps); HW RAID 0, 1, 5, 6, 10, 50, 60</td>
<td>-RTBPTN+: Quad set of Intel® X540 Dual Port 10GBase-T Controller</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Quad set of Dual LAN ports with Intel® I350 Gigabit Ethernet controller</td>
<td>Quad set of Dual 10Gb Ethernet LAN with Intel® X540 and 10GBase-T Connector</td>
<td>Quad set of Intel® C612 chipset SATA3 (6Gbps) with RAID 0, 1, 5, 10</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Quad set of AST2400 VGA</td>
<td>Quad set of AST2400 VGA</td>
<td>Quad set of AST2400 VGA</td>
</tr>
<tr>
<td>Management</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSIM, SuperDoctor® S, Watchdog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSIM, SuperDoctor® S, Watchdog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSIM, SuperDoctor® S, Watchdog</td>
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<tr>
<td>Drive Bays</td>
<td>Quad set of 8x 3.5&quot; hot-swap SAS3/SATA drive bays; or 6x SAS/SATA + 2x NVMe optional</td>
<td>Quad set of 8x 3.5&quot; hot-swap SAS3/SATA drive bays; or 6x SAS/SATA + 2x NVMe optional</td>
<td>Quad set of 8x 3.5&quot; hot-swap SAS3/SATA drive bays; or 6x SAS/SATA + 2x NVMe optional</td>
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<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Quad set of Redundant 1280W Platinum Level (95%+) Digital power supplies with I²C &amp; PMBus</td>
<td>Quad set of Redundant 1280W Platinum Level (95%+) Digital power supplies with I²C &amp; PMBus</td>
<td>Quad set of Redundant 1280W Platinum Level (95%+) Digital power supplies with I²C &amp; PMBus</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Quad set of 2x 80mm heavy duty fans with air shroud &amp; PWM fan speed control</td>
<td>Quad set of 2x 80mm heavy duty fans with air shroud &amp; PWM fan speed control</td>
<td>Quad set of 2x 80mm heavy duty fans with air shroud &amp; PWM fan speed control</td>
</tr>
<tr>
<td>Form Factor</td>
<td>4U Rackmount</td>
<td>4U Rackmount</td>
<td>4U Rackmount</td>
</tr>
<tr>
<td></td>
<td>448 x 177 x 737mm (17.63&quot; x 6.96&quot; x 29&quot;)</td>
<td>448 x 177 x 737mm (17.63&quot; x 6.96&quot; x 29&quot;)</td>
<td>448 x 177 x 737mm (17.63&quot; x 6.96&quot; x 29&quot;)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
4-Node Rear I/O, 8 Hot-swap 3.5” HDDs per 1U

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-F648G2-FC0+</th>
<th>SYS-F648G2-FC0PT+</th>
<th>SYS-F648G2-FT+</th>
<th>SYS-F648G2-FTPT+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Twin set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Twin set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td></td>
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</tr>
<tr>
<td>Key Applications</td>
<td>• 3D Rendering • CAD/CAM/CAE • Compute Intensive Application • Digital Content Creation • GPU server • High-performance computing</td>
<td>• 3D Rendering • CAD/CAM/CAE • Compute Intensive Application • Digital Content Creation • GPU server • High-performance computing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• 145W CPU support • 8x 2.5” SAS/SATA drive bays • IPMI 2.0 + KVM with dedicated LAN • Up to 6 GPUs per node* (*4x K80 per node) • 3008 controller (-FC0+/-FC0PT+)</td>
<td>• 145W CPU support • 8x 2.5” SAS/SATA drive bays • IPMI 2.0 + KVM with dedicated LAN • Up to 6 GPUs per node* (*4x K80 per node) • 3008 controller (-FC0+/-FC0PT+)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serverboard</td>
<td>-FC0+: SUPER® X10DRFF-CG -FC0PT+: SUPER® X10DRFF-CTG</td>
<td>-FT+: SUPER® X10DRFF-IQ -FTPT+: SUPER® X10DRFF-TG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Twin set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td>Twin set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>Twin set of 6 PCI-E 3.0 x16 FHFL Double Width; 2 PCI-E 3.0 x8 FH/HL</td>
<td>Twin set of 6 PCI-E 3.0 x16 FHFL Double Width; 2 PCI-E 3.0 x8 FH/HL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Twin set of Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1; Twin set of 3008 SW controller for 8 SAS3 (12Gbs) ports; RAID 0,1,10</td>
<td>Twin set of Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connectivity</td>
<td>-FC0+: Quad set of Dual LAN with Intel® I350 Gigabit Ethernet Controller; -FC0PT+: Quad set of Dual 10GBase-T with Intel® XS40 10GDBE Controller</td>
<td>-FT+: Quad set of Dual LAN with Intel® I350 Gigabit Ethernet Controller; -FTPT+: Quad set of Dual 10GBase-T with Intel® XS40 10GDBE Controller</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Twin set of AST2400 VGA</td>
<td>Twin set of AST2400 VGA</td>
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<tr>
<td>Management</td>
<td>Twin set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® S, Watchdog</td>
<td>Twin set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® S, Watchdog</td>
<td></td>
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</tr>
<tr>
<td>Drive Bays</td>
<td>Twin set of 8x 2.5” hot-swap SATA3/SAS3 drive bays</td>
<td>Twin set of 8x 2.5” hot-swap SATA3/SAS3 drive bays</td>
<td></td>
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<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Power Supply</td>
<td>4x Redundant 2000W Titanium Level power supplies</td>
<td>4x Redundant 2000W Titanium Level power supplies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooling System</td>
<td>8x 80mm heavy duty fans with air shroud and PWM fan speed control and additional internal fans available</td>
<td>8x 80mm heavy duty fans with air shroud and PWM fan speed control and additional internal fans available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form Factor</td>
<td>4U Rackmount 448 x 177 x 889mm (17.63” x 6.96” x 35&quot;)</td>
<td>4U Rackmount 448 x 177 x 889mm (17.63” x 6.96” x 35&quot;)</td>
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<td></td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
### X12 TwinPro®

(For Complete System Only)

#### 3rd Gen Intel® Xeon® Scalable processors Supported

#### Key Applications
- High Performance Computing
- Hyper-Converged Infrastructure
- Big Data / Big Science
- Oil immersion, Liquid Cooling

#### Outstanding Features
- The most cost optimized 2U, 4 node solution

#### Serverboard
- SUPER® X12DPT-PT6

#### Chipset
- Intel® C621A

#### System Memory (Max.)
- 16 DIMM slots
  - Up to 4TB ECC RDIMM, DDR4-3200MHz

#### Expansion Slots
- M.2 slot(s)
- 2 PCI-E 4.0 x16 LP slot(s)

#### Onboard Storage Controller
- Intel® SATA

#### Connectivity
- 2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X710-AT2

#### VGA/Audio
- 1 VGA port

#### Management
- SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSD; IPMI 2.0; Redfish API; Supermicro Out of Band (OoB) Software License Key

#### Drive Bays
- 3x 3.5" hot-swap SATA drive bays;
- 3x 3.5" hot-swap SAS/SATA drive bays;
- 3x 3.5" hot-swap SATA/SAS drive bays;

#### Peripheral Bays
- None

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

#### Cooling System
- 4x 8cm heavy duty fan(s)

#### Form Factor
- 2U rackmount
  - Enclosure: 438 x 88 x 774mm (17.25" x 3.47" x 30.5")
  - Package: 622 x 254 x 1143mm (24.5" x 10" x 45")

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<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-620TP-HTTR</th>
<th>SYS-620TP-HC0TR</th>
<th>SYS-620TP-HC1TR</th>
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<tbody>
<tr>
<td>Processor Support</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
</tr>
<tr>
<td></td>
<td>Dual Socket LGA-4189 (Socket P+) supported</td>
<td>TDP up to 185W; 2 UPI up to 11.2GT/s</td>
<td>TDP up to 185W; 2 UPI up to 11.2GT/s</td>
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<tr>
<td>Key Applications</td>
<td>• High Performance Computing</td>
<td>• High Performance Computing</td>
<td>• High Performance Computing</td>
</tr>
<tr>
<td></td>
<td>• Hyper-Converged Infrastructure</td>
<td>• Hyper-Converged Infrastructure</td>
<td>• Hyper-Converged Infrastructure</td>
</tr>
<tr>
<td></td>
<td>• Big Data / Big Science</td>
<td>• Big Data / Big Science</td>
<td>• Big Data / Big Science</td>
</tr>
<tr>
<td></td>
<td>• Oil immersion, Liquid Cooling</td>
<td>• Oil immersion, Liquid Cooling</td>
<td>• Oil immersion, Liquid Cooling</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• The most cost optimized 2U, 4 node solution</td>
<td>• The most cost optimized 2U, 4 node solution</td>
<td>• The most cost optimized 2U, 4 node solution</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X12DPT-PT6</td>
<td>SUPER® X12DPT-PT6</td>
<td>SUPER® X12DPT-PT6</td>
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<tr>
<td>Chipset</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
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<tr>
<td>System Memory (Max.)</td>
<td>16 DIMM slots</td>
<td>16 DIMM slots</td>
<td>16 DIMM slots</td>
</tr>
<tr>
<td></td>
<td>Up to 4TB ECC RDIMM, DDR4-3200MHz</td>
<td>Up to 4TB ECC RDIMM, DDR4-3200MHz</td>
<td>Up to 4TB ECC RDIMM, DDR4-3200MHz</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>M.2 slot(s)</td>
<td>M.2 slot(s)</td>
<td>M.2 slot(s)</td>
</tr>
<tr>
<td></td>
<td>2 PCI-E 4.0 x16 LP slot(s)</td>
<td>2 PCI-E 4.0 x16 LP slot(s)</td>
<td>2 PCI-E 4.0 x16 LP slot(s)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® SATA</td>
<td>Broadcom® 3008</td>
<td>Broadcom® 3108</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>
<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>
<td>1 VGA port</td>
</tr>
<tr>
<td>Management</td>
<td>SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSD; IPMI 2.0; Redfish API; Supermicro Out of Band (OoB) Software License Key</td>
<td>SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSD; IPMI 2.0; Redfish API; Supermicro Out of Band (OoB) Software License Key</td>
<td>SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSD; IPMI 2.0; Redfish API; Supermicro Out of Band (OoB) Software License Key</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>3x 3.5&quot; hot-swap SATA drive bays;</td>
<td>3x 3.5&quot; hot-swap SAS/SATA drive bays;</td>
<td>3x 3.5&quot; hot-swap SATA/SAS drive bays;</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Power Supply</td>
<td>2200W Titanium level (96%)</td>
<td>2200W Titanium level (96%)</td>
<td>2200W Titanium level (96%)</td>
</tr>
<tr>
<td>Cooling System</td>
<td>4x 8cm heavy duty fan(s)</td>
<td>4x 8cm heavy duty fan(s)</td>
<td>4x 8cm heavy duty fan(s)</td>
</tr>
</tbody>
</table>
| Form Factor | 2U rackmount
  - Enclosure: 438 x 88 x 774mm (17.25" x 3.47" x 30.5")
  - Package: 622 x 254 x 1143mm (24.5" x 10" x 45") | 2U rackmount
  - Enclosure: 438 x 88 x 774mm (17.25" x 3.47" x 30.5")
  - Package: 622 x 254 x 1143mm (24.5" x 10" x 45") | 2U rackmount
  - Enclosure: 438 x 88 x 774mm (17.25" x 3.47" x 30.5")
  - Package: 622 x 254 x 1143mm (24.5" x 10" x 45") |
## Features

### Processor Support
- Dual Socket P (LGA 3647) supported, CPU TDP support 165W TDP, 2UPI up to 10.4GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh). GT/s

### Key Applications
- Mission-critical applications

### Outstanding Features
- Dual set of 3x heavy duty counter rotating fans with air shroud and optimal fan speed control
- Dual set of 3x heavy duty counter rotating fans with air shroud and optimal fan speed control
- Dual set of 4x 2.5" hot-swap SATA/SAS drive bays
- Dual set of 4x 2.5" hot-swap SATA/SAS drive bays

### Serverboard
- Twin set of 4x 2.5" hot-swap SATA/SAS drive bays
- Twin set of 4x 2.5" hot-swap SATA/SAS drive bays

### Chipset
- Intel® C621 chipset
- Intel® C621 chipset
- Intel® C621 chipset

### System Memory (Max.)*
- 256GB memory modules; Supports Intel® Optane™ DCPMM††
- 256GB memory modules; Supports Intel® Optane™ DCPMM††
- 256GB memory modules; Supports Intel® Optane™ DCPMM††

### Expansion Slots
- Dual set of: 2x PCI-E 3.0 x16 Low-profile slot and 2 x M.2 slot
- Dual set of: 2x PCI-E 3.0 x16 Low-profile slot and 2 x M.2 slot
- Dual set of: 2x PCI-E 3.0 x16 Low-profile slot and 2 x M.2 slot

### Onboard Storage Controller
- Dual set of Broadcom 3108 HW RAID 12Gbps SAS 3.0 controller for RAID 0,1,5,10 with 256GB memory modules; Supports Intel® Optane™ DCPMM††
- Dual set of Broadcom 3108 HW RAID 12Gbps SAS 3.0 controller for RAID 0,1,5,10
- Dual set of Intel® C621 controller for 4 SATA (6 Gbps) ports; RAID 0,1,5,10

### Connectivity
- Dual set of single IPMI 2.0 + KVM with dedicated LAN only. Need to bundle with network card
- Dual set of single IPMI 2.0 + KVM with dedicated LAN only. Need to bundle with network card
- Dual set of single IPMI 2.0 + KVM with dedicated LAN only. Need to bundle with network card

### Power Supply
- 1000W Redundant Titanium Level High-Efficiency Power Supplies with I2C & PMBus
- 1000W Redundant Titanium Level high-efficiency Power Supplies with I2C & PMBus
- 1000W Redundant Titanium Level high-efficiency Power Supplies with I2C & PMBus

### Cooling System
- 1U Rackmount; Enclosure: 437 x 43 x 718mm (17.2" x 1.7" x 28.25")
- 1U Rackmount; Enclosure: 437 x 43 x 718mm (17.2" x 1.7" x 28.25")
- 1U Rackmount; Enclosure: 437 x 43 x 718mm (17.2" x 1.7" x 28.25")

### Form Factor
- Package: 752 x 203 x 975mm (29.6" x 8" x 38.4")
- Package: 752 x 203 x 975mm (29.6" x 8" x 38.4")
- Package: 752 x 203 x 975mm (29.6" x 8" x 38.4")

### Net Weight
- 48.1lbs (21.82kg)
- 48.1lbs (21.82kg)
- 48.1lbs (21.82kg)

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*Please check with your Supermicro sales representative and website for compatibility and configuration details.

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh/Cascade Lake) only. Contact your Supermicro sales rep for more info.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-2029TP-HC0R</th>
<th>SYS-2029TP-HC1R</th>
<th>SYS-2029TP-HTR</th>
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</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 165W TDP, 2UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 165W TDP, 2UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 165W TDP, 2UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Compute Intensive Application</td>
<td>• Compute Intensive Application</td>
<td>• Compute Intensive Application</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• 2 Low-profile PCI-E 3.0 x16 slots 1 PCI-E 3.0 x16 SIOM LAN Networking slot IPMI 2.0 + KVM with dedicated LAN QUAD set of 6 hot-swap 2.5” SATA/SAS drive bays</td>
<td>• 2 Low-profile PCI-E 3.0 x16 slots 1 PCI-E 3.0 x16 SIOM LAN Networking slot IPMI 2.0 + KVM with dedicated LAN QUAD set of 6 hot-swap 2.5” SATA/SAS drive bays</td>
<td>• 2 Low-profile PCI-E 3.0 x16 slots 1 PCI-E 3.0 x16 SIOM LAN Networking slot IPMI 2.0 + KVM with dedicated LAN QUAD set of 6 hot-swap 2.5” SATA/SAS drive bays</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X11DPT-PS</td>
<td>SUPER® X11DPT-PS</td>
<td>SUPER® X11DPT-PS</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>16 DIMM slots; Up to 4TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
<td>16 DIMM slots; Up to 4TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
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</tr>
<tr>
<td>Expansion Slots</td>
<td>Quad set of: 2x PCI-E 3.0 LP x16; 1x SIOM LAN Networking card support</td>
<td>Quad set of: 2x PCI-E 3.0 LP x16; 1x SIOM LAN Networking card support</td>
<td>Quad set of: 2x PCI-E 3.0 LP x16; 1x SIOM LAN Networking card support</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Quad set of Broadcom 3008 HW RAID 12Gbps SAS 3.0 controller for RAID 0,1,5,10,6,10 w/ optional SuperCap</td>
<td>Quad set of Broadcom 3108 HW RAID 12Gbps SAS 3.0 controller for RAID 0,1,5,10,6,10 w/ optional SuperCap</td>
<td>Quad set of Intel® C620 controller for 6 SATA3 (6 Gbps) ports: RAID 0,1,5,10</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Quad set of single IPMI 2.0 + KVM with dedicated LAN only. Need one network card installed per node</td>
<td>Quad set of single IPMI 2.0 + KVM with dedicated LAN only. Need one network card installed per node</td>
<td>Quad set of single IPMI 2.0 + KVM with dedicated LAN only. Need one network card installed per node</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>1 VGA, 1 Aspeed AST2500 BMC</td>
<td>1 VGA, 1 Aspeed AST2500 BMC</td>
<td>1 VGA, 1 Aspeed AST2500 BMC</td>
</tr>
<tr>
<td>Management</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor®, Watch Dog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor®, Watch Dog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor®, Watch Dog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>Quad set of 6x 2.5” hot-swap SAS/SATA drive bays</td>
<td>Quad set of 6x 2.5” hot-swap SATA drive bays</td>
<td>Quad set of 6x 2.5” hot-swap SATA drive bays</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Power Supply</td>
<td>2200W Redundant Titanium Level high-efficiency Power Supplies with I2C &amp; PMBus</td>
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<td>Cooling System</td>
<td>4x 8cm and 4x 8cm high temperature fans with air shroud and optimal fan speed control</td>
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<td>4x 8cm and 4x 8cm high temperature fans with air shroud and optimal fan speed control</td>
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†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
### MODEL

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<thead>
<tr>
<th>Processor Support</th>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
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<tbody>
<tr>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 165W TDP, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 165W TDP, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
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### Key Applications

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<tr>
<th>SYN-6029TP-HC0R</th>
<th><strong>SYS-6029TP-HC1R</strong></th>
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</thead>
<tbody>
<tr>
<td>• Compute Intensive Application Data Center Enterprise Server Financial Analysis HPC Mission-Critical</td>
<td>• Compute Intensive Application Data Center Enterprise Server Financial Analysis HPC Mission-Critical</td>
</tr>
</tbody>
</table>

### Outstanding Features

<table>
<thead>
<tr>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• 2 Low-profile PCI-E 3.0x16 slots 1 PCI-E 3.0x16 SIOM LAN Networking slot IPMI 2.0 + KVM with dedicated LAN</td>
<td>• 2 Low-profile PCI-E 3.0x16 slots 1 PCI-E 3.0x16 SIOM LAN Networking slot IPMI 2.0 + KVM with dedicated LAN</td>
</tr>
</tbody>
</table>

### Serverboard

<table>
<thead>
<tr>
<th><strong>SYs-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPER® X11DPT-PS</td>
<td>SUPER® X11DPT-PS</td>
</tr>
</tbody>
</table>

### Chipset

<table>
<thead>
<tr>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
</tr>
</tbody>
</table>

### System Memory (Max.)*

<table>
<thead>
<tr>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>16 DIMM slots; Up to 4TB DDR4-2933 MHz* with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
<td>16 DIMM slots; Up to 4TB DDR4-2933 MHz* with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
</tr>
</tbody>
</table>

### Expansion Slots

<table>
<thead>
<tr>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Quad set of: 2x PCI-E 3.0 LP x16; 1x SIOM card support</td>
<td>Quad set of: 2x PCI-E 3.0 LP x16; 1x SIOM LAN Networking card support</td>
</tr>
</tbody>
</table>

### Onboard Storage Controller

<table>
<thead>
<tr>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Quad set of Broadcom 3008 SAS3 controller for 3 SATA3 (6 Gbps) / SAS3(12Gbps) ports; RAID 0,1,1E</td>
<td>Quad set of Broadcom 3008 SAS3 controller for 3 SATA3 (6 Gbps) ports; RAID 0,1,1E w/optional SuperCap</td>
</tr>
</tbody>
</table>

### Connectivity

<table>
<thead>
<tr>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Quad set of single IPMI 2.0 + KVM with dedicated LAN only. Need one network card installed per node</td>
<td>Quad set of single IPMI 2.0 + KVM with dedicated LAN only. Need one network card installed per node</td>
</tr>
</tbody>
</table>

### V/G/Audio

<table>
<thead>
<tr>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 VGA, 1 Aspeed AST2500 BMC</td>
<td>1 VGA, 1 Aspeed AST2500 BMC</td>
</tr>
</tbody>
</table>

### Management

<table>
<thead>
<tr>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor™, WatchDog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor™, WatchDog</td>
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</table>

### Drive Bays

<table>
<thead>
<tr>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Quad set of 3x 3.5&quot; hot-swap SATA drive bays</td>
<td>Quad set of 3x 3.5&quot; hot-swap SAS/SATA drive bays</td>
</tr>
</tbody>
</table>

### Peripheral Bays

<table>
<thead>
<tr>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Power Supply

<table>
<thead>
<tr>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>2200W Redundant Titanium Level high-efficiency Power Supplies with I2C &amp; PMBus</td>
<td>2200W Redundant Titanium Level high-efficiency Power Supplies with I2C &amp; PMBus</td>
</tr>
</tbody>
</table>

### Cooling System

<table>
<thead>
<tr>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
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<tbody>
<tr>
<td>4x 8cm heavy duty PWM fans with air shroud and optimal fan speed control</td>
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</table>

### Form Factor

<table>
<thead>
<tr>
<th><strong>SYS-6029TP-HC0R</strong></th>
<th><strong>SYS-6029TP-HC1R</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>2U Rackmount 438 x 88 x 774mm (17.25” x 3.47” x 30.5”); Enclosure: 438 x 88 x 775mm (17.25” x 3.47” x 30.5”)</td>
<td>2U Rackmount 438 x 88 x 774mm (17.25” x 3.47” x 30.5”); Enclosure: 438 x 88 x 775mm (17.25” x 3.47” x 30.5”)</td>
</tr>
<tr>
<td>Package: 622 x 254 x 1143mm (24.5” x 10” x 45”)</td>
<td>Package: 622 x 254 x 1143mm (24.5” x 10” x 45”)</td>
</tr>
<tr>
<td>Gross Weight: 90lbs (40.82kg)</td>
<td>Gross Weight: 90lbs (40.82kg)</td>
</tr>
<tr>
<td>Net Weight: 72lbs (32.66kg)</td>
<td>Net Weight: 72lbs (32.66kg)</td>
</tr>
</tbody>
</table>

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*Please check with your Supermicro sales representative and website for compatibility and configuration details

*2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

*For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
# SuperServer® Solutions - June 2021

## 1U TwinPro™

2 hot swappable nodes in 1U, Redundant Titanium Level power supplies

---

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-1028TP-DTFR</th>
<th>SYS-1028TP-DC0FR</th>
<th>SYS-1028TP-DC1FR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Twin set of Intel® Xeon® processor E5-2600 v3 Socket R3 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Twin set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; UPI up to 9.6GT/s, CPU support up to 145W TDP</td>
<td>Twin set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; UPI up to 9.6GT/s, CPU support up to 145W TDP</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>Twin set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; UPI up to 9.6GT/s, CPU support up to 145W TDP</td>
<td>Twin set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; UPI up to 9.6GT/s, CPU support up to 145W TDP</td>
<td>Twin set of Dual Intel® Xeon® Processor E5-2600 v3 Socket R3 (LGA 2011) supported; UPI up to 9.6GT/s, CPU TDP support Up to 145W</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>Twin set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; UPI up to 9.6GT/s, CPU support up to 145W TDP</td>
<td>Twin set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; UPI up to 9.6GT/s, CPU support up to 145W TDP</td>
<td>Twin set of Dual Intel® Xeon® Processor E5-2600 v3 Socket R3 (LGA 2011) supported; UPI up to 9.6GT/s, CPU TDP support Up to 145W</td>
</tr>
</tbody>
</table>

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**Processor Support**

- System Memory (Max.)*
  - Dual set of up to 1TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2133MHz in 16 DIMM slots.
  - Twin set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots.
  - Twin set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots.

**Expansion Slots**

- Twin set of Low-profile PCI-E x16 slot
- 1x "0" slot (-DC0R)
- Twin set of Low-profile PCI-E x16 slot
- 1x "0" slot (-DC0TR)

**Onboard Storage Controller**

- Twin set of Dual Intel® C612 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
- Twin set of Broadcom 3008 controller for 4 SAS3(12 Gbps) ports; RAID 0,1,10
- Twin set of Broadcom 3108 controller for 4 SAS3(12 Gbps) ports; RAID 0,1,5,6,10
- Twin set of Dual Intel® C612 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
- Twin set of Broadcom 3008 controller for 4 SAS3(12 Gbps) ports; RAID 0,1,10
- Twin set of Broadcom 3108 controller for 4 SAS3(12 Gbps) ports; RAID 0,1,5,6,10

**Connectivity**

- Twin set of Dual 1GBe ports with Intel® i350 Ethernet controller
- Twin set of Dual 10GBase-T ports with Intel® X540 Ethernet controller
- Twin set of Dual 10GBase-T ports with Intel® X540 Ethernet controller

**VGA/Audio**

- 1 VGA, 1 Aspeed AST2400 BMC;
- Twin set of Aspeed AST2400 BMC
- Twin set of Aspeed AST2400 BMC

**Management**

- Twin set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor® 5, Watchdog
- Twin set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor® 5, Watchdog
- Twin set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor® 5, Watchdog

**Drive Bays**

- Twin set of 4x 2.5" hot-swap SATA drive bays
- Twin set of 4x 2.5" hot-swap SAS3/SATA3 drive bays
- Twin set of 4x 2.5" hot-swap SAS3/SATA3 drive bays

**Peripheral Bays**

- N/A
- N/A
- N/A

**Power Supply**

- 900W Redundant Titanium Level high-efficiency Power Supplies with I2C & PMBus
- 1000W Redundant Titanium Level high-efficiency power supplies with I2C & PMBus
- 1000W Redundant Titanium Level high-efficiency power supplies with I2C & PMBus

**Cooling System**

- Twin set of 3x heavy duty counter rotating fans with air shroud and optimal fan speed control
- Twin set of 3x heavy duty counter rotating fans with air shroud and optimal fan speed control
- Twin set of 3x heavy duty counter rotating fans with air shroud and optimal fan speed control

**Form Factor**

- 1U Rackmount
- 1U Rackmount
- 1U Rackmount

* Please check with your Supermicro sales representative and website for compatibility and configuration details
**TWINPRO®**
*(For Complete System Only)*

4 hot-swap nodes in 2U w/ 2.5” or 3.5” HDDs, Intel® Xeon® Processor E5-2600 v4 product family support

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-2028TP-HC0R</th>
<th>SYS-2028TP-HC0FR</th>
<th>SYS-2028TP-HC0TR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Compute Intensive Application</td>
<td>• Compute Intensive Application</td>
<td>• Compute Intensive Application</td>
</tr>
<tr>
<td></td>
<td>• Data Center</td>
<td>• Data Center</td>
<td>• Data Center</td>
</tr>
<tr>
<td></td>
<td>• Enterprise Server</td>
<td>• Enterprise Server</td>
<td>• Enterprise Server</td>
</tr>
<tr>
<td></td>
<td>• Financial Analysis</td>
<td>• Financial Analysis</td>
<td>• Financial Analysis</td>
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<tr>
<td></td>
<td>• HPC</td>
<td>• HPC</td>
<td>• HPC</td>
</tr>
<tr>
<td></td>
<td>• Mission-Critical</td>
<td>• Mission-Critical</td>
<td>• Mission-Critical</td>
</tr>
<tr>
<td>Outstanding</td>
<td>• 1 Low-profile PCI-E 3.0 x16 slot + 0 slot</td>
<td>• 1 Low-profile PCI-E 3.0 x16 slot + 0 slot</td>
<td>• 1 Low-profile PCI-E 3.0 x16 slot + 0 slot</td>
</tr>
<tr>
<td>Features</td>
<td>• 4 hot swappable nodes in 2U</td>
<td>• 4 hot swappable nodes in 2U</td>
<td>• 4 hot swappable nodes in 2U</td>
</tr>
<tr>
<td></td>
<td>• IPMI 2.0 + KVM with dedicated LAN</td>
<td>• IPMI 2.0 + KVM with dedicated LAN</td>
<td>• IPMI 2.0 + KVM with dedicated LAN</td>
</tr>
<tr>
<td></td>
<td>• Quad set of 6 hot-swap 2.5” SATA/SAS drive bays</td>
<td>• Quad set of 6 hot-swap 2.5” SATA/SAS drive bays</td>
<td>• Quad set of 6 hot-swap 2.5” SATA/SAS drive bays</td>
</tr>
<tr>
<td></td>
<td>• SAS 3.0, 40G Ethernet, FDR IB</td>
<td>• SAS 3.0, 40G Ethernet, FDR IB</td>
<td>• SAS 3.0, 40G Ethernet, FDR IB</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10DRT-P</td>
<td>SUPER® X10DRT-PIBF</td>
<td>SUPER® X10DRT-PT</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 D IMM slots</td>
<td>Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 D IMM slots</td>
<td>Quad set of up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 D IMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>Quad set of low-profile PCI-E 3.x 16; 1 x 16 “0 slot”</td>
<td>Quad set of low-profile PCI-E 3.x 16; 1 x 16 “0 slot”</td>
<td>Quad set of low-profile PCI-E 3.x 16; 1 x 16 “0 slot”</td>
</tr>
<tr>
<td></td>
<td>Onboard Storage Controller</td>
<td>Quad set of 3008 SW RAID 12Gbps SAS 3.0 controller; RAID 0,1,10</td>
<td>Quad set of 3008 SW RAID 12Gbps SAS 3.0 controller; RAID 0,1,10</td>
</tr>
<tr>
<td></td>
<td>Quad set of Dual LAN with Intel® i350 Gigabit Ethernet controller</td>
<td>Quad set of FDR (Connect-X3) InfiniBand / 40G Ethernet</td>
<td>Quad set of Dual 10Gb Ethernet LAN with Intel® X540 and 10Gbase-T Connector</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Quad set of AST2400 VGA</td>
<td>Quad set of AST2400 VGA</td>
<td>Quad set of AST2400 VGA</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Quad set of Dual 10Gb Ethernet LAN with Intel® X540 and 10Gbase-T Connector</td>
<td>Quad set of Dual 10Gb Ethernet LAN with Intel® X540 and 10Gbase-T Connector</td>
<td>Quad set of Dual 10Gb Ethernet LAN with Intel® X540 and 10Gbase-T Connector</td>
</tr>
<tr>
<td>Management</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td></td>
<td>Drive Bays set of 6x 2.5” hot-swap SAS/SATA drive bays</td>
<td>Quad set of 6x 2.5” hot-swap SAS/SATA drive bays</td>
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<tr>
<td></td>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Power Supply</td>
<td>Redundant 2000W Titanium Level high-efficiency power supplies with I²C &amp; PMBus</td>
<td>Redundant 2000W Titanium Level high-efficiency power supplies with I²C &amp; PMBus</td>
</tr>
<tr>
<td></td>
<td>Cooling System</td>
<td>4x8cm heavy duty PWM fans with air shroud with optimal fan speed control</td>
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<tr>
<td></td>
<td>Form Factor</td>
<td>2U Rackmount 438 x 88 x 724mm (17.25” x 3.47” x 28.5”)</td>
<td>2U Rackmount 438 x 88 x 724mm (17.25” x 3.47” x 28.5”)</td>
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</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
### TwinPro®

*(For Complete System Only)*

2U TwinPro™

4 hot-swap nodes in 2U w/ 2.5” or 3.5” HDDs, Intel® Xeon® Processor E5-2600 v4 product family support

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**TwinPro2™**

4 DP Nodes in 2U, 24x 2.5” SAS/SATA drives

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<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-2028TP-HTFR</th>
<th>SYS-2028TP-HTR</th>
<th>SYS-2028TP-HTTR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
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<td>• Mission-Critical</td>
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<td>• Mission-Critical</td>
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<tr>
<td><strong>Outstanding Features</strong></td>
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<td>• 1 Low-profile PCI-E 3.0 x16 slot + 0 slot</td>
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<tr>
<td><strong>Expansion Slots</strong></td>
<td>Quad set of low-profile PCI-E 3.0 x16; 1 x16 &quot;0 slot&quot;</td>
<td>Quad set of low-profile PCI-E 3.0 x16; 1 x16 &quot;0 slot&quot;</td>
<td>Quad set of low-profile PCI-E 3.0 x16; 1 x16 &quot;0 slot&quot;</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Quad set of Intel® C612 AHCI controller for 6 SATA3 (6Gbps); RAID 0,1,5,10</td>
<td>Quad set of Intel® C612 AHCI controller for 6 SATA3 (6Gbps); RAID 0,1,5,10</td>
<td>Quad set of Intel® C612 AHCI controller for 6 SATA3 (6Gbps); RAID 0,1,5,10</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>Quad set of FDR (Connect-X3) InfiniBand / 40G Ethernet</td>
<td>Quad set of Dual LAN with Intel® i350 Gigabit Ethernet controller</td>
<td>Quad set of Dual 10Gb Ethernet LAN with Intel® X540 and 10GbE Base-T Connector</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>Quad set of AST2400 VGA</td>
<td>Quad set of AST2400 VGA</td>
<td>Quad set of AST2400 VGA</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>Quad set of 6x 2.5” hot-swap SATA drive bays</td>
<td>Quad set of 6x 2.5” hot-swap SATA drive bays</td>
<td>Quad set of 6x 2.5” hot-swap SATA drive bays</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>Redundant 2000W Titanium Level high-efficiency power supplies with I²C &amp; PMBus</td>
<td>Redundant 2000W Titanium Level high-efficiency power supplies with I²C &amp; PMBus</td>
<td>Redundant 2000W Titanium Level high-efficiency power supplies with I²C &amp; PMBus</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>4x8cm heavy duty PWM fans with air shroud with optimal fan speed control</td>
<td>4x8cm heavy duty PWM fans with air shroud with optimal fan speed control</td>
<td>4x8cm heavy duty PWM fans with air shroud with optimal fan speed control</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>2U Rackmount 438 x 88 x 724mm (17.25” x 3.47” x 28.5”)</td>
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</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
### TwinPro®

(For Complete System Only)

2U TwinPro™

2 hot-swap nodes in 2U w/ 2.5” HDDs, Intel® Xeon® Processor E5-2600 v4 product family support

![Rear View](image)

#### MODEL

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYSTEM-2028TP-DCOR</th>
<th>SYSTEM-2028TP-DCTR</th>
<th>SYSTEM-2028TP-DECOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Twin set of Intel® Xeon® processor E5-2600 v3</td>
<td>Twin set of Intel® Xeon® processor E5-2600 v3</td>
<td>Twin set of Intel® Xeon® processor E5-2600 v3</td>
</tr>
<tr>
<td>Socket R3 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Socket R3 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Socket R3 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td></td>
</tr>
</tbody>
</table>

#### Key Applications

- Compute Intensive Application
- Data Center
- Enterprise Server
- Financial Analysis
- HPC
- Mission-Critical

- Twin set of up to 12x 3.5” hot-swap SAS/SATA drives per node

#### Outstanding Features

- 2 hot swappable nodes in 2U
- IPMI 2.0 + KVM with dedicated LAN
- SAS3.0 (12Gbps) support
- 1280W Platinum Level redundant high-efficiency power supplies

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYSTEM-2028TP-DOR</th>
<th>SYSTEM-2028TP-DCTR</th>
<th>SYSTEM-2028TP-DECOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Memory (Max.)*</td>
<td>Twin set of up to 1TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2133MHz in 16 DIMM slots.</td>
<td>Twin set of up to 1TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2133MHz in 16 DIMM slots.</td>
<td>Twin set of up to 1TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2133MHz in 16 DIMM slots.</td>
</tr>
</tbody>
</table>

#### Expansion Slots

- DCOR/DCR: Twin set of 1 PCI-E 3.0 x16, 1 PCI-E 3.0 x8 and 1 "0 slot"
- DC1R: Twin set of 1 PCI-E 3.0 x16, 1 PCI-E 3.0 x8 and One GPU/Xeon Phi or internal X16 slot.
- DTR: Twin set of 1 PCI-E 3.0 x16, 1 PCI-E 3.0 x8 and 1 PCI-E 3.0 x16 for GPU support (with GPU kit)

#### Onboard Storage Controller

- DCOR: Twin set of Broadcom® 3008 SAS3 (12Gbps); RAID 0,1,10,5,6,10,50,60
- DCTR: Twin set of Intel® C612 PCH controller for 8 SATA3 ports; RAID 0,1,5,10,50

#### Connectivity

- Twin set of Dual LAN with Intel® I350 Gigabit Ethernet controller
- Twin set of FDR (Connect-X3) / 40G Ethernet
- Twin set of Dual 10Gb Ethernet LAN with Intel® X540 and 10GBase-T Connector

#### VGA/Audio

- 1 VGA, 1 Aspeed AST2400 BMC
- 1 VGA, 1 Aspeed AST2400 BMC
- 1 VGA, 1 Aspeed AST2400 BMC

#### Management

- Twin set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor®, Watch Dog
- Twin set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor®, Watch Dog
- Twin set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor®, Watch Dog

#### Drive Bays

- Twin set of 12x 2.5” hot-swap SAS(8)+SATA(4) drive bays
- Twin set of 12x 2.5” hot-swap SAS(8)+SATA(4) drive bays
- Twin set of 12x 2.5” hot-swap SAS(8)+SATA(4) drive bays

#### Peripheral Bays

- N/A
- N/A
- N/A

#### Power Supply

- 1280W Redundant Platinum Level Digital high-efficiency power supplies with I2C & PMBus
- 1280W Redundant Platinum Level Digital high-efficiency power supplies with I2C & PMBus
- 1280W Redundant Platinum Level Digital high-efficiency power supplies with I2C & PMBus

#### Cooling System

- 4x 8cm heavy duty PWM fans with air shroud and optimal fan speed control
- 4x 8cm heavy duty PWM fans with air shroud and optimal fan speed control
- 4x 8cm heavy duty PWM fans with air shroud and optimal fan speed control

#### Form Factor

- 2U Rackmount 438 x 88 x 724mm (17.25” x 3.47” x 28.75”)
- 2U Rackmount 438 x 88 x 724mm (17.25” x 3.47” x 28.75”)
- 2U Rackmount 438 x 88 x 724mm (17.25” x 3.47” x 28.75”)

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
# SuperServer® Solutions - June 2021

## 2U TwinPro™

4 hot-swap nodes in 2U with 2.5” or 3.5” HDDs, Intel® Xeon® Processor E5-2600 v4 product family support

### TwinPro®

*(For Complete System Only)*

2U TwinPro™

4 hot-swap nodes in 2U w/ 2.5” or 3.5” HDDs, Intel® Xeon® Processor E5-2600 v4 product family support

---

### TwinPro®

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
## TwinPro® Solutions - June 2021

### 2 hot-swap nodes in 2U w/ up to 4 NVMe per Node

![Rear View](image)

**SYS-2028TP-DNC/(T)(F)R**
- Up to 4x NVMe + 8x SAS 3.0 drives (per node)
- Up to 6x SAS 3.0 support (per node)

**SYS-6028TP-DNC/(T)(F)R**
- Up to 4x NVMe + 2x SAS 3.0 drives (per node)

### MODEL

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-2028TP-DNCR</th>
<th>SYS-2028TP-DNCFR</th>
<th>SYS-2028TP-DNCTR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Twin set of Intel® Xeon® processor E5-2600 v3 Socket R3 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Twin set of Intel® Xeon® processor E5-2600 v3 Socket R3 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Twin set of Intel® Xeon® processor E5-2600 v3 Socket R3 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• 2 hot swappable nodes in 2U IPMI 2.0 + KVM with dedicated LAN SAS3.0 (12Gbps) support NVMe Support Up to 2 Low Profile Add-On-Cards 1280W Platinum Level redundant high-efficiency power supplies</td>
<td>• 2 hot swappable nodes in 2U IPMI 2.0 + KVM with dedicated LAN SAS3.0 (12Gbps) support NVMe Support Up to 2 Low Profile Add-On-Cards 1280W Platinum Level redundant high-efficiency power supplies</td>
<td>• NVMe support Up to 2 Low Profile Add-On-Cards 1280W Platinum Level redundant high-efficiency power supplies 2 hot swappable nodes in 2U IPMI 2.0 + KVM with dedicated LAN SAS3.0 (12Gbps) support</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10DRT-P</td>
<td>SUPER® X10DRT-PBF</td>
<td>SUPER® X10DRT-PT</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Twin set of up to 1TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2133MHz in 16 DIMM slots.</td>
<td>Twin set of up to 1TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2133MHz in 16 DIMM slots.</td>
<td>Twin set of up to 1TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2133MHz in 16 DIMM slots.</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>Twin set of 1 PCI-E 3.0 x16, 1 PCI-E 3.0 x8.</td>
<td>Twin set of 1 PCI-E 3.0 x16, 1 PCI-E 3.0 x8.</td>
<td>Twin set of 1 PCI-E 3.0 x16, 1 PCI-E 3.0 x8.</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Twin set of Broadcom® 3008 SAS3 (12Gbps); RAID 0,1,10</td>
<td>Twin set of Broadcom® 3008 SAS3 (12Gbps); RAID 0,1,10</td>
<td>Twin set of Broadcom® 3008 SAS3 (12Gbps); RAID 0,1,10</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Twin set of Dual LAN with Intel® I350 Gigabit Ethernet controller</td>
<td>Twin set of FDR (Connect-X3) / 56G Ethernet</td>
<td>Twin set of Dual 10Gb Ethernet LAN with Intel® X540 and 10GBase-T Connector</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>1 VGA, 1 Aspeed AST2400 BMC (per node)</td>
<td>1 VGA, 1 Aspeed AST2400 BMC (per node)</td>
<td>1 VGA, 1 Aspeed AST2400 BMC (per node)</td>
</tr>
<tr>
<td>Management</td>
<td>Twin set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor®, Watch Dog</td>
<td>Twin set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor®, Watch Dog</td>
<td>Twin set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor®, Watch Dog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>Twin set of 4x NVMe and 8x 2.5” hot-swap SAS drives.</td>
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<td>Twin set of 4x NVMe and 8x 2.5” hot-swap SAS drives.</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>1280W Redundant Platinum Level Digital high-efficiency power supplies with 12C &amp; PMBus</td>
<td>1280W Redundant Platinum Level Digital high-efficiency power supplies with 12C &amp; PMBus</td>
<td>1280W Redundant Platinum Level Digital high-efficiency power supplies with 12C &amp; PMBus</td>
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<tr>
<td>Cooling System</td>
<td>4x 8cm heavy duty PWM fans with air shroud and optimal fan speed control</td>
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<td>Form Factor</td>
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</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details

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**TwinPro® (For Complete System Only)**

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**MODEL**

- **SYS-2028TP-DNCR**
- **SYS-2028TP-DNCFR**
- **SYS-2028TP-DNCTR**
### SYS-2028TP-H Series

#### 4 DP Nodes in 2U, 24x 2.5" SAS3/SATA3 drives

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-2028TP-HC0R-SIOM</th>
<th>SYS-2028TP-HC1R-SIOM</th>
<th>SYS-2028TP-HTTR-SIOM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Quad set of Intel® Xeon® processor E5-2600 v3/ v4 Socket R4 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Quad set of Intel® Xeon® processor E5-2600 v3/ v4 Socket R4 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Quad set of Intel® Xeon® processor E5-2600 v3/ v4 Socket R4 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
</tr>
</tbody>
</table>
| **Key Applications**   | • Compute Intensive Application  
                          • Data Center  
                          • Enterprise Server  
                          • Financial Analysis  
                          • HPC  
                          • Mission-Critical | • Compute Intensive Application  
                          • Data Center  
                          • Enterprise Server  
                          • Financial Analysis  
                          • HPC  
                          • Mission-Critical | • Compute Intensive Application  
                          • Data Center  
                          • Enterprise Server  
                          • Financial Analysis  
                          • HPC  
                          • Mission-Critical |
| **Outstanding Features** | • 2 Low-profile PCI-E slots  
                            • 1 SIOM card support  
                            • IPMI 2.0 & KVM with dedicated LAN  
                            • QUAD set of 6 hot-swap 2.5" SATA/SAS drive bays | • 1 Low-profile PCI-E x16 slot  
                            • 4 hot swappable nodes in 2U  
                            • IPMI 2.0 + KVM with dedicated LAN  
                            • QUAD set of 3 hot-swap 3.5" SATA/SAS drive bays | • 1 Low-profile PCI-E x16 slot  
                            • 4 hot swappable nodes in 2U  
                            • IPMI 2.0 + KVM with dedicated LAN  
                            • QUAD set of 3 hot-swap 3.5" SATA/SAS drive bays |
| **Serverboard**        | SUPER® X10DRT-PS | SUPER® X10DRT-P | SUPER® X10DRT-PIBF |
| **Chipset**            | Intel® C612 chipset | Intel® C612 chipset | Intel® C612 chipset |
| **System Memory (Max.)** | Quad set of up to 2TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2400MHz in 16 DIMG slots | Quad set of up to 2TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2133MHz in 16 DIMG slots | Quad set of up to 2TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2133MHz in 16 DIMG slots |
| **Expansion Slots**    | Quad set of: 1x PCI-E 3.0 x16 LP  
                          1x PCI-E 3.0 x8 LP  
                          1x SIOM card support | Quad set of low-profile PCI-E 3.0 x16; 1x16 “0 slot” | Quad set of low-profile PCI-E 3.0 x16; 1x16 “0 slot” |
| **Onboard Storage Controller** | -HCOR-SIOM: Quad set of Broadcom 3008 SW RAID 12Gbps SAS 3.0 controller for RAID 0,1,10  
                                  -HCIR-SIOM: Quad set of Broadcom 3108 HW RAID 12Gbps SAS 3.0 controller for RAID 0,1,10,50 w/optional SuperCap  
                                  -HTTR-SIOM: Quad set of Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 | -HCOR: Quad set of Broadcom® 3008 SAS3 (12Gbps); RAID 0,1,10  
                                  -HCIR: Quad set of Broadcom® 3108 SAS3 (12Gbps); RAID 0,1,5,10  
                                  -HTTR: Quad set of Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 | -HCOR: Quad set of Broadcom® 3008 SAS3 (12Gbps); RAID 0,1,10  
                                  -HCIR: Quad set of Broadcom® 3108 SAS3 (12Gbps); RAID 0,1,5,10  
                                  -HTTR: Quad set of Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 |
| **Connectivity**       | Quad set of single IPMI 2.0 + KVM with dedicated LAN only. Need to bundle with network card | Quad set of Dual LAN with Intel® i350 Gigabit Ethernet controller | -HCORF: Quad set of FDR (Connect-X3) / 56G Ethernet  
                                  -HTTR: Quad set of 3x 3.5" hot-swap SATA drive bays |
| **VGA/Audio**          | 1 VGA, 1 Aspeed AST2400 BMC | 1 VGA, 1 Aspeed AST2400 BMC | 1 VGA, 1 Aspeed AST2400 BMC |
| **Management**         | Quad set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor*, Watch Dog | Quad set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor*, Watch Dog | Quad set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor*, Watch Dog |
| **Drive Bays**         | Quad set of 6x 2.5" hot-swap SAS/SATA drive bays | Quad set of 3x 3.5" hot-swap SATA drive bays | Quad set of 3x 3.5" hot-swap SATA drive bays |
| **Peripheral Bays**    | N/A | N/A | N/A |
| **Cooling System**     | 4x8cm heavy duty PWM fans with air shroud and optimal fan speed control | 4x8cm heavy duty PWM fans with air shroud and optimal fan speed control | 4x8cm heavy duty PWM fans with air shroud and optimal fan speed control |
| **Form Factor**        | 438 x 88 x 730mm (17.25” x 3.47” x 28.75”) | 2U Rackmount 438 x 88 x 762mm (17.25” x 3.47” x 30”) | 2U Rackmount 438 x 88 x 762mm (17.25” x 3.47” x 30”) |

* Please check with your Supermicro sales representative and website for compatibility and configuration details
### 2U TwinPro<sup>™</sup>

- **4 hot-swap nodes in 2U w/ 2.5” or 3.5” HDDs**

### 2U TwinPro<sup>™</sup>

- **2 hot-swap nodes in 2U w/ up to 4 NVMe per Node**

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### MODEL | SYS-6028TP-HC0TR | SYS-6028TP-HC1TR | SYS-6028TP-HTTR | SYS-6028TP-DNCR | SYS-6028TP-DNCFR
---|---|---|---|---|---
**Processor Support** | Quad set of Intel<sup>®</sup> Xeon<sup>®</sup> processor E5-2600 v3 Socket R3 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W | Quad set of Intel<sup>®</sup> Xeon<sup>®</sup> processor E5-2600 v3 Socket R3 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W |
**Key Applications** | • Compute Intensive Application | • Compute Intensive Application |
| | Data Center | Data Center |
| | Enterprise Server | Enterprise Server |
| | Financial Analysis | Financial Analysis |
| | HPC | HPC |
| | Mission-Critical | Mission-Critical |
**Outstanding Features** | • 1 Low-profile PCI-E x16 slot | • 2 hot swappable nodes in 2U |
| | 4 hot swappable nodes in 2U | IPMI 2.0 + KVM with dedicated LAN |
| | IPMI 2.0 + KVM with dedicated LAN | NVMe Support |
| | QUAD set of 3 hot-swap 3.5” SATA/SAS drive bays | Up to 2 Low Profile Add-On-Cards |
**Serverboard** | SUPER® X10DRT-PT | SUPER® X10DRT-P |
**Chipset** | Intel<sup>®</sup> C612 chipset | Intel<sup>®</sup> C612 chipset |
**System Memory (Max).** | Quad set of up to 1TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2133MHz in 16 DIMM slots. | Twin set of up to 1TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2133MHz in 16 DIMM slots. |
**Expansion Slots** | Quad set of low-profile PCI-E 3.0 x16, 1 x16 “0 slot” | Twin set of 1 PCI-E 3.0 x16, 1 PCI-E 3.0 x8. |
**Onboard Storage Controller** | -HCOTR: Quad set of Broadcom<sup>®</sup> 3008 SATA3 (12Gbps); RAID 0,1,10 | Twin set of Broadcom<sup>®</sup> 3008 SATA3 (12Gbps); RAID 0,1,10 |
| | -HC1TR: Quad set of Broadcom<sup>®</sup> 3108 SATA3 (12Gbps); RAID 0,1,5,10 | -DNCR: Twin set of Dual LAN with Intel<sup>®</sup> i350 Gigabit Ethernet controller |
| | -HTTR: Quad set of Intel<sup>®</sup> C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 | -DNCFR: Twin set of FDR (Connect-X3) / 56G Ethernet |
**Connectivity** | -HCOTR: Quad set of Dual 10Gb Ethernet LAN with Intel<sup>®</sup> X540 and 10GBase-T Connector | -DNC: Twin set of Dual LAN with Intel<sup>®</sup> i350 Gigabit Ethernet controller |
| | -HC1TR: Quad set of Dual LAN with Intel<sup>®</sup> i350 Gigabit Ethernet controller | -DNCFR: Twin set of FDR (Connect-X3) / 56G Ethernet |
| | -HTTR: Quad set of Dual LAN with Intel<sup>®</sup> X540 10GBase-T Ethernet Controller | |
**VGA/Audio** | 1 VGA, 1 Aspeed AST2400 BMC | 1 VGA, 1 Aspeed AST2400 BMC (per node) |
**Management** | Quad set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor®, WatchDog | Twin set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor®, WatchDog |
**Drive Bays** | Quad set of 3x 3.5” hot-swap SATA drive bays | Twin set of 6x 3.5” hot-swap drive bays, (Max) Up to 4x NVMe + 2x SAS3 drives (per node), or, (Max) Up to 6x SAS3 support (per node) |
**Peripheral Bays** | N/A | N/A |
**Power Supply** | 2000W Redundant Titanium / Platinum Level high-efficiency Power Supplies with I2C & PMBus | 1280W Redundant Platinum Level Digital high-efficiency power supplies with I2C & PMBus |
**Cooling System** | 4x 8cm heavy duty PWM fans with air shroud and optimal fan speed control | 4x 8cm heavy duty PWM fans with air shroud and optimal fan speed control |
**Form Factor** | 2U Rackmount 438 x 88 x 762mm (17.25” x 3.47” x 30”) | 2U Rackmount 438 x 88 x 762mm (17.25” x 3.47” x 30”) |

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
### SuperServer® Solutions - June 2021

#### 2U TwinPro™

- **2 hot-swap nodes in 2U w/ up to 4 NVMe per Node**

#### SIOM Support on 2U TwinPro2™

- **4 hot-swap nodes in 2U w/ 2.5” HDDs. Up to 2 Low Profile PCI-E Cards + 1 SIOM Card**

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<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6028TP-DNCTR</th>
<th>SYS-6028TP-HC0R-SIOM</th>
<th>SYS-6028TP-HC1R-SIOM</th>
<th>SYS-6028TP-HTR-SIOM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Twin set of Intel® Xeon® processor E5-2600 v3 Socket R3 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Quad set of Intel® Xeon® processor E5-2600 v3/v4 Socket R4 (LGA 2011) supported; UPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **Key Applications** | - Compute Intensive Application  
- Data Center  
- Enterprise Server  
- Financial Analysis  
- HPC  
- Mission-Critical | - Compute Intensive Application  
- Data Center  
- Enterprise Server  
- Financial Analysis  
- HPC  
- Mission-Critical |
| **Outstanding Features** | - 2 hot swappable nodes in 2U  
- IPMI 2.0 + KVM with dedicated LAN  
- SAS3.0 (12Gbps) support  
- NVMe Support  
- Up to 2 Low Profile Add-On-Cards  
- 1280W Platinum Level redundant high-efficiency power supplies | - 2 low-profile PCI-E slots  
- 1 SIOM card support  
- IPMI 2.0 + KVM with dedicated LAN  
- QUAD set of 3 hot-swap 3.5” SATA/SAS drive bays |
| **Serverboard** | SUPER® X10DRT-PT | SUPER® X10DRT-PS |
| **Chipset** | Intel® C612 chipset | Intel® C612 chipset |
| **System Memory (Max.)** | Twin set of up to 1TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2133MHz in 16 DIMM slots. | Quad set of up to 2TB ECC LRDIMM, 512GB ECC RDIMM, DDR4-2400MHz in 16 DIMM slots. |
| **Expansion Slots** | Twin set of 1 PCI-E 3.0 x16, 1 PCI-E 3.0 x8. | Quad set of: 1x PCI-E 3.0 LP x16; 1x PCI-E 3.0 LP x8; 1x SIOM card support |
| **Onboard Storage Controller** | Twin set of Broadcom* 3008 SAS3 (12Gbps); RAID 0,1,10 | -HC0R-SIOM: Quad set of Broadcom 3008 SW RAID 12Gbps SAS 3.0 controller for RAID 0,1,10  
-HC1R-SIOM: Quad set of Broadcom 3108 HW RAID 12Gbps SAS 3.0 controller for RAID 0,1,5 w/optional SuperCap  
-HTR-SIOM: Quad set of Intel® C612 controller for 3 SATA3 (6 Gbps) ports; RAID 0,1,5 |
| **Connectivity** | Twin set of Dual 10Gb Ethernet LAN with Intel® X540 and 10GBase-T Connector | Quad set of single IMPI 2.0 + KVM with dedicated LAN only. Need to bundle with network card |
| **VGA/Audio** | 1 VGA, 1 Aspeed AST2400 BMC (per node) | 1 VGA, 1 Aspeed AST2400 BMC |
| **Management** | Twin set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor®, Watch Dog | Quad set of IPMI 2.0 + KVM with dedicated LAN, SuperDoctor®, Watch Dog |
| **Drive Bays** | Twin set of 6x 3.5” hot-swap drive bays. (Max) Up to 4x NVMe + 2x SAS3 drives (per node), or, (Max) Up to 6x SAS3 support (per node) | Quad set of 3x 3.5” hot-swap SAS/SATA drive bays |
| **Peripheral Bays** | N/A | N/A |
| **Power Supply** | 1280W Redundant Platinum Level Digital high-efficiency power supplies with I2C & PMBus | 2000W Redundant Titanium / Platinum Level high-efficiency Power Supplies with I2C & PMBus |
| **Cooling System** | 4x 8cm heavy duty PWM fans with air shroud and optimal fan speed control | 4x 8cm heavy duty PWM fans with air shroud and optimal fan speed control |
| **Form Factor** | 2U Rackmount 438 x 88 x 762mm (17.25” x 3.47” x 30”) | 2U Rackmount 438 x 88 x 774mm (17.25” x 3.47” x 30.5”); Enclosure: 438 x 88 x 775mm (17.25” x 3.47” x 30.5”); Gross Weight: 90lbs (40.82kg)  
Net Weight: 72lbs (32.66kg) |

* Please check with your Supermicro sales representative and website for compatibility and configuration details

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* *TwINpRO® (For Complete System Only)*
## TWIN

(For Complete System Only)

1U Twin
Cost-Optimized, 2 nodes in 1U
w/ 8x 2.5” HDDs

1U Twin
Cost-Optimized, 2 nodes in 1U
w/4x 3.5” HDDs

2U Twin
4 hot-swap nodes in 2U

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Intel® Xeon® processor E5-2600 V3 with UPI up to 9.6GT/s</td>
<td>Intel® Xeon® processor E5-2600 V3 with UPI up to 9.6GT/s</td>
<td>Intel® Xeon® processor E5-2600 V3 with UPI up to 9.6GT/s</td>
<td>Intel® Xeon® processor E5-2600 V3 with UPI up to 9.6GT/s</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 V4/V3 product family with UPI up to 9.6 GT/s TDP support up to 145W</td>
<td></td>
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<tr>
<td>Key Applications</td>
<td>HPC Data Center Front End Server</td>
<td>HPC Data Center Front End Server</td>
<td>HPC Data Center Front End Server</td>
<td>HPC Virtualization Data Center Web Server</td>
<td>• IPMI 2.0 + KVM with dedicated LAN 2 hot swappable nodes in 2U 2 SATA DOM support with embedded power Redundant 1600W Titanium Level high-efficiency power supplies</td>
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<tr>
<td>Outstanding Features</td>
<td>1000W Titanium Level high-efficiency power supply 10x 2.5” SAS/SATA drive bays IPMI 2.0 management with dedicated LAN</td>
<td>1000W Titanium Level high-efficiency power supply</td>
<td>1000W Titanium Level high-efficiency power supply</td>
<td>IPMI 2.0 Management</td>
<td>• IPMI 2.0 Management 1000W Titanium Level high-efficiency power supply 2 hot swappable nodes in 2U 2 SATA DOM support with embedded power Redundant 1600W Titanium Level high-efficiency power supplies</td>
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<tr>
<td>Chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel C612</td>
<td></td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>512GB Registered ECC, DDR4-2133MHz in 8 DIMM slots</td>
<td>512GB Registered ECC, DDR4-2133MHz in 8 DIMM slots</td>
<td>512GB Registered ECC, DDR4-2133MHz in 8 DIMM slots</td>
<td>512GB Registered ECC, DDR4-2133MHz in 8 DIMM slots</td>
<td>Quad set of 512 GB ECC LRDIMM, 256 GB ECC RDIMM; DDR4-2400MHz in 8 DIMM slots</td>
<td></td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>1 PCI-E 3.0 x16 (in x16 slot);</td>
<td>1 PCI-E 3.0 x16 (in x16 slot);</td>
<td>1 PCI-E 3.0 x16 (in x16 slot);</td>
<td>1 PCI-E 3.0 x16 (in x16 slot);</td>
<td>Quad set of 1 PCI-E 3.0 x16 Low-profile</td>
<td></td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Quad set of dual LAN with INTEL i350 Gigabit Ethernet controller</td>
<td></td>
</tr>
<tr>
<td>Connectivity</td>
<td>-T: 2 Intel® i350 Gigabit Ethernet -TF: 2 Intel® i350 Gigabit Ethernet + Single port IB (FDR, 56Gbps), w/ QSFP connector</td>
<td>-T: 2 Intel® i350 Gigabit Ethernet -TF: 2 Intel® i350 Gigabit Ethernet + Single port IB (FDR, 56Gbps), w/ QSFP connector</td>
<td>-T: 2 Intel® i350 Gigabit Ethernet -TF: 2 Intel® i350 Gigabit Ethernet + Single port IB (FDR, 56Gbps), w/ QSFP connector</td>
<td>-T: 2 Intel® i350 Gigabit Ethernet -TF: 2 Intel® i350 Gigabit Ethernet + Single port IB (FDR, 56Gbps), w/ QSFP connector</td>
<td>Quad set of dual LAN with INTEL i350 Gigabit Ethernet controller</td>
<td></td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>1 VGA, 1 Aspeed AST2400 BMC;</td>
<td>1 VGA, 1 Aspeed AST2400 BMC;</td>
<td>1 VGA, 1 Aspeed AST2400 BMC;</td>
<td>1 VGA, 1 Aspeed AST2400 BMC;</td>
<td>Quad set of Aspeed AST2400 BMC</td>
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<tr>
<td>Management</td>
<td>Intel® Node Manager; IPMI2.0; NMI; SuperDoctor® 5; Watchdog;</td>
<td>Intel® Node Manager; IPMI2.0; NMI; SuperDoctor® 5; Watchdog;</td>
<td>Intel® Node Manager; IPMI2.0; NMI; SuperDoctor® 5; Watchdog;</td>
<td>Intel® Node Manager; IPMI2.0; NMI; SuperDoctor® 5; Watchdog;</td>
<td>Intel® Node Manager; IPMI2.0; NMI; SMCBU and SMM; SuperDoctor III; Watchdog</td>
<td></td>
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<tr>
<td>Drive Bays</td>
<td>8x 2.5” hot-swap SAS/SATA drive bay</td>
<td>8x 2.5” hot-swap SAS/SATA drive bay</td>
<td>4 x 3.5” host-swap SAS/SATA drive bay</td>
<td>4 x 3.5” host-swap SAS/SATA drive bay</td>
<td>Quad set of 6x 2.5” hot-swap SATA drive bay</td>
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<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Power Supply</td>
<td>1000W redundant Titanium Level digital power supplies</td>
<td>1000W redundant Titanium Level digital power supplies</td>
<td>1000W redundant Titanium Level digital power supplies</td>
<td>1600W Redundant Titanium Level high-efficiency power supplies with I2C &amp; PMBus</td>
<td>4x 8cm heavy duty fans with PWM fan speed control</td>
<td></td>
</tr>
<tr>
<td>Cooling System</td>
<td>6x 40x56mm counter-rotation PWM fan;</td>
<td>6x 40x56mm counter-rotation PWM fan;</td>
<td>6x 40x56mm counter-rotation PWM fan;</td>
<td>6x 40x56mm counter-rotation PWM fan;</td>
<td>2U Rackmount; Enclosure: 438 x 88 x 724mm (17.25” x 3.47” x 28.5”); Package: 671 x 284 x 1011mm (26.4” x 11.2” x 39.8”); Gross Weight: 85lbs (38.56kg); Net Weight: 54.5lbs (24.72kg)</td>
<td></td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U-Twin 17.2” (437mm) x 1.75” (44.45mm) x 27.75” (705mm)</td>
<td>1U-Twin 17.2” (437mm) x 1.75” (44.45mm) x 27.75” (705mm)</td>
<td>1U-Twin 17.2” (437mm) x 1.75” (44.45mm) x 27.75” (705mm)</td>
<td>1U-Twin 17.2” (437mm) x 1.75” (44.45mm) x 27.75” (705mm)</td>
<td>1U-Twin 17.2” (437mm) x 1.75” (44.45mm) x 27.75” (705mm)</td>
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</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
### MODEL

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<tr>
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</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Quad set of Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Data Center</td>
<td>• Data Center</td>
<td>• Data Center</td>
<td>• Data Center</td>
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<td>• Web Server</td>
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<td>• Web Server</td>
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<td></td>
<td>• HPC</td>
<td>• HPC</td>
<td>• HPC</td>
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<td></td>
<td>• Virtualization</td>
<td>• Virtualization</td>
<td>• Virtualization</td>
<td>• Virtualization</td>
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<tr>
<td>Outstanding Features</td>
<td>2U Twin 2 hot-swap nodes in 2U</td>
<td>4 DP Nodes in 2U, 6x 2.5” HDD drives per Node</td>
<td>4 DP Nodes in 2U, 6x 2.5” HDD drives per Node</td>
<td>4 DP Nodes in 2U, 6x 2.5” HDD drives per Node</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10DRT-HIBF</td>
<td>SUPER® X10DRT-HIBF</td>
<td>SUPER® X10DRT-HIBF</td>
<td>SUPER® X10DRT-HIBF</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Quad set of up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots</td>
<td>Quad set of up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots</td>
<td>Quad set of up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots</td>
<td>Quad set of up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>Quad set of 1 PCI-E 3.0 x16 Low-profile</td>
<td>Quad set of 1 PCI-E 3.0 x16 Low-profile</td>
<td>Quad set of 1 PCI-E 3.0 x16 Low-profile</td>
<td>Quad set of 1 PCI-E 3.0 x16 Low-profile</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Quad set of SAS2 (6Gbps) via 2208; HW RAID supports 0,1,5,10,50</td>
<td>Quad set of Intel® C612 controller for 3 SATA3 (6Gbps) ports; RAID 0,1</td>
<td>Quad set of Intel® C612 controller for 3 SATA3 (6Gbps) ports; RAID 0,1</td>
<td>Quad set of Intel® C612 controller for 3 SATA3 (6Gbps) ports; RAID 0,1</td>
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<tr>
<td>Connectivity</td>
<td>-H72FR: Quad set of dual LAN with ConnectX3 single port FDR</td>
<td>Quad set of dual LAN with ConnectX3 single port FDR</td>
<td>Quad set of dual LAN with ConnectX3 single port FDR</td>
<td>Quad set of dual LAN with ConnectX3 single port FDR</td>
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<tr>
<td>VGA/Audio</td>
<td>Quad set of AST2400 VGA</td>
<td>Quad set of AST2400 VGA</td>
<td>Quad set of AST2400 VGA</td>
<td>Quad set of AST2400 VGA</td>
</tr>
<tr>
<td>Management</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>Quad set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>Quad set of 6x 2.5” hot-swap SAS2 HDDs</td>
<td>Quad set of 3x 3.5” hot-swap SATA3 HDDs</td>
<td>Quad set of 3x 3.5” hot-swap SATA3 HDDs</td>
<td>Quad set of 3x 3.5” hot-swap SATA3 HDDs</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 1600W Titanium Level high-efficiency power supplies with I²C &amp; PMBus</td>
<td>Redundant 1600W Titanium Level high-efficiency power supplies with I²C &amp; PMBus</td>
<td>Redundant 1600W Titanium Level high-efficiency power supplies with I²C &amp; PMBus</td>
<td>Redundant 1600W Titanium Level high-efficiency power supplies with I²C &amp; PMBus</td>
</tr>
<tr>
<td>Cooling System</td>
<td>4x 80mm heavy duty fans with PWM fan speed control</td>
<td>4x 80mm heavy duty fans with PWM fan speed control</td>
<td>4x 80mm heavy duty fans with PWM fan speed control</td>
<td>4x 80mm heavy duty fans with PWM fan speed control</td>
</tr>
<tr>
<td>Form Factor</td>
<td>2U Rackmount 438 x 88 x 679mm (17.25” x 3.47” x 26.75”)</td>
<td>2U Rackmount 438 x 88 x 724mm (17.25” x 3.47” x 28.5”)</td>
<td>2U Rackmount 438 x 88 x 724mm (17.25” x 3.47” x 28.5”)</td>
<td>2U Rackmount 438 x 88 x 724mm (17.25” x 3.47” x 28.5”)</td>
</tr>
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* Please check with your Supermicro sales representative and website for compatibility and configuration details.
<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-220U-MTNR</th>
<th>SYS-620U-TNR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 270W; 3 UPI up to 11.2GT/s</td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 270W; 3 UPI up to 11.2GT/s</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Virtualization • HPC • Cloud Computing • High End Enterprise Server • Software Defined Storage • Application Tier Service Provider • 5G/Telco</td>
<td>• Virtualization • HPC • Cloud Computing • High End Enterprise Server • Software Defined Storage • Application Tier Service Provider • 5G/Telco</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• Modular Components for Building Application-Optimized Solutions • Optimized cooling with support up to 270W TDP processors • Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors • Up to 8TB Intel® Optane™ Persistent Memory (up to 12TB with DRAM) • Hot-swappable hybrid drive bays supporting NVMe, SATA or SAS • Configurable number of PCI-E 4.0 expansion slots with support for double-width GPUs and FPGAs. • Flexible onboard networking options • Short-depth model (22.6&quot;) optimized for 5G and Telco Markets</td>
<td>• Modular Components for Building Application-Optimized Solutions • Optimized cooling with support up to 270W TDP processors • Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors • Up to 8TB Intel® Optane™ Persistent Memory (up to 12TB with DRAM) • Hot-swappable hybrid drive bays supporting NVMe, SATA or SAS • Configurable number of PCI-E 4.0 expansion slots with support for double-width GPUs and FPGAs. • Flexible onboard networking options</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X12DPU-6</td>
<td>SUPER® X12DPU-6</td>
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<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
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<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>32 DIMM slots Up to 8TB ECC RDIMM, DDR4-3200MHz</td>
<td>32 DIMM slots Up to 8TB ECC RDIMM, DDR4-3200MHz</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>1 PCI-E 4.0 x16 FH, 10.5”L slot 1 PCI-E 4.0 x16 LP slot 5 PCI-E 4.0 x8 FH, 10.5”L slots (PCI-E 4.0 x16 options available) 1 PCI-E 4.0 x8 internal LP slot</td>
<td>1 PCI-E 4.0 x16 FH, 10.5”L slot 1 PCI-E 4.0 x16 LP slot 5 PCI-E 4.0 x8 FH, 10.5”L slots (PCI-E 4.0 x16 options available) 1 PCI-E 4.0 x8 internal LP slot</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>2x 10GbE RJ45 with Intel® X710-AT2 (optional) 2x 10GbE RJ45 or 2x 10GbE SFP+ with Intel® X710-TM4 (optional)</td>
<td>2x 10GbE RJ45 with Intel® X710-AT2 (optional) 2x 10GbE RJ45 or 2x 10GbE SFP+ with Intel® X710-TM4 (optional)</td>
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<tr>
<td><strong>VGA/Audio</strong></td>
<td>1 VGA port</td>
<td>1 VGA port</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; Intel® Node Manager; IPMI 2.0; Redfish API</td>
<td>SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; Intel® Node Manager; IPMI 2.0; Redfish API</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>6x 2.5” hot-swap NVMe/SATA/SAS drive bays; 6x 2.5” NVMe hybrid; Optional RAID support via RAID controller AOC</td>
<td>12x 3.5” hot-swap NVMe/SATA/SAS drive bays; 12x 2.5” NVMe hybrid; Optional RAID support via RAID controller AOC</td>
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<tr>
<td><strong>Peripheral Bays</strong></td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>Redundant 1600W Titanium level (96%)</td>
<td>Redundant 1200W Titanium level (96%)</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>6x 6cm heavy duty fan(s)</td>
<td>4x 8cm heavy duty fan(s)</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>2U rackmount Enclosure: 437 x 89 x 574mm (17.2” x 3.5” x 22.6”) Package: 625 x 253 x 1154mm (24.6” x 9.96” x 45.43”)</td>
<td>2U rackmount Enclosure: 437 x 89 x 723mm (17.2” x 3.5” x 28.46”) Package: 605 x 256 x 947mm (23.81” x 10.07” x 37.28”)</td>
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# X12 ULTRA

(For Complete System Only)

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<tr>
<th>MODEL</th>
<th>SYS-120U-TNR</th>
<th>SYS-610U-TNR</th>
<th>SYS-220U-TNR</th>
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<tbody>
<tr>
<td>Processor Support</td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 270W; 3 UPI up to 11.2GT/s</td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 270W; 3 UPI up to 11.2GT/s</td>
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<tr>
<td>Key Applications</td>
<td>• Virtualization</td>
<td>• Virtualization</td>
<td>• Virtualization</td>
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<td>• HPC</td>
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<td>• Cloud Computing</td>
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<td>• High End Enterprise Server</td>
<td>• High End Enterprise Server</td>
<td>• High End Enterprise Server</td>
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<td>• Software Defined Storage</td>
<td>• Software Defined Storage</td>
<td>• Software Defined Storage</td>
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<td>• Application Tier Service Provider</td>
<td>• Application Tier Service Provider</td>
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<td>• SG/Telco</td>
<td>• SG/Telco</td>
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<td>• Modular Components for Building Application-Optimized Solutions</td>
<td>• Modular Components for Building Application-Optimized Solutions</td>
<td>• Modular Components for Building Application-Optimized Solutions</td>
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<tr>
<td></td>
<td>• Optimized cooling with support up to 270W TDP processors</td>
<td>• Optimized cooling with support up to 270W TDP processors</td>
<td>• Optimized cooling with support up to 270W TDP processors</td>
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<tr>
<td></td>
<td>• Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors</td>
<td>• Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors</td>
<td>• Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors</td>
</tr>
<tr>
<td></td>
<td>• Up to 8TB Intel® Optane™ Persistent Memory (up to 12TB with DRAM)</td>
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<td>• Up to 8TB Intel® Optane™ Persistent Memory (up to 12TB with DRAM)</td>
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<td></td>
<td>• Hot-swappable hybrid drive bays supporting NVMe, SATA or SAS</td>
<td>• Hot-swappable hybrid drive bays supporting NVMe, SATA or SAS</td>
<td>• Configurable number of PCI-E 4.0 expansion slots with support for double-width GPUs and FPGAs.</td>
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<td>• Configurable number of PCI-E 4.0 expansion slots with support for double-width GPUs and FPGAs.</td>
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<td>• Configurable number of PCI-E 4.0 expansion slots with support for double-width GPUs and FPGAs.</td>
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<td></td>
<td>• Flexible onboard networking options</td>
<td>• Flexible onboard networking options</td>
<td>• Flexible onboard networking options</td>
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<tr>
<td>Outstanding Features</td>
<td>• Flexible onboard networking options</td>
<td>• Flexible onboard networking options</td>
<td>• Flexible onboard networking options</td>
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<tr>
<td>Serverboard</td>
<td>SUPER® X12DPU-6</td>
<td>SUPER® X12DPU-6</td>
<td>SUPER® X12DPU-6</td>
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<td>Chipset</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
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<tr>
<td>System Memory (Max.)</td>
<td>Up to 8TB ECC RDimM, DDR4-3200MHz</td>
<td>Up to 8TB ECC RDimM, DDR4-3200MHz</td>
<td>Up to 8TB ECC RDimM, DDR4-3200MHz</td>
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<tr>
<td>Expansion Slots</td>
<td>2 PCI-E 4.0 x16 FH, 10.5”L slots</td>
<td>2 PCI-E 4.0 x16 FH, 10.5”L slots</td>
<td>2 PCI-E 4.0 x16 FH, 10.5”L slots</td>
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<td>1 PCI-E 4.0 x16 LP slot</td>
<td>1 PCI-E 4.0 x16 LP slot</td>
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<tr>
<td></td>
<td>1 PCI-E 4.0 x16 Internal LP slot</td>
<td>1 PCI-E 4.0 x16 Internal LP slot</td>
<td>1 PCI-E 4.0 x16 Internal LP slot</td>
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<td>Onboard Storage Controller</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2x 10GbE RJ45 with Intel® X710-AT2 (optional)</td>
<td>2x 10GbE RJ45 with Intel® X710-AT2 (optional)</td>
<td>2x 10GbE RJ45 with Intel® X710-AT2 (optional)</td>
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<tr>
<td></td>
<td>2x 10GbE RJ45 or 2x 10GbE SFP+ with Intel® X710-TM (optional)</td>
<td>2x 10GbE RJ45 or 2x 10GbE SFP+ with Intel® X710-TM (optional)</td>
<td>2x 10GbE RJ45 or 2x 10GbE SFP+ with Intel® X710-TM (optional)</td>
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<tr>
<td>VGA/Audio</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
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<tr>
<td>Management</td>
<td>SuperDoctor® S; Watch Dog; NMI; SUM; KVM with dedicated LAN; Intel® Node Manager; IPMI 2.0; Redfish API</td>
<td>SuperDoctor® S; Watch Dog; NMI; SUM; KVM with dedicated LAN; Intel® Node Manager; IPMI 2.0; Redfish API</td>
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</tr>
<tr>
<td>Drive Bays</td>
<td>12x 2.5” hot-swap NVMe/SATA/SAS drive bays; 12x 2.5” NVMe hybrid; Optional RAID support via RAID controller AOC</td>
<td>4x 3.5” hot-swap NVMe/SATA/SAS drive bays; 4x 2.5” NVMe hybrid; Optional RAID support via RAID controller AOC</td>
<td>2x 2.5” hot-swap NVMe/SATA/SAS drive bays; 4x 2.5” NVMe hybrid; Optional RAID support via RAID controller AOC</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 1200W Titanium level (96%)</td>
<td>Redundant 1200W Titanium level (96%)</td>
<td>Redundant 1600W Titanium level (96%)</td>
</tr>
<tr>
<td>Cooling System</td>
<td>8x 4cm heavy duty fan(s)</td>
<td>8x 4cm heavy duty fan(s)</td>
<td>4x 8cm heavy duty fan(s)</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U rackmount: Enclosure: 437 x 43 x 739mm (17.2” x 1.7” x 29.1”)</td>
<td>1U rackmount: Enclosure: 437 x 43 x 741mm (17.2” x 1.7” x 29.1”)</td>
<td>2U rackmount: Enclosure: 437 x 43 x 704.5mm (17.2” x 3.5” x 27.7”)</td>
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<tr>
<td></td>
<td>Package: 605 x 203 x 950mm (23.8” x 7.9” x 37.4”)</td>
<td>Package: 605 x 203 x 950mm (23.8” x 7.9” x 37.4”)</td>
<td>Package: 625 x 253 x 1154mm (24.6” x 9.96” x 45.43”)</td>
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</tbody>
</table>
## SuperServer® X11DPU -XLL SUPER

### 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors

#### Processor Support

- **SYS-1029UX-LL1-C16**
  - Dual Socket P (LGA 3647), Intel Xeon Gold 6144 included
  - 24 DIMM sockets; Up to 6TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB); 12x 16GB DDR4-2933 MHz included

- **SYS-1029UX-LL2-C16**
  - Dual Socket P (LGA 3647), Intel Xeon Gold 6146 included
  - 24 DIMM slots; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB); 16x DDR4-2933 MHz included

- **SYS-1029UX-LL3-C16**
  - Dual Socket P (LGA 3647), Intel Xeon Gold 6154 included
  - 24 DIMM slots; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB); 12x 16GB DDR4-2933 MHz included

- **SYS-1029UX-LL3-S16**
  - Dual Socket P (LGA 3647), Intel Xeon Gold 6154 included
  - 24 DIMM slots; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB); 12x 16GB DDR4-2933 MHz included

- **SYS-1029UX-LL2-S16**
  - Dual Socket P (LGA 3647), Intel Xeon Gold 6146 included
  - 24 DIMM slots; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB); 16x DDR4-2933 MHz included

- **SYS-1029UX-LL1-S16**
  - Dual Socket P (LGA 3647), Intel Xeon Gold 6144 included
  - 24 DIMM slots; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB); 16x DDR4-2933 MHz included

- **SYS-1029UX-TN10RT**
  - Dual Socket P (LGA 3647), Intel Xeon Scalable Processors (codenamed Cascade Lake Refresh).
  - Supports Intel® Optane™ DCPMM†† (128/256/512GB); and 3DS LRDIMM; note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable Processors (codenamed Cascade Lake Refresh).

### Key Applications

- **Enterprise Server**
- **Business Critical Applications**
- **Financial Analysis**
- **Low Latency & Jitter Optimized**
- **Hyper-Speed Hardware Acceleration**

### Outstanding Features

- **SuperDoctor® 5, Watchdog**
- **NMI; SPM; SSM; SUM; SuperDoctor® BMC**
- **Controller 5 USB 3.0 ports (2 Rear, 2 Front, 1 Type A)**
- **2 10G base-T Ethernet via Intel® X540 Ethernet NIC**
- **10 Hot-Swappable 2.5" drive bays: 6 NVMe ports (NVMe from CPU (2))**
- **24 NVMe ports (NVMe from CPU (4))**
- **Ultra/10T**
- **10x 2.5" NVMe Drive Bays**
- **10 Hot-Swappable 2.5" drive bays**
- **10 NVMe SSDs Support**

### Power Supply

- **5U High-efficiency (Platinum level) digital power supply**
- **750W High-efficiency (Platinum level) digital power supply**
- **Relentless NAS Power Supply**
- **Redundant 1000W Titanium Level Power Supply**

### Cooling System

- **8 Heavy duty fans w/ Optimal Fan Speed Control**
- **8 Heavy duty fans w/ Optimal Fan Speed Control**
- **8 Heavy duty fans w/ Optimal Fan Speed Control**
- **8 Heavy duty fans w/ Optimal Fan Speed Control**

### System Memory

- **Up to 6TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB); 12x 16GB DDR4-2933 MHz included**

### Onboard Storage Controller

- **Broadcom® 3108 controller for 8 SAS3 ports**
- **Broadcom® 3108 controller for 8 SAS3 ports**
- **Intel® C621 SATA3 (6 Gbps) controller**

### System Memory (Max.)*

- **16 DIMM slots; Up to 4TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB); 12x 16GB DDR4-2933 MHz included**

### Expansion Slots

- **2 PCI-E 3.0 x16 (1x Full Height, 10.5" Length; 1x Full Height, 10" Length) 1 PCI-E 3.0 x8 (Low Profile) 1 PCI-E 3.0 x8 (Internal SAS3 integrated 3108)**
- **2 PCI-E 3.0 x16 (2 FH, 10.5")**

### Onboard RAID

- **2 SATA DOMs Support with Embedded Power Management**
- **2 SATA DOMs Support with Embedded Power Management**
- **2 SATA DOMs Support with Embedded Power Management**
- **2 SATA DOMs Support with Embedded Power Management**

### Chipset

- **Intel C621 Chipset**
- **Intel C621 Chipset**
- **Intel C621 Chipset**
- **Intel C621 Chipset**

### Management

- **IPMI2.0, KVM with dedicated LAN, SPM, SUM, SuperDoctor®, 5, Watchdog**
- **IPMI2.0, KVM with dedicated LAN, SPM, SUM, SuperDoctor®, 5, Watchdog**
- **IPMI2.0, KVM with dedicated LAN, SPM, SUM, SuperDoctor®, 5, Watchdog**
- **Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SUM; SuperDoctor® 5**

### Drive Bays

- **8x SATA/SAS3 Hot-swap 2.5" HDD bays (SAS3 3108) 2x NVME Hot-swap 2.5" HDD bays**
- **8x SATA/SAS3 Hot-swap 2.5" HDD bays (SAS3 3108) 2x NVME Hot-swap 2.5" HDD bays**
- **8x SATA/SAS3 Hot-swap 2.5" HDD bays (SAS3 3108) 2x NVME Hot-swap 2.5" HDD bays**
- **10 Hot-Swappable 2.5" drive bays: 6 NVMe ports (NVMe from CPU (4)) NVMe from CPU (4) NVMe from CPU (4) NVMe from CPU (4)**

### Peripheral Bays

- **N/A**
- **N/A**
- **N/A**
- **N/A**

### Power Supply

- **N/A**
- **N/A**
- **N/A**
- **N/A**

### Cooling System

- **8 heavy duty fans w/ Optimal Fan Speed Control**
- **8 heavy duty fans w/ Optimal Fan Speed Control**
- **8 heavy duty fans w/ Optimal Fan Speed Control**
- **8 Heavy Duty fans w/ Optimal Fan Speed Control, 1 Air Shroud**

### Form Factor

- **2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.**
- **For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.**
- **For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.**

### Connector

- **4x Gigabit Ethernet ports via AOC-UR-14G**
- **4x Gigabit Ethernet ports via AOC-UR-14G**

### Expansion

- **Air Shroud**
- **Air Shroud**

### Dimensions

- **432 x 43 x 706mm (17.2" x 1.7" x 27.8")**
- **437 x 43 x 724mm (17.2" x 1.7" x 28.5")**
- **437 x 43 x 724mm (17.2" x 1.7" x 27.8")**
- **432 x 43 x 706mm (17.2" x 1.7" x 27.8")**

### Model List

- **SYS-1029UX-TN10RT**
- **SYS-1029UX-LL3-C16**
- **SYS-1029UX-LL2-C16**
- **SYS-1029UX-LL1-C16**

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**Notes:**

- **††** For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
- **†** 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
### SuperServer® 1U X11 Ultra

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<tr>
<td><strong>Processor Support</strong></td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors</td>
<td>Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
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<tr>
<td><strong>Key Applications</strong></td>
<td>- Virtualization</td>
<td>Cloud Computing</td>
<td>High End Enterprise Server</td>
<td>- Virtualization</td>
<td>Cloud Computing</td>
<td>High End Enterprise Server</td>
<td>- Flexible LAN options</td>
<td>10x 2.5&quot; SAS3 (12Gb/s) drive bays</td>
<td>24 DIMM sockets</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
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<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X11DPU</td>
<td>2 SATA DOM support with embedded power</td>
<td>Platinum Level Power Supply</td>
<td>2 SATA DOM support with embedded power</td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
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<tr>
<td><strong>Expansion Slots</strong></td>
<td>2 PCI-E 3.0 x16 (FH, 10.5”L); 2 PCI-E 3.0 x8 (1 LP, 1 Internal LP)</td>
<td>2 PCI-E 3.0 x16 (FH, 10.5”L); 2 PCI-E 3.0 x8 (1 LP, 1 Internal LP)</td>
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<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C621 SATA controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; Intel® C621 SATA3 (6Gb/s) controller</td>
<td>Intel® C621 SATA3 (6Gb/s) controller</td>
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<tr>
<td><strong>Connectivity</strong></td>
<td>- TR4: 4 Gigabit Ethernet; 2 VGA ports (1 rear, 1 onboard) 5 USB 3.0 ports (2 rear, 2 front, 1 Type A); 1 Serial Port</td>
<td>- E1CR4: 4 Gigabit Ethernet; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
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<tr>
<td><strong>Drive Bays</strong></td>
<td>24 DIMM sockets; 2 SATA DOM support with embedded power</td>
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<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>Power Supply</strong></td>
<td>750W Redundant Platinum Level Power Supply</td>
<td>750W Redundant Platinum Level Power Supply</td>
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<tr>
<td><strong>Cooling System</strong></td>
<td>8 heavy duty fans w/ Optimal Fan Speed Control, 1 Air Shroud</td>
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<tr>
<td><strong>Form Factor</strong></td>
<td>1U Chassis; Enclosure: 437 x 43 x 707mm (17.2” x 1.7” x 27.8”); Gross Weight: 48lbs (21.77kg); Net Weight: 36.5lbs (16.56kg)</td>
<td>1U Chassis; Enclosure: 437 x 43 x 707mm (17.2” x 1.7” x 27.8”); Gross Weight: 48lbs (21.77kg); Net Weight: 36.5lbs (16.56kg)</td>
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*Please check with your Supermicro sales representative and website for compatibility and configuration details

2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only - Contact your Supermicro sales rep for more info.
### Model Comparison

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<td><strong>Processor Support</strong></td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
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</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Virtualization Cloud Computing High End Enterprise Server</td>
<td>• Virtualization Cloud Computing High End Enterprise Server</td>
<td>• Virtualization Cloud Computing High End Enterprise Server</td>
<td>• Virtualization Cloud Computing High End Enterprise Server</td>
<td>• Virtualization Cloud Computing High End Enterprise Server</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>12 Hot-Swap NVMe/SATA Drive Bays 24 DIMM sockets 3 PCI-E Expansion Slots Flexible Networking Options with Ultra Riser Card 12000W Redundant Power, Titanium Level (96% typical efficiency)</td>
<td>8 heavy duty fans w/ Optimal Fan Speed Control</td>
<td>1 Air Shroud</td>
<td>5; 1 PCI-E Add-on cards 240W CPU support Platinum Level Power Supply 2 SATA DOM support with embedded power</td>
<td>24 DIMM sockets 4 PCI-E Add-on cards 2 4.5&quot; drive bays 205W CPU support Platinum Level Power Supply 2 SATA DOM support with embedded power</td>
</tr>
<tr>
<td><strong>Serverboard Chipset</strong></td>
<td>Intel® C621 Chipset</td>
<td>Intel® C621 Chipset</td>
<td>Intel® C621 Chipset</td>
<td>Intel® C621 Chipset</td>
<td>Intel® C621 Chipset</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>32GB DDR4-2666 MHz</td>
<td>256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCMM™ (128/256/512GB) 1 PCIe-E 3.0 x16 (FH, 10.5’L); 1 PCl-E 3.0 x8 (LP), 1 Internal PCI-E 3.0 x16 (For SMC Storage Controllers)</td>
<td>Intel® Optane™ DCMM™ (128/256/512GB) 2 PCIe-E 3.0 x16 (FH, 10.5’L); 2 PCIe-E 3.0 x8 (LP, 1 Internal LP)</td>
<td>Intel® C621 SATA3 (6Gbps) controller</td>
<td>Intel® C621 SATA3 (6Gbps) controller</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>4 3.5&quot; drive bays</td>
<td>Internal PCI-E 3.0 x16 (For SMC Storage Controllers)</td>
<td>2 3.5&quot; drive bays</td>
<td>2 3.5&quot; drive bays</td>
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</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C621 SATA3 (6Gbps) controller</td>
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</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>Optional 2x25GBE (SFP28) or 2x10GBE (RI45) via Ultra Riser Card; 4 USB 3.0 ports (2 Rear, 1 Front, 1 Type A); 1 Serial Port</td>
<td>-TN4RT: 2 10GBase-T Ethernet ports; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td>-TR4T: 4 Gigabit Ethernet; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td>-TR4T: 4 Gigabit Ethernet; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td>Intel® C621 Chipset</td>
</tr>
<tr>
<td><strong>VGA/Audio Management</strong></td>
<td>1 VGA, Aspeed AST2500 Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSU; SuperDoctor* 5;</td>
<td>Aspeed AST2500 BMC Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSU; SuperDoctor* 5;</td>
<td>Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSU; SuperDoctor* 5;</td>
<td>Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSU; SuperDoctor* 5;</td>
<td>Intel® C621 Chipset</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>12 Hot-Swappable 2.5&quot; drive bays; 6 NVMe/SATA ports (NVMe from CPU1) and 6 NVMe/SATA ports (NVMe from CPU2); Optional SAS support via SAS storage controller</td>
<td>4 hot-swap 3.5&quot; drive support; 4 NVMe/SATA3 ports</td>
<td>4 hot-swap 3.5&quot; drive support</td>
<td>4 hot-swap 3.5&quot; drive support</td>
<td>Intel® C621 Chipset</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>Redundant 1200W Titanium Level Power Supply 8 Heavy Duty fans w/ Optimal Fan Speed Control, 1 Air Shroud</td>
<td>Platinum Level Power Supply 8 heavy duty fans w/ Optimal Fan Speed Control, 1 Air Shroud</td>
<td>Platinum Level Power Supply 8 heavy duty fans w/ Optimal Fan Speed Control, 1 Air Shroud</td>
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<td>Platinum Level Power Supply 8 heavy duty fans w/ Optimal Fan Speed Control, 1 Air Shroud</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>8 heavy duty fans w/ Optimal Fan Speed Control, 1 Air Shroud</td>
<td>1 Air Shroud</td>
<td>1 Air Shroud</td>
<td>1 Air Shroud</td>
<td>1 Air Shroud</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>1U Chassis; Enclosure: 432 x 43 x 739mm (17.2” x 1.7” x 29.1”)</td>
<td>1U Chassis; Enclosure: 437 x 43 x 737mm (17.2” x 1.7” x 29”)</td>
<td>1U Chassis; Enclosure: 437 x 43 x 737mm (17.2” x 1.7” x 29”)</td>
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*Please check with your Supermicro sales representative and website for compatibility and configuration details.

1. 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

2. For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
### Model Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-1029UZ-TN20R25M</th>
<th>SYS-2029UZ-TR4+</th>
<th>SYS-6029UZ-TR4+</th>
<th>SYS-2029UZ-TN24R4T</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor</strong></td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 3 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 3 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>2nd Generation Intel® Xeon® Scalable Processors (Cascade Lake-SP), Intel® Xeon® Scalable Processors (codenamed Cascade Lake Refresh).</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>Superior® X11DPU-Z+</td>
<td>Superior® X11DPU-Z+</td>
<td>Superior® X11DPU-Z+</td>
<td>Superior® X11DPU</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
</tr>
<tr>
<td><strong>System Memory (Max.*)</strong></td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane DCPMM™ (128/256/512GB).</td>
<td>Up to 6TB DDR4-2933 MHz; Up to 6TB 3DS ECC RDIMM, DDR4-2933 MHz, in 24 DIMM slots; Up to 6TB Intel® Optane™ DC Persistent Memory in memory mode (Cascade Lake only).</td>
<td>Up to 6TB DDR4-2933 MHz; Up to 6TB 3DS ECC RDIMM, DDR4-2933 MHz, in 24 DIMM slots; Up to 6TB Intel® Optane™ DC Persistent Memory in memory mode (Cascade Lake only).</td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane DCPMM™ (128/256/512GB).</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>Up to 2 PCI-E x3.0 (x8,FH,FLL); For 20 NVMe configuration, only 1 PCI-E x3.0 x8 is available for 18 NVMe configuration, 2 PCI-E x3.0 x8 will be available.</td>
<td>1 PCI-E x3.0 x16 (FH, 10.5”L); 5 PCI-E x8 (LP); 1 PCI-E x16 (FL); 1 PCI-E x16 (FH, 20.5”L).</td>
<td>1 PCI-E x3.0 x16 (FH, 10.5”L); 1 PCI-E x3.0 x8 (LP); 1 PCI-E x3.0 x8 (intern LP).</td>
<td></td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>4 GbE ports with Intel® i350 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td>4 GbE ports with Intel® i350 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
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</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>1 VGA, 1 Aspeed AST2500 BMC;</td>
<td>1 VGA, 1 Aspeed AST2500 BMC;</td>
<td>1 VGA, 1 Aspeed AST2500 BMC;</td>
<td>1 VGA, 1 Aspeed AST2500 BMC;</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SMM; SUM; SuperDoctor® 5; Watchdog;</td>
<td>Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SMM; SUM; SuperDoctor® 5;</td>
<td>Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SMM; SUM; SuperDoctor® 5;</td>
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</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>8 NVMe ports and 2 SAS/SATA3/NVMe Hybrid Ports from CPU1 and 10 NVMe ports from CPU2</td>
<td>24 Hot-swap, 2.5” Drive Bays; 10 SATA3 ports by default; Optional drive support: 20 SAS3 + 4 SAS3/NVMe; Optional 2 Rear Hot-swap, 2.5” Drive Bays.</td>
<td>24 Hot-swap, 2.5” Drive Bays; 10 SATA3 ports by default; Optional drive support: 8 SAS3 + 4 SAS3/NVMe; Optional 2 Rear Hot-swap, 2.5” Drive Bays.</td>
<td>20 Hot-Swap, 2.5” Drive Bays; 10 SATA3 ports by default; Optional drive support: 20 SAS3 + 4 SAS3/NVMe; Optional 2 Rear Hot-swap, 2.5” Drive Bays.</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>1600W Titanium Level Power Supply</td>
<td>1600W Redundant Power Supplies with PMBus</td>
<td>1600W Redundant Power Supplies with PMBus</td>
<td>1600W Redundant Power Supplies with PMBus</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>6 Heavy Duty fans w/ Optional Fan Speed Control, 2 Air-Shroud</td>
<td>4 Heavy duty 8cm PWM fans</td>
<td>4 Heavy duty 8cm PWM fans</td>
<td>4 Heavy duty 8cm PWM fans</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>2U Rackmount; Enclosure: 437 x 89 x 705mm (17.2” x 3.5” x 27.6”); Gross Weight: 86.5lbs (39.24kg)</td>
<td>2U Rackmount; Enclosure: 437 x 89 x 705mm (17.2” x 3.5” x 27.6”); Gross Weight: 86.5lbs (39.24kg)</td>
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<tr>
<td><strong>Key Applications</strong></td>
<td>Virtualization</td>
<td>Hyperconverge Storage</td>
<td>High End Enterprise Server</td>
<td>Virtualization</td>
<td>Hyperconverge Storage</td>
<td>High End Enterprise Server</td>
</tr>
<tr>
<td></td>
<td>Quad Gigabit Ethernet LAN</td>
<td>[nid:256]</td>
<td>with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM™ (128/256/512GB)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM™ (128/256/512GB)</td>
<td>Supports Intel® Optane® DCPMM™ (128/256/512GB)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>-E1CR4: 4 GbE ports with Intel® i350 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port -E1CR4T: 4 10GBase-T ports with Intel® XL710 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td>-E1CR4T: 2.5GBase-T ports with Mellanox® ConnectX®-4 Lx EN Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td></td>
<td>-TR4: 4 GbE ports with Intel® i350 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td>-TR4T: 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td></td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
<td></td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>-E1CR4: 4 GbE ports with Intel® i350 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port -E1CR4T: 4 10GBase-T ports with Intel® XL710 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td>-E1CR4T: 2.5GBase-T ports with Mellanox® ConnectX®-4 Lx EN Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td></td>
<td>-TR4: 4 GbE ports with Intel® i350 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td>-TR4T: 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
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<td><strong>VGA/Audio</strong></td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
<td></td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSM; SUM; SuperDoctor® 5; 24 Hot-swap 2.5&quot; Drive Bays; 24 SAS3 ports support via Expander and AOC; Optional drive support: 20 SAS3 + 4 SAS3/NVMe; Optional 2 Rear Hot-swap 2.5&quot; Drive Bays</td>
<td>Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSM; SUM; SuperDoctor® 5; 24 Hot-swap 2.5&quot; Drive Bays; 14 SATA3 ports by default; Optional drive support: 20 SAS3 + 4 SAS3/NVMe; Optional 2 Rear Hot-swap 2.5&quot; Drive Bays</td>
<td></td>
<td>Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSM; SUM; SuperDoctor® 5; 24 Hot-swap 2.5&quot; Drive Bays; 14 SATA3 ports by default; Optional drive support: 20 SAS3 + 4 SAS3/NVMe; Optional 2 Rear Hot-swap 2.5&quot; Drive Bays</td>
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<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td>N/A</td>
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<tr>
<td><strong>Power Supply</strong></td>
<td>1000W Redundant Power Supplies with PMBus</td>
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<th>SYS-6029U-E1CR4</th>
<th>SYS-6029U-E1CRT</th>
<th>SYS-6029U-E1CRTP</th>
<th>SYS-6029U-E1CR25M</th>
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<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
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</tr>
<tr>
<td>Key Applications</td>
<td>• Virtualization</td>
<td>• Virtualization</td>
<td>• Virtualization</td>
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</tr>
<tr>
<td></td>
<td>• High End Enterprise Server</td>
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<td>• High End Enterprise Server</td>
<td>• High End Enterprise Server</td>
<td>• High End Enterprise Server</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>20 Port NVMe port direct connect 24 DIMM sockets Redundant 1600W Titanium Level high-efficiency power supplies 2U 25G SFP28</td>
<td>One of the following storage Add-on cards required: AOC-S3108L-H8iR-16DD (SAS3 HW RAID), AOC-S3108L-L8i (SAS3 SW RAID), AOC-S3108L-L8e (SAS3 SW RAID); AOC-S3008L-L8e (SAS3 HW RAID); AOC-S3008L-L8i (SAS3 SW RAID), AOC-S3008L-L8e (SAS3 SW RAID); AOC-S3008L-L8i (SAS3 SW RAID).</td>
<td>One of the following storage Add-on cards required: AOC-S3108L-H8iR-16DD (SAS3 HW RAID), AOC-S3108L-L8i (SAS3 SW RAID), AOC-S3108L-L8e (SAS3 SW RAID); AOC-S3108L-L8i (SAS3 SW RAID), AOC-S3008L-L8e (SAS3 SW RAID), AOC-S3008L-L8i (SAS3 SW RAID).</td>
<td>One of the following storage Add-on cards required: AOC-S3108L-H8iR-16DD (SAS3 HW RAID), AOC-S3108L-L8i (SAS3 SW RAID), AOC-S3108L-L8e (SAS3 SW RAID); AOC-S3008L-L8e (SAS3 SW RAID), AOC-S3008L-L8i (SAS3 SW RAID).</td>
<td>One of the following storage Add-on cards required: AOC-S3108L-H8iR-16DD (SAS3 HW RAID), AOC-S3108L-L8i (SAS3 SW RAID), AOC-S3108L-L8e (SAS3 SW RAID); AOC-S3008L-L8e (SAS3 SW RAID), AOC-S3008L-L8i (SAS3 SW RAID).</td>
</tr>
<tr>
<td>Serverboard Chipset</td>
<td>SUPER® X11DPU-Z+ Intel® C621 chipset</td>
<td>SUPER® X11DPU</td>
<td>Intel® C621 Chipset</td>
<td>Intel® C621 Chipset</td>
<td>Intel® C621 Chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>24 DIMM slots; Up to 6T DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM1† (128/256/512GB)</td>
<td>One of the following memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM1† (128/256/512GB)</td>
<td>One of the following memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM1† (128/256/512GB)</td>
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</tr>
<tr>
<td>Expansion Slots</td>
<td>1 PCI-E 3.0 x8 (LP)</td>
<td>1 PCI-E 3.0 x16(FH, 10.5”L); 5 PCI-E 3.0 x8(FH, 10.5”L); 1 PCI-E 3.0 x8(LP); 1 PCI-E 3.0 x8(Internal LP)</td>
<td>2 PCI-E 3.0 x16(FH, 10.5”L); 4 PCI-E 3.0 x8(FH, 10.5”L); 1 PCI-E 3.0 x8(LP)</td>
<td>4 PCI-E 3.0 x16(FH, 10.5”L); 4 PCI-E 3.0 x8(LP)</td>
<td>4 PCI-E 3.0 x16(FH, 10.5”L); 4 PCI-E 3.0 x8(LP)</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2 25GbE SFP28 ports with Mellanox® ConnectX™-4 4x Lx EN Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td>4 10GbBase-T ports with Intel® X710 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td>4 10GbBase-T ports with Intel® X710 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td>4 10GbBase-T ports with Intel® X710 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
<td>4 10GbBase-T ports with Intel® X710 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</td>
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<tr>
<td>VGA/Audio</td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
</tr>
<tr>
<td>Management</td>
<td>Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSIM; SUM; SuperDoctor® 5;</td>
<td>Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSIM; SUM; SuperDoctor® 5; 12 Hot swap 3.5” Drive Bays; 12 SAS3 ports support via Expander and AOC; Optional drive support: 8 SAS3 + 4 SAS3/NVMe; Optional 2 Rear Hot swap 2.5” Drive Bays</td>
<td>Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSIM; SUM; SuperDoctor® 5; 12 Hot swap 3.5” Drive Bays; 12 SAS3 ports support via Expander and AOC; Optional drive support: 8 SAS3 + 4 SAS3/NVMe; Optional 2 Rear Hot swap 2.5” Drive Bays</td>
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<tr>
<td>Drive Bays</td>
<td>24 Hot swap 2.5” Drive Bays; 20 NVMe + 4 SAS3/SATA</td>
<td>Hot swap 2.5” Drive Bays</td>
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</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Supply</td>
<td>1600W Redundant Power Supplies with PMBus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooling System</td>
<td>4 Heavy duty 8cm PWM fans</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form Factor</td>
<td>(17.2” x 3.5” x 27.7”) Gross Weight 86.5lbs (39.24kg) Net Weight 51lbs (23.13kg)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details.

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.

2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
2U X11 Ultra
12x 3.5" Drive Bays

### MODEL

<table>
<thead>
<tr>
<th>2U X11 Ultra</th>
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</tr>
</thead>
<tbody>
<tr>
<td>SYS-6029U-TR4</td>
<td>SYS-6029U-TR4</td>
</tr>
<tr>
<td>SYS-6029U-TR-T</td>
<td>SYS-6029U-TR8T</td>
</tr>
<tr>
<td>SYS-6029U-TRTP</td>
<td>SYS-6029U-TR2M</td>
</tr>
</tbody>
</table>

#### Processor Support
- 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors
- Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 2UPI up to 10.4 GT/s.
- Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).

#### Key Applications
- Virtualization
- Hyperconverge Storage
- Cloud Computing
- High End Enterprise Server
- 8 PCI-E Add-on cards [nid:3716]
- Quad Gigabit Ethernet LAN [nid:6162]
- 12x 3.5" hot-swap drive bays
- Optional SAS3 and NVMe support
- 24 DIMM support
- 1000W Titanium Level Power Supply
- Flexible LAN Options

#### Outstanding Features
- 8 PCI-E Add-on cards [nid:3716]
- Quad Gigabit Ethernet LAN [nid:6162]
- 12x 3.5" hot-swap drive bays
- Optional SAS3 and NVMe support
- 24 DIMM support
- 1000W Titanium Level Power Supply
- Flexible LAN Options

#### Serverboard
- Super® X11DPU
- SUPER® X11DPU

#### Chipset
- Intel® C621 chipset
- Intel® C621 chipset

#### System Memory (Max.)*
- 24 DIMM slots; Up to 6T DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DC PMM (128/256/512GB)
- 24 DIMM slots; Up to 6T DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DC PMM (128/256/512GB)

#### Expansion Slots
- 1 PCI-E 3.0 x16(FH, 10.5"L); 5 PCI-E 3.0 x8(FH, 10.5"L); 1 PCI-E 3.0 x8(LP); 1 PCI-E 3.0 x8(Internal LP)
- 2 PCI-E 3.0 x16(FH, 10.5"L); 4 PCI-E 3.0 x8(FH, 10.5"L); 1 PCI-E 3.0 x8(LP)

#### Onboard Storage Controller
- Intel® C621 SATA3 (6Gb/s) controller
- Intel® C621 SATA3 (6Gb/s) controller

#### Connectivity
- 4 GbE ports with Intel® i350 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port
- 4 GbE ports with Intel® i350 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port

#### VGA/Audio
- Aspeed AST2500 BMC
- Aspeed AST2500 BMC

#### Management
- Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSM; SUM; SuperDoctor® 5
- Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSM; SUM; SuperDoctor® 5

#### Drive Bays
- 12 Hot-swap 3.5" Drive Bays; 12 SATA3 ports by default; Optional drive support: 8 SAS3 + 4 SAS3/NVMe
- 12 Hot-swap 3.5" Drive Bays; 12 SATA3 ports by default; Optional drive support: 8 SAS3 + 4 SAS3/NVMe

#### Peripheral Bays
- N/A
- N/A

#### Power Supply
- 1000W Redundant Power Supplies with PMBus
- 1000W Redundant Power Supplies with PMBus

#### Cooling System
- 4 Heavy duty 8cm PWM fans
- 4 Heavy duty 8cm PWM fans

#### Form Factor
- 437 x 89 x 723mm (17.2" x 3.5" x 28.46")
- 437 x 89 x 723mm (17.2" x 3.5" x 28.46")

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* Please check with your Supermicro sales representative and website for compatibility and configuration details

† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
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<tr>
<th>MODEL</th>
<th>SYS-6019P-WT</th>
<th>SYS-6019P-WTR</th>
<th>SYS-6019P-WT8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CUP TDP support 203W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
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</tr>
<tr>
<td>Key Applications</td>
<td>• Web Server FireWall Applications Corporate-WINS, DNS, Print, Login Gateway, provisioning servers Compact Network Appliance Cloud Computing</td>
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</tr>
<tr>
<td>Outstanding Features</td>
<td>• Supports 3 PCIe and 1 Mezzanine cards 1 NVMe M.2 Support Flexible I/O options Dedicated IPMI port 4x 3.5” SAS3/SATA3 drive bays Support 1 Slim DVD-ROM and 1 COM &amp; 2 USB3.0 ports module</td>
<td>• Supports 3 PCIe and 1 Mezzanine cards 1 NVMe M.2 Support Flexible I/O options Dedicated IPMI port 4x 3.5” SAS3/SATA3 drive bays Support 1 Slim DVD-ROM and 1 COM &amp; 2 USB3.0 ports module</td>
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<tr>
<td>Serverboard</td>
<td>SUPER® X11DDW-L</td>
<td>SUPER® X11DDW-L</td>
<td>SUPER® X11DDW-L</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
</tr>
<tr>
<td>System Memory (Max)*</td>
<td>12 DIMM slots; Up to 3TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane DCPMM™ (128/256/512GB)</td>
<td>12 DIMM slots; Up to 3TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane DCPMM™ (128/256/512GB)</td>
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</tr>
<tr>
<td>Expansion Slots</td>
<td>2 PCI-E 3.0 x16 (FHHL) slots, 1 PCI-E 3.0 x8 (LP) slot, 1 PCI-E 3.0 x16 Add-On-Module for SAS3 storage controller</td>
<td>2 PCI-E 3.0 x16 (FHHL) slots, 1 PCI-E 3.0 x8 (LP) slot, 1 PCI-E 3.0 x16 Add-On-Module for SAS3 storage controller</td>
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</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® C621 controller for 14 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C621 controller for 14 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C621 controller for 14 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Dual 1G LAN ports, 1 dedicated IPMI port, 4 rear USB 3.0 ports</td>
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<td>Dual 1G LAN ports, 1 dedicated IPMI port, 4 rear USB 3.0 ports</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Onboard VGA</td>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPFM, SSM, SUM, SuperDoctor® 5, Watchdog</td>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPFM, SSM, SUM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>Management</td>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPFM, SSM, SUM, SuperDoctor® 5, Watchdog</td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>4x 3.5” hot-swap SATA3/SSD drive bays</td>
<td>4x 3.5” hot-swap SATA3/SSD drive bays</td>
<td>8x 3.5” fixed SATA drive bays, 2x 2.5” fixed SATA drive bays</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>Optional 1x slim DVD-ROM drive bay</td>
<td>Optional 1x slim DVD-ROM drive bay</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>600W high-efficiency (Platinum Level) multiple output power supply w/pmbus</td>
<td>Redundant 700/750W High-efficiency (Platinum Level) power supply</td>
<td>650w high-efficiency (Platinum Level) multi-output power supply</td>
</tr>
<tr>
<td>Cooling System</td>
<td>4x 40x56mm counter-rotation PWM fan</td>
<td>4x 40x56mm counter-rotation PWM fan</td>
<td>6x 40x56mm counter-rotation PWM fan</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U 17.2” (437mm) x 1.7” (43mm) x 25.6” (650mm); Enclosure: 437 x 43 x 650mm (17.2” x 1.7” x 25.6”); Package: 597 x 216 x 856mm (23.5” x 8.5” x 33.7”); Gross Weight: 36lbs (16.33kg); Net Weight: 22lbs (9.98kg)</td>
<td>1U 17.2” (437mm) x 1.7” (43mm) x 25.6” (650mm); Enclosure: 437 x 43 x 650mm (17.2” x 1.7” x 25.6”); Package: 597 x 216 x 856mm (23.5” x 8.5” x 33.7”); Gross Weight: 39lbs (17.69kg); Net Weight: 25.3lbs (11.57kg)</td>
<td>1U Rackmount 437 x 43 x 613mm (17.2” x 1.7” x 23.2”); Enclosure: 437 x 43 x 613mm (17.2” x 1.7” x 23.2”); Package: 597 x 198 x 1019mm (23.5” x 7.8” x 40.1”); Gross Weight: 62lbs (28.12kg); Net Weight: 38lbs (17.24kg)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-1029P-WT</th>
<th>SYS-1029P-WTR</th>
<th>SYS-1029P-WTRT</th>
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<tr>
<td><strong>Processor Support</strong></td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
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<td><strong>Key Applications</strong></td>
<td>• Web Server, FireWall Applications, Corporate - WINS, DNS, Print, Login Gateway, provisioning servers, Compact Network Appliance, Cloud Computing</td>
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<td><strong>Outstanding Features</strong></td>
<td>• 3 PCIe and 1 Mezzanine cards support 205W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 205W, 2 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
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<td>SUPER® X11DDW-NT</td>
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<td><strong>Chipset</strong></td>
<td>Intel® C621 chipset</td>
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<td>Intel® C622 chipset</td>
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<td>*<em>System Memory (Max.)</em></td>
<td>12 DIMM slots; Up to 3TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
<td>12 DIMM slots; Up to 3TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
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</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>2 PCI-E 3.0 x16 (FHHL) slots, 1 PCI-E 3.0 x16 Add-On-Module for SAS3 storage controller</td>
<td>2 PCI-E 3.0 x16 (FHHL) slots, 1 PCI-E 3.0 x16 Add-On-Module for SAS3 storage controller</td>
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</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C621 controller for 14 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C621 controller for 14 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C622 controller for 14 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>Dual 1G LAN ports, 1 dedicated IPMI port, 4 rear USB 3.0 ports</td>
<td>Dual 1G LAN ports, 1 dedicated IPMI port, 4 rear USB 3.0 ports</td>
<td>Dual 10GBaseT LAN ports, 1 dedicated IPMI port, 4 rear USB 3.0 ports, 2 Front USB 3.0 ports</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>Onboard VGA</td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Intel® Node Manager; IPMI2.0, KVM with dedicated LAN; SPM, SSM; SUM, SuperDoctor* 5, Watchdog.</td>
<td>Intel® Node Manager; IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor* 5, Watchdog.</td>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor* 5, Watchdog.</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>8x 2.5&quot; hot-swap SATA3/SAS3 drive bays</td>
<td>8x 2.5&quot; hot-swap SATA3/SAS3 drive bays</td>
<td>10x 2.5&quot; hot-swap SATA3/SAS3 drive bays, 2x 2.5&quot; hot-swap NVMe/SAS3/SAS3 hybrid drive bays</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>Optional 1x slim DVD-ROM drive bay</td>
<td>Optional 1x slim DVD-ROM drive bay</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>600W high-efficiency (Platinum Level) multiple output power supply w/pmbus</td>
<td>Redundant 700/750W high-efficiency (Platinum Level) power supply</td>
<td>Redundant 700/750W high-efficiency (Platinum Level) power supply</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>4x 40x56mm counter-rotation PWM fans</td>
<td>4x 40x56mm counter-rotation PWM fans</td>
<td>4x 40x56mm counter-rotation PWM fans</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>1U 17.2&quot; (437mm) x 1.7&quot; (43mm) x 23.5&quot; (597mm); Enclosure: 437 x 43 x 597mm (17.2&quot; x 1.7&quot; x 23.5&quot;)</td>
<td>1U 17.2&quot; (437mm) x 1.7&quot; (43mm) x 23.5&quot; (597mm); Enclosure: 437 x 43 x 597mm (17.2&quot; x 1.7&quot; x 23.5&quot;)</td>
<td>1U 17.2&quot; (437mm) x 1.7&quot; (43mm) x 23.5&quot; (597mm); Enclosure: 437 x 43 x 597mm (17.2&quot; x 1.7&quot; x 23.5&quot;)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details.
† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh) only. Contact your Supermicro sales rep for more info.
### SuperServer® X11WIO

#### Key Features

**X11 WIO**
- **7 PCI-E 3.0**
- **Dual 10GBaseT LAN**

#### Technical Specifications

**Processor Support**
- 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.
- Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 2 UPI up to 10.4 GT/s.
- Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).

**Key Applications**
- Web Server
- FireWall Applications
- Corporate - WINS, DNS, Print, Login
- Gateway, provisioning servers
- Compact Network Appliance
- Cloud Computing

**Outstanding Features**
- Supports 6 PCIe and 1 Mezzanine cards
- 1 NVMe M.2 Support
- Supports 1x Slim DVD-ROM and 1 COM & 2 USB3.0 ports module
- 8x 3.5” SAS3/SATA3 drive bays
- Dedicated IPMI port

**System Memory**
- 12 DIMM slots; Up to 3TB DDR4-2933 MHz† with 256GB memory modules;
  - Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM;
  - Supports Intel® Optane™ DCPMM†† (128/256/512GB)

**Expansion Slots**
- 4 PCI-E 3.0 x8(FHHL)slots, 2 PCI-E 3.0 x8(LP)slot, 1 PCI-E 3.0 x16 Add-On-Module for SAS3 storage controller

**Onboard Storage Controller**
- Intel® C621 controller for 14 SATA3 (6 Gbps) ports; RAID 0,1,5,10;

**Connectivity**
- Dual 1G LAN ports, 1 dedicated IPMI port, 4 rear USB 3.0 ports

**Serverboard**
- SUPER® X11DDW-L
- 2U 17.2” (437mm) x 3.5” (89mm) x 25.5” (647mm)
- Enclosure: 437 x 89 x 648mm
- Gross Weight: 62lbs (28.12kg)
- Net Weight: 35lbs (15.88kg)

**Chipset**
- Intel® C621 chipset

**Management**
- Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog

**Drive Bays**
- 8x 3.5” hot-swap SATA3/SAS3 drive bays
- 12x 3.5” hot-swap SATA3/SAS3 drive bays (4x NVMe/SAS3/SATA3 hybrid drive bays)

**Peripheral Bays**
- 1x optional slim DVD-ROM drive bay

**Power Supply**
- Redundant 800/1000W high-efficiency (Titanium Level) power supply

**Cooling System**
- 3x 80mm heavy duty fans with PWM fan speed control

**Form Factor**
- 2U 17.2” (437mm) x 3.5” (89mm) x 25.5” (647mm); Enclosure: 437 x 89 x 648mm (17.2” x 3.5” x 25.5”)
- Gross Weight: 62lbs (28.12kg)
- Net Weight: 35lbs (15.88kg)

### SuperServer® X11WIO T

#### Key Features

**X11 WIO**
- **7 PCI-E 3.0**
- **Dual 10GBaseT LAN**

#### Technical Specifications

**Processor Support**
- 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.
- Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 2 UPI up to 10.4 GT/s.
- Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).

**Key Applications**
- Web Server
- FireWall Applications
- Corporate - WINS, DNS, Print, Login
- Gateway, provisioning servers
- Compact Network Appliance
- Cloud Computing

**Outstanding Features**
- Supports 5 PCIe and 1 Mezzanine cards
- 1 NVMe M.2 Support
- Dual 10GBaseT LAN Ports
- Redundant 1200W Titanium Level Power Supply
- Dedicated IPMI port
- Optional 4x 2.5” NVMe SSD

**System Memory**
- 12 DIMM slots; Up to 3TB DDR4-2933 MHz† with 256GB memory modules;
  - Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM;
  - Supports Intel® Optane™ DCPMM†† (128/256/512GB)

**Expansion Slots**
- 1 PCI-E 3.0 x16(FHHL)slot, 4 PCI-E 3.0 x8(2 FHHL, 2 LP)slots, 1 PCI-E 3.0 x16 Add-On-Module for SAS3 storage controller

**Onboard Storage Controller**
- Intel® C621 controller for 14 SATA3 (6 Gbps) ports; RAID 0,1,5,10;

**Connectivity**
- Dual 10GBaseT LAN ports, 1 dedicated IPMI port, 4 rear USB3.0 ports

**Serverboard**
- SUPER® X11DDW-NT
- 2U 17.2” (437mm) x 3.5” (89mm) x 25.5” (647mm)
- Enclosure: 437 x 89 x 648mm (17.2” x 3.5” x 25.5”)
- Gross Weight: 66lbs (29.94kg)
- Net Weight: 36lbs (16.33kg)

**Chipset**
- Intel® C622 chipset

**Management**
- Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog

**Drive Bays**
- 12x 3.5” SAS3/SATA3 drive bays (4x NVMe/SAS3/SATA3 hybrid drive bays)

**Peripheral Bays**
- N/A

**Power Supply**
- Redundant 1200W high-efficiency (Titanium Level) power supply

**Cooling System**
- 3x 80mm heavy duty fans with PWM fan speed control

**Form Factor**
- 2U 17.2” (437mm) x 3.5” (89mm) x 25.5” (647mm); Enclosure: 437 x 89 x 648mm (17.2” x 3.5” x 25.5”)
- Gross Weight: 66lbs (29.94kg)
- Net Weight: 36lbs (16.33kg)

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* Please check with your Supermicro sales representative and website for compatibility and configuration details

† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
### Model Comparison

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-1028U-E1CR4+</th>
<th>SYS-1028U-E1CRTP+</th>
<th>SYS-1028U-TR4+</th>
<th>SYS-1028U-TRT+</th>
<th>SYS-1028U-TR4T+</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Dual Intel® Xeon® Processor E5-2600 v4 / v3 product family with QPI up to 9.6 GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4 / v3 product family with QPI up to 9.6 GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4 / v3 product family with QPI up to 9.6 GT/s</td>
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<td>Dual Intel® Xeon® Processor E5-2600 v4 / v3 product family with QPI up to 9.6 GT/s</td>
</tr>
</tbody>
</table>
| **Key Applications** | • Virtualization  
  Cloud Computing  
  High End Enterprise Server | • Virtualization  
  Cloud Computing  
  High End Enterprise Server | • Virtualization  
  Cloud Computing  
  High End Enterprise Server | • Virtualization  
  Cloud Computing  
  High End Enterprise Server | • Virtualization  
  Cloud Computing  
  High End Enterprise Server |
| **Outstanding Features** | • Expander Backplane  
  Flexible LAN options  
  24 DIMM sockets  
  4 PCI-E Add-on cards  
  10x 2.5” SAS/SATA drive bays  
  160W CPU support  
  Platinum Level Power Supply  
  2 SATA DOM support with embedded power | • Expander Backplane  
  2 port 10G SFP+ and 2 port 1GBase-T connectivity  
  24 DIMM sockets  
  4 PCI-E Add-on cards  
  10x 2.5” SAS/SATA drive bays  
  160W CPU support  
  Platinum Level Power Supply  
  2 SATA DOM support with embedded power | • Expander Backplane  
  Flexible LAN options  
  24 DIMM sockets  
  4 PCI-E Add-on cards  
  10x 2.5” SAS/SATA drive bays  
  160W CPU support  
  Platinum Level Power Supply  
  2 SATA DOM support with embedded power | • Expander Backplane  
  Flexible LAN options  
  24 DIMM sockets  
  4 PCI-E Add-on cards  
  10x 2.5” SAS/SATA drive bays  
  160W CPU support  
  Platinum Level Power Supply  
  2 SATA DOM support with embedded power | • Flexible LAN options  
  24 DIMM sockets  
  4 PCI-E Add-on cards  
  10x 2.5” SAS/SATA drive bays  
  160W CPU support  
  Platinum Level Power Supply  
  2 SATA DOM support with embedded power |
| **Serverboard**      | SUPER® X10DRU-i+  | SUPER® X10DRU-i+  | SUPER® X10DRU-i+  | SUPER® X10DRU-i+  | SUPER® X10DRU-i+  |
| **Chipset**          | Intel® C612 chipset | Intel® C612 chipset | Intel® C612 chipset | Intel® C612 chipset | Intel® C612 chipset |
| **System Memory (Max.)*** | Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400 in 24 DIMM slots | Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400 in 24 DIMM slots | Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400 in 24 DIMM slots | Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400 in 24 DIMM slots | Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400 in 24 DIMM slots |
| **Expansion Slots**  | 2 PCI-E 3.0 x16(FH, 10.5”L); 2 PCI-E 3.0 x8(1 LP, 1 Internal LP) | 2 PCI-E 3.0 x16(FH, 10.5”L); 2 PCI-E 3.0 x8(1 LP, 1 Internal LP) | 2 PCI-E 3.0 x16(FH, 10.5”L); 2 PCI-E 3.0 x8(1 LP, 1 Internal LP) | 2 PCI-E 3.0 x16(FH, 10.5”L); 2 PCI-E 3.0 x8(1 LP, 1 Internal LP) | 2 PCI-E 3.0 x16(FH, 10.5”L); 2 PCI-E 3.0 x8(1 LP, 1 Internal LP) |
| **Onboard Storage Controller** | One of the following storage Add-on cards required: AOC-S3108L-H8iR-16DD (SAS3 HW RAID), AOC-S3008L-L8i (SAS3 SW RAID), AOC-S3008L-L8e (SAS3 HBA) | One of the following storage Add-on cards required: AOC-S3108L-H8iR-16DD (SAS3 HW RAID), AOC-S3008L-L8i (SAS3 SW RAID), AOC-S3008L-L8e (SAS3 HBA) | One of the following storage Add-on cards required: AOC-S3108L-H8iR-16DD (SAS3 HW RAID), AOC-S3008L-L8i (SAS3 SW RAID), AOC-S3008L-L8e (SAS3 HBA) | One of the following storage Add-on cards required: AOC-S3108L-H8iR-16DD (SAS3 HW RAID), AOC-S3008L-L8i (SAS3 SW RAID), AOC-S3008L-L8e (SAS3 HBA) | One of the following storage Add-on cards required: AOC-S3108L-H8iR-16DD (SAS3 HW RAID), AOC-S3008L-L8i (SAS3 SW RAID), AOC-S3008L-L8e (SAS3 HBA) |
| **Connectivity**     | 4 Gigabit Ethernet; 5 USB 3.0 ports (2 rear, 2 front, 1 Type A); 1 Serial Port | 2 10G SFP+; 2 Gigabit Ethernet; 5 USB 3.0 ports (2 rear, 2 front, 1 Type A); 1 Serial Port | 4 Gigabit Ethernet; 5 USB 3.0 ports (2 rear, 2 front, 1 Type A); 1 Serial Port | 2 10G SFP+; 2 Gigabit Ethernet; 5 USB 3.0 ports (2 rear, 2 front, 1 Type A); 1 Serial Port | 4 Gigabit Ethernet; 5 USB 3.0 ports (2 rear, 2 front, 1 Type A); 1 Serial Port |
| **VGA/Audio**        | Aspeed AST2400 BMC | Aspeed AST2400 BMC | Aspeed AST2400 BMC | Aspeed AST2400 BMC | Aspeed AST2400 BMC |
| **Management**       | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog |
| **Drive Bays**       | 10 hot-swap 2.5” drive support via Expander | 10 hot-swap 2.5” drive support via Expander | 10 hot-swap 2.5” drive support | 10 hot-swap 2.5” drive support | 10 hot-swap 2.5” drive support |
| **Peripheral Bays**  | N/A | N/A | N/A | N/A | N/A |
| **Power Supply**     | Redundant 750W Platinum Level (94%+) Power Supplies with PMBus | Redundant 750W Platinum Level (94%+) Power Supplies with PMBus | Redundant 750W Platinum Level (94%+) Power Supplies with PMBus | Redundant 750W Platinum Level (94%+) Power Supplies with PMBus | Redundant 750W Platinum Level (94%+) Power Supplies with PMBus |
| **Cooling System**   | 5 heavy duty fans w/ Optimal Fan Speed Control; Optional 3 additional fans, 1 Air Shroud | 6 heavy duty fans w/ Optimal Fan Speed Control; Optional 2 additional fans, 1 Air Shroud | 6 heavy duty fans w/ Optimal Fan Speed Control; Optional 2 additional fans, 1 Air Shroud | 6 heavy duty fans w/ Optimal Fan Speed Control; Optional 2 additional fans, 1 Air Shroud | 4 heavy duty fans w/ Optimal Fan Speed Control; Optional 4 additional fans, 1 Air Shroud |
| **Form Factor**      | 1U Chassis; Enclosure: 437 x 43 x 707mm (17.2” x 1.7” x 27.82”)  
  Gross Weight: 41lbs (18.6kg)  
  Net Weight: 26lbs (11.79kg) | 1U Chassis; Enclosure: 437 x 43 x 707mm (17.2” x 1.7” x 27.82”)  
  Gross Weight: 41lbs (18.6kg)  
  Net Weight: 26lbs (11.79kg) | 1U Chassis; Enclosure: 437 x 43 x 707mm (17.2” x 1.7” x 27.82”)  
  Gross Weight: 41lbs (18.6kg)  
  Net Weight: 26lbs (11.79kg) | 1U Chassis; Enclosure: 437 x 43 x 724mm (17.2” x 1.7” x 28.5”)  
  Gross Weight: 48lbs (21.77kg)  
  Net Weight: 36.5lbs (16.56kg) | 1U Chassis; Enclosure: 437 x 43 x 724mm (17.2” x 1.7” x 28.5”)  
  Gross Weight: 48lbs (21.77kg)  
  Net Weight: 36.5lbs (16.56kg) |

*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
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<thead>
<tr>
<th>MODEL</th>
<th>SYS-1028U-TN10RT+</th>
<th>SYS-1028U-TNRT+</th>
<th>SYS-1028U-TNRT+ SYS-1028U-TNRT4T+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4 / v3 product family with QPI up to 9.6 GT/s</td>
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</tr>
<tr>
<td>Key Applications</td>
<td>• Virtualization Cloud Computing High End Enterprise Server</td>
<td>• Virtualization Cloud Computing High End Enterprise Server</td>
<td>• Virtualization Cloud Computing High End Enterprise Server</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10DRU-i+</td>
<td>SUPER® X10DRU-i+</td>
<td>SUPER® X10DRU-i+</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
</tr>
<tr>
<td>System Memory (Max)*</td>
<td>Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400 in 24 DIMM slots</td>
<td>Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400 in 24 DIMM slots</td>
<td>Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400 in 24 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>3 PCI-E 3.0 x8(2 FH, 10.5”L, LP)</td>
<td>2 PCI-E 3.0 x16(FH, 10.5”L); 2 PCI-E 3.0 x8(1 LP, 1 Internal LP)</td>
<td>2 PCI-E 3.0 x16(FH, 10.5”L); 2 PCI-E 3.0 x8(1 LP, 1 Internal LP)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® C612 controller with 10 SATA3 (6 Gbps) Ports; RAID 0,1,5,10;</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2 10Gbase-T Ethernet 5 USB 3.0 ports (2 Rear, 2 Front, 1 Type A) 1 Serial Port</td>
<td>2 10G SFP+ Ethernet; 5 USB 3.0 ports (2 rear, 2 front, 1 Type A); 1 Serial Port</td>
<td>-TNRT+: 2 10Gbase-T Ethernet; 5 USB 3.0 ports (2 rear, 2 front, 1 Type A); 1 Serial Port -TNRT4T+: 4 10Gbase-T Ethernet; 5 USB 3.0 ports (2 rear, 2 front, 1 Type A); 1 Serial Port</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
</tr>
<tr>
<td>Management</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>10 Hot-Swappable 2.5” drive bays: 6 NVMe ports (NVMe from CPU1) 4 NVMe/SATA3 Hybrid Ports (NVMe from CPU2)</td>
<td>10 hot-swap 2.5” drive support: Default 8 SATA3 ports + 2 NVMe/SATA3 hybrid ports; Optional 8 SAS3 ports via AOC</td>
<td>2 PCI-E 3.0 x16(FH, 10.5”L); 2 PCI-E 3.0 x8(1 LP, 1 Internal LP)</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 1000W Titanium Level (96%+) Power Supplies with PMBus</td>
<td>Redundant 750W Platinum Level (94%+) Power Supplies with PMBus</td>
<td>Redundant 750W Platinum Level (94%+) Power Supplies with PMBus</td>
</tr>
<tr>
<td>Cooling System</td>
<td>8 Heavy Duty fans w/ Optimal Fan Speed Control, 1 Air Shroud</td>
<td>5 heavy duty fans w/ Optimal Fan Speed Control; Optional 3 additional fans, 1 Air Shroud</td>
<td>5 heavy duty fans w/ Optimal Fan Speed Control; Optional 3 additional fans, 1 Air Shroud</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U Chassis; Enclosure: 432 x 43 x 706mm (17.2&quot; x 1.7&quot; x 27.8&quot;) Gross Weight: 48lbs (21.77kg) Net Weight: 36.5lbs (16.56kg)</td>
<td>1U Chassis; Enclosure: 432 x 43 x 706mm (17.2&quot; x 1.7&quot; x 27.8&quot;) Gross Weight: 48lbs (21.77kg) Net Weight: 36.5lbs (16.56kg)</td>
<td>1U Chassis; Enclosure: 437 x 43 x 724mm (17.2” x 1.7” x 28.5”) Gross Weight: 48lbs (21.77kg) Net Weight: 36.5lbs (16.56kg)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
**ULLTRA**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6018U-TR4+</th>
<th>SYS-6018U-TR4T+</th>
<th>SYS-2028U-E1CNRT+</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Dual Intel® Xeon® Processor E5-2600 v4 / v3 product family with QPI up to 9.6 GT/s</td>
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<td>Dual Intel® Xeon® Processor E5-2600 v4 / v3 product family with QPI up to 9.6 GT/s</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Virtualization Cloud Computing High End Enterprise Server</td>
<td>• Virtualization Cloud Computing High End Enterprise Server</td>
<td>• Virtualization Cloud Computing High End Enterprise Server Hyperconverge Storage Database Processing &amp; Storage</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• Flexible LAN options 24 DIMM sockets 4 PCI-E Add-on cards 4 3.5” drive bays 160W CPU support Platinum Level Power Supply 2 SATA DOM support with embedded power</td>
<td>• Flexible LAN options 24 DIMM sockets 4 PCI-E Add-on cards 4 3.5” drive bays 160W CPU support Platinum Level Power Supply 2 SATA DOM support with embedded power</td>
<td>• 24 DIMM sockets 24x 2.5” hot-swap drive bays 4-port NVMe SSD Support 160W CPU support Titanium Level Power Supply 2 SATA DOM support with embedded power</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X10DRU-i+</td>
<td>SUPER® X10DRU-i+</td>
<td>SUPER® X10DRU-i+</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400 in 24 DIMM slots</td>
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<td>Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400 in 24 DIMM slots</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>2 PCI-E 3.0 x16(FH, 10.5&quot;L); 2 PCI-E 3.0 x8(1 LP, 1 Internal LP)</td>
<td>2 PCI-E 3.0 x16(FH, 10.5&quot;L); 2 PCI-E 3.0 x8(1 LP, 1 Internal LP)</td>
<td>7 PCI-E 3.0 x8(5 FH, 10.5&quot;L, 1 LP, 1 Internal LP)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C612 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C612 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>One of the following storage Add-on cards required: AOC-S3108L-H8iR (SAS3 HW RAID), AOC-S3008L-L8i (SAS3 SW RAID), AOC-S3008L-L8e (SAS3 HBA)</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>-TR4+: 4 Gigabit Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port</td>
<td>-TR4T+: 4 10GBase-T Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port</td>
<td>-E1CNRT+: 2 10GbE-T Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SMM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SMM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
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<tr>
<td><strong>Drive Bays</strong></td>
<td>4 hot-swap 3.5” drive support</td>
<td>4 hot-swap 3.5” drive support</td>
<td>24 Hot-Swap 2.5” Drive Support with Expander; (including for 4 NVMe 2.5” drive support)</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>Power Supply</strong></td>
<td>Redundant 750W Platinum Level (94%+) Power Supplies with PMBus</td>
<td>Redundant 750W Platinum Level (94%+) Power Supplies with PMBus</td>
<td>Redundant 1000W Titanium Level (96%+) Power Supplies with PMBus</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>4 heavy duty fans w/ Optimal Fan Speed Control; Optional 4 additional fans, 1 Air Shroud</td>
<td>4 heavy duty fans w/ Optimal Fan Speed Control; Optional 4 additional fans, 1 Air Shroud</td>
<td>4 heavy duty fans w/ Optimal Fan Speed Control; 1 Air Shroud</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>1U Chassis; Enclosure: 437 x 43 x 754mm (17.2” x 1.7” x 29.7”) Gross Weight: 41lbs (18.6kg) Net Weight: 26lbs (11.79kg)</td>
<td>1U Chassis; Enclosure: 437 x 43 x 754mm (17.2” x 1.7” x 29.7”) Gross Weight: 41lbs (18.6kg) Net Weight: 26lbs (11.79kg)</td>
<td>2U Rackmount Server; Enclosure: 437 x 89 x 705mm (17.2” x 3.5” x 27.7”) Gross Weight: 72lbs (32.66kg) Net Weight: 36lbs (16.33kg)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
### MODEL

| Processor Support | Dual Intel® Xeon® Processor ES-2600 v4/v3 product family with QPI up to 9.6 GT/s |
| Key Applications | • Virtualization  
High End Enterprise Server |
| Outstanding Features | • 24 DIMM sockets  
24x2.5" hot-swap drive bays  
4-port NVMe SSD Support  
160W CPU support  
Titanium Level Power Supply  
2 SATA DOM support with embedded power |
| Serverboard | SUPER® X10DRU-i+ |
| Chipset | Intel® C612 chipset |
| System Memory (Max.) | Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400 in 24 DIMM slots |
| Expansion Slots | -TNRT+: 7 PCI-E 3.0 x8(5 FH, 10.5"L, 1 LP, 1 Internal LP) |
| Onboard Storage Controller | Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 |
| Connectivity | -TNRT+: 2 10Gbase-T Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port |
| VGA/Audio | Aspeed AST2400 BMC |
| Management | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog |
| Drive Bays | 24 hot-swap 2.5" drive support; 8 SATA3 + 4 NVMe; Optional 24 SAS3 drive support via AOCs |
| Peripheral Bays | N/A |
| Power Supply | Redundant 1000W Titanium Level (96%+) Power Supplies with PMBus |
| Cooling System | 4 heavy duty fans |
| Form Factor | 2U Chassis; Enclosure: 437 x 89 x 705mm (17.2" x 3.5" x 27.76")  
Gross Weight: 72lbs (32.66kg)  
Net Weight: 36lbs (16.33kg) |
| **SYS-2028U-TNRT+** | **SYS-2028U-TN4R4T+** |
| Processor Support | Dual Intel® Xeon® Processors ES-2600 v4/v3 with QPI up to 9.6GT/s |
| Key Applications | • Virtualization  
High End Enterprise Server |
| Outstanding Features | • 24 DIMM sockets  
145W CPU support  
3 PCI-E Add-on cards  
4 x 10G BaseT  
Redundant 1600W Titanium Level high-efficiency power supplies  
2 SATA DOM support with embedded power |
| Serverboard | SUPER® X10DRU-i+ |
| Chipset | Intel® C612 chipset |
| System Memory (Max.) | Up to 3TB ECC RDIMM/LRDIMM; DDR4 up to 2400MHz, in 24 DIMM slots |
| Expansion Slots | -TNR4T+: 6 PCI-E 3.0 x8(4 FH, 10.5"L, 1 LP, 1 Internal LP)  
2 PCI-E 3.0 x16(2 FH, 10.5"L)  
1 PCI-E 3.0 x8(1 LP, 6.6"L) |
| Onboard Storage Controller | Intel® C612 controller with 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 |
| Connectivity | 4 10Gbase-T Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port |
| VGA/Audio | 1 VGA, 1 Aspeed AST2400 BMC |
| Management | Intel® Node Manager; IPMI2.0: NMI; SMCBU and SMM; SuperDoctor® 5; Watchdog |
| Drive Bays | 24 Hot-swap 2.5" NVMe Drive Bays; Optional Drive Support: 20 NVMe + 4 NVMe/SAS3; 2x 2.5" Rear Hot-swap Drive Bays (default SATA) |
| Peripheral Bays | N/A |
| Power Supply | Redundant 1600W Titanium Level Power Supplies |
| Cooling System | 4 heavy duty fans |
| Form Factor | 2U Chassis; Enclosure: 89 x 437 x 705mm (3.5" x 17.2" x 27.76")  
Gross Weight: 72lbs (32.66kg)  
Net Weight: 36lbs (16.33kg) |

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
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<th>SYS-2028U-TR4+</th>
<th>SYS-2028U-TRT+</th>
<th>SYS-2028U-TRTP+</th>
<th>SYS-6028U-TNRT+</th>
<th>SYS-6028U-TNR4T+</th>
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<td><strong>Key Applications</strong></td>
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<td>• Cloud Computing</td>
<td>• High End Enterprise Server</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• 8 PCI-E Add-on cards [nid:3716] 24 DIMM sockets SAS3 and SATA3 Support 160W CPU support Titanium Level Power Supply 2 SATA DOM support with embedded power Flexible LAN Options</td>
<td>• 7 PCI-E Add-on cards [nid:12248] 24 DIMM sockets SAS3 and SATA3 Support 160W CPU support Titanium Level Power Supply 2 SATA DOM support with embedded power Flexible LAN Options</td>
<td>• Flexible LAN options 24 DIMM sockets 12x 3.5” hot-swap drive bays 4-port NVMe SSD Support 160W CPU support Titanium Level Power Supply 2 SATA DOM support with embedded power</td>
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<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X10DRU-i+</td>
<td></td>
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<tr>
<td><strong>Chipset</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>1 PCI-E 3.0 x16(FH, 10.5”L); 7 PCI-E 3.0 x8(5 FH, 10.5”L, 1 LP, 1 Internal LP)</td>
<td>1 PCI-E 3.0 x16(FH, 10.5”L); 6 PCI-E 3.0 x8(4 FH, 10.5”L, 1 LP, 1 Internal LP)</td>
<td></td>
<td>4 10Gbase-T Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port</td>
<td></td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; Optional 24 SAS3 drive support via AOCs</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; Optional 24 SAS3 drive support via AOCs</td>
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</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>-TR4+: 4 Gigabit Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port -TRRT+: 2 10Gbase-T Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port -TRTP+: 2 10G SFP+ Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port</td>
<td>4 10Gbase-T Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port</td>
<td>-TNRT+: 2 10Gbase-T Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port -TNRT4+: 4 10Gbase-T Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port</td>
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<td><strong>VGA/Audio</strong></td>
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<td>Aspeed AST2400 BMC</td>
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<td><strong>Management</strong></td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SMM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SMM, SuperDoctor® 5, Watchdog</td>
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<td></td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>24 hot-swap 2.5” drive support</td>
<td>24 hot-swap 2.5” drive support</td>
<td></td>
<td>12 hot-swap 3.5” drive support; 8 SATA3 + 4 NVMe; Optional 12 SAS3 drive support via AOCs</td>
<td></td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>Redundant 1000W Titanium Level (96%+) Power Supplies with PMBus</td>
<td>Redundant 1000W Titanium Level (96%+) Power Supplies with PMBus</td>
<td>Redundant 1000W Titanium Level (96%+) Power Supplies with PMBus</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>4 heavy duty fans</td>
<td>4 heavy duty fans</td>
<td>4 heavy duty fans</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>2U Chassis; Enclosure: 437 x 89 x 705mm (17.2” x 3.5” x 27.76”) Gross Weight: 72lbs (32.66kg) Net Weight: 36lbs (16.33kg)</td>
<td>2U Chassis; Enclosure: 437 x 89 x 705mm (17.2” x 3.5” x 27.76”) Gross Weight: 72lbs (32.66kg) Net Weight: 36lbs (16.33kg)</td>
<td>2U Chassis; Enclosure: 89 x 437 x 723mm (3.5” x 17.2” x 28.46”) Gross Weight: 72lbs (32.66kg) Net Weight: 36lbs (16.33kg)</td>
<td></td>
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</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
### SuperServer® Solutions - June 2021

**Ultra/WIO**

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#### 2U Ultra

- **Model:** SYS-6028U-TR4+
- **Model:** SYS-6028U-TRT+
- **Model:** SYS-6028U-TRTP+

#### SYS-6028U-TR4+
- **Processor Support:** Dual Intel® Xeon® Processor E5-2600 v4 / v3 product family with QPI up to 9.6 GT/s
- **Key Applications:** Virtualization, Cloud Computing, High End Enterprise Server
- **Outstanding Features:** 8 PCIe Add-on cards [nid:3716], 2 SATA DOM support with embedded power [nid:3016], 24 DIMM sockets, 12x 3.5" hot-swap SAS3/SATA3 drive bays, 160W CPU support, Titanium Level Power Supply, Flexible LAN Options
- **Serverboard:** SUPER® X10DRU-i+  
- **Chipset:** Intel® C612 chipset
- **System Memory (Max.):** Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400 in 24 DIMM slots
- **Expansion Slots:** 1 PCI-E 3.0 x16(FH, 10.5"L); 7 PCI-E 3.0 x8(5 FH, 10.5"L, 1 LP, 1 Internal LP)
- **Onboard Storage Controller:** Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; Optional 12 SAS3 drive support
- **Connectivity:** 4 Gigabit Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port
- **Management:** IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SMM, SuperDoctor® 5, Watchdog
- **Drive Bays:** 12 hot-swap 3.5" drive support
- **Peripheral Bays:** N/A
- **Power Supply:** Redundant 1000W Titanium Level (96%+) Power Supplies with PMBus
- **Cooling System:** 4 heavy duty fans
- **Form Factor:** 2U Chassis; Enclosure: 437 x 89 x 723mm (17.2" x 3.5" x 28.46")  
  Gross Weight: 72lbs (32.66kg)  
  Net Weight: 36lbs (16.33kg)

#### SYS-6028U-TR4T+
- **Processor Support:** Dual Intel® Xeon® Processor E5-2600 v4 / v3 product family with QPI up to 9.6 GT/s
- **Key Applications:** Virtualization, Cloud Computing, High End Enterprise Server
- **Outstanding Features:** 2 SATA DOM support with embedded power [nid:3016], 24 DIMM sockets, 12x 3.5" hot-swap SAS3/SATA3 drive bays, 160W CPU support, Titanium Level Power Supply, Flexible LAN Options
- **Serverboard:** SUPER® X10DRU-i+  
- **Chipset:** Intel® C612 chipset
- **System Memory (Max.):** Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400 in 24 DIMM slots
- **Expansion Slots:** 1 PCI-E 3.0 x16(FH, 10.5"L); 6 PCI-E 3.0 x8(4 FH, 10.5"L, 1 LP, 1 Internal LP)
- **Onboard Storage Controller:** Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; Optional 12 SAS3 drive support
- **Connectivity:** 4 Gigabit Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port
- **Management:** IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SMM, SuperDoctor® 5, Watchdog
- **Drive Bays:** 12 hot-swap 3.5" drive support
- **Peripheral Bays:** N/A
- **Power Supply:** Redundant 1000W Titanium Level (96%+) Power Supplies with PMBus
- **Cooling System:** 4 heavy duty fans
- **Form Factor:** 2U Chassis; Enclosure: 437 x 89 x 723mm (17.2" x 3.5" x 28.46")  
  Gross Weight: 72lbs (32.66kg)  
  Net Weight: 36lbs (16.33kg)

#### SYS-6028UX-TR4
- **Processor Support:** Intel® Xeon® processor E5-2600 V4/V3 with UPI up to 9.6GT/s
- **Key Applications:** Remote Workstation, Financial Market
- **Outstanding Features:** Up to 4 double width GPU cards, Up to 12 hot-swap 3.5" HDD, Optional SAS3 and NVMe support, Flexible LAN port options
- **Serverboard:** SUPER® X10DRU-X  
- **Chipset:** Intel® C612 chipset
- **System Memory (Max.):** Up to 2TB Registered ECC (3DS), DDR4-2400MHz in 16 DIMM slots
- **Expansion Slots:** 3 PCI-E Gen 3.0 x16(full height 10.5" length)  
  Up to 4 double width GPU cards  
  Up to 12 hot-swap 3.5" HDD  
  Optional SAS3 and NVMe support  
  Flexible LAN port options
- **Onboard Storage Controller:** Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; Optional 12 SAS3 drive support
- **Connectivity:** 4 Gigabit Ethernet; 5 USB 3.0 ports (2 rear, 2 onboard header, 1 Type A); 1 Serial Port
- **Management:** Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SUM, SuperDoctor® 5, Watchdog
- **Drive Bays:** 12 hot-swap 3.5" drives bays support
- **Peripheral Bays:** N/A
- **Power Supply:** 1000W High-efficiency redundant (Titanium level) digital power supply
- **Cooling System:** 4 heavy duty fans w/ Optimal Fan Speed Control; 1 Air Shroud
- **Form Factor:** 2U Chassis; Enclosure: 437 x 89 x 648mm (17.2" x 3.5" x 25.5")  
  Gross Weight: 72lbs (32.66kg)  
  Net Weight: 36lbs (16.33kg)

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*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
## Model Specifications

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6028R-TDWNR</th>
<th>SYS-6038R-TXR</th>
<th>SYS-6048R-TXR</th>
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</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s; CPU TDP support Up to 145W</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s; CPU TDP support up to 145W</td>
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</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Data Center • Cloud and Virtualization needs • Hosting &amp; Application delivery • Database Processing &amp; Storage • Simulation &amp; Automation</td>
<td>• Networking Telephony • Surveillance DVR • Industrial Server Solutions • Head-node controller</td>
<td>• Networking Telephony • Surveillance DVR • Industrial Server Solutions • Head-node controller</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• Redundant 920W Platinum Level high-efficiency power supplies • IPMI 2.0 + KVM with Dedicated LAN • Supports 16 DIMM DDR4-2133MHz • Up to 4 add-on cards • NVMe Support</td>
<td>• 16 DIMM slots • 10x PCIe 3.0 x8, 1x PCIe E 2.0 x4 (in x8) • 8x Hot-swap 3.5” HDD Bays and 2x 5.25” Drive Bays • 2 SATA DOMs Support with Embedded Power • 145W CPU support</td>
<td>• Supports 16 DIMM DDR4-2133MHz • Up to 11 PCI-E slots • 5 hot-swap 3.5” drives bays (SATA3 ports) • 3x 5.25” Peripheral Drive Bays • 2 SATA DOMs Support with Embedded Power</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X10DDW-iN</td>
<td>SUPER® X10DRX</td>
<td>SUPER® X10DRX</td>
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<td><strong>Chipset</strong></td>
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<td><strong>System Memory (Max.)</strong></td>
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</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>3 PCIe 3.0 x8 (FH/FL) &amp; 1 PCIe 3.0 (LP)</td>
<td>10 PCIe 3.0 x8 (FH, FL), 1 PCIe 2.0 x4 (in x8 slot)</td>
<td>10 PCIe 3.0 x8 (FH, FL), 1 PCIe 2.0 x4 (in x8 slot)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C612 controller for 8 SATA3 (6Gbps) Ports; RAID 0,1,5,10</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,10</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,10</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>Dual LAN with Intel® i350 Gigabit Ethernet Controllers</td>
<td>Dual LAN with Intel® i350 Gigabit Ethernet Controller</td>
<td>Dual LAN with Intel® i350 Gigabit Ethernet Controller</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>AST2400 VGA</td>
<td>AST2400 VGA</td>
<td>AST2400 VGA</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>8x 3.5” SATA + 4x 2.5” NVMe drive bay</td>
<td>8x 3.5” hot-swap and 2x 5.25” drive bay</td>
<td>5x 3.5” hot-swap and 3x 5.25” peripheral drive bays</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>1 optional Slim DVD-ROM bay</td>
<td>1 optional Slim DVD-ROM bay</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>Redundant 920W Platinum Level high-efficiency power supplies with I²C &amp; PMBus</td>
<td>Redundant 1280W Platinum Level Digital power supplies with PMBus supports</td>
<td>Redundant 600W power supplies</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>3x 80x80x38mm heavy duty counter-rotating fans with optimal fan speed control</td>
<td>3x middle fans &amp; 1x rear exhaust fan</td>
<td>1x 92x38mm 4-pin PWM front intake fan 2x 80x38mm 4-pin PWM rear exhaust fans</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>2U Rackmount 437 x 89 x 647mm (17.2” x 3.5” x 25.5”)</td>
<td>3U Rackmount 437 x 132 x 647mm (17.2” x 5.2” x 25.5”)</td>
<td>4U Rackmount 437 x 178 x 525mm (17.2” x 7” x 20.68”)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
### MODEL | SYS-6018R-WTR | SYS-6018R-WTRT | SYS-1028R-WC1R | SYS-1028R-WC1RT
--- | --- | --- | --- | ---
**Processor Support** | Intel® Xeon® processor E5-2600 v3, Intel® Xeon® processor E5-2600 v4, Dual Socket R3 (LGA 2011) supported, CPU TDP support up to 145W, 1 QPI up to 9.6GT/s | Intel® Xeon® processor E5-2600 V3 with UPI up to 9.6GT/s | **Key Applications**
- Cloud and Virtualization needs
- Database Processing & Storage
- Hosting & Application delivery
- HPC cluster computer nodes
**Key Applications**
- Disk Backup & Recovery
- Downloads
- e-Business
- Email Server
- Enterprise Server
- Web Server
**Outstanding Features**
- 2 SATA DOM support with embedded power
- 700W Gold Level High Efficiency Redundant
- Supports 16 DIMM DDR4 up to 2133MHz
- Up to 2 add-on cards
**Outstanding Features**
- 2 SATA DOM support with embedded power
- SAS3.0 (12Gbps) support
- Supports 16 DIMM DDR4 up to 2133MHz
- Up to 2 add-on cards
**Serverboard**
- -WTR: SUPER® X10DRW-i
- -WTRT: SUPER® X10DRW-IT
- -WC1R: SUPER® X10DRW-i
- -WC1RT: SUPER® X10DRW-IT
**Chipset** | Intel® C612 chipset | Intel® C610 chipset | Intel® C612 chipset | Intel® C610 chipset | Intel® C612 chipset | Intel® C610 chipset
**System Memory**
(Max.)* | Up to 1TB DDR4 up to 2133MHz, in 16 DIMM slots | Up to 1TB DDR4 up to 2133MHz, in 16 DIMM slots | Intel® C612 chipset | Intel® C610 chipset | Intel® C612 chipset | Intel® C610 chipset
**Expansion Slots** | 2 PCI-E 3.0 x16(FHHL) | 2 PCI-E 3.0 x16 (FHHL) 1 PCI-E 3.0 x8 Mezzanine for HBA cards | Intel® C612 chipset | Intel® C610 chipset | Intel® C612 chipset | Intel® C610 chipset
**Onboard Storage Controller** | ports; RAID | Broadcom 3108 SAS3 (12Gbs) HW RAID controller for 8 SAS3 (12Gbps) ports; RAID 0, 1, 5, 6, 10, 50, 60; 2GB DDR3 Cache; C610 controller for 2 SATA3 (6Gbps) ports; RAID 0, 1; | **Connectivity**
- -WTR: Dual LAN with Intel® i350 Gigabit Ethernet Controller
- -WTRT: Dual 10Gb Ethernet LAN with Intel® X540 Dual Port 10GBase-T
- -WC1R: N/A
- -WC1RT: N/A
**VGA/Audio** | Aspeed AST2400 BMC | 1 VGA, 1 Aspeed AST2400 BMC; | **Management**
- Intel® Node Manager, IPMI2.0, NMI, SuperDoctor® 5, Watchdog | Intel® Node Manager, IPMI2.0, NMI, SuperDoctor® 5, Watchdog:
**Drive Bays** | 4x 3.5” hot-swap SAS/SATA drive bays | 10x 2.5” hot-swap SAS/SATA drive bay | **Peripheral Bays** | 1 slim DVD-ROM drive (optional) | N/A
**Power Supply** | 700W Redundant Gold Level high-efficiency power supplies | 700W Redundant Gold Level high-efficiency power supplies with I2C & PMBus | **Cooling System** | 5x 4cm heavy duty counter-rotating fans with air shroud & optimal fan speed control | 5x 4cm heavy duty counter-rotating fans with air shroud & optimal fan speed control
**Form Factor** | 1U Rackmount 437 x 43 x 650mm (17.2” x 1.7” x 25.6”) | 1U 17.2” (437mm) x 1.7” (43mm) x 23.5” (597mm)

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-1028R-WMR</th>
<th>SYS-1028R-WMRT</th>
<th>SYS-1028R-WTR</th>
<th>SYS-1028R-WTRT</th>
<th>SYS-1028R-WTNR</th>
<th>SYS-1028R-WTNRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Intel® Xeon® processor ES-2600 v3 family (up to 145W TDP **) Dual Socket R3 (LGA 2011)</td>
<td>Intel® Xeon® processor ES-2600 V3 withUPI up to 9.6GT/s</td>
<td>Intel® Xeon® processor ES-2600 v3, Intel® Xeon® processor ES-2600 v4 &lt;sup&gt;1&lt;/sup&gt; Dual Socket R3 (LGA 2011) supported, CPU TDP support Up to 145W, 1 QPI up to 9.6GT/s</td>
<td>Intel® Xeon® processor ES-2600 v3, Intel® Xeon® processor ES-2600 v4 &lt;sup&gt;1&lt;/sup&gt; Dual Socket R3 (LGA 2011) supported, CPU TDP support Up to 145W, 1 QPI up to 9.6GT/s</td>
<td>Intel® Xeon® processor ES-2600 v3, Intel® Xeon® processor ES-2600 v4 &lt;sup&gt;1&lt;/sup&gt; Dual Socket R3 (LGA 2011) supported, CPU TDP support Up to 145W, 1 QPI up to 9.6GT/s</td>
<td>Intel® Xeon® processor ES-2600 v3, Intel® Xeon® processor ES-2600 v4 &lt;sup&gt;1&lt;/sup&gt; Dual Socket R3 (LGA 2011) supported, CPU TDP support Up to 145W, 1 QPI up to 9.6GT/s</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• File/Print Server Application and data serving Clone of Server Clustering Business Critical Applications</td>
<td>• Disk Backup &amp; Recovery Downloads e-Business Email Server Enterprise Server Web Server</td>
<td>• Cloud and Virtualization needs Database Processing &amp; Storage Hosting &amp; Application delivery HPC cluster computer nodes Simulation &amp; Automation</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• support up to 2x AOCs Short-Depth 16.9”</td>
<td>• 16 DIMM support 2 SATA DOM support with embedded power Supports 16 DIMM DDR4 up to 2133MHz Up to 4 add-on cards</td>
<td>• Enterprise Performance Native NVMe Cost-effective Storage optimized 8 SATA3 ports and 2 NVMe/SATA3 hybrid ports High-density, Enterprise Performance, Cost-effective 16 DIMM support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
</tr>
<tr>
<td>System Memory (Max.*)</td>
<td>16x 288-pin DDR4 DIMM slots Up to 1TB ECC LRDIMM, 512GB ECC RDIMM</td>
<td>16 DIMM, 1024GB Reg. ECC DDR4 up to 2133MHz</td>
<td>Up to 512GB Registered ECC RDIMM, DDR4-2400MHz; Up to 2TB 3DS ECC LRDIMM, in 16 DIMM slots</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>2 PCI-E 3.0 x16 full-height, Half-length slots</td>
<td>2 PCI-E 3.0 x16(FHHL) 1 PCI-E 3.0 x8 Mezzanine for HBA cards</td>
<td>2x PCI-E 3.0 x16-full height, Half-length slots</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Onboard Storage Connectivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controller</td>
<td>10x SATA3 (6Gbps) ports</td>
<td>SATA3 (6Gbps); RAID 0, 1, 5, 10</td>
<td>Intel® C612 controller for SATA3 (6Gbps); RAID 0, 1, 5, 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connectivity</td>
<td>-WMR: 2x RJ45 Gigabit Ethernet LAN ports 1x RJ45 Dedicated IPMI LAN port</td>
<td>-WTR: 2x RJ45 Gigabit Ethernet LAN ports</td>
<td>-WTNR: Intel® i350 Dual Port Gigabit Ethernet Controller</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>Intel® Node Manager, IPMI2.0, NMI, SuperDoctor® 5, Watchdog</td>
<td>Built-in Server management tool (IPMI 2.0, KVM/media over LAN) with dedicated LAN port</td>
<td>Intel® Node Manager, IPMI2.0, NMI, SuperDoctor® 5, Watchdog</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drive Bays</td>
<td>2x 2.5” fixed with bracket</td>
<td>10x 2.5” hot-swap SAS/SATA drive bay</td>
<td>10x 2.5” hot-swap SAS/SATA drive bay</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Supply</td>
<td>PWS-406P-1R</td>
<td>PWS-706P-1R</td>
<td>PWS-706P-1R</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooling System</td>
<td>4x 40x56mm PWM fan; 2x fans for AOC cooling</td>
<td>4x 40x56mm counter-rotation PWM fan; 4x 40x56mm counter-rotation PWM fan;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U 17.2” (437mm) x 1.7” (43mm) x 16.9” (429mm)</td>
<td>1U 17.2” (437mm) x 1.7” (43mm) x 23.5” (597mm)</td>
<td>1U 17.2” (437mm) x 1.7” (43mm) x 23.5” (597mm)</td>
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</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
## 2U WIO

### 16 DIMMs, 6 PCI-E 3.0 x8

**2U WIO**

### 16 DIMMs, 6 PCI-E 3.0 x8

**Dual 10G LAN**

---

### Model Comparison

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-6028R-WTR</th>
<th>SYS-6028R-WTRT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>SYS-6028R-WTR</td>
<td>SYS-6028R-WTRT</td>
</tr>
<tr>
<td><strong>Processor Support</strong></td>
<td>Intel® Xeon® processor E5-2600 v3, Intel® Xeon® processor E5-2600 v4, Dual Socket R3 (LGA 2011) supported, CPU TDP support Up to 145W, 1 QPI up to 9.6GT/s</td>
<td>Intel® Xeon® processor E5-2600 v3, Intel® Xeon® processor E5-2600 v4, Dual Socket R3 (LGA 2011) supported, CPU TDP support Up to 145W, 1 QPI up to 9.6GT/s</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Cloud and Virtualization needs Database Processing &amp; Storage Hosting &amp; Application delivery HPC cluster computer nodes Simulation &amp; Automation</td>
<td>• Cloud and Virtualization needs Database Processing &amp; Storage Hosting &amp; Application delivery HPC cluster computer nodes Simulation &amp; Automation</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• 2 SATA DOM support with embedded power 740W Redundant Platinum Level high-efficiency power supplies Supports 16 DIMM DDR4 up to 2133MHz Up to 4 add-on cards</td>
<td>• 2x 10GBase-T Ports [nid:2349] 2 SATA DOM support with embedded power 740W Redundant Platinum Level high-efficiency power supplies Supports 16 DIMM DDR4 up to 2133MHz Up to 4 add-on cards</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X10DRW-i</td>
<td>SUPER® X10DRW-iT</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
</tr>
<tr>
<td>*<em>System Memory (Max.)</em></td>
<td>Up to 1TB DDR4 up to 2133MHz, in 16 DIMM slots</td>
<td>Up to 1TB DDR4 up to 2133MHz, in 16 DIMM slots</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>4 PCI-E 3.0 x8(2 FHFL, 2 FHHL)</td>
<td>4 PCI-E 3.0 x8(2 FHFL, 2 FHHL)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C612 for 8 SATA3 (6Gbps); RAID 0, 1, 5, 10</td>
<td>Intel® C612 for 8 SATA3 (6Gbps); RAID 0, 1, 5, 10</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>Dual LAN with Intel® i350 Gigabit Ethernet Controller</td>
<td>Dual LAN with Intel® X540 10GBase-T Ethernet Controller</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Intel® Node Manager, IPMI2.0, NMI, SuperDoctor® S, Watchdog</td>
<td>Intel® Node Manager, IPMI2.0, NMI, SuperDoctor® S, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>8x 3.5” hot-swap SAS/SATA drive bays</td>
<td>8x 3.5” hot-swap SAS/SATA drive bays</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>1 slim DVD-ROM drive (optional)</td>
<td>1 slim DVD-ROM drive (optional)</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>740W Redundant Platinum Level high-efficiency power supplies with I2C &amp; PMBus</td>
<td>740W Redundant Platinum Level high-efficiency power supplies with I2C &amp; PMBus</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>3x 8cm (7000 RPM) hot-swap PWM cooling fan;</td>
<td>3x 8cm (7000 RPM) hot-swap PWM cooling fan;</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>2U 17.2” (437mm) x 3.5” (89mm) x 25.5” (647mm)</td>
<td>2U 17.2” (437mm) x 3.5” (89mm) x 25.5” (647mm)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
### 3rd Gen Intel® Xeon® Scalable processors Supported

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

#### Outstanding Features
- Dual AIOM with NCSI (OCP 3.0 NIC)
- Dual NVMe M.2 (2280)
- Dual sockets up to 76 cores and 270W TDP
- Compact server with tool-less drive trays
- Optional hot-swappable 2.5” rear drive bays
- Flexible expansion with up to 2x PCI-E 4.0 x16 and 4x PCI-E 4.0 x8 (convertible to 2x PCI-E 4.0 x16) slots
- Balanced architecture in compact chassis (25.6”)
- Up to 12x NVMe/SATA/SAS hybrid tool-less drive bays
- 3.5” tool-less drive trays also support 2.5” drives

### Processor Support
- 3rd Gen Intel® Xeon® Scalable processors
- Dual Socket LGA-4189 (Socket P+) supported
- TDP up to 270W; 3 UPI up to 11.2GT/s

#### 12x 3.5” NVMe/SAS/SATA Drives

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-620C-TN12R</th>
<th>SYS-610C-TR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Web Server, Firewall Application</td>
<td>• Web Server, Firewall Application</td>
</tr>
<tr>
<td></td>
<td>• Data Center Optimized, Value IaaS</td>
<td>• Data Center Optimized, Value IaaS</td>
</tr>
<tr>
<td></td>
<td>• Cloud Computing, Compact Server</td>
<td>• Cloud Computing, Compact Server</td>
</tr>
<tr>
<td></td>
<td>• DNS &amp; Gateway Servers, Firewall Application</td>
<td>• DNS &amp; Gateway Servers, Firewall Application</td>
</tr>
<tr>
<td></td>
<td>• CDN, Edge Nodes</td>
<td>• CDN, Edge Nodes</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Dual AIOM with NCSI (OCP 3.0 NIC)</td>
<td>• Dual AIOM with NCSI (OCP 3.0 NIC)</td>
</tr>
<tr>
<td></td>
<td>• Dual NVMe M.2 (2280)</td>
<td>• Dual NVMe M.2 (2280)</td>
</tr>
<tr>
<td></td>
<td>• Dual sockets up to 76 cores and 270W TDP</td>
<td>• Dual sockets up to 76 cores and 270W TDP</td>
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<td>• Compact server with tool-less drive trays</td>
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</tr>
<tr>
<td></td>
<td>• Optional hot-swappable 2.5” rear drive bays</td>
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<tr>
<td></td>
<td>• Flexible expansion with up to 2x PCI-E 4.0 x16 and 4x PCI-E 4.0 x8 (convertible to 2x PCI-E 4.0 x16) slots</td>
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<td></td>
<td>• Balanced architecture in compact chassis (25.6”)</td>
<td>• Balanced architecture in compact chassis (25.6”)</td>
</tr>
<tr>
<td></td>
<td>• Up to 12x NVMe/SATA/SAS hybrid tool-less drive bays</td>
<td>• Up to 4x SATA/SAS tool-less drive bays</td>
</tr>
<tr>
<td></td>
<td>• 3.5” tool-less drive trays also support 2.5” drives</td>
<td>• 3.5” tool-less drive trays also support 2.5” drives</td>
</tr>
</tbody>
</table>

#### Serverboard
- SUPER® X12DDW-A6

#### Chipset
- Intel® C621A

#### System Memory (Max.)
- 16 DIMM slots
- Up to 4 TB ECC RDIMM, DDR4-3200MHz
- Up to 4 TB ECC LRDIMM, DDR4-3200MHz
- Up to 4 TB Intel® DCPMM, DDR4-3200MHz

#### Expansion Slots
- 4 PCI-E 4.0 x16 FHHL slot(s)
- 2 PCI-E 4.0 x8 FHHL slot(s)

#### Onboard Storage Controller
- Intel® SATA

#### Connectivity
- VGA/Audio: 1 VGA port
- Management: SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; IPMI 2.0; Redfish API; SCC
- Drive Bays: 12x 3.5” hot-swap NVMe/SATA/SAS hybrid 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 fan(s)
- Form Factor: 2U rackmount

#### SYS-610C-TR
- System Memory (Max.)
- 16 DIMM slots
- Up to 4 TB ECC RDIMM, DDR4-3200MHz
- Up to 4 TB ECC LRDIMM, DDR4-3200MHz
- Up to 4 TB Intel® DCPMM, DDR4-3200MHz

#### Expansion Slots
- 2 PCI-E 4.0 x16 FHHL slot(s)

#### Onboard Storage Controller
- Intel® SATA

#### Connectivity
- VGA/Audio: 1 VGA port
- Management: SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; IPMI 2.0; Redfish API; SCC
- Drive Bays: 4x 3.5” hot-swap SATA/SAS drive bays; Optional RAID support via RAID controller AOC
- Peripheral Bays: 2x 2.5” (optional)
- Power Supply: Redundant 860W Platinum level (94%)
- Cooling System: 6x 4cm heavy duty fan(s)
- Form Factor: 1U rackmount

#### Enclosure:
- SYS-620C-TN12R: 437 x 89 x 648mm (17.2” x 3.5” x 25.5”)
- SYS-610C-TR: 437 x 43 x 650mm (17.2” x 1.7” x 25.6”)
### Processor Support
- 3rd Gen Intel® Xeon® Scalable processors
- Dual Socket LGA-4189 (Socket P+) supported
- TDP up to 270W, 3 UPI up to 11.2GT/s

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

### Outstanding Features
- Dual AIOM with NCSI (OCP 3.0 NIC)
- Dual NVMe M.2 (2280)
- Dual sockets up to 76 cores and 270W TDP
- Compact server with tool-less drive trays
- Flexible expansion with up to 2x PCI-E 4.0 x16 slots
- Balanced architecture in compact chassis (23.5”)
- Up to 10x NVMe/SATA/SAS hybrid tool-less drive bays

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-120C-TN10R</th>
<th>SYS-120C-TR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>Dual Socket LGA-4189 (Socket P+) supported</td>
<td>Dual Socket LGA-4189 (Socket P+) supported</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>TDP up to 270W, 3 UPI up to 11.2GT/s</td>
<td>TDP up to 270W, 3 UPI up to 11.2GT/s</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X12DDW-A6</td>
<td>SUPER® X12DDW-A6</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>16 DIMM slots Up to 4 TB ECC RDIMM, DDR4-3200MHz Up to 4 TB ECC LRDIMM, DDR4-3200MHz</td>
<td>16 DIMM slots Up to 4 TB ECC RDIMM, DDR4-3200MHz Up to 4 TB ECC LRDIMM, DDR4-3200MHz</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>2 PCI-E 4.0 x16 FHHL slot(s)</td>
<td>2 PCI-E 4.0 x16 FHHL slot(s)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® SATA</td>
<td>Intel® SATA</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>1 VGA port</td>
<td>1 VGA port</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; IPMI 2.0; Redfish API; SCC</td>
<td>SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; IPMI 2.0; Redfish API; SCC</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>10x 2.5” hot-swap NVMe/SATA/SAS hybrid drive bays; Optional RAID support via RAID controller AOC</td>
<td>8x 2.5” hot-swap SATA/SAS drive bays; Optional RAID support via RAID controller AOC</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>None</td>
<td>1x DVD-ROM (optional)</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>Redundant 860W Platinum level (94%)</td>
<td>Redundant 860W Platinum level (94%)</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>6x 4cm heavy duty fan(s)</td>
<td>6x 4cm heavy duty fan(s)</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>1U rackmount Enclosure: 437 x 43 x 597mm (17.2” x 1.7” x 23.5”)</td>
<td>1U rackmount Enclosure: 437 x 43 x 597mm (17.2” x 1.7” x 23.5”)</td>
</tr>
</tbody>
</table>
## Processor Support
- Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s

## Key Applications
- Data Center
- Cloud and Virtualization needs
- Hosting & Application delivery
- Database Processing & Storage
- Simulation & Automation

## Outstanding Features
- 480W Platinum Level high-efficiency power supply
- IPMI 2.0 + KVM with Dedicated LAN
- Cost Effective

## Serverboard
- SUPER® X10DRD-L
- SUPER® X10DDW-i
- SUPER® X10DDW-i

### Serverboard Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-6018R-TD</th>
<th>SYS-6018R-TD8</th>
<th>SYS-6018R-TDW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>Data Center, Cloud and Virtualization needs, Hosting &amp; Application delivery, Database Processing &amp; Storage, Simulation &amp; Automation</td>
<td>Data Center, Cloud and Virtualization needs, Hosting &amp; Application delivery, Database Processing &amp; Storage, Simulation &amp; Automation</td>
<td>Data Center, Cloud and Virtualization needs, Hosting &amp; Application delivery, Database Processing &amp; Storage, Simulation &amp; Automation</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>480W Platinum Level high-efficiency power supply, IPMI 2.0 + KVM with Dedicated LAN, Cost Effective</td>
<td>650W Platinum Level high-efficiency power supply, IPMI 2.0 + KVM with Dedicated LAN, Up to 3 add-on cards, 8x 3.5&quot; &amp; 2x 2.5&quot; Fixed SATA Drives</td>
<td>600W Platinum Level high-efficiency power supply, IPMI 2.0 + KVM with Dedicated LAN, Up to 3 add-on cards</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong>*</td>
<td>Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots</td>
<td>Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td>Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>1 PCI-E 3.0 x8 (Full-Height, Half-Length)</td>
<td>2 PCI-E 3.0 x16 (Full-Height, Half-Length)</td>
<td>1 PCI-E 3.0 (LP)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C612 controller for 6 SATA3 (6Gbps) ports; RAID 0,1,5,10</td>
<td>Intel® C612 controller for 6 SATA3 (6Gbps) ports; RAID 0,1,5,10</td>
<td>Intel® C612 controller for 4 SATA3 (6Gbps) Ports; RAID 0,1,5,10</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>Dual LAN with Intel® i350 Gigabit Ethernet controller</td>
<td>Dual LAN with Intel® i350 Gigabit Ethernet controller</td>
<td>Dual LAN with Intel® i350 Gigabit Ethernet controller</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>AST2400 VGA</td>
<td>AST2400 VGA</td>
<td>AST2400 VGA</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>4x 3.5&quot; hot-swap SATA HDD drive bays</td>
<td>8x 3.5&quot; &amp; 2x 2.5&quot; Fixed SATA drive bays</td>
<td>4x 3.5&quot; hot-swap SATA HDD drive bays</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>1 slim DVD-ROM drive (optional)</td>
<td>N/A</td>
<td>1 slim DVD-ROM drive (optional)</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>480W Platinum Level high-efficiency power supply</td>
<td>650W Platinum Level high-efficiency power supply</td>
<td>600W Platinum Level high-efficiency power supply</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>2x blower + 1x 4cm fans with optimal fan speed control</td>
<td>6x 4cm heavy duty counter-rotating fans with optimal fan speed control</td>
<td>5x 4cm heavy duty counter-rotating fans with optimal fan speed control</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>1U Rackmount 437 x 43 x 650mm (17.2” x 1.7” x 25.6”)</td>
<td>1U Rackmount 437 x 43 x 813mm (17.2” x 1.7” x 32”)</td>
<td>1U Rackmount 437 x 43 x 650mm (17.2” x 1.7” x 25.6”)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
## X12 DP MAINSTREAM

![Image of SuperServer X12 DP Mainstream]  

### New Features
- 3rd Gen Intel® Xeon® Scalable processors Supported

### Key Applications
- High Performance Computing
- Enterprise Server
- Data Center Optimized
- Database Processing and High Density Storage
- Application-Optimized Solutions
- Virtualization
- Enterprise Server
- Data Center Optimized
- Application and data serving
- Model analysis
- Compute Intensive Applications

### Outstanding Features
- High end all-purpose 2U rackmount server
- Cost effective all-purpose 2U rackmount server

### Processor Support
- 3rd Gen Intel® Xeon® Scalable processors
  - Dual Socket LGA-4189 (Socket P+) supported
  - TDP up to 270W

### Serverboard
- **MODEL** | **SYS-220P-C9R** | **SYS-220P-C9RT** | **SYS-620P-TR**
---|---|---|---
**Processor Support** | 3rd Gen Intel® Xeon® Scalable processors | 3rd Gen Intel® Xeon® Scalable processors | 3rd Gen Intel® Xeon® Scalable processors
| | Dual Socket LGA-4189 (Socket P+) supported | Dual Socket LGA-4189 (Socket P+) supported | Dual Socket LGA-4189 (Socket P+) supported
| | TDP up to 270W | TDP up to 270W | TDP up to 270W

### Key Applications
- High Performance Computing
- Enterprise Server
- Data Center Optimized
- Database Processing and High Density Storage
- Application-Optimized Solutions

### System Memory (Max.)
- 16 DIMM slots
- Up to 4TB Intel® Optane™ Persistent Memory, DDR4-3200MHz
- Up to 4TB ECC RDIMM, DDR4-3200MHz

### Expansion Slots
- 4x PCI-E 4.0 x16 LP slot(s)
- 1x PCI-E 4.0 x8 LP slot(s)

### Onboard Storage Controller
- Intel® C621A
- Broadcom® 3908

### Connectivity
- 2x 1GbE port(s)
- 2x 10GbE port(s)
- 2x 1GbE port(s)

### Management
- NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; IPMI2.0

### Drive Bays
- 6x 2.5" hot-swap drive bays
- 4x 2.5" NVMe optional

### Peripheral Bays
- 1x DVD (optional)

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

### Cooling System
- 3 heavy duty fan(s)

### Form Factor
- 2U rackmount
  - Enclosure: 437 x 89 x 630mm (17.2" x 3.5" x 24.8")

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SuperServer® Solutions - June 2021
### Processor Support
- **3rd Gen Intel® Xeon® Scalable processors**
- Dual Socket LGA-4189 (Socket P+)
- TDP up to 270W

### Key Applications
- Virtualization
- Enterprise Server
- Data Center Optimized
- Application and data serving
- Model analysis
- Compute Intensive Applications
- Office environment

### Outstanding Features
- Cost-effective all-purpose 2U rackmount server
- Cost-effective all-purpose tower server

### Serverboard
- **SUPER® X12DPi-NT6**
- **SUPER® X12DPi-N6**
- **SUPER® X12DPi-NT6**

### Chipset
- Intel® C621A
- Intel® C621A
- Intel® C621A

### System Memory (Max.)
- **16 DIMM slots**
- Up to 18TB Intel® DCPMM, DDR4-2666MHz
- Up to 4TB Intel® Optane™ Persistent Memory, DDR4-3200MHz

### Expansion Slots
- 4x PCI-E 4.0 x16 LP slot(s)
- 2x PCI-E 4.0 x8 LP slot(s)
- 4 PCI-E 4.0 x16 Full-height slot(s)
- 2 PCI-E 4.0 x8 Full-height slot(s)

### Onboard Storage Controller
- Intel® C621A
- Intel® C621A
- Intel® C621A

### Connectivity
- 2x 10GbE port(s)
- 2x 1GbE port(s)
- 2x 10GbE port(s)

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

### Management
- NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; IPMI2.0
- NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; IPMI2.0
- NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; IPMI2.0

### Drive Bays
- 8x 3.5” hot-swap drive bays; 2x 2.5” NVMe fixed drives optional
- 8x 3.5” hot-swap drive bays; 2x 2.5” NVMe hybrid; 2.5” NVMe fixed drives optional
- 8x 3.5” hot-swap drive bays; 2x 2.5” NVMe hybrid; 2.5” NVMe fixed drives optional

### Peripheral Bays
- 1x DVD (optional)
- 1x 5.25” DVD (optional)
- 1x 5.25” DVD (optional)

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

### Cooling System
- 3 heavy duty fans(s)
- 3 heavy duty fans(s)
- 3 heavy duty fans(s)

### Form Factor
- **2U rackmount**
- Enclosure: 437 x 89 x 647mm (17.2” x 3.5” x 25.5”)
- **Tower/4U rackmount**
- Enclosure: 178 x 452 x 648mm (7” x 17.8” x 25.5”)

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**NEW!**
3rd Gen Intel® Xeon® Scalable processors Supported

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"SuperServer® Solutions - June 2021"
### DP MAINSTREAM

#### Data Center Optimized

**Onboard Dual SFP+**

**8x SAS3 (12Gbps) and**

**8x SATA3 (6Gbps)**

**2U SAS3/SATA3 Quad LAN, 24 DIMMs, 10GBase-T**

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### MODEL Comparison

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6018R-TDTP (shown)</th>
<th>SYS-2028R-C1R</th>
<th>SYS-2028R-C1RT</th>
<th>SYS-2028R-C1R4+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
</tbody>
</table>
| Key Applications | • Data Center
• Cloud and Virtualization needs
• Hosting & Application delivery
• Database Processing & Storage
• Simulation & Automation
• Application and data serving
• Business Critical Applications
• Compute Intensive Application
• Database Processing & Storage
• DataCenter Applications
• Mission-critical applications
• Simulation & Automation | • Data Center
• Cloud and Virtualization needs
• Hosting & Application delivery
• Database Processing & Storage
• Simulation & Automation | • Data Center
• Cloud and Virtualization needs
• Hosting & Application delivery
• Database Processing & Storage
• Simulation & Automation | • Data Center
• Cloud and Virtualization needs
• Hosting & Application delivery
• Database Processing & Storage
• Simulation & Automation |
| Outstanding Features | • 600W Platinum Level High-Efficiency Power Supply; or
• 500W Redundant Platinum Level
• IPMI 2.0 + KVM with Dedicated LAN
• 2x 10G SFP+ onboard | • 8x SAS3 (12Gbps) and 8x SATA3 (6Gbps) 2.5" drives
• 2 SATA DOM support with embedded power
• 16 DIMM slots
• Redundant 920W Platinum Level high-efficiency
• Supports up to 7 expansion cards | • 8x 2.5" SAS/8x 2.5" SATA drive bays
• 24 DIMM slots
• Redundant 920W Platinum Level high-efficiency
• 3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) hot-swappable 2.5" drives
• Up to 6 add-on cards
• 2 SATA DOM support with built-in power | • 8x 2.5" SAS/8x 2.5" SATA drive bays
• 24 DIMM slots
• Redundant 920W Platinum Level high-efficiency
• 3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) hot-swappable 2.5" drives
• Up to 6 add-on cards
• 2 SATA DOM support with built-in power |
| Serverboard | SUPER® X10DRD-LTP | -C1R: SUPER® X10DRH-C
-C1RT: SUPER® X10DRH-CT | -C1R4+: SUPER® X10DRC-LN4+
-C1RT4+: SUPER® X10DRC-CT4+ | -C1R4+: SUPER® X10DRC-LN4+
-C1RT4+: SUPER® X10DRC-CT4+ |
| Chipset | Intel® C612 Chipset | Intel® C612 Chipset | Intel® C612 Chipset | Intel® C612 Chipset |
| System Memory (Max.)* | Up to 1TB ECC 3DS RDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots | Up to 2TB ECC 3DS RDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots | Up to 3TB ECC 3DS RDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots | Up to 3TB ECC 3DS RDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots |
| Expansion Slots | 1 PCI-E 3.0 x16; 6 PCI-E 3.0 x8 low profile add on cards; Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; 3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) ports; RAID 0,1,5,6,10,50,60 | Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; 3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) ports; RAID 0,1,5,6,10,50,60 | Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; 3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) ports; RAID 0,1,5,6,10,50,60 | Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,6,10,50,60 |
| Onboard Storage | Intel® C612 controller for 6 SATA3 (6Gbps) ports; RAID 0,1,5,10 | Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; 3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) ports; RAID 0,1,5,6,10,50,60 | Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; 3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) ports; RAID 0,1,5,6,10,50,60 | Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; 3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) ports; RAID 0,1,5,6,10,50,60 |
| Connectivity | Dual LAN with Intel® 82599ES 10 Gigabit Ethernet w/ SFP+ | Dual LAN with Intel® 10Gb Ethernet LAN with Intel® X540 and 10GbE-T Connector | Quad LAN with Intel® 10Gb Gigabit Ethernet Controllers; -C1RT4+: Quad 10Gb Ethernet LAN with Intel® X540 and 10GbE-T Connector | Quad LAN with Intel® 10Gb Gigabit Ethernet Controllers; -C1RT4+: Quad 10Gb Ethernet LAN with Intel® X540 and 10GbE-T Connector |
| VGA/Audio | AST2400 VGA | AST2400 VGA | AST2400 VGA | AST2400 VGA |
| Drive Bays | 4x 3.5" hot-swap SATA HDD drive bays | 8x 2.5" SAS3 (12Gbps) and 8x 2.5" 6Gbps SATA3 (Total 16 hot-swap drives) | 8x 2.5" SAS3 (12Gbps) and 8x 2.5" 6Gbps SATA3 (Total 16 hot-swap drives) | 8x 2.5" SAS3 (12Gbps) and 8x 2.5" 6Gbps SATA3 (Total 16 hot-swap drives) |
| Peripheral Bays | 1 slim DVD-ROM drive (optional) | USB Support: Rear: 2x3.0 + 2x2.0, Front: 2x2.0, and 1x Type A; optional DVD-ROM drive: support either 1x slim or 1x 5.25" DVD drive | USB Support: Rear: 2x3.0 + 2x2.0; Front: 2x2.0, 1x Type A, optional 1x 5.25" DVD-ROM drive; support either 1x slim or 1x 5.25" DVD drive | USB Support: Rear: 2x3.0 + 2x2.0; Front: 2x2.0, 1x Type A, optional 1x 5.25" DVD-ROM drive; support either 1x slim or 1x 5.25" DVD drive |
| Power Supply | -TDTP: 600W Platinum Level high-efficiency power supply
-TDTPR: 500W Redundant Platinum Level high-efficiency power supplies | Redundant 920W Platinum Level (94%) High-Efficiency power supplies | Redundant 920W Platinum Level high-efficiency power supplies with I²C & PMBus | Redundant 920W Platinum Level high-efficiency power supplies with I²C & PMBus |
| Cooling System | 5x 4cm heavy duty counter-rotating fans with optimal fan speed control | 3x 8cm high-performance PWM fans | 3x 8cm high-performance PWM fans | 3x 8cm high-performance PWM fans |
| Form Factor | 1U Rackmount
437 x 43 x 650mm (17.2" x 1.7" x 25.6") | 2U Rackmount
437 x 89 x 630mm (17.2" x 3.5" x 24.8") | 2U Rackmount
437 x 89 x 630mm (17.2" x 3.5" x 24.8") | 2U Rackmount
437 x 89 x 630mm (17.2" x 3.5" x 24.8") |

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
### Model Comparison

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-2028R-TXR</th>
<th>SYS-6028R-T</th>
<th>SYS-6028R-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
</tbody>
</table>
| **Key Applications** | • Surveillance DVR  
 • Networking Telephony  
 • Industrial Server Solutions  
 • Head-node controller  
 • Flash Array Server | • Cloud and Virtualization needs  
 • Hosting & Application delivery  
 • Database processing & Storage  
 • Simulation & Automation | • Cloud and Virtualization needs  
 • Hosting & Application delivery  
 • Database processing & Storage  
 • Simulation & Automation |
| **Outstanding Features** | • 16 DIMM support DDR4-2400MHz  
 • 10x PCI-E 3.0 x8, 1x PCI-E 2.0 x4 (in x8)  
 • 16x Hot-swap 2.5" HDD Bays (default 8x HDD Bays)  
 • 2x SATA DOMs Support with Embedded Power  
 • Support 1 Slim DVD-ROM and 1 COM & 2 USB3.0 ports module  
 • 145W CPU support | • 16 DIMM slots  
 • 650W Gold Level high-efficiency power supply  
 • IPMI 2.0 + KVM with dedicated LAN  
 • 6x 3.5" hot-swap drive bays  
 • 2 SATA DOM support with built-in power | • 16 DIMM slots  
 • Redundant 740W Platinum Level high-efficiency power supplies  
 • IPMI 2.0 + KVM with dedicated LAN  
 • 8x 3.5" hot-swap SATA3 drive bays  
 • 2 SATA DOM support with built-in power |
| **Serverboard** | SUPER® X10DRX | -T: SUPER® X10DRI  
 -TT: SUPER® X10DRI-T | -TR: SUPER® X10DRI  
 -TRT: SUPER® X10DRI-T |
| **Chipset** | Intel® C612 Chipset | Intel® C612 Chipset | Intel® C612 Chipset |
| **System Memory (Max.)** | Up to 2TB ECC 3DS RDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots | Up to 2TB ECC 3DS RDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots | Up to 2TB ECC 3DS RDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots |
| **Expansion Slots** | 10 Low Profile PCI-E 3.0 x8  
 1 Low Profile PCI-E 2.0 x4 (in x8 slot) | 3 PCI-E 3.0 x16 (LP)  
 3 PCI-E 3.0 x8 (LP) | 3 PCI-E 3.0 x16 (LP)  
 3 PCI-E 3.0 x8 (LP) |
| **Onboard Storage Controller** | Intel® C612 controller for 8 SATA3 (6GBps) ports; RAID 0,1,5,10 | Intel® C612 controller for 6 SATA3 (6GBps) ports; RAID 0,1,5,10 | Intel® C612 controller for 8 SATA3 (6GBps) ports; RAID 0,1,5,10 |
| **Connectivity** | Dual LAN with Intel® i350 Gigabit Ethernet controller;  
 -T: Dual LAN with Intel® i350 Gigabit Ethernet controller; or  
 -TT: Dual 10Gb Ethernet LAN with Intel® X540 and 10GBase-T Connector | -TR: Dual LAN with Intel® i350 Gigabit Ethernet controller;  
 -TRT: Dual 10Gb Ethernet LAN with Intel® X540 and 10GBase-T Connector | -TR: Dual LAN with Intel® i350 Gigabit Ethernet controller;  
 -TRT: Dual 10Gb Ethernet LAN with Intel® X540 and 10GBase-T Connector |
| **VGA/Audio** | AST2400 VGA | AST2400 VGA | AST2400 VGA |
| **Management** | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog |
| **Drive Bays** | 16x 2.5" hot-swap SATA3 drive bays (8x SATA3 ports by default)  
 6x 3.5" hot-swap drive bays | 6x 3.5" hot-swap drive bays  
 8x 3.5" hot-swap SATA3 drive bays | 6x 3.5" hot-swap drive bays  
 8x 3.5" hot-swap SATA3 drive bays |
| **Peripheral Bays** | 1x slim DVD-ROM drive bay  
 1x USB + COM port tray  
 1x standard 5.25" drive bay | 1 slim DVD/DVD-ROM drive (optional) | 1 slim DVD-ROM drive (optional) |
| **Power Supply** | Redundant 1000W Titanium Level (96%) power supplies | 650W high-efficiency power supply | Redundant 740W Platinum Level high-efficiency power supplies with I²C & PMBus |
| **Cooling System** | 5x 8cm hot-swap PWM cooling fans with air shroud with optimal fan speed control | 4x 8cm hot-swap PWM cooling fans with air shroud with optimal fan speed control | 3x 8cm hot-swap PWM cooling fans with air shroud with optimal fan speed control |
| **Form Factor** | 2U Rackmount  
 437 x 89 x 650mm (17.2"x 3.5" x 25.6") | 2U Rackmount  
 437 x 89 x 648mm (17.2"x 3.5" x 25.6") | 2U Rackmount  
 437 x 89 x 648mm (17.2"x 3.5" x 25.6") |

*Please check with your Supermicro sales representative and website for compatibility and configuration details.
### SuperServer Features

**Outstanding Features**

- **Key Applications**
  - Big Data Analytics
  - Compute Intensive Storage Environments
  - DataCenter Applications
  - Simulation & Automation

- **Expansion Slots**
  - FH, FL support for 1 PCI-E 3.0 x16, 6 PCI-E 3.0 x8
  - RAID 0,1,5,6,10,50,60

- **Onboard Storage Controller**
  - Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s

- **Serverboard**
  - 4U Standalone/Rackmount
  - SAS3, 7 PCI-E 3.0
  - 2x 2x 8cm hot-swap exhaust fans air shroud
  - Dual 10Gb Ethernet LAN with Intel® X540 and 10GBase-T Connector

- **Chipset**
  - Intel® C612 Chipset

- **System Memory (Max.)*
  - Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots

- **Drive Bays**
  - 8x 2.5” 12Gbps SAS3 hot-swap drives in mobile rack and 8x 3.5” 6Gbps SATA3 hot-swap drives

- **Peripheral Bays**
  - USB Support: Rear: 2x3.0 + 2x2.0, Front 2x2.0
  - Front 1x Type A, optional 1x 5.25” DVD-ROM drive

- **Power Supply**
  - Redundant 920W Platinum Level high-efficiency power supplies with I²C & PMBus

- **Cooling System**
  - 2x 8cm hot-swap redundant PWM cooling fans; 2x 2x 8cm hot-swap exhaust fans air shroud

- **Form Factor**
  - Tower/4U Rackmount
  - 437 x 178 x 647mm (17.2” x 7” x 25.5”)

*Please check with your Supermicro sales representative and website for compatibility and configuration details.

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### SuperServer Models

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-7048R-C1R</th>
<th>SYS-7048R-C1R4+</th>
<th>SYS-7048R-C1RT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
<td>Intel® C612 Chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td>Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td>Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>FH, FL support for 1 PCI-E 3.0 x16, 6 PCI-E 3.0 x8</td>
<td>FH/FL support for 2 PCI-E 3.0 x16, 3 PCI-E 3.0 x8; 1 PCI-E 2.0 x4 (in x8 slot)</td>
<td>FH/FL support for 1 PCI-E 3.0 x16, 6 PCI-E 3.0 x8 add on cards</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; SAS3 3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) ports; RAID 0,1,5,6,10,50,60</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; SAS3 3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) ports; RAID 0,1,5,6,10,50,60</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; SAS3 3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) ports; RAID 0,1,5,6,10,50,60</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Dual LAN with Intel® i350 Gigabit Ethernet Controllers; Quad LAN with Intel® i350 Gigabit Ethernet Controllers; Quad LAN with Intel® i350 Gigabit Ethernet Controllers; Dual 10Gb Ethernet LAN with Intel® X540 and 10GBase-T Connector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor’ 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor’ 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor’ 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>8x 2.5” 12Gbps SAS3 hot-swap drives in mobile rack and 8x 3.5” 6Gbps SATA3 hot-swap drives</td>
<td>8x 2.5” 12Gbps SAS3 hot-swap drives in mobile rack and 8x 3.5” 6Gbps SATA3 hot-swap drives (Total 16x hot-swap drive bays)</td>
<td>8x 2.5” 12Gbps SAS3 hot-swap drives in mobile rack and 8x 3.5” 6Gbps SATA3 hot-swap drives</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>USB Support: Rear: 2x3.0 + 2x2.0, Front 2x2.0</td>
<td>USB Support: Rear: 2x3.0 + 2x2.0, Front 2x2.0, 1x Type A, optional 1x 5.25” DVD-ROM drive</td>
<td>USB Support: Rear: 2x3.0 + 2x2.0, Front 2x2.0, 1x Type A, optional 1x 5.25” DVD-ROM drive</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 920W Platinum Level high-efficiency power supplies with I²C &amp; PMBus</td>
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</tr>
<tr>
<td>Cooling System</td>
<td>3x 8cm hot-swap redundant PWM cooling fans; 2x 2x 8cm hot-swap exhaust fans air shroud</td>
<td>3x 8cm hot-swap cooling fans and 2x 8cm exhaust fans with air shroud with optional fan speed control</td>
<td>3x 8cm hot-swap redundant PWM cooling fans; 2x 2x 8cm hot-swap exhaust fans air shroud</td>
</tr>
<tr>
<td>Form Factor</td>
<td>Tower/4U Rackmount</td>
<td>Tower/4U Rackmount</td>
<td>Tower/4U Rackmount</td>
</tr>
</tbody>
</table>

**Dimensions**

- **4U Standalone/Rackmount**
  - 437 x 178 x 647mm (17.2” x 7” x 25.5”)

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*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
### MAINSTREAM

#### 4U Standalone/Rackmount
- SAS3, 24 DIMMs, Quad LAN
- 4U Standalone/Rackmount, 16 DIMMs
- 4U Standalone/Rackmount, 16 DIMMs

###MODEL | SYS-7048R-C1RT4+ | SYS-7048R-TR | SYS-7048R-TRT
--- | --- | --- | ---
**Processor Support** | Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s | Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s | Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s
**Key Applications** | Big Data Analytics | Virtualization | Virtualization
| Compute Intensive Storage Environments | Powerful multi-tasking workstation (financial analysis, digital video editing, engineering design, scientific computing) | Powerful multi-tasking workstation (financial analysis, digital video editing, engineering design, scientific computing)
**Outstanding Features** | 2 SATA DOM support with embedded power | 16 DIMM slots | 16 DIMM slots
| 2x 2.5” SAS/8x 3.5” SATA hot-swap drive bays | Redundant 1000W Titanium Level power | Redundant 1000W Platinum Level high-efficiency power supplies
| Redundant 1000W Titanium Level power | Up to 6 add-on cards | IPMI 2.0 + KVM with dedicated LAN
**Serverboard** | SUPER® X10DRC-T4+ | SUPER® X10DR | SUPER® X10DR-T
**Chipset** | Intel® C612 Chipset | Intel® C612 Chipset | Intel® C612 Chipset
**System Memory (Max.*)** | Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots | Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots | Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots
**Expansion Slots** | FH/FL support for 2 PCI-E 3.0 x16; 3 PCI-E 3.0 x8; 1 PCI-E 2.0 x4 (in x8 slot) add on cards | 3 PCI-E 3.0 x16 | 3 PCI-E 3.0 x16; 3 PCI-E 3.0 x8
**Onboard Storage Controller** | Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; SAS3 3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) ports; RAID 0,1,5,6,10,50,60 | Intel® C612 controller for 8 SATA3 (6Gbps) ports; RAID 0,1,5,10 | Intel® C612 controller for 8 SATA3 (6Gbps) ports; RAID 0,1,5,10
**Connectivity** | Quad 10Gb Ethernet LAN with Intel® X540 and 10GBase-T Connector | Dual LAN with Intel® i350 Gigabit Ethernet controller; | Dual 10Gb Ethernet LAN with Intel® X540 and 10GBase-T Connector
**VGA/Audio** | AST2400 VGA | AST2400 VGA | AST2400 VGA
**Management** | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog
**Drive Bays** | 8x 2.5” 12Gbps SAS3 hot-swap drives in mobile rack and 8x 3.5” 12Gbps SATA3 hot-swap drives (Total 16x hot-swap drive bays) | 8x 3.5” hot-swap SATA3 drive bays | 8x 3.5” hot-swap SATA3 drive bays
**Peripheral Bays** | USB Support: Rear: 2x3.0 + 2x2.0, Front 2x2.0, 1x Type A, optional 1x 5.25” DVD-ROM drive | 90-degree rotatable module: 2 x 5.25” drive bays & 1 x 3.5” drive bays; Optional DVD drive | 90-degree rotatable module: 2 x 5.25” drive bays & 1 x 3.5” drive bays; Optional DVD drive
**Power Supply** | Redundant 1000W Titanium Level high-efficiency power supplies with I²C & PMBus | Redundant 920W Platinum Level high-efficiency power supplies with I²C & PMBus | Redundant 920W Platinum Level high-efficiency power supplies with I²C & PMBus
**Cooling System** | 3x 8cm hot-swap cooling fans and 2 x 8cm exhaust fans with air shroud with optimal fan speed control | 3x 8cm hot-swap cooling fans and 2 x 8cm exhaust fans with air shroud with optimal fan speed control | 3x 8cm hot-swap cooling fans and 2 x 8cm exhaust fans with air shroud with optimal fan speed control
**Form Factor** | Tower/4U Rackmount, 452 x 178 x 648mm (17.8” x 7” x 25.5”) | Tower/4U Rackmount, 453 x 178 x 648mm (17.8” x 7” x 25.5”) | Tower/4U Rackmount, 453 x 178 x 648mm (17.8” x 7” x 25.5”)

*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
## X12 HYPER-E (For Complete System Only)

Front I/O, DC Power
Optimized for 5G and Telco

Front I/O, AC Power
Optimized for 5G and Telco

### MODEL

<table>
<thead>
<tr>
<th>Processor Support</th>
<th>3rd Gen Intel® Xeon® Scalable processors</th>
<th>3rd Gen Intel® Xeon® Scalable processors</th>
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<tbody>
<tr>
<td>Key Applications</td>
<td>5G Core and Edge, Telecom Micro Data Center, AI Inference and Machine Learning, Cloud Computing</td>
<td>5G Core and Edge, Telecom Micro Data Center, AI Inference and Machine Learning, Cloud Computing</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>NEBS level 3 certified for telecommunication, Front I/O, tool-less design</td>
<td>NEBS level 3 certified for telecommunication, Front I/O, tool-less design</td>
</tr>
</tbody>
</table>

### SYS-220HE-FTNRD

- **Processor Support**: Dual Socket LGA-4189 (Socket P+) supported
- **TDP**: up to 270W, 3 UPI up to 11.2GT/s
- **Key Applications**:
  - 5G Core and Edge
  - Telecom Micro Data Center
  - AI Inference and Machine Learning
  - Cloud Computing

### SYS-220HE-FTNR

- **Processor Support**: Dual Socket LGA-4189 (Socket P+) supported
- **TDP**: up to 270W, 3 UPI up to 11.2GT/s
- **Key Applications**:
  - 5G Core and Edge
  - Telecom Micro Data Center
  - AI Inference and Machine Learning
  - Cloud Computing

### Serverboard

- **SUPER® X12DHM-6**

### Chipset

- **Intel® C621A**

### System Memory

- **32 DIMM slots**
- **Up to 8TB ECC LRDIMM, DDR4-3200MHz**
- **Up to 8TB Intel® DCPMM, DDR4-3200MHz**
- **Up to 8TB ECC RDIMM, DDR4-3200MHz**

### Expansion Slots

- **3 PCI-E 4.0 x16 DW FHFL or 6 x8 SW FHFL slot(s)**
- **PCI-E 4.0 x16 SW FHHL or 2 x8 SW FHHL slot(s)**

### Onboard Storage Controller

- **Intel® SATA**

### Connectivity

- **1x 1Gb port(s) with Aspeed 2600**
- **2x 25GbE SFP28 with Broadcom® BCM57414 (optional)**
- **2x 10GbE RJ45 with Intel® i350-AM2 (optional)**
- **4x 10GbE RJ45 with Intel® X550-AT2 (optional)**
- **10GbE SFP+ with Mellanox® CX-4 Lx EN Intel® X550-AT2 (optional)**

### VGA/Audio

- **1 VGA port**

### Management

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

### Drive Bays

- **6x 2.5” hot-swap NVMe/SATA/SAS drive bays; 6x 2.5” NVMe hybrid; Optional RAID support via RAID Controller AOC**
- **2x M.2 slots M key for SSD via PCI-E & SATA interface, 2280/22110**

### Peripheral Bays

- **None**

### Power Supply

- **1300W Redundant -48v DC Power Supplies**
- **2000W or 1200W AC redundant Titanium Level (typical 96%)**

### Cooling System

- **6x 6cm heavy duty fan(s)**
- **2U rackmount Enclosure: 436.88 x 88.9 x 574mm (17.2” x 3.5” x 22.6”)**
- **Package: 598 x 247 x 938mm (23.5’’ x 9.7’’ x 36.9’’)**

### Form Factor

- **2U rackmount**
- **Enclosure: 436.88 x 88.9 x 574mm (17.2” x 3.5” x 22.6”)**
- **Package: 598 x 247 x 938mm (23.5” x 9.7” x 36.9”)**

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**SuperServer® Solutions - June 2021**
# X12 HYPER

(For Complete System Only)

## New!
3rd Gen Intel® Xeon® Scalable processors Supported

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## Model Specifications

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
<td>Dual Socket LGA-4189 (Socket P+) supported TDP up to 270W, 3 UPI up to 11.2GT/s</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Software-Defined Storage</td>
<td>• Virtualization</td>
<td>• Virtualization</td>
</tr>
<tr>
<td></td>
<td>• AI Inference and Machine Learning</td>
<td>• Software-defined Storage</td>
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</tr>
<tr>
<td></td>
<td>• Enterprise Server</td>
<td>• Cloud Computing</td>
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<tr>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Tool-less system design for easy maintenance</td>
<td>• Flexible networking options with AIO/OCP NIC 3.0 support</td>
<td>• Tool-less system design for easy maintenance</td>
</tr>
<tr>
<td></td>
<td>• 2x 32.5” 2.5” hot-swap NVMe/SATA/SAS drive bays</td>
<td>• 12x 3.5” hot-swap NVMe/SATA/SAS drive bays</td>
<td>• 12x 3.5” hot-swap NVMe/SATA/SAS drive bays</td>
</tr>
</tbody>
</table>

## Serverboard

- **Model**: SUPER® X12DHM-6
- **Chipset**: Intel® C621A
- **System Memory (Max.)**: 32 DIMM slots
- **Expansion Slots**: Configurable PCI-E slot options up to 8 PCI-E 4.0 x8 or 4 PCI-E 4.0 x16 FH, 10.5”
- **Onboard Storage Controller**: Intel® SATA
- **Connectivity**: 2x 25GbE SFP28 with Broadcom® BCM57414 (optional), 2x 100GbE QSFP28 with Broadcom® BCM57508 (optional), 2x 10GbE RJ45 with Intel® I350-AM2 (optional), 4x 1GbE SFP with Intel® I350-AM4 (optional), 2x 10GbE RJ45 with Intel® X570-AT2 (optional), 2x 10GbE RJ45/SFP+ with Intel® X710-8M2 (optional), 4x 10GbE RJ45/SFP+ with Intel® X710-TM4 (optional), 4x 10GbE RJ45 with Intel® X710-BM1 (optional), 4x 25GbE RJ45/SFP28 with Mellanox® CX-4 Lx EN Intel® X550-AT2 (optional)
- **VGA/Audio**: Intel® SATA
- **Management**: Intel® Node Manager; KVM with dedicated LAN; SuperDoctor® 5; Watch Dog; NMI; SPM; Redfish API
- **Drive Bays**: 24x 2.5” hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC
- **Peripheral Bays**: None
- **Power Supply**: Redundant 1600W Titanium level (96%)
- **Cooling System**: 4x 8cm heavy duty fan(s)
- **Form Factor**: 2U Rackmount
- **Package**: 625 x 253 x 1154mm (24.6” x 9.96” x 45.43”)

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## Additional Features

- Redundant 1600W Titanium level (96%)
- Intel® Xeon® Scalable processors
- Dual Socket LGA-4189 (Socket P+)
- TDP up to 270W
- 3 UPI up to 11.2GT/s
- Software-Defined Storage
- AI Inference and Machine Learning
- Enterprise Server
- Cloud Computing
- Tool-less system design for easy maintenance
- Flexible networking options with AIO/OCP NIC 3.0 support
- Storage configurations up to 12x 2.5” hot-swap NVMe/SATA/SAS drive bays
- Flexible networking options with AIO/OCP NIC 3.0 support
- Tool-less system design for easy maintenance
# X12 Workstations

**NEW!**
3rd Gen
Intel® Xeon®
Scalable
processors
Supported

## Processor Support
- **SYS-740A-T**
  - 3rd Gen Intel® Xeon® Scalable processors
  - Dual Socket LGA-4189 (Socket P+) supported
  - TDP up to 270W; 3 UPI
- **SYS-730A-I**
  - 3rd Gen Intel® Xeon® Scalable processors
  - Dual Socket LGA-4189 (Socket P+) supported
  - TDP up to 270W; 3 UPI
- **SYS-540A-TR**
  - 3rd Gen Intel® Xeon® Scalable processors
  - Single Socket LGA-4189 (Socket P+)
  - TDP up to 270W; up to 11.2GT/s

## Key Applications
- **SYS-740A-T**
  - Rendering
  - CAD
  - Multimedia/Digital Content creation
  - Engineering/scientific research
- **SYS-730A-I**
  - Rendering
  - CAD
  - Multimedia/Digital Content creation
  - Engineering/scientific research
- **SYS-540A-TR**
  - Deep Learning/AI/Machine Learning Development

## Outstanding Features
- **SYS-740A-T**
  - Supports up to two double width active GPUs
  - Front accessible storage configurable up to 8x 2.5/3.5” hot-swap drive bays
  - Redundant Power Supplies
- **SYS-730A-I**
  - Compact and quiet operation
  - Supports up to two double width active GPUs
  - New front bezel with keylock for added security
- **SYS-540A-TR**
  - Versatile: Full Tower or 4U Rack mount form factor
  - Powerful: Up to 4 double-width GPUs
  - Flexible: Supports either active & passive GPUs
  - Robust: Features 7 PCI-E Gen 4 slots

## Serverboard
- **SYS-740A-T**
  - SUPER® X12DAI-N6
- **SYS-730A-I**
  - SUPER® X12DAI-N6
- **SYS-540A-TR**
  - SUPER® X12SPA-TF

## Chipset
- **SYS-740A-T**
  - Intel® C621A
- **SYS-730A-I**
  - Intel® C621A
- **SYS-540A-TR**
  - Intel® C621A

## System Memory (Max.)
- **SYS-740A-T**
  - 16 DIMM slots
  - Up to 4 TB ECC RDIMM, DDR4-3200MHz
  - Up to 4 TB ECC LRDIMM, DDR4-3200MHz
  - Up to 512GB Intel® DCPMM, DDR4-3200MHz
- **SYS-730A-I**
  - 16 DIMM slots
  - Up to 4 TB ECC RDIMM, DDR4-3200MHz
  - Up to 4 TB ECC LRDIMM, DDR4-3200MHz
  - Up to 512GB Intel® DCPMM, DDR4-3200MHz
- **SYS-540A-TR**
  - 16 DIMM slots
  - Up to 4TB ECC LRDIMM, DDR4-3200MHz

## Expansion Slots
- **SYS-740A-T**
  - 5 PCI-E 4.0 x16 FHFL slot(s)
  - PCI-E 4.0 x8 FHHL slot(s)
- **SYS-730A-I**
  - 5 PCI-E 4.0 x16 FHFL slot(s)
  - PCI-E 4.0 x8 FHHL slot(s)
- **SYS-540A-TR**
  - 7 PCI-E 3.0 x16 FHFL slot(s)

## Onboard Storage Controller
- **SYS-740A-T**
  - Intel® SATA
- **SYS-730A-I**
  - Intel® SATA
- **SYS-540A-TR**
  - Intel® C621A

## Connectivity
- **SYS-740A-T**
  - 2x 1GbE port(s)
- **SYS-730A-I**
  - 2x 1GbE port(s)

## VGA/Audio
- **SYS-740A-T**
  - 1 VGA port
- **SYS-730A-I**
  - 1 VGA port

## Management
- **SYS-740A-T**
  - SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; SSM; IPMI 2.0; Redfish API
- **SYS-730A-I**
  - SuperDoctor® 5; Watch Dog; NMI; SUM; KVM with dedicated LAN; SPM; SSM; IPMI 2.0; Redfish API

## Drive Bays
- **SYS-740A-T**
  - 8x 3.5” hot-swap SATA (SAS/NVMe optional) drive bays; Optional RAID support via RAID controller AOC
  - 4x 3.5” NVMe/SATA drive bays
- **SYS-730A-I**
  - 8x 3.5” hot-swap SATA drive bays

## Peripheral Bays
- **SYS-740A-T**
  - 3x 5.25” (optional)
- **SYS-730A-I**
  - 2x 5.25” (optional)
- **SYS-540A-TR**
  - 3x 5.25”

## Power Supply
- **SYS-740A-T**
  - Redundant 1200W Titanium level (96%)
- **SYS-730A-I**
  - 1200W Platinum level (92%)
- **SYS-540A-TR**
  - Redundant 2200W Titanium level (96%)

## Cooling System
- **SYS-740A-T**
  - 2x 8cm heavy duty fan(s)
- **SYS-730A-I**
  - 2x 12cm heavy duty fan(s)
- **SYS-540A-TR**
  - 2x 8cm heavy duty fan(s)

## Form Factor
- **SYS-740A-T**
  - 4U Tower rackmount
  - Mid-Tower rackmount
  - Full-Tower rackmount
  - Enclosure: 178 x 452 x 647 mm (7” x 17.8” x 25.5”)
  - Package: 356 x 625 x 795 mm (14” x 24.6” x 31.3”)
  - 1x 1GbE RJ45 port(s) with Intel® Ethernet Controller I210-AT
  - 1x 10GbE RJ45 port(s) with Marvell AQC113C
  - 1x 1GBE RJ45 port(s) with Realtek RTL8211F PHY (dedicated IPMI)

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**SuperServer® Solutions - June 2021**
### WORKSTATIONS

#### X11 SuperWorkstation

**Compact High-Performance**

**Model**

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-7039A-I</th>
<th>SYS-7049A-T</th>
<th>SYS-5049A-TR</th>
</tr>
</thead>
</table>

**Processor Support**

- 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.
- Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 2UPI up to 10.4 GT/s.
  
  **Note:** BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable Processors (codenamed Cascade Lake Refresh).

**Key Applications**

- 2D/3D and CAD Applications
- Digital Content Creation
- Oil and Gas Simulation
- Research Lab/National Lab

**Outstanding Features**

- Whispy quiet and compact
- Multiple GPU support
- Whisper quiet and compact
- Multiple GPU support
- Versatile Storage with M.2, U.2 and SATA support

**Serverboard Chipset**

- Intel® C621 chipset

**System Memory (Max.)*

- 16 DIMM slots; Up to 4TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM.
- Supports Intel® Optane™ DCPMM†† (128/256/512GB)

**Expansion Slots**

- 4 PCI-E 3.0 x16; 2 PCI-E 3.0 x8

**Onboard Storage Controller**

- Intel® C621 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;
- Intel® C621 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;
- Intel® C621 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10

**Connectivity**

- Dual GbE LAN from C621
- Dual GbE LAN from C621
- Single LAN with Intel® Ethernet Controller I210-AT

**VGA/Audio**

- 1 VGA D-Sub Connector

**Management**

- Intel® Node Manager, IPMI2.0, SPM, SSM, SUM, SuperDoctor® 5, Watchdog

**Drive Bays**

- 4x 3.5"S fixed drive bay, optional 4x 2.5" fixed drive bay
- 8x 3.5" hot-swap SAS/SATA drive bays (SAS requires optional RAID card)
- 8x 3.5" hot-swap SAS/SATA drive bay with SGPIO
- 90 degree rotate drive cage 3x standard 5.25" drive bay
- 1x 1U 2200W Titanium Redundant Power Supply W/PMBus
- 4x 92mm hot-swap fan(s)
- 2x 80mm rear hot-swap exhaust PWM fans
- 4U Tower

**Power Supply**

- 1200W high-efficiency Platinum Level power supply
- 1200W high-efficiency Platinum Level power supply

**Cooling System**

- 1x 12cm rear exhaust fan; 1x 12cm (front) cooling fan
- 2 Super quiet PWM chassis fan & 1 Super quiet rear fan with Optimal Fan Speed Control
- 2 Super quiet PWM chassis fan & 1 Super quiet rear fan with Optimal Fan Speed Control

**Form Factor**

<table>
<thead>
<tr>
<th>SYS-7039A-I</th>
<th>SYS-7049A-T</th>
<th>SYS-5049A-TR</th>
</tr>
</thead>
<tbody>
<tr>
<td>193 x 424 x 525mm (7.6&quot; x 16.7&quot; x 20.68&quot;)</td>
<td>178 x 452 x 648mm (7&quot; x 17.8&quot; x 25.5&quot;)</td>
<td>178 x 460 x 673mm (7&quot; x 18.1&quot; x 26.5&quot;)</td>
</tr>
</tbody>
</table>

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* Please check with your Supermicro sales representative and website for compatibility and configuration details

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.

† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

**SuperServer® Solutions - June 2021**
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-5049A-T</th>
<th>SYS-5039A-IL</th>
<th>SYS-5039A-I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support Up to 205W TDP. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>Intel® 7th/6th Gen Core i7/i5/i3 series, Intel® Celeron®, Intel® Pentium® processor Intel® Xeon® processor E3-1200 v6/v5 series Socket H4 (LGA 1151), supports up to 95W TDP</td>
<td>Intel® Xeon® W-21XX series, &lt;BR&gt;Single Socket R4 (LGA 2066), supports up to 140W</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• 2D/3D and CAD Applications &lt;BR&gt;3D Animations &lt;BR&gt;CAD/CAM/CAE &lt;BR&gt;Digital Content Creation &lt;BR&gt;3D Rendering</td>
<td>• 2D/3D and CAD Applications &lt;BR&gt;Digital Content Creation &lt;BR&gt;CAD/CAM/CAE</td>
<td>• 2D/3D and CAD Applications &lt;BR&gt;3D Simulation and Rendering &lt;BR&gt;Digital Content Creation</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Tower or 4U Rackmount System &lt;BR&gt;Versatile Storage with M.2, U.2 and SATA support &lt;BR&gt;Multi GPU support</td>
<td>• Cost effective UP platform &lt;BR&gt;Rich I/O ports &lt;BR&gt;2 PCI 32bit 5V slots for legacy AOC support</td>
<td>• Supports up to 18 cores, 36 threads and 512GB of memory &lt;BR&gt;Fast and versatile I/O and storage options &lt;BR&gt;Multi-GPU support</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X11SPA-TF</td>
<td>SUPER® X11SAE</td>
<td>SUPER® X11SRA</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C621 chipset</td>
<td>Intel® C422 chipset</td>
<td>Intel® C422 chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>64GB Unbuffered ECC/non-ECC, DDR4-2400MHz in 4 DIMM slots</td>
<td>Up to 256GB Registered ECC RDIMM, DDR4-2666MHz; Up to 512GB Registered ECC RDIMM, in 8 DIMM slots</td>
<td>Up to 256GB Registered ECC RDIMM, DDR4-2666MHz; Up to 512GB Registered ECC RDIMM, in 8 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>4 PCI-E 3.0 x16, 3 PCI-E 3.0 x8 (in x16 slot), PCI-E x16 Slot#1 shares with Slot#2, Slot#4 shares with Slot#3(NA/16,8/8), Slot#4 shares with Slot#2(NA/16,8/8), Slot#4 shares with Slot#2(NA/16,8/8)</td>
<td>2 PCI-E 3.0 x16 (x16/NA or x8/x8)</td>
<td>3 PCI-E 3.0 x16 (x8/x16/x16)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® C621 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Single LAN with Intel® Ethernet Controller I216-AT</td>
<td>Intel® C422 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10*&lt;br&gt;*RST enabled, only SATA2 to SATA5 support RAID;</td>
</tr>
<tr>
<td>Connectivity</td>
<td>N/A</td>
<td>Single LAN with Intel® PHY I219LM LAN controller</td>
<td>Single LAN with Intel® PHY I219LM LAN controller</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Aspeed AST2500 BMC</td>
<td>DVI - D port, 1 DP (DisplayPort), 1 HDMI port</td>
<td>Single LAN with Aquantia 5G LAN chip AQC108</td>
</tr>
<tr>
<td>Management</td>
<td>IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SUM, SuperDoctor® 5, Watchdog</td>
<td>AMT, SuperDoctor® 5, Watchdog</td>
<td>900W High-efficiency (80PLUS Gold) PS/2 Power Supply</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>8x 3.5” hot-swap SAS/SATA drive bay with SGIO</td>
<td>4 Fixed 3.5” drive bays; Optional 4 internal 2.5” drive bays</td>
<td>4 Fixed 3.5” drive bays; Optional 4 internal 2.5” drive bays</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>2x standard 5.25” drive bay 90 degree rotatable drive cage</td>
<td>2 external 5.25” drive bays</td>
<td>2 external 5.25” drive bays</td>
</tr>
<tr>
<td>Power Supply</td>
<td>PWS-1K25P-PQ</td>
<td>1 3.5” external device bay</td>
<td>1 3.5” external device bay</td>
</tr>
<tr>
<td>Cooling System</td>
<td>2x 80mm PWM Chassis Middle Fans; 1x 92mm PWM Rear Fan;</td>
<td>1 12cm rear exhaust fan</td>
<td>1 12cm rear exhaust fan</td>
</tr>
<tr>
<td>Form Factor</td>
<td>4U 7” (178mm) x 17.8” (452mm) x 25.5” (647mm)</td>
<td>Optional 12cm front cooling fan</td>
<td>Optional 12cm front cooling fan</td>
</tr>
<tr>
<td>* Please check with your Supermicro sales representative and website for compatibility and configuration details</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**SUPER™ C9X299-PGF**

**SUPER™ X10DAi**

**SUPER™ X10DAi**

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-5039AD-I</th>
<th>SYS-7038A-I</th>
<th>SYS-7048A-T</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Intel® Core™ X-series Processors. Socket R4 (LGA 2066), supports up to 165W TDP</td>
<td>Dual Intel® Xeon® Processor ES-2600 v4/v3 product families supported; QPI up to 9.6GT/s (up to 160W)</td>
<td>Dual Intel® Xeon® Processor ES-2600 v4/v3 product families supported; QPI up to 9.6GT/s (up to 160W)</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Professional VR and Gaming Digital Content Creation 2D/3D and CAD Applications</td>
<td>• 2D/3D and CAD Applications 3D Rendering CAD/CAM/CAE Digital Content Creation Digital Imaging</td>
<td>• 2D/3D and CAD Applications 3D Rendering CAD/CAM/CAE Digital Content Creation Digital Imaging</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• CPU and Memory Overclocking Support Multi-GPU support IPMI 2.0 Management</td>
<td>• Thunderbolt 2.0 AOC Support Support 2 double width GPUs + 1 single width graphic card 6x USB 3.0 ports Up to 160W CPU support</td>
<td>• Tower or 4U Rackmount System Thunderbolt 2.0 AOC Support Support 2 double-width + 1 single-width GPUs 8x 3.5&quot; hot-swap drive bays Up to 160W CPU support</td>
</tr>
</tbody>
</table>

**Serverboard**

SuperServer® C9X299-PGF

SuperServer® X10DAi

SuperServer® X10DAi

**Chipset**

Intel® X299 chipset

Intel® C612 Chipset

Intel® C612 Chipset

**System Memory (Max.)***

Up to 128GB Unbuffered non-ECC UDIMM, DDR4-2666MHz, in 8 DIMM slots

Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots

Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots

**Expansion Slots**

4 PCI-E 3.0 x16* and 1 PCIe3.0x1 slots

3 PCI-E 3.0 x16 (2 double-width, 1 single-width), 2 PCI-E 3.0 x8 (1 in x16 slot), 1 PCI-E 3.0 x4 (1 in x16 slot), Support Thunderbolt 2.0 AOC

3 PCI-E 3.0 x16 (2 double-width, 1 single-width), 2 PCI-E 3.0 x8 (1 in x16 slot), 1 PCI-E 3.0 x4 (1 in x16 slot), Support Thunderbolt 2.0 AOC

**Onboard Storage Controller**

6 SATA3 (6 Gbps) ports; RAID 0,1,5,10

Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10

Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10

**Connectivity**

Single LAN with Intel® Ethernet Controller I210-AT

Dual LAN with Intel® i210 Gigabit Ethernet Controller

Dual LAN with Intel® i210 Gigabit Ethernet Controller

**VGA/Audio**

1 VGA

7.1 HD Audio

7.1 HD Audio

**Management**

IPMI 2.0

NMI, SuperDoctor® 5, Watchdog

NMI, SuperDoctor® 5, Watchdog

**Drive Bays**

6 3.5" fixed drive bays and 4 2.5" fixed drive bays

4x 3.5" internal fixed drive bays; optional 4x 2.5" internal fixed drive bays

8x 3.5" hot-swap SAS/SATA drive bay

**Peripheral Bays**

2 external 5.25" drive bays

2x standard 5.25" drive bays; 1x 3.5" device bay

3x standard 5.25" drive bays

**Power Supply**

750W High-efficiency (80PLUS Gold) PS/2 Power Supply

900W Gold Level Multi-Output Power Supply

1200W Platinum Level Multi-Output Power Supply

**Cooling System**

2 12cm front PWM intake fans; 1 12cm rear PWM exhaust fan

2x 12cm (1859 RPM)

2x 2800 RPM fan; 1x 2700 RPM fan

**Form Factor**

Mid-Tower 17.9" (200mm) x 18.1" (460mm) x 19.4" (493mm)

Mid-Tower 424 x 193 x 525mm (16.7" x 7.6" x 20.68")

Tower/4U Rackmount 452 x 178 x 647mm (17.8" x 7" x 25.5")

* Please check with your Supermicro sales representative and website for compatibility and configuration details
# X12 SUPERBLADE®

## 3rd Gen Intel® Xeon® Scalable processors Supported

## New Features
- Up to 20 hot-pluggable half-height 1-socket or 2-socket blade servers
- Up to 10 hot-pluggable full-height 4-socket blade servers
- Mixing of blade servers in a single enclosure allowed

## Processor Blade
- Up to 20 hot-pluggable half-height 1-socket or 2-socket blade servers
- Up to 10 hot-pluggable full-height 4-socket blade servers
- Mixing of blade servers in a single enclosure allowed

## LED
- Power LED, Fault LED

## InfiniBand Switch
- SBE-820H/C/J/L-822: 8U SuperBlade®
  - Single 200G HDR InfiniBand switch with add-on card
- SBE-610J/C/J/L-822: 6U SuperBlade®
  - Single 100G EDR InfiniBand switch with add-on card
- SBE-414J-822: 4U SuperBlade®
  - N/A

## Ethernet Switch
- SBE-820H/C/J/L-822: 8U SuperBlade®
  - Up to 4 hot-pluggable 25G Ethernet switches
  - Up to 2 hot-pluggable 25G Ethernet switches
  - N/A
- SBE-610J/C/J/L-822: 6U SuperBlade®
  - Up to 4 hot-pluggable 25G/10G/1G Ethernet switches
  - N/A
- SBE-414J-822: 4U SuperBlade®
  - Up to 4 hot-pluggable 25G/10G/1G Ethernet switches

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

## Available Models
- SBE-820H/C/J/L-822: 8U SuperBlade®
  - 8x 2200W Titanium power supplies
  - 6x 2200W Titanium power supplies
- SBE-820H/C/J/L-622: 6U SuperBlade®
  - 4x 2200W Titanium power supplies
  - 2x 2000W DC power supplies
- SBE-820H/C/J/L-820D: 4U SuperBlade®
  - 4x 2000W DC power supplies + 4 cooling fans
- SBE-820CB/JB-422: 4x 2200W Titanium power supplies + 4x 1200W BBP modules
- SBE-610J-822: 6U SuperBlade®
  - 8x 2200W Titanium power supplies
  - 6x 2200W Titanium power supplies
- SBE-610J-622: 6U SuperBlade®
  - 4x 2200W Titanium power supplies
  - 2x 2000W DC power supplies
- SBE-610D-822: 4U SuperBlade®
  - 4x 2200W Titanium power supplies + 4x 1200W BBP modules
- SBE-414J-822: 4U SuperBlade®
  - 4x 2200W Titanium power supplies

## Rack Unit
- 8U
- 6U
- 4U

## Dimensions (H x W x D)
- 8U: 356 x 447 x 813mm (14” x 17.6” x 32”)
- 6U: 267 x 447 x 813mm (10.5” x 17.6” x 32”)
- 4U: 178 x 447 x 813mm (7” x 17.6” x 32”)

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**SuperServer® Solutions - June 2021**
### SuperServer® X12 SUPERBLADE®

**For Complete System Only**

#### 3rd Gen Intel® Xeon® Scalable processors Supported

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SBI-420P-1T3N</th>
<th>Liquid Cooling (OEM SKU*)</th>
<th>SBI-420P-1C2N</th>
<th>SBI-420P-4T2N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>3rd Gen Intel® Xeon® Scalable processors; Dual Socket supported TDP up to 220W; 3 UPI</td>
<td>3rd Gen Intel® Xeon® Scalable processors; Dual Socket supported TDP up to 270W; 3 UPI</td>
<td>3rd Gen Intel® Xeon® Scalable processors; Dual Socket supported TDP up to 220W; 3 UPI</td>
<td>3rd Gen Intel® Xeon® Scalable processors; Dual Socket supported TDP up to 165W; 3 UPI</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• HPC, Hybrid Cloud, EDA, Virtualization, Health, Financial Services</td>
<td>• HPC, Hybrid Cloud, EDA, Virtualization, Health, Financial Services</td>
<td>• HPC, Hybrid Cloud, EDA, Virtualization, Health, Financial Services</td>
<td>• HPC, Hybrid Cloud, EDA, Virtualization, Health, Financial Services</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Air cooling</td>
<td>• Direct liquid cooling</td>
<td>• High performance, high density</td>
<td>• Value and density optimized</td>
</tr>
<tr>
<td>• Advanced networking (InfiniBand, OmniPath)</td>
<td></td>
<td>• Advanced networking (InfiniBand, OmniPath)</td>
<td>• Advanced networking (InfiniBand, OmniPath)</td>
<td>• High performance</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER•® B12DPT-6</td>
<td>SUPER•® B12DPT-6</td>
<td>SUPER•® B12DPT-6</td>
<td>SUPER•® B12DPT-6</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
</tr>
<tr>
<td>System Memory (Max.)</td>
<td>16 DIMM slots Up to 4 TB ECC RDIMM, DDR4-3200MHz Up to 4 TB ECC RDIMM, DDR4-3200MHz Up to 2 TB Intel® DCPMM, DDR4-3200MHz</td>
<td>16 DIMM slots Up to 4 TB ECC RDIMM, DDR4-3200MHz Up to 4 TB ECC RDIMM, DDR4-3200MHz Up to 2 TB Intel® DCPMM, DDR4-3200MHz</td>
<td>16 DIMM slots Up to 4 TB ECC RDIMM, DDR4-3200MHz Up to 4 TB ECC RDIMM, DDR4-3200MHz Up to 2 TB Intel® DCPMM, DDR4-3200MHz</td>
<td>16 DIMM slots Up to 512GB VLP RDIMM, DDR4-3200MHz</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>1 PCI-E 4.0 x16 slot for mezzanine option</td>
<td>1 PCI-E 4.0 x16 slot for mezzanine option</td>
<td>1 PCI-E 4.0 x16 slot for mezzanine option</td>
<td>N/A</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® PCH 3.0 SATA Controller</td>
<td>Intel® PCH 3.0 SATA Controller</td>
<td>Broadcom® 3108 SAS Controller</td>
<td>Intel PCH 3.0 SATA Controller</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>One VGA connector and one COM port on KVM dongle</td>
<td>One VGA connector and one COM port on KVM dongle</td>
<td>One VGA connector and one COM port on KVM dongle</td>
<td>KVM over IP, Virtual Media over LAN</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>1x M.2 NVMe 2x U.2 NVMe/SATA and 1x SATA Optional mezzanine 4x M.2 NVMe</td>
<td>1x M.2 NVMe 2x U.2 NVMe/SATA Optional mezzanine 4x M.2 NVMe</td>
<td>1x M.2 NVMe 2x U.2 NVMe/SAS/SATA Optional mezzanine 4x M.2 NVMe</td>
<td>1x M.2 NVMe 2x U.2 NVMe/SATA</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Up to 8x 2200W Titanium Level power supplies</td>
<td>Up to 8x 2200W Titanium Level power supplies</td>
<td>Up to 8x 2200W Titanium Level power supplies</td>
<td>Up to 4x 2200W Titanium Level power supplies</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Up to 8x fans 3x System fan modules (optional)</td>
<td>Up to 8x fans 3x System fan modules</td>
<td>Up to 8x fans 3x System fan modules (optional)</td>
<td>4x PSU fans 3x System fan modules</td>
</tr>
<tr>
<td>Form Factor</td>
<td>8U Enclosure Up to 20x half-height blades</td>
<td>8U Enclosure Up to 20x half-height blades</td>
<td>8U Enclosure Up to 20x half-height blades</td>
<td>4U Enclosure Up to 14x blades</td>
</tr>
</tbody>
</table>

*Contact Supermicro for more information*
### X12 SUPERBLADE®

(For Complete System Only)

**6U/10-Blade w/ 2 SAS/NVMe**

**6U/10-Blade w/ 2 SATA/NVMe**

**6U/10-Blade w/ 3 SAS or 2 NVMe**

**6U/10-Blade w/ 3 SATA/NVMe**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SBI-610P-1C2N</th>
<th>SBI-610P-1T2N</th>
<th>SBI-620P-1C3N</th>
<th>SBI-620P-1T3N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>3rd Gen Intel® Xeon® Scalable processor; Single Socket supported; TDP up to 270W</td>
<td>3rd Gen Intel® Xeon® Scalable processor; Single Socket supported; TDP up to 270W</td>
<td>3rd Gen Intel® Xeon® Scalable processors; Dual Socket supported; TDP up to 270W</td>
<td>3rd Gen Intel® Xeon® Scalable processors; Dual Socket supported; TDP up to 270W</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• HPC, Hybrid Cloud, EDA, Virtualization, Health, Financial Services</td>
<td>• HPC, Hybrid Cloud, EDA, Virtualization, Health, Financial Services</td>
<td>• HPC, Hybrid Cloud, EDA, Virtualization, Health, Financial Services</td>
<td>• HPC, Hybrid Cloud, EDA, Virtualization, Health, Financial Services</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• High performance 15 with max memory footprint</td>
<td>• High performance 15 with max memory footprint</td>
<td>• High performance 25 with max memory footprint</td>
<td>• High performance 25 with max memory footprint</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPERO® B12SPE</td>
<td>SUPERO® B12SPE</td>
<td>SUPER® B12DPE</td>
<td>SUPER® B12DPE</td>
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<tr>
<td>Chipset</td>
<td>Intel C621A</td>
<td>Intel C621A</td>
<td>Intel C621A</td>
<td>Intel C621A</td>
</tr>
<tr>
<td>System Memory (Max.)</td>
<td>16 DIMM slots; Up to 4TB Intel® DCPMM, DDR4-3200MHz; Up to 4TB ECC LRDIMM, DDR4-3200MHz; Up to 4TB ECC RDIMM, DDR4-3200MHz</td>
<td>16 DIMM slots; Up to 4TB Intel® DCPMM, DDR4-3200MHz; Up to 4TB ECC LRDIMM, DDR4-3200MHz; Up to 4TB ECC RDIMM, DDR4-3200MHz</td>
<td>32 DIMM slots; Up to 8TB Intel® DCPMM, DDR4-3200MHz; Up to 8TB ECC LRDIMM, DDR4-3200MHz; Up to 8TB ECC RDIMM, DDR4-3200MHz</td>
<td>32 DIMM slots; Up to 8TB Intel® DCPMM, DDR4-3200MHz; Up to 8TB ECC LRDIMM, DDR4-3200MHz; Up to 8TB ECC RDIMM, DDR4-3200MHz</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>2 PCI-E 4.0 x16 slots for high-speed networking mezzanine connector</td>
<td>2 PCI-E 4.0 x16 slots for high-speed networking mezzanine connector</td>
<td>1 PCI-E 4.0 x16 slot for high-speed networking mezzanine connector</td>
<td>1 PCI-E 4.0 x16 slot for high-speed networking mezzanine connector</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Broadcom 3108 SAS Controller</td>
<td>Intel PCH 3.0 SATA Controller</td>
<td>Broadcom 3108 SAS Controller</td>
<td>Intel PCH 3.0 SATA Controller</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Dual-port 25GbE LOM Mezzanine option for 2x25GbE</td>
<td>Dual-port 25GbE LOM Mezzanine option for 2x25GbE</td>
<td>Dual-port 25GbE LOM Mezzanine option for 2x25GbE</td>
<td>Dual-port 25GbE LOM Mezzanine option for 2x25GbE</td>
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<tr>
<td>VGA/Audio</td>
<td>KVM over IP, Virtual Media over LAN</td>
<td>KVM over IP, Virtual Media over LAN</td>
<td>KVM over IP, Virtual Media over LAN</td>
<td>KVM over IP, Virtual Media over LAN</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>2x U.2 NVMe/SAS/SATA 1x M.2 NVMe/SATA</td>
<td>2x U.2 NVMe/SATA 1x M.2 NVMe/SATA</td>
<td>2x U.2 NVMe/SAS/SATA 1x M.2 NVMe</td>
<td>3x U.2 NVMe/SATA</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Power Supply</td>
<td>Up to 8x 2200W Titanium Level power supplies</td>
<td>Up to 8x 2200W Titanium Level power supplies</td>
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<td>Up to 8x 2200W Titanium Level power supplies</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Up to 8x fans</td>
<td>Up to 8x fans</td>
<td>Up to 8x fans</td>
<td>Up to 8x fans</td>
</tr>
<tr>
<td>Form Factor</td>
<td>6U Enclosure Up to 10x blades</td>
<td>6U Enclosure Up to 10x blades</td>
<td>6U Enclosure Up to 10x blades</td>
<td>6U Enclosure Up to 10x blades</td>
</tr>
</tbody>
</table>
## Overview

**New! 3rd Gen Intel® Xeon® Scalable processors Supported**

### Key Applications
- High Performance Computing
- AI/Deep Learning Training
- Rendering
- Virtualization
- Scientific Virtualization
- AI/Deep Learning Training

### Outstanding Features
- High density 4U system with NVIDIA® HGX™ A100 8-GPU
- Highest GPU communication using NVIDIA® NVLINK™ + NVIDIA® NVSwitch™
- 8 NIC for GPU direct RDMA (1:1 GPU Ratio)
- 4 NVMe for GPU direct storage
- 2 M.2 NVMe and SATA
- AIO/M/OCP 3.0 Support

## Serverboard Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-420GP-TNAR</th>
<th>SYS-420GP-TNAR+</th>
<th>SYS-740GP-TNRT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
</tr>
<tr>
<td>Dual Socket LG-4189 (Socket P+) supported</td>
<td>Dual Socket LG-4189 (Socket P+) supported</td>
<td>Dual Socket LG-4189 (Socket P+) supported</td>
<td></td>
</tr>
<tr>
<td>TDP up to 270W; 3 UPI up to 11.2GT/s</td>
<td>TDP up to 270W; 3 UPI up to 11.2GT/s</td>
<td>TDP up to 270W; 3 UPI up to 11.2GT/s</td>
<td></td>
</tr>
</tbody>
</table>

- **4U HGX A100 8-GPU**
- **4U 10-GPU**
- **4U 4-GPU**

### Serverboard

- **SUPER® X12DGO-6**
- **SUPER® X12DPG-OA6**
- **SUPER® X12DPG-QT**

### Chipset
- Intel® C621A

### System Memory (Max.)
- 16 DIMM slots
- Up to 8TB ECC RDIMM, DDR4-3200MHz

### Expansion Slots
- 10 PCI-E 4.0 X16 LP Slots

### Onboard Storage Controller
- Intel® SATA

### Connectivity
- 2x 10GbE RJ45 with Intel® X550-AT2 (optional)
- 2x 1Gbe RJ45 port(s) with Intel® Ethernet Controller i350
- 2x 10GbE RJ45 port(s)

### VGA/Audio
- 1 VGA port

### Management
- SuperDoctor® 5; Watch Dog; NMI; SUM; Intel® Node Manager; SSM; IPMI 2.0; Redfish API

### Drive Bays
- 6x 2.5" hot-swap NVMe/SATA/SAS drive bays;
- 16x 2.5" hot-swap SATA/SAS, 8x 2.5" Hot-swap NVMe drive bays;
- 8x 3.5" hot-swap NVMe/SATA/SAS Support drive bays; 8x 2.5" NVMe hybrid;

### Peripheral Bays
- None

### Power Supply
- **-TNAR**: Redundant 2200W Titanium level (96%)
- **-TNAR+**: Redundant 3000W Titanium level (96%)
- Redundant 2000W Titanium level (80%)
- 2200W Titanium level (96%)

### Cooling System
- 4 heavy duty fan(s)

### Form Factor
- 4U rackmount
- Enclosure: 446 x 174 x 900mm (17.6” x 6.9” x 35.4”)
- Package: 695 x 750 x 1140mm (27.4” x 29.5” x 44.9”)
- Full-Tower rackmount
- Enclosure: 178 x 460 x 673mm (7” x 18.1” x 26.5”)
- Package: 685.8 x 322.6 x 952.5mm (27” x 12.7” x 37.5”)

**SUPER® Solutions - June 2021**
### 3rd Gen Intel® Xeon® Scalable processors Supported

**NEW!**

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### Key Applications

- Scientific Virtualization
- High Performance Computing
- VDI
- AI/Deep Learning Training

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### Outstanding Features

- Dual Socket LG-4189 (Socket P+) supported
- Processor Support
  - TDP up to 270W; 3 UPI up to 11.2GT/s
  - TDP up to 220W; 3 UPI up to 11.2GT/s

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### Serverboard

- **SUPER® X12DPG-AR**
- **SUPER® X12DGQ-R**

---

### Chipset

- Intel® C621A
- Intel® C621A

---

### System Memory (Max.)

- 16 DIMM slots
- Up to 4TB ECC LRDIMM, DDR4-3200MHz
- Up to 4TB ECC RDIMM, DDR4-3200MHz
- 16 DIMM slots
- Up to 4TB ECC LRDIMM, DDR4-3200MHz
- Up to 4TB ECC RDIMM, DDR4-3200MHz

---

### Expansion Slots

- 6 PCI-E 4.0 x16 FHFL Slots
- 2 PCI-E 4.0 x8 Slots or PCI-E 4.0 x16 slot
- PCI-E 4.0
- 4 PCI-E 4.0 x16 FHFL Slots, 2 PCI-E 4.0 x16 LP Slots

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### Onboard Storage Controller

- Intel® SATA
- Intel® SATA

---

### Connectivity

- via AIOM
- 2x 10GbE RJ45 port(s)

---

### VGA/Audio

- 1 VGA port
- 1 VGA port

---

### Management

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

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### Drive Bays

- 10x 2.5" hot-swap NVMe/SATA/SAS drive bays; 2x 2.5" NVMe dedicated;
- 2x 2.5" hot-swap NVMe/SATA; 2x fixed SATA drive bays; 2x 2.5" NVMe dedicated;

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### Peripheral Bays

- None
- None

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### Power Supply

- Redundant 2600W Titanium level (96%)
- Redundant 2000W Titanium level (96%)

---

### Cooling System

- 5 heavy duty fan(s)
- 9 heavy duty fan(s)

---

### Form Factor

- 2U rackmount
  - Enclosure: 437 x 89 x 787mm (17.2" x 3.5" x 31")
  - Package: 279.4 x 673.1 x 1130.3mm (26.5" x 11" x 44.5")
- 1U rackmount
  - Enclosure: 437 x 43 x 894mm (17.2" x 1.7" x 35.2")
  - Package: 203.2 x 609.6 x 1168.4mm (24" x 8" x 46")
### MODEL | SYS-1019GP-TT | SYS-5019GP-TT | SYS-1029GP-TR
--- | --- | --- | ---
**Processor Support** | 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support 205W. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh). | 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support 205W. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh). | 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up To 205W TDP, 3 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh). |
**Key Applications** | - HPC cluster computer nodes | - HPC cluster computer nodes | - 2D/3D and CAD Applications, 3D Rendering, Astrophysics, Chemistry, Cloud and Virtualization needs, Cloud Computing |
**Outstanding Features** | - 3x 3.5” SAS/SATA drive bays | - 3x 3.5” SAS/SATA drive bays | - 4 PCI-E x16 center right-hand slot, 1 PCI-E x16 left riser slot, 1 PCI-E x16 right riser slot |
**Serverboard** | SUPER® X11SPG-TF | SUPER® X11SPG-TF | SUPER® X11DPG-SN |
**Chipset** | Intel® C621 chipset | Intel® C621 chipset | Intel® C621 chipset |
**System Memory (Max.)** | Up to Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots | Up to Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots | 16 DIMM slots; Up to 4TB DDR4-2933 MHz* with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB) |
**Expansion Slots** | 1 PCI-E 3.0 x16 Center Right Hand Slot, 1 PCI-E 3.0 x16 Left Riser Slot, 1 PCI-E 3.0 x16 Right Riser Slot | 1 PCI-E 3.0 x16 Center Right Hand Slot, 1 PCI-E 3.0 x16 Left Riser Slot, 1 PCI-E 3.0 x16 Right Riser Slot | 4 PCI-E x3.0 x16; 1 PCI-E 3.0 x8 (in x16) low profile slot |
**Onboard Storage Controller** | Intel® C621 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10; | Intel® C621 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10; | Intel® C621 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; |
**Connectivity** | 2x 10GBase-T ports; Intel® X540 10GBase-T | 2x 10GBase-T ports; Intel® X540 10GBase-T | N/A |
**VGA/Audio** | Aspeed AST2500 BMC | Aspeed AST2500 BMC | Aspeed AST2500 BMC |
**Management** | Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog | Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog | Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog |
**Drive Bays** | 6x 2.5” hot-swap SAS/SATA drive bay | 3x 3.5” hot-swap SAS/SATA | 2x 2.5” hot-swap NVMe/SAS/SATA drive bays; 2x 2.5” hot-swap SAS/SATA drive bays |
**Peripheral Bays** | 1x slim DVD-ROM drive bay 1x USB + COM port tray | N/A | N/A |
**Power Supply** | 1400W Platinum Level high-efficiency power supplies with 2I2C & PMBus | 1400W Platinum Level high-efficiency power supplies with 2I2C & PMBus | 1600W Platinum level efficiency redundant power supplies |
**Cooling System** | 8x 4cm high-performance counter-rotating PWM fans with optional fan speed control; | 8x 4cm high-performance counter-rotating PWM fans with optional fan speed control; | 16 x 4cm heavy duty counter-rotating fans with air shroud & optimal fan speed control |
**Form Factor** | 1U 17.2” (437mm) x 1.7” (43mm) x 28.5” (724mm) | 1U 17.2” (437mm) x 1.7” (43mm) x 28.2” (716mm) | 1U 17.2” (437mm) x 1.7” (43mm) x 30.6” (777 mm) |

* Please check with your Supermicro sales representative and website for compatibility and configuration details

† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
## GPU

### SuperServer 2U Solutions - June 2021

#### X11 GPU

**Model:** X11GPU 2U

**8 V100 GPUs in 4U**

**8 Tesla P100 GPUs in 4U**

### Key Applications
- 3D Rendering
- Astrophysics
- Chemistry
- Cloud and virtualization needs
- Cloud computing
- Artificial Intelligence
- Big Data analytics
- High-performance computing
- Research lab/National Lab
- Astrophysics
- Business intelligence
- Support up to 205W CPU
- Support 8 Tesla P100 with 160GB/s NVLINK
- Support up to 205W CPU
- Support GPU Direct RDMA
- Support 8 NVMe SSD
- Support up to 10.4 GT/s

### Outstanding Features
- 10x 2.5” hot-swap drive bays
- 16 DIMM sockets
- GPU health monitoring with fan speed control
- High-density, enterprise performance, cost-effective
- Supports up to 205W CPU
- Supports 8 Tesla P100 with 300GB/s NVLINK
- Supports up to 205W CPU
- Supports Gem5 x16 (GPU tray for GPU Direct RDMA)
- Supports Gem5 x16 (CPU tray)
- Supports up to 205W CPU

### Serverboard
- **Model:** SUPER® X11DPG-5N
- **Chipset:** Intel® C621 chipset
- 16 DIMM slots; Up to 4TB DDR4-2933 MHz†
- with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DC PMM™
- (128/256/512GB)
- 6 PCI-E x16 slots; 1 PCI-E x8 (in x16) low profile slot
- Intel® C621 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10
- 2x 10GBase-T ports; Intel® X540 10GBase-T
- N/A
- Aspeed AST2500 BMC
- Aspeed AST2500 BMC
- Aspeed AST2500 BMC
- Intel® Node Manager, IPI2M.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
- 8x 2.5” hot-swap SAS/SATA drive bays; 2x 2.5” hot-swap NVMe/SAS drive bays
- N/A
- N/A
- 24 DIMM slots; Up to 6TB DDR4-2933 MHz†
- with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DC PMM™
- (128/256/512GB)
- 4 x PCI-E Gen3 x16 (GPU tray for GPU Direct RDMA); 2 x PCI-E Gen3 x16 (CPU tray)
- Intel® C621 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10
- Intel® C621 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10
- Intel® C621 chipset
- Intel® C621 chipset
- Intel® C621 chipset

### Chipset
- **Model:** SUPER® X11DGO-T
- **Chipset:** Intel® C621 chipset
- 24 DIMM slots; Up to 6TB DDR4-2933 MHz†
- with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DC PMM™
- (128/256/512GB)
- 4 x PCI-E Gen3 x16 (GPU tray for GPU Direct RDMA); 2 x PCI-E Gen3 x16 (CPU tray)
- Intel® C621 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10
- Intel® C621 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10
- Intel® C621 chipset
- Intel® C621 chipset
- Intel® C621 chipset

### Power Supply
- **Model:** SUPER® X11DPG-5N
- **Power Supply:** 2000W (2+2) Redundant Titanium Level Power Supplies with PMBus
- Support 8 NVMe SSD
- Support up to 205W CPU
- Support 8 Tesla P100 with 160GB/s NVLINK
- Support up to 205W CPU
- Supports 8 NVMe SSD
- Support GPU Direct RDMA
- Support 8 Tesla P100 with 160GB/s NVLINK
- Support up to 205W CPU
- Support GPU Direct RDMA
- Support 8 Tesla P100 with 160GB/s NVLINK
- Support up to 205W CPU

### Cooling System
- **Model:** SUPER® X11DPG-5N
- **Cooling System:** 8x 92mm Heavy Duty Fans with optimal fan speed control
- 8x 92mm Cooling Fans
- 4U Rackmount; Enclosure: 447 x 178 x 805mm (17.6” x 7.0” x 31.7”)
- 4U Rackmount; Enclosure: 447 x 178 x 805mm (17.6” x 7.0” x 31.7”)
- 4U Rackmount; Enclosure: 447 x 178 x 805mm (17.6” x 7.0” x 31.7”)
- Net Weight: 80lbs (36.29kg)
- Net Weight: 80lbs (36.29kg)
- Net Weight: 80lbs (36.29kg)

### Management
- **Model:** SUPER® X11DPG-5N
- **Management:** IPMI2.0.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
- 8x 2.5” hot-swap SAS/SATA drive bays; 2x 2.5” hot-swap NVMe/SAS drive bays
- 16x 2.5” Hot-swap SATA/SAS drives; Supports 8 NVMe Drives
- N/A
- N/A
- N/A
- 16x 2.5” Hot-swap SATA/SAS drives; Supports 8 NVMe Drives
- N/A
- N/A
- N/A

### Storage
- **Model:** SUPER® X11DPG-5N
- **Storage:** 16x 2.5” Hot-swap SAS/SATA drive bays; 2x 2.5” Hot-swap NVMe/SAS drive bays
- N/A
- N/A
- N/A
- 16x 2.5” Hot-swap SATA/SAS drives; Supports 8 NVMe Drives
- N/A
- N/A
- N/A

### Form Factor
- **Model:** SUPER® X11DPG-5N
- **Form Factor:** 2U 17.2” (437mm) x 3.5” (89 mm) x 31” (787 mm)
- Form Factor: 2U 17.2” (437mm) x 3.5” (89 mm) x 31” (787 mm)
- Form Factor: 2U 17.2” (437mm) x 3.5” (89 mm) x 31” (787 mm)
- 447 x 178 x 805mm (17.6” x 7.0” x 31.7”)
- 447 x 178 x 805mm (17.6” x 7.0” x 31.7”)
- 447 x 178 x 805mm (17.6” x 7.0” x 31.7”)
- Gross Weight: 135lbs (61.23kg)
- Gross Weight: 135lbs (61.23kg)
- Gross Weight: 135lbs (61.23kg)
- Net Weight: 80lbs (36.29kg)
- Net Weight: 80lbs (36.29kg)
- Net Weight: 80lbs (36.29kg)

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* Please check with your Supermicro sales representative and website for compatibility and configuration details

† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-4029GP-TRT</th>
<th>SYS-4029GP-TRT2</th>
<th>SYS-4029GP-TRT3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 3 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 3 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 3 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• 3D Rendering &amp; 3D Rendering</td>
<td>• 3D Rendering &amp; 3D Rendering</td>
<td>• Artificial Intelligence &amp; Deep Learning Training</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• 24 DIMM sockets 2x 2.5&quot; SATA drives Support up to 8 GPUs Dual root system Optimized cooling with no GPU pre-heat</td>
<td>• 24 DIMM sockets 2x 2.5&quot; SATA drives Support up to 8 GPUs Dual root system Optimized cooling with no GPU pre-heat</td>
<td>• Supports 8 GPU under one root &amp; cascade mode Optimized for GPU Direct RDMA Support up to 8 GPUs 24x 2.5&quot; hot-swap drive bays 24 DIMM sockets Optimized cooling with no GPU pre-heat Single root system (cascade mode)</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X11DPG-OT-CPU</td>
<td>SUPER® X11DPG-OT-CPU</td>
<td>SUPER® X11DPG-OT-CPU</td>
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<td><strong>Chipset</strong></td>
<td>Intel® C622 chipset</td>
<td>Intel® C622 chipset</td>
<td>Intel® C622 chipset</td>
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<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB)</td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB)</td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB)</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>8 x PCI-E Gen 3.x 16x support up to 8 double width GPU 2 x PCI-E Gen 3.x 8x 1 x PCI-E Gen 2.x 4x</td>
<td>11 PCI-E 3.0 x16 (FH, FL); 1 PCI-E 3.0 x8 (FH, FL) in x16 slot;</td>
<td>11 PCI-E 3.0 x16 (FH, FL); 1 PCI-E 3.0 x8 (FH, FL) in x16 slot;</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C622 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C622 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C622 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>2x 10GBase-T ports; Intel® X540 10GbE Base-T</td>
<td>2x 10GBase-T ports; Intel® X540 10GbE Base-T</td>
<td>2x 10GBase-T ports; Intel® X540 10GbE Base-T</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>1x VGA, Intel® Aspeed AST2500 BMC</td>
<td>1x VGA, Intel® Aspeed AST2500 BMC</td>
<td>1 VGA, 1 Aspeed AST2500 BMC</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPMM, SSM, SUM, SuperDoctor® 5, Watchdog</td>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPMM, SSM, SUM, SuperDoctor® 5, Watchdog</td>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPMM, SSM, SUM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>24x 2.5&quot; Hot-swap SATA/SAS drives</td>
<td>24x 2.5&quot; Hot-swap SATA/SAS drives</td>
<td>22x 2.5&quot; SATA/SAS drive bays; 2x 2.5&quot; NVMe/ SATA/SAS drive bays</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>4 x 2000W Redundant Titanium Level high-efficiency power supplies with I2C &amp; PMBus 8x 92mm heavy duty counter-rotating fans with air shroud &amp; optimal fan speed control</td>
<td>4 x 2000W Redundant Titanium Level high-efficiency power supplies with I2C &amp; PMBus 8x 92mm heavy duty counter-rotating fans with air shroud &amp; optimal fan speed control</td>
<td>4 x 2000W Redundant (2+2) Titanium Level high-efficiency power supplies 8x 92mm heavy duty counter-rotating fans with air shroud &amp; optimal fan speed control</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>8x 92mm heavy duty counter-rotating fans with air shroud &amp; optimal fan speed control</td>
<td>8x 92mm heavy duty counter-rotating fans with air shroud &amp; optimal fan speed control</td>
<td>8x 92mm heavy duty counter-rotating fans with air shroud &amp; optimal fan speed control</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>437 x 178 x 737mm (17.2&quot; x 7.0&quot; x 29&quot;)</td>
<td>437 x 178 x 737mm (17.2&quot; x 7.0&quot; x 29&quot;)</td>
<td>4U</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
Processor Support

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.</td>
<td>Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 3 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
</tr>
<tr>
<td>Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 3 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key Applications

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Artificial Intelligence Deep Learning Inference Video Transcoding.</td>
<td>• Scientific Virtualization High Performance Computing High-End GPU workstation Bio-Informatics Machine Learning Computer Aided Design</td>
<td></td>
</tr>
</tbody>
</table>

Outstanding Features

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Support up to 20 GPUs 24x 3.5&quot; Hot-swap drive bays 24 DIMM sockets Optimized cooling with no GPU pre-heat.</td>
<td>• Support up to 4 GPUs/Coprocessors 2200W Redundant Titanium Level high-efficiency power supplies 16 DIMM slots 8 Hot-Swap 3.5&quot; SATA/SAS Drives 7.1 HD Audio Header</td>
<td></td>
</tr>
</tbody>
</table>

Serverboard

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPER® X11DPG-OT-CPUX11DPG-OT-CPU</td>
<td>SUPER® X11DPG-OT-CPUX11DPG-OT-CPU</td>
<td></td>
</tr>
</tbody>
</table>

Chipset

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® C622 chipset</td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
</tr>
</tbody>
</table>

System Memory (Max.)*

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
<td>16 DIMM slots; Up to 4TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
<td></td>
</tr>
</tbody>
</table>

Expansion Slots

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 PCI-E 3.0 x16 support up to 20 single width GPU; 1 PCI-E 3.0 x8 (FH, FL in x16 slot)</td>
<td>6 PCI-E 3.0 x16 Slots; 1 PCI-E x4(in x8 slot)</td>
<td></td>
</tr>
</tbody>
</table>

Onboard Storage Controller

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® C622 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C621 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td></td>
</tr>
</tbody>
</table>

Connectivity

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2x 10GBase-T ports; Intel® X540 10GBase-T</td>
<td>2 10GBase-T ports; Intel® X550 10GBase-T</td>
<td></td>
</tr>
</tbody>
</table>

VGA/Audio

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x VGA, Aspeed AST2500 BMC</td>
<td>Aspeed AST2500</td>
<td>Aspeed AST2500</td>
</tr>
</tbody>
</table>

Management

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Node Manager, IPMI Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, SPM, SSM, SUM, SuperDoctor™ 5, Watchdog</td>
<td>Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSM; SUM; SuperDoctor™ 5;</td>
<td></td>
</tr>
</tbody>
</table>

Drive Bays

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>24x 3.5&quot; Hot-swap drives</td>
<td>8 Hot-swap 3.5&quot; Drive Bays; (2x SAT3 ports default)</td>
<td>8 Hot-swap 3.5&quot; Drive Bays; (2x SAT3 ports default)</td>
</tr>
</tbody>
</table>

Peripheral Bays

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Power Supply

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000W (2+2) redundant Titanium Level (96%+) power supplies</td>
<td>2200W redundant Titanium Level power supplies</td>
<td></td>
</tr>
</tbody>
</table>

Cooling System

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>8x 92mm RPM Hot-Swappable Cooling Fans</td>
<td>4 heavy duty fans, 4 exhaust fans, and 2 active heat sink w/ Optimal Fan Speed Control</td>
<td></td>
</tr>
</tbody>
</table>

Form Factor

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-6049GP-TRT</th>
<th>SYS-7049GP-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>4U Rackmount; Enclosure: 437 x 178 x 737mm (17.2” x 7.0” x 29”) Gross Weight: 135lbs (61.23kg) Net Weight: 80lbs (36.29kg)</td>
<td>4U Rackmount/Workstation 462 x 178 x 673mm (18.2” x 7.0” x 26.5”)</td>
<td></td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details

† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-9029GP-TNVRT</th>
<th>SYS-1018GR-T</th>
<th>SYS-5018GR-T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 3UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>Intel® Xeon® Processor E5-1600 V3 Intel® Xeon® processor E5-2600 V3</td>
<td>Intel® Xeon® Processor E5-1600 V3 Intel® Xeon® processor E5-2600 V3</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Artificial Intelligence Deep Learning Training High Performance Computing Autonomous Vehicle Technology</td>
<td>• HPC cluster computer nodes</td>
<td>• HPC cluster computer nodes</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• NVSwitch &amp; NVLink Based Performance Support up to 16 GPUs Supports NVLink and NVSwitch technologies 16 NVMe 2.5” hot-swap drive bays 16 PCIe Gen 3.0 x16 LP slots for RDMA via EDR</td>
<td>• 3x 3.5” SAS/SATA drive bays 512GB DDR3 SDRAM 1400W Platinum Level high-efficiency power supply IPMI 2.0 + KVM with dedicated LAN UID LED</td>
<td>• 3x 3.5” SAS/SATA drive bays 512GB DDR3 SDRAM 1400W Platinum Level high-efficiency power supply IPMI 2.0 + KVM with dedicated LAN UID LED</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X11DPG-HGX2</td>
<td>SUPER® X10SRG-F</td>
<td>SUPER® X10SRG-F</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C621 chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz* with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
<td>Up to 512GB Registered ECC, DDR4-2133MHz in 8 DIMM slots</td>
<td>Up to 512GB Registered ECC, DDR4-2133MHz in 8 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>16 PCI-E 3.0 x16 on MB for RDMA via IB EDR; 2 PCI-E 3.0 x16 on MB</td>
<td>2 PCI-E 3.0 x16; 1 PCI-E 3.0 x8;</td>
<td>2 PCI-E 3.0 x16; 1 PCI-E 3.0 x8;</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® C621 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Dual LAN with 10GBase-T with Intel® X540 10GBe Controller</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>1x VGA, Aspeed AST2500 BMC</td>
<td>1x Intel® Node Manager; IPMI2.0; NMI; SMCBU and SMM; SuperDoctor III; Watchdog</td>
<td>1x Intel® Node Manager; IPMI2.0; NMI; SMCBU and SMM; SuperDoctor III; Watchdog</td>
</tr>
<tr>
<td>Management</td>
<td>1x Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor* 5, Watchdog</td>
<td>1x slim DVD-ROM drive bay 1x USB + COM port tray</td>
<td>1x slim DVD-ROM drive bay 1x USB + COM port tray</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>16 hot-swap NVMe 2.5” drive bays; 6 hot-swap SATA 2.5” drive bays</td>
<td>3x 3.5” hot-swap SAS/SATA</td>
<td>3x 3.5” hot-swap SAS/SATA</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>1x slim DVD-ROM drive bay 1x USB + COM port tray</td>
<td>1x slim DVD-ROM drive bay 1x USB + COM port tray</td>
</tr>
<tr>
<td>Power Supply</td>
<td>6x 3000W Redundant (5+1) Titanium Level Power Supplies</td>
<td>1400W Redundant Platinum Level high-efficiency power supplies with I2C &amp; PMBus</td>
<td>1400W Redundant Platinum Level high-efficiency power supplies with I2C &amp; PMBus</td>
</tr>
<tr>
<td>Cooling System</td>
<td>6x 80mm Hot-swap PWM Fans; 8x 92mm hot-swap fans</td>
<td>8x 4cm high-performance counter-rotating PWM fans with optimal fan speed control;</td>
<td>8x 4cm high-performance counter-rotating PWM fans with optimal fan speed control;</td>
</tr>
<tr>
<td>Form Factor</td>
<td>10U Rackmount 437 x 452 x 705mm (17.2” x 17.8” x 27.75”)</td>
<td>1U 17.2” (437mm) x 1.7” (43mm) x 28.2” (716mm)</td>
<td>1U 17.2” (437mm) x 1.7” (43mm) x 28.2” (716mm)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
|| For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake) only. Contact your Supermicro sales rep for more info.
1U 4-GPU

1U 4 Pascal GPUs

1U 4-GPU

**Model:** SYS-1028GQ-TR

**Key Applications:**
- HPC cluster computer nodes
- 2D/3D and CAD Applications
- High-performance computing
- Oil & Gas
- Cloud and Virtualization needs
- Astrophysics
- Business Intelligence
- Artificial Intelligence
- Big Data Analytics
- High-performance computing
- Research lab/National Lab
- Astrophysics
- Business Intelligence

**Outstanding Features:**
- Up to 4 double width GPU cards in 1U
- Supports 16 DIMM DDR4-2133MHz
- 2000W Redundant Platinum Level high-efficiency power supplies
- 4x 2.5” SATA drives
- IPMI 2.0 + KVM with dedicated LAN
- GPU health monitoring with fan speed control

---

**Processor Support:**
- Dual Intel® Xeon® Processor E5-2600 v4/v3 products families supported; QPI up to 9.6GT/s
- Dual Intel® Xeon® Processor E5-2600 v4 product family with QPI up to 9.6 GT/s
- Dual Intel® Xeon® Processor E5-2600 V4 (Broadwell) product family with QPI up to 9.6 GT/s

**Chipset:**
- Intel® C612 Chipset
- Intel® C612 Chipset
- Intel® C612 Chipset

**System Memory (Max.):**
- Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots
- Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots
- Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots

**Expansion Slots:**
- 4 PCI-E 3.0 x16 slots (4x GPU opt.)
- 2 PCI-E 3.0 x8 (in x16) low profile slot
- 3 PCI-E x16 slots

**Onboard Storage Controller:**
- Intel® C612 controller for 4 SATA3 (6Gbps) Ports; RAID 0,1,5,10
- Intel® C612 controller for 4 SATA3 (6Gbps) Ports; RAID 0,1,5,10
- Intel® C612 controller for 4 SATA3 (6Gbps) Ports; RAID 0,1,5,10

**Connectivity:**
- -TR: Dual LAN with Intel® i350 Gigabit Ethernet controller
- -TXR: Dual 10Gb Ethernet LAN with Intel® X540 and 10GBase-T Connector

**VGA/Audio:**
- AST2400 VGA
- AST2400 VGA
- 1 VGA, 1 Aspeed AST2400 BMC

**Management:**
- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog
- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog
- Intel® Node Manager; IPMI2.0; NMI; SPM; SUM; SuperDoctor® 5; Watchdog:

**Drive Bays:**
- 2x 2.5” hot-swap SATA drive bays; 2x 2.5” internal HDDs
- 2x 2.5” hot-swap SATA drive bays; 2x 2.5” Internal HDDs
- 2x 2.5” hot-swap SAS/SATA drive bay; 2x 2.5” internal HDDs

**Peripheral Bays:**
- N/A
- N/A
- N/A

**Power Supply:**
- Redundant 2000W Platinum Level high-efficiency power supplies
- Redundant 2000W Titanium Level high-efficiency power supplies
- 2000W Redundant Titanium level efficiency redundant power supplies

**Cooling System:**
- 9x 4cm heavy duty counter-rotating PWM fans with air shroud with optimal fan speed control
- 8 x 4cm heavy duty counter-rotating fans with air shroud & optimal fan speed control

**Form Factor:**
- 437 x 43 x 894mm (17.2” x 1.7” x 35.2”)
- 437 x 43 x 894mm (17.2” x 1.7” x 35.2”)
- 437 x 43 x 894mm (17.2” x 1.7” x 35.2”)

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*Please check with your Supermicro sales representative and website for compatibility and configuration details.
### GPU

#### 1U 3-GPU

**Model:** SYS-1028GR-TR

- **Processor Support:** Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s
- **Key Applications:** 2D/3D and CAD Applications, 3D Rendering, Astrophysics, Chemistry, Cloud and Virtualization needs, Cloud Computing, Financial Analysis, High-performance computing, Oil & Gas
- **Outstanding Features:**
  - Supports 16 DIMM DDR4-2133MHz
  - 4x 2.5” SATA drives
  - GPU health monitoring with fan speed control
  - Up to 3 GPUs in 1U
- **Serverboard:**
  - TR: SUPER® X10DRG-H
  - TRH: SUPER® X10DRG-H

#### 2U GPU

**Model:** SYS-2028GR-TR

- **Processor Support:** Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s
- **Key Applications:** 2D/3D and CAD Applications, 3D Rendering, Astrophysics, Chemistry, Cloud and Virtualization needs, Cloud Computing, Financial Analysis, High-performance computing, Oil & Gas
- **Outstanding Features:**
  - Up to 6 PCI-E 3.0 x16 slots support 6 double-width GPU cards
  - 10x 2.5” SAS/SATA drive bays
  - 16 DIMM slots
  - GPU health monitoring with fan speed control
  - High-density, Enterprise Performance, Cost-effective
- **Serverboard:**
  - TR: SUPER® X10DRG-H
  - TRH: SUPER® X10DRG-H

#### 2U GPU

**Model:** SYS-2028GR-TRH

- **Processor Support:** Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s
- **Key Applications:** 2D/3D and CAD Applications, 3D Rendering, Astrophysics, Chemistry, Cloud and Virtualization needs, Cloud Computing, Financial Analysis, High-performance computing, Oil & Gas
- **Outstanding Features:**
  - Up to 6 PCI-E 3.0 x16 slots support 6 double-width GPU cards
  - 10x 2.5” SAS/SATA drive bays
  - 16 DIMM slots
  - GPU health monitoring with fan speed control
  - High-density, Enterprise Performance, Cost-effective
- **Serverboard:**
  - TR: SUPER® X10DRG-H
  - TRHT: SUPER® X10DRG-HT

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*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
## Model Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-5028TK-HTR</th>
<th>SYS-4028GR-TR</th>
<th>SYS-4028GR-TRT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Quad set of Coprocessor (codename Knights Landing); optional integrated Intel® Omni-Path fabric</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td></td>
</tr>
</tbody>
</table>
| **Key Applications** | • HPC/Cluster  
• Financial Analysis  
• Oil and Gas Simulation | • 3D Rendering  
• Astrophysics  
• Chemistry  
• Cloud and Virtualization needs  
• Cloud Computing  
• Compute Intensive Application |                                               |
| **Outstanding Features** | • 2 low-profile PCI-E x16 slots  
• Intel® Omni-Path fabric support  
• 4 hot swappable nodes in 2U  
• IPMI 2.0 + KVM with dedicated LAN | • Up to 8 GPUs in 4U  
• 24 DIMM slots  
• 24x 2.5” SATA drives  
• GPU health monitoring with fan speed control  
• 4x 1600W Redundant Platinum Level power supplies |                                               |
| **Serverboard** | SUPER® K1SPI                       | -TR: SUPER® X10DRG-O+CPU, X10DRG-O-PCI-E  
-TRT: SUPER® X10DRG-OT+CPU, X10DRG-O-PCI-E |                                               |
| **Chipset** | Intel® C612 Chipset                        | Intel® C612 chipset                      | Intel® C612 chipset                      |
| **System Memory** | Quad set of up to 384GB ECC LRDIMM, 192GB ECC RDIMM, DDR4-2400MHz in 6 DIMM slots | Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots |                                               |
| **Expansion Slots** | Quad set of 2 PCI-E x16 (LP) | 8x PCI-E 3.0 x16 (support up to 8 double width GPUs)  
2x PCI-E 3.0 x8  
1x PCI-E 2.0 x4 |                                               |
| **Onboard Storage Controller** | Quad set of Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 | Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 |                                               |
| **Connectivity** | Quad set of Dual LAN with Intel® i350 Gigabit Ethernet controller | -TR: Dual LAN with Intel® i350 Gigabit Ethernet Controller;  
-TRT: Dual LAN with Intel® X540 10GbE Base-T Ethernet Controller |                                               |
| **VGA/Audio** | AST2400 VGA | AST2400 VGA |                                               |
| **Management** | Quad set of IPMI 2.0 + KVM with dedicated LAN | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor®, 5, Watchdog |                                               |
| **Drive Bays** | Quad set of 3x 3.5” hot-swap SATA drive bays | 24x hot-swap 2.5” SAS/SATA drive bays |                                               |
| **Peripheral Bays** | 1x slim DVD-ROM drive bay 2x USB 2.0 ports (option) | N/A |                                               |
| **Power Supply** | Redundant 2000W Platinum Level high-efficiency Power Supplies with 1C & PMBus | Four 1600W (2+2) Redundant Platinum Level high-efficiency power supplies with 1C & PMBus |                                               |
| **Cooling System** | 4x 8cm heavy duty PWM fans with air shroud and optimal fan speed control | 8x 92mm RPM Hot-Swappable Cooling Fans |                                               |
| **Form Factor** | 2U Rackmount  
438 x 88 x 762mm (17.25” x 3.47” x 30”) | 4U Rackmount  
437 x 178 x 737mm (17.2” x7” x 29”) |                                               |

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* Please check with your Supermicro sales representative and website for compatibility and configuration details

† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-4028GR-TR2</th>
<th>SYS-4028GR-TRT2</th>
<th>SYS-4028GR-TXR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Intel® Xeon® processor ES-2600 V4 with UPI up to 9.6GT/s</td>
<td>Intel® Xeon® processor ES-2600 V4 with UPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor ES-2600 V4 (Broadwell) product family with UPI up to 9.6GT/s</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Artificial Intelligence • Big Data Analytics • High-performance computing • Research lab/National Lab • Astrophysics • Business Intelligence</td>
<td>• Artificial Intelligence • Big Data Analytics • High-performance computing • Research lab/National Lab • Astrophysics • Business Intelligence</td>
<td>• Artificial Intelligence • Big Data Analytics • High-performance computing • Research lab/National Lab • Astrophysics • Business Intelligence</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• 24x 2.5&quot; SATA drives IPMI 2.0 + KVM with dedicated LAN 24 DIMM sockets Supports 8 GPU under one CPU Root Optimized for GPUDirect RDMA</td>
<td>• Supports 8 GPU under one CPU Root Optimized for GPUDirect RDMA 24x 2.5&quot; SATA drives IPMI 2.0 + KVM with dedicated LAN 24 DIMM sockets</td>
<td>• Support 8 Tesla P100 with 80GB/s NVLINK Support GPUDirect RDMA Support 8 NVMe SSD Support up to 160W CPU Optimized cooling with no GPU pre-heat 2000W (2+2) Redundant Titanium Level Power Supplies with PMBus</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10DRG-0T+CPU Intel® C612 chipset</td>
<td>SUPER® X10DRG-0T+CPU Intel® C612 chipset</td>
<td>SUPER® X10DRG-O+CPU Intel® C612 chipset</td>
</tr>
<tr>
<td>Chipset</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Up to 3TB DDR4-2400MHz in 24 DIMM slots</td>
<td>Up to 3TB DDR4-2400MHz in 24 DIMM slots</td>
<td>Up to 3TB ECC 3DS LRDIMM, 2TB ECC RDIMM</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>11 PCI-E 3.0 x16(FH, FL); 1 PCI-E 3.0 x8(FH, FL, in x16 slot); 1 PCI-E 3.0 x8(FH, FL, in x16 slot);</td>
<td>11 PCI-E 3.0 x16(FH, FL); 1 PCI-E 3.0 x8(FH, FL, in x16 slot);</td>
<td>4x PCI-E 3.0 x16, 2x PCI-E 3.0 x8</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® C612 chipset supports SATA3 (6Gb/s) with RAID 0, 1, 5, 10</td>
<td>Intel® C612 chipset supports SATA3 (6Gb/s) with RAID 0, 1, 5, 10</td>
<td>Intel® C612 chipset SATA3 (6Gb/s)</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Dual 1GbE LAN ports and 1x Dedicated IPMI port Dual LAN with Intel® X540 10GbE Controller and 1x Dedicated IPMI port Dual LAN with Intel® X540 10GbE Controller and 1x Dedicated IPMI port Dual LAN with Intel® X540 10GbE Controller and 1x Dedicated IPMI port</td>
<td>Dual LAN with 10GbBase-T with Intel® X540 10GbE Controller and 1x Dedicated IPMI port Dual LAN with 10GbBase-T with Intel® X540 10GbE Controller and 1x Dedicated IPMI port Dual LAN with 10GbBase-T with Intel® X540 10GbE Controller and 1x Dedicated IPMI port</td>
<td>Dual LAN with Intel® i350 GbE LAN Controller</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
</tr>
<tr>
<td>Management</td>
<td>IPMI2.0, SPM, SUM, SuperDoctor® 5</td>
<td>IPMI2.0, SPM, SUM, SuperDoctor® 5</td>
<td>IPMI2.0; SPM; SUM; SuperDoctor® 5;</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>24 x 2.5&quot; HDD drives</td>
<td>24 x 2.5&quot; HDD drives</td>
<td>16x 2.5” Hot-swap SATA/SAS drives; Supports 8 NVMe Drives</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>4 x 2000W Redundant Titanium Level high-efficiency power supplies with I2C &amp; PMBus</td>
<td>4 x 2000W Redundant Titanium Level high-efficiency power supplies with I2C &amp; PMBus</td>
<td>2000W(2+2) Redundant Power Supplies Titanium Level (96%+)</td>
</tr>
<tr>
<td>Cooling System</td>
<td>8x 92mm heavy duty counter-rotating fans with air shroud &amp; optimal fan speed control</td>
<td>8x 92mm heavy duty counter-rotating fans with air shroud &amp; optimal fan speed control</td>
<td>8x 92mm Cooling Fans</td>
</tr>
<tr>
<td>Form Factor</td>
<td>4U</td>
<td>4U</td>
<td>4U Rackmount; Enclosure: 447 x 178 x 805mm (17.6&quot; x 7.0&quot; x 31.7&quot;) Gross Weight: 135lbs (61.23kg) Net Weight: 80lbs (36.29kg)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
### Processor Support
- Intel® Xeon® processor E5-2600 v4 product family with QPI up to 9.6 GT/s
- Dual Intel® Xeon® Processor E5-2600 V4 (Broadwell) product family with UPI up to 9.6 GT/s
- Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6 GT/s

### Key Applications
- Artificial Intelligence
- Big Data Analytics
- High-performance computing
- Research lab/National Lab
- Astrophysics
- Business Intelligence

### Outstanding Features
- Support 8 Tesla P100 with 80GB/s NVLink
- Support GPUDirect RDMA
- Support 8 NVMe SSD
- Support up to 160W CPU
- Optimized cooling with no GPU pre-heat
- 2000W (2+2) Redundant Titanium Level Power Supplies with PMBus
- Support 8 Tesla V100 GPUs with 300GB/s NVLink
- Support GPUDirect RDMA
- Support 8 NVMe SSD
- Support up to 160W CPU
- Optimized cooling with no GPU pre-heat
- 2000W (2+2) Redundant Titanium Level Power Supplies with PMBus
- 16 DIMM slots
- 2000W Redundant Titanium Level high-efficiency power supplies
- 16 DIMM slots
- 8 Hot-swap 3.5” SATA/SAS drive bays
- IPMI 2.0 + KVM with dedicated LAN
- 7.1 HD Audio Header
- 4 x PCI-E 3.0 x16 slots, 2 x PCI-E 3.0 x8 (1 in x16), 1 x PCI-E 2.0 x4 (in x8)

### Serverboard
- SUPERO® X10DRG-OT+-CPU
- SUPERO® X10DRG-Q

### Chipset
- Intel® C612 Chipset
- Intel® C612 Chipset
- Intel® C612 chipset
- Intel® C612 chipset

### System Memory (Max.)*
- Up to 3TB DDR4-2400MHz in 24 DIMM slots
- Up to 3TB DDR4 ECC 3DS RDIMM, 2TB ECC RDIMM
- Up to 2TB ECC 3DS RDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots

### Expansion Slots
- 4 x PCI-E 3.0 x16, 2 x PCI-E 3.0 x8
- 4 x PCI-E 3.0 x16, 2 x PCI-E 3.0 x8
- 4 x PCI-E 3.0 x16 (double-width), 2 PCI-E 3.0 x8 (1 in x16 slot), 1 PCI-E 2.0 x4 (in x8), Support Thunderbolt 2.0 AOC

### Onboard Storage Controller
- Intel® C612 controller for 4 SATA3 (6Gbps) Ports; RAID 0,1,5,10
- Intel® C612 chipset SATA3 (6 Gbps) ports; RAID 0,1,5,10,1
- Intel® C612 AHCI controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10,1

### Connectivity
- Dual LAN with 10GbE Ethernet controller
- Dual LAN with Intel® i350 Gigabit Ethernet controller
- Dual LAN with Intel® i350 Gigabit Ethernet Controllers

### VGA/Audio
- Matrox G200eW graphics
- Matrox G200eW graphics
- AST2400 VGA

### Management
- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog
- IPMI2.0; SPM; SUM; SuperDoctor® 5;
- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog

### Drive Bays
- 24 x 2.5" HDD drive bays
- 16x 2.5" Hot-swap SATA/SAS drives; Supports 8 NVMe Drives
- 8x hot-swap 3.5" SAS/SATA drive bays

### Peripheral Bays
- N/A
- N/A
- 3x 5.25" drive bays in storage module - rotates 90° for Rackmount, 1x 3.5" fixed drive bay

### Power Supply
- 4x 2000W Redundant Titanium Level (96%+)
- 2000W(2+2) Redundant Power Supplies Titanium Level (96%+)
- 2000W Redundant Titanium Level high-efficiency power supplies with I²C & PMBus

### Cooling System
- 8x 92mm heavy duty counter-rotating fans with air shroud & optimal fan speed control
- 8x 92mm Cooling Fans
- 4x 92x38mm 4-pin PWM Middle Cooling Fans, 2x 80x38mm 4-pin PWM Rear Exhaust Fans

### Form Factor
- 4U Rackmount
- 4U Rackmount; Enclosure: 447 x 178 x 805mm (17.6’’ x 7.0’’ x 31.7’’)
- 4U Tower
- 447 x 178 x 805mm (17.6’’ x 7.0’’ x 31.7’’)
- 462 x 178 x 673mm (18.2’’ x 7’’ x 26.5’’)

*Please check with your Supermicro sales representative and website for compatibility and configuration details
### X12 STORAGE

**SuperServer® Solutions - June 2021**

**NEW!** 3rd Gen Intel® Xeon® Scalable processors Supported

#### X12 Storage

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LG-4189 (Socket P+) supported TDP up to 205W; up to 11.2GT/s</td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LG-4189 (Socket P+) supported TDP up to 270W; up to 11.2GT/s</td>
<td>3rd Gen Intel® Xeon® Scalable processors Dual Socket LG-4189 (Socket P+) supported TDP up to 270W; up to 11.2GT/s</td>
<td>3rd Gen Intel® Xeon® Scalable processors, up to 72 Cores</td>
<td>16 ECC DDR4-3200: LRDIMM/RDIMM; +2 Intel® DCPMM</td>
<td>Dual socket 3rd Gen Intel® Xeon® Scalable processors, up to 72 Cores</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Database Applications • Hyperscale Data Center • Object Storage • Big Data Analytics • Scale-Out Density • Hadoop &amp; Ceph storage solutions • Scale-out NAS</td>
<td>• Appliance Optimized Storage Building Blocks • Enterprise Database Applications • Big Data Analytic and HPC • On Premise Converged Infrastructure</td>
<td>• Appliance Optimized Storage Building Blocks • Enterprise Database Applications • Big Data Analytic and HPC • On Premise Converged Infrastructure</td>
<td>• Dual socket 3rd Gen Intel® Xeon® Scalable processors, up to 72 Cores</td>
<td>16 ECC DDR4-3200: LRDIMM/RDIMM; +2 Intel® DCPMM</td>
<td>• Dual socket 3rd Gen Intel® Xeon® Scalable processors, up to 72 Cores</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Hardware RAID supported for 12x 3.5” drives • Server remote management: IPMI 2.0/KVM over LAN/Media over LAN • Dual socket 3rd Gen Intel® Xeon® Scalable processors, up to 72 Cores</td>
<td>• 16 ECC DDR4-3200: LRDIMM/RDIMM; +2 Intel® DCPMM • 4 PCI-E 4.0 x16 Slots + 2 PCI-E 4.0 x8 Slots • Server remote management: IPMI 2.0/KVM over LAN/Media over LAN • Dual socket 3rd Gen Intel® Xeon® Scalable processors, up to 72 Cores</td>
<td>• 16 ECC DDR4-3200: LRDIMM/RDIMM; +2 Intel® DCPMM • 12 Hot-swap 3.5” NVMe/SAS3/SATA3 drive bays • Front EDSFF Short Slots + 2 SATA NVMe Slots</td>
<td>• 16 ECC DDR4-3200: LRDIMM/RDIMM; +2 Intel® DCPMM • 12 Hot-swap 3.5” NVMe/SAS3/SATA3 drive bays • Onboard 1 M.2 NVMe/SATA</td>
<td>• Dual socket 3rd Gen Intel® Xeon® Scalable processors, up to 72 Cores</td>
<td>• Dual socket 3rd Gen Intel® Xeon® Scalable processors, up to 72 Cores</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X12DPD-A6M25</td>
<td>SUPER® X12DP-N16T</td>
<td>SUPER® X12DP-N16T</td>
<td>SUPER® X12DP-N16T</td>
<td>SUPER® X12DP-N16T</td>
<td>SUPER® X12DP-N16T</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
</tr>
<tr>
<td>System Memory (Max.)</td>
<td>16 DIMM slots</td>
<td>16 DIMM slots</td>
<td>16 DIMM slots</td>
<td>16 DIMM slots</td>
<td>16 DIMM slots</td>
<td>16 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>2 PCI-E 4.0 x16 AIOM slot(s) 2 PCI-E 4.0 x16 LP slot(s) *PCI-E 4.0 x8 LP slot(s)</td>
<td>4 PCI-E 4.0 x16 LP slot(s) 2 PCI-E 4.0 x8 LP slot(s)</td>
<td>4 PCI-E 4.0 x16 LP slot(s) 2 PCI-E 4.0 x8 LP slot(s)</td>
<td>4 PCI-E 4.0 x16 LP slot(s) 2 PCI-E 4.0 x8 LP slot(s)</td>
<td>4 PCI-E 4.0 x16 LP slot(s) 2 PCI-E 4.0 x8 LP slot(s)</td>
<td>4 PCI-E 4.0 x16 LP slot(s) 2 PCI-E 4.0 x8 LP slot(s)</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2x 25GbE SFP28 port(s) with Mellanox</td>
<td>2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550</td>
<td>2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550</td>
<td>2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550</td>
<td>2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550</td>
<td>2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550</td>
</tr>
<tr>
<td>VGA/Audio Management</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
<td>1 VGA port</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>12x 3.5” hot-swap SATA3/SAS3 drive bays; 2x 2.5” 7mm hot-swap hybrid NVMe/SATA drive bays</td>
<td>4x 3.5” NVMe hybrid; Optional RAID support via RAID/HBA controller AOC</td>
<td>4x 3.5” NVMe hybrid; Optional RAID support via RAID/HBA controller AOC</td>
<td>4x 3.5” NVMe hybrid; Optional RAID support via RAID/HBA controller AOC</td>
<td>4x 3.5” NVMe hybrid; Optional RAID support via RAID/HBA controller AOC</td>
<td>4x 3.5” NVMe hybrid; Optional RAID support via RAID/HBA controller AOC</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 800W Platinum level (94%)</td>
<td>Redundant 1200W Titanium level (96%)</td>
<td>Redundant 1600W Titanium level (96%)</td>
<td>Redundant 1600W Titanium level (96%)</td>
<td>Redundant 1600W Titanium level (96%)</td>
<td>Redundant 1600W Titanium level (96%)</td>
</tr>
<tr>
<td>Cooling System</td>
<td>6x 4cm heavy duty fan(s) (94%)</td>
<td>3x 8cm heavy duty fan(s)</td>
<td>4x 8cm heavy duty fan(s)</td>
<td>4x 8cm heavy duty fan(s)</td>
<td>4x 8cm heavy duty fan(s)</td>
<td>4x 8cm heavy duty fan(s)</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U rackmount</td>
<td>2U rackmount</td>
<td>2U rackmount</td>
<td>2U rackmount</td>
<td>2U rackmount</td>
<td>2U rackmount</td>
</tr>
<tr>
<td>Package</td>
<td>(17.6” x 1.7” x 37”)</td>
<td>(27.7” x 12” x 53.15”)</td>
<td>(27.7” x 12” x 53.15”)</td>
<td>(27.7” x 12” x 53.15”)</td>
<td>(27.7” x 12” x 53.15”)</td>
<td>(27.7” x 12” x 53.15”)</td>
</tr>
</tbody>
</table>

For Complete System Only
## X12 Storage

*For Complete System Only*

### 2U Simply Double, 24x Drives

- **Model**: SSG-620P-E1CR24H, SSG-620P-E1CR24L
- **Processor Support**: 3rd Gen Intel® Xeon® Scalable processors
  - Dual Socket LG-4189 (Socket P+) supported
  - TDP up to 250W; up to 11.2GT/s
- **Key Applications**:
  - Application Optimized Storage Building Blocks
  - Corporate Database
  - Database Processing & Storage
  - HPC, Data Center
  - Database Processing & Storage
  - Corporate Database
- **Outstanding Features**:
  - Support dual Intel® Xeon Scalable CPUs
  - Server remote management: IPMI 2.0/KVM over LAN/Media over LAN
  - High Density platform in 2U rack size
  - Flexible storage media and controller configurations, and support tiering storage (HDD/SSD)
  - Enterprise serviceability with hot-swappable drives and power supplies
  - 24 Hot-swap 3.5” SAS3/SATA3 drive bays + 4 NVME/SATA3 Rear Drive Bays
  - 4 PCI-E 4.0 x16 Slots + 2 PCI-E 4.0 x8 Slots
  - Server remote management: IPMI 2.0/KVM over LAN/Media over LAN
  - Dual socket 3rd Gen Intel® Xeon® Scalable processors, up to 72 Cores
  - 16 ECC DDR4-3200LRDIMM/RRDIMM; +2 Intel® DCPMM
  - 24 Hot-swap 3.5” SAS3/SATA3 drive bays
  - On board 1 M.2 NVMe/SATA

### 4U 24x Drives

- **Model**: SSG-640P-E1CR24H, SSG-640P-E1CR24L
- **Processor Support**: 3rd Gen Intel® Xeon® Scalable processors
  - Dual Socket LG-4189 (Socket P+) supported
  - TDP up to 270W; up to 11.2GT/s
- **Key Applications**:
  - Enterprise Server
  - ISCSI SAN
  - HPC, Data Center
  - Database Processing & Storage
  - Corporate Database
- **Outstanding Features**:
  - Support dual Intel® Xeon Scalable CPUs
  - Server remote management: IPMI 2.0/KVM over LAN/Media over LAN
  - Dual socket 3rd Gen Intel® Xeon® Scalable processors, up to 72 Cores
  - 16 ECC DDR4-3200LRDIMM/RRDIMM; +2 Intel® DCPMM
  - On board 1 M.2 NVMe/SATA
  - 32 Hot-swap 3.5” SAS3/SATA3 drive bays + 4 NVME/SAS3/SATA3 Drive Bays

### 4U 36x Drives

- **Model**: SSG-640P-E1CR36H, SSG-640P-E1CR36L
- **Processor Support**: 3rd Gen Intel® Xeon® Scalable processors
  - Dual Socket LG-4189 (Socket P+) supported
  - TDP up to 270W; up to 11.2GT/s
- **Key Applications**:
  - Enterprise Server
  - ISCSI SAN
  - HPC, Data Center
  - Database Processing & Storage
  - Corporate Database
- **Outstanding Features**:
  - Support dual Intel® Xeon Scalable CPUs
  - Server remote management: IPMI 2.0/KVM over LAN/Media over LAN
  - Dual socket 3rd Gen Intel® Xeon® Scalable processors, up to 72 Cores
  - 16 ECC DDR4-3200LRDIMM/RRDIMM; +2 Intel® DCPMM
  - On board 1 M.2 NVMe/SATA
  - 32 Hot-swap 3.5” SAS3/SATA3 drive bays + 4 NVME/SAS3/SATA3 Drive Bays

### Specifications

- **Serverboard**: SuperServer® X12DSC+
- **Chipset**: Intel® C621A
- **System Memory (Max.)**: 16 DIMM slots
  - Up to 4TB ECC RDIMM/LRDIMM, DDR4-3200MHz
- **Expansion Slots**: PCI-E 4.0 x16 AOM slot(s)
  - 3 PCI-E 4.0 x16 LP slot(s)
- **Onboard Storage Controller**:
  - -EICR24H: Intel® SATA Broadcom® 3916
  - -EICR24L: Intel® SATA Broadcom® 3816
- **Connectivity**: 2x 10GBe RJ45 port(s) with Intel® Ethernet Controller X550
- **VGA/Audio**: 1 VGA port
- **Management**: SuperDoctor® 5; Watch Dog; NMI; IPMI 2.0; SUM
- **Drive Bays**: 24x 3.5” hot-swap Simply Double drive bays; Optional RAID support via RAID/HBA Controller AOC
- **Peripheral Bays**: None
- **Power Supply**: Redundant 1600W Titanium level (96%)
- **Cooling System**: 5x 8cm heavy duty fan(s)
- **Form Factor**: 2U Rackmount
  - Enclosure: 437 x 89 x 866.14mm (17.2” x 3.5” x 34”)

### Additional Notes

- Chipset: Intel® C621A
- System Memory (Max.): 16 DIMM slots
- Expansion Slots: PCI-E 4.0 x16 AOM slot(s)
- Onboard Storage Controller: -EICR24H: Intel® SATA Broadcom® 3916
- Connectivity: 2x 10GBe RJ45 port(s) with Intel® Ethernet Controller X550
- Management: SuperDoctor® 5; Watch Dog; NMI; IPMI 2.0
- Drive Bays: 24x 3.5” hot-swap Simply Double drive bays; Optional RAID support via RAID/HBA Controller AOC
- Peripheral Bays: None
- Power Supply: Redundant 1600W Titanium level (96%)
- Cooling System: 5x 8cm heavy duty fan(s)
- Form Factor: 2U Rackmount
  - Enclosure: 437 x 89 x 866.14mm (17.2” x 3.5” x 34”)

### Model Variations

- **SSG-620P-E1CR24H**: Intel® SATA
- **SSG-620P-E1CR24L**: Intel® SATA
- **SSG-640P-E1CR24H**: Intel® SATA
- **SSG-640P-E1CR24L**: Intel® SATA
- **SSG-640P-E1CR36H**: Intel® SATA
- **SSG-640P-E1CR36L**: Intel® SATA

### Additional System Specifications

- **Package**: (27” x 15” x 39”)
- **Enclosure**: (17.2” x 7” x 27.5”)
- **System Memory**: Up to 18TB Intel® DCPMM, DDR4-2666MHz
- **Onboard Storage**: 3 Hot-swap 3.5” SAS3/SATA3 drive bays; 4 Hot-swap 3.5” SAS3/SATA3 drive bays + 4 NVME/SAS3/SATA3 Drive Bays
- **Connectivity**: Dual 10GbE RJ45 ports
- **Management**: SuperDoctor® 5; Watch Dog; NMI; IPMI 2.0
- **Drive Bays**: 24x 3.5” hot-swap Simply Double drive bays; Optional RAID support via RAID/HBA Controller AOC
- **Peripheral Bays**: None
- **Power Supply**: Redundant 1200W Titanium level (96%)
- **Cooling System**: 5x 8cm heavy duty fan(s)
- **Form Factor**: 2U Rackmount
  - Enclosure: (17.2” x 7” x 27.5”)
  - Package: (27” x 15” x 39”)

---

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## X12 STORAGE

(For Complete System Only)

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### Model Comparison

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SSG-640SP-E1CR60</th>
<th>SSG-640SP-E1CR90</th>
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| Key Applications | • Big Data & Analytics, Data Lake  
• HPC and AI/ML Workloads  
• Telco & Cloud Service Providers  
• Financial Services & Healthcare Image Archives  
• Content Repositories  
• Government Data Protection | • Big Data & Analytics, Data Lake  
• HPC and AI/ML Workloads  
• Telco & Cloud Service Providers  
• Financial Services & Healthcare Image Archives  
• Content Repositories  
• Government Data Protection |
| Outstanding Features | • Single Node High density, 2 rear mirrored boot drives, 4 NVMe SSD drives for caching  
• Drive Controller support via Broadcom® 3916 HW RAID or 3816 IT Mode  
• Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN  
• Excellent Serviceability with Modular Design | • Single Node High density, 2 rear mirrored boot drives, 4 NVMe SSD drives for caching  
• Drive Controller support via Broadcom® 3916 HW RAID or 3816 IT Mode  
• Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN  
• Excellent Serviceability with Modular Design |
| Serverboard | SUPER® X12DSC-6 | SUPER® X12DSC-6 |
| Chipset | Intel® C621A | Intel® C621A |
| System Memory (Max.) | 16 DIMM slots  
Up to 4TB ECC RDIMM/LRDIMM, DDR4-3200MHz | 16 DIMM slots  
Up to 4TB ECC RDIMM/LRDIMM, DDR4-3200MHz |
| Expansion Slots | 3 PCI-E 4.0 x16 LP slot(s) | 3 PCI-E 4.0 x16 LP slot(s) |
| Onboard Storage Controller | Intel® SATA Broadcom® 3616 | Intel® SATA Broadcom® 3616 |
| Connectivity | 2x 10GbE RJ45 port(s) with X550 | 2x 10GbE RJ45 port(s) with X550 |
| VGA/Audio | 1 VGA port | 1 VGA port |
| Management | SuperDoctor® 5; Watch Dog; NMI; SUM; IPMI 2.0 | SuperDoctor® 5; Watch Dog; NMI; SUM; IPMI 2.0 |
| Drive Bays | 60x 3.5" hot-swap SATA3/SAS3 drive bays;  
Optional RAID support via RAID/HBA controller AOC  
2x 2.5" 7mm hot-swap hybrid NVMe/SATA drive bays | 90x 3.5" hot-swap SATA3/SAS3 drive bays;  
Optional RAID support via RAID/HBA controller AOC  
2x 2.5" 7mm hot-swap hybrid NVMe/SATA drive bays |
| Peripheral Bays | None | None |
| Power Supply | Redundant 2000W Titanium level (96%) | Redundant 2600W Titanium level (96%) |
| Cooling System | 6x 8cm heavy duty fan(s) | 6x 8cm heavy duty fan(s) |
| Form Factor | 4U rackmount  
Enclosure: (17.6" x 7" x 34.1")  
Package: (31.89" x 29.92" x 44.88") | 4U rackmount  
Enclosure: (17.6" x 7" x 42.1")  
Package: (35.82" x 29.92" x 53.15") |
# X12 Storage

(For Complete System Only)

![Image of SuperServer X12 Storage](image)

## Processor Support

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SSG-640SP-DE1CR60</th>
<th>SSG-640SP-DE1CR90</th>
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</tr>
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<td>Dual Socket LG-4189 (Socket P+) supported</td>
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## Key Applications

- Big Data & Analytics, Data Lake
- HPC and AI/ML Workloads
- Telco & Cloud Service Providers
- Financial Services & Healthcare Image Archives
- Content Repositories
- Government Data Protection

- Drive Controller support via Broadcom® 3916 HW RAID or 3816 IT Mode
- Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN
- Excellent Serviceability with Modular Node Design

## System Memory

- 16 DIMM slots
- Up to 4TB ECC RDIMM/LRDIMM, DDR4-3200MHz

## Expansion Slots

- 3 PCI-E 4.0 x16 LP slot(s)

## Onboard Storage Controller

- Intel® SATA
- Broadcom® 3616

## Connectivity

- 2x 10GbE RJ45 port(s) with X550

## VGA/Audio

- 1 VGA port

## Management

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

## Drive Bays

- 60x 3.5" hot-swap SATA3/SAS3 drive bays;
- Optional RAID support via RAID/HBA controller AOC
- 4x 2.5" 7mm hot-swap hybrid NVMe/SATA drive bays

## Peripheral Bays

None

## Power Supply

- Redundant 2600W Titanium level (96%)

## Cooling System

- 6x 8cm heavy duty fan(s)

## Form Factor

- 4U 60x Top-loading
- Enclosure: (17.6" x 7" x 34.1")
- Package: (31.89" x 29.92" x 44.88")

- 4U 90x Top-loading
- Enclosure: (17.6" x 7" x 42.1")
- Package: (33.82" x 29.92" x 53.15")
### 3rd Gen Intel® Xeon® Scalable processors Supported

- **NEW!**
- **MODEL**
- **SSG-640SP-DE2CR60**
- **SSG-640SP-DE2CR90**

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<th>Processor Support</th>
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|                   | • Financial Services & Healthcare Image Archives  
|                   | • Content Repositories  
|                   | • Government Data Protection  | • Big Data & Analytics, Data Lake  
|                   | • HPC and AI/ML Workloads  
|                   | • Telco & Cloud Service Providers  
|                   | • Financial Services & Healthcare Image Archives  
|                   | • Content Repositories  
|                   | • Government Data Protection  |
| Outstanding       | • Drive Controller support via Broadcom® 3916 HW RAID or 3816 IT Mode  
| Features          | • Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN  
|                   | • Excellent Serviceability with Modular Node Design  | • Drive Controller support via Broadcom® 3916 HW RAID or 3816 IT Mode  
|                   | • Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN  
|                   | • Excellent Serviceability with Modular Node Design  |
| Serverboard       | SUPER® X12DSC-6 | SUPER® X12DSC-6 |
| Chipset           | Intel® C621A | Intel® C621A |
| System Memory     | 16 DIMM slots  
| (Max.)            | Up to 4TB ECC RDIMM/LRDIMM, DDR4-3200MHz | 16 DIMM slots  
|                   | Up to 4TB ECC RDIMM/LRDIMM, DDR4-3200MHz |
| Expansion Slots   | 3 PCI-E 4.0 x16 LP slot(s) | 3 PCI-E 4.0 x16 LP slot(s) |
| Onboard Storage   | Intel® SATA Broadcom® 3616 | Intel® SATA Broadcom® 3616 |
| Controller        | Connectivity  
|                   | VGA/Audio 1 VGA port | VGA/Audio 1 VGA port |
| Management        | SuperDoctor® 5; Watch Dog; NMI; SUM; IPMI 2.0 | SuperDoctor® 5; Watch Dog; NMI; SUM; IPMI 2.0 |
| Drive Bays        | 60x 3.5” hot-swap SATA3/SAS3 drive bays; Optional RAID support via HBA controller AOC  
|                   | 4x 2.5” 7mm hot-swap hybrid NVMe/SATA drive bays | 90x 3.5” hot-swap SATA3/SAS3 drive bays; Optional RAID support via HBA controller AOC  
|                   | 4x 2.5” 7mm hot-swap hybrid NVMe/SATA drive bays |
| Peripheral Bays   | None | None |
| Power Supply      | Redundant 2600W Titanium level (96%) | Redundant 2600W Titanium level (96%) |
| Cooling System    | 6x 8cm heavy duty fan(s) | 6x 8cm heavy duty fan(s) |
| Form Factor       | 4U rackmount  
|                   | Enclosure: (17.6” x 7” x 34.1”)  
|                   | Package: (31.89” x 29.92” x 44.88”) | 4U rackmount  
|                   | Enclosure: (17.6” x 7” x 42.1”)  
|                   | Package: (33.82” x 29.92” x 53.15”) |
### Processor Support
- **MODEL:** SSG-1129P-ACR10N4L
  - 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.
  - Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 2 UPI up to 10.4 GT/s.
  - Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codename Cascade Lake Refresh).

- **MODEL:** SSG-6119P-ACR12N4L
  - 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.
  - Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 2 UPI up to 10.4 GT/s.
  - Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codename Cascade Lake Refresh).

### Key Applications
- **MegaDC - 1U Compute Compact Server with Onboard 25G Networking and AIOM**
  - Front End Server
  - Enterprise Server
  - Scale-Out NAS
  - Object Storage
  - Infrastructure
  - Data Center

### Outstanding Features
- **MegaDC - 1U Storage Top-loading Storage Featuring the New Internal Drawer Design**
  - 1x PCIe3.0 x16 slot for AIOM
  - 12x 3.5” hot-swap SAS3/SATA3 drive bays and 4x 2.5” 7mm hot-swap NVMe/SATA drive bays
  - 2x M.2 NVMe/SATA up to 80mm
  - Front Panel HDD Locate LED
  - Internal Cable Arm

### Serverboard
- **MODEL:** SSG-1129P-ACR10N4L
  - Processor Support: Intel® C621 chipset
  - System Memory: Up to 3TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 3TB 3DS ECC LRDIMM, DDR4-2933MHz, in 16 DIMM slots; Up to 2TB Intel® Optane™ DC Persistent Memory in memory mode (Cascade Lake only)

- **MODEL:** SSG-6119P-ACR12N4L
  - Processor Support: Intel® C621 chipset
  - System Memory: Up to 3TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 3TB 3DS ECC LRDIMM, DDR4-2933MHz, in 16 DIMM slots; Up to 2TB Intel® Optane™ DC Persistent Memory in memory mode (Cascade Lake only)

### Expansion Slots
- **MODEL:** SSG-1129P-ACR10N4L
  - 1 PCI-E 3.0 x16 (HBA Add-On-Module),
  - 1 PCI-E 3.0 x16 Left Riser Slot,
  - 1 PCI-E 3.0 x8 Right Riser Slot,
  - 1 PCI-E 3.0 x16 (AIOM)

- **MODEL:** SSG-6119P-ACR12N4L
  - 1 PCI-E 3.0 x16 (HBA Add-On-Module),
  - 1 PCI-E 3.0 x16 Left Riser Slot,
  - 1 PCI-E 3.0 x8 Right Riser Slot,
  - 1 PCI-E 3.0 x16 (AIOM)

### Onboard Storage Controller
- **MODEL:** SSG-1129P-ACR10N4L
  - Intel® C621 controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10

- **MODEL:** SSG-6119P-ACR12N4L
  - Intel® C621 controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10

### Connectivty
- **MODEL:** SSG-1129P-ACR10N4L
  - N/A

- **MODEL:** SSG-6119P-ACR12N4L
  - N/A

### VGA/Audio
- **MODEL:** SSG-1129P-ACR10N4L
  - Aspeed AST2500 BMC

- **MODEL:** SSG-6119P-ACR12N4L
  - Aspeed AST2500 BMC

### Management
- **MODEL:** SSG-1129P-ACR10N4L
  - Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog

- **MODEL:** SSG-6119P-ACR12N4L
  - Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog

### Drive Bays
- **MODEL:** SSG-1129P-ACR10N4L
  - 10x 2.5” hot-swap SAS3/SATA3 drive bays with 4x NVMe/SAS3/SATA3 hybrid ports (OEM SKU supports 10x 2.5“ all hybrid ports)

- **MODEL:** SSG-6119P-ACR12N4L
  - 12x 3.5” hot-swap SAS3/SATA3 drive bays and 4x 2.5” 7mm hot-swap NVMe/SATA drive bays

### Peripheral Bays
- **MODEL:** SSG-1129P-ACR10N4L
  - N/A

- **MODEL:** SSG-6119P-ACR12N4L
  - N/A

### Power Supply
- **MODEL:** SSG-1129P-ACR10N4L
  - 800W 1U Platinum redundant power supply

- **MODEL:** SSG-6119P-ACR12N4L
  - 800W 1U Platinum redundant power supply

### Cooling System
- **MODEL:** SSG-1129P-ACR10N4L
  - 6x 40x40x56mm 20.5K-17.6K RPM Counter-rotating Fan

- **MODEL:** SSG-6119P-ACR12N4L
  - 6x 40x40x56mm 20.5K-17.6K RPM Counter-rotating Fan

### Form Factor
- **MODEL:** SSG-1129P-ACR10N4L
  - 1U 17.2” (437mm) x 1.7” (43mm) x 23.5” (597mm)

- **MODEL:** SSG-6119P-ACR12N4L
  - 1U 17.6” (447mm) x 1.7” (43mm) x 37” (940mm)

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* Please check with your Supermicro sales representative and website for compatibility and configuration details.

† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
### Processor Support

**MODEL** | SSG-6129P-ACR12N4G | SSG-6129P-ACR12N4L** | SSG-6129P-ACR12N4L
---|---|---|---
**2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.** | **2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.** | **2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.**
**Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 2 UPI up to 10.4 GT/s.** | **Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 2 UPI up to 10.4 GT/s.** | **Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 2 UPI up to 10.4 GT/s.**
**Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).** | **Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).** | **Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).**

### Key Applications

**MODEL** | SSG-6129P-ACR12N4G | SSG-6129P-ACR12N4L** | SSG-6129P-ACR12N4L
---|---|---|---
**• GPU accelerated compute** | **• Data Center** | **• Database Processing & Storage**
**• High End Enterprise Server** | **Data Center** | **Data Center**

### Outstanding Features

**MODEL** | SSG-6129P-ACR12N4G | SSG-6129P-ACR12N4L** | SSG-6129P-ACR12N4L
---|---|---|---
**1x PCIe3.0 x16 slot for AIOM 12x 3.5” hot-swap SAS3/SATA3 drive bays 2x M.2 NVMe/SATA up to 80mm Dual GPU support Full Height, Full Length GPU Dual 25Gb SFP28 on board** | **1x PCIe3.0 x16 slot for AIOM 12x 3.5” hot-swap SAS3/SATA3 drive bays 2x M.2 NVMe/SATA up to 80mm** | **1x PCIe3.0 x16 slot for AIOM 12x 3.5” hot-swap SAS3/SATA3 drive bays 2x M.2 NVMe/SATA up to 80mm**

### System Memory

**MODEL** | SSG-6129P-ACR12N4G | SSG-6129P-ACR12N4L** | SSG-6129P-ACR12N4L
---|---|---|---
**DIMM slots; 2933 MHz, in 12 DIMM slots;** | **2933 MHz, in 16 DIMM slots;** | **2933 MHz, in 16 DIMM slots;**
**Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).**

### Expansion Slots

**MODEL** | SSG-6129P-ACR12N4G | SSG-6129P-ACR12N4L** | SSG-6129P-ACR12N4L
---|---|---|---
**2 PCI-E 3.0 x16 Double-Wide FHFL GPGPU 1 PCI-E 3.0 x8 Low Profile, 1 PCI-E 3.0 x16 Low Profile, 1 PCI-E 3.0 x16 (AIOM)** | **1 PCI-E 3.0 x16 (HBA Add-On-Module), 3 PCI-E 3.0 x8 Low Profile, 1 PCI-E 3.0 x16 Low Profile, 1 PCI-E 3.0 x16 (AIOM)** | **1 PCI-E 3.0 x16 (HBA Add-On-Module), 1 PCI-E 3.0 x8 Low Profile, 1 PCI-E 3.0 x16 Low Profile, 1 PCI-E 3.0 x16 (AIOM)**

### Onboard Storage Controller

**MODEL** | SSG-6129P-ACR12N4G | SSG-6129P-ACR12N4L** | SSG-6129P-ACR12N4L
---|---|---|---
**Intel® C621 controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10** | **Intel® C621 controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10** | **Intel® C621 controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10**

### Power Supply

**MODEL** | SSG-6129P-ACR12N4G | SSG-6129P-ACR12N4L** | SSG-6129P-ACR12N4L
---|---|---|---
**1U 1600W Redundant Titanium AC Power Supply with PMbus 73.5x203x40mm** | **1U 1000W CRPS, +12V/+12Vsb output, Platinum Level AC-DC Power Supply Module (203x73.5x40mm)** | **1U 750W CRPS, +12V/+12Vsb output, Platinum Level AC-DC Power Supply Module (203x73.5x40mm)**

### Cooling System

**MODEL** | SSG-6129P-ACR12N4G | SSG-6129P-ACR12N4L** | SSG-6129P-ACR12N4L
---|---|---|---
**3x 80x80x38mm high-performance PWM fans** | **3x 80x80x38mm high-performance PWM fans** | **3x 80x80x38mm high-performance PWM fans**

### Form Factor

**MODEL** | SSG-6129P-ACR12N4G | SSG-6129P-ACR12N4L** | SSG-6129P-ACR12N4L
---|---|---|---
**2U 17.2” (437mm) x 3.5” (89mm) x 25.5” (647mm)** | **2U 17.2” (437mm) x 3.5” (89mm) x 25.5” (647mm)** | **2U 17.2” (437mm) x 3.5” (89mm) x 25.5” (647mm)**

*Please check with your Supermicro sales representative and website for compatibility and configuration details

*2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

**OEM SKU only
### MODEL | SSG-1029P-NEL32R | SSG-1029P-NES32R

| Processor Support | 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 165W, 3 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh). | 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 3 UPI designed for up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh). |
| Key Applications | • High Throughput Ingest
HPC / Data Analytics
Media / Video Streaming
Content Delivery Network (CDN)
Big Data Top of Rack Storage | • IOPS Intensive application
Database
HCI |
| Outstanding Features | • Front access to a total of 32 NVMe hot swap 9.5mm EDSFF Long SSDs
• 2x PCI-E 3.0 x16 slots
• 1600W Platinum Level high-efficiency power supply
• IPMI management with dedicated LAN
• Intel® C627 chipset support
• QAT | • All flash NVMe drives
Supports new E1.S form factor
5KL (up to 205W), 3 UPI designed for up to 10.4 GT/s
24 DIMM support
Intel® Quick Assist Technology
Redundant 1600W Titanium Level high-efficiency power supplies |
| Serverboard | SUPER® X11DPS-RE | SUPER® X11DSF-E |
| Chipset | Intel® C627 chipset | Intel® C627 chipset |
| System Memory (Max)* | 24 DIMM slots; Up to 6TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, 3DS RDIMM;
Supports Intel® Optane™ DCPMM™†† (128/256/512GB) | 24 DIMM slots; Up to 6TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM;
Supports Intel® Optane™ DCPMM™†† (128/256/512GB) |
| Expansion Slots | 2 PCI-E 3.0 x16 slots (Low Profile) | 2 PCI-E 3.0 x16 (FHHL) slots, 1 PCI-E 3.0 x4 (Low Profile) slot |
| Onboard Storage Controller | N/A | PCIe fan out switching supporting 32x E1.S |
| Connectivity | Intel® X550 Dual Port 10GBase-T | Intel® X550 Dual Port 10GBase-T |
| VGA/Audio | Aspeed AST2500 BMC | Onboard VGA port |
| Management | Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support; IPMI2.0, KVM with dedicated LAN, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog | Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support; IPMI2.0, KVM with dedicated LAN, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog |
| Drive Bays | 32x Hot-swap EDSFF Long Drive slots | 32 Hot-swap E1.S Drive slots |
| Peripheral Bays | N/A | N/A |
| Power Supply | Redundant(1+1) 1600W Platinum level high efficiency power supplies | Redundant(1+1) 1600W Platinum level high efficiency power supplies |
| Cooling System | 8x 40x56mm PWM fan; 8x 40x56mm counter-rotation PWM fan; | 8x 40x56mm PWM fan; |
| Form Factor | 1U Rackmount 17.26" (438mm) x 1.71" (43mm) x 35.95" (913mm); Enclosure: 438 x 43 x 913mm (17.26" x 1.7" x 35.95"
| Gross Weight: 90lbs (40.82kg)
Net Weight: 55lbs (24.93kg) | 1U 17.2" (437mm) x 1.7" (43mm) x 30" (762mm) |

* Please check with your Supermicro sales representative and website for compatibility and configuration details
† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
### MODEL | SYS-1029P-N32R | SSG-1029P-NMR36L
--- | --- | ---
**Processor Support** | 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 140W, 3 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh). | 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 3 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh). |
**Key Applications** | • High Throughput Ingest High Density Hot Storage HPC / Data Analytics Media/Video Streaming Content Delivery Network (CDN) Big Data Top of Rack Storage | • IOPS Intensive application Database HCI |
**Outstanding Features** | • Dual Drawer/Tray with a total of 32 NVMe 2.5” SSDs 2x PCI-E 3.0 x16 slots 1600W Platinum Level high-efficiency power supply IPMI management with dedicated LAN Intel® C627 chipset support QAT | • All flash NVMe drives Supports new NF1 form factor SKL (up to 205W), 3 UPI designed for up to 10.4 GT/s[nid:9987] 24 DIMM support Intel® Quick Assist Technology Redundant 1600W Titanium Level high-efficiency power supplies |
**Serverboard** | SUPER® X11DPS-RE | SUPER® X11DSF-E |
**Chipset** | Intel® C627 chipset | Intel® C627 chipset |
**System Memory (Max.)** | 24 DIMM slots; Up to 6TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, 3DS RDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB) | 24 DIMM slots; Up to 6TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB) |
**Expansion Slots** | 2 PCI-E 3.0 x16 slots (Low Profile) | 2 PCI-E 3.0 x16(FHHL), 1 PCI-E 3.0 x4(LP) support |
**Onboard Storage Controller** | N/A | PCIe fan out switching supporting 32x NF1 |
**Connectivity** | Intel® X550 Dual Port 10GBase-T | Dual LAN with 10GBase-T with Intel® X550; |
**VGA/Audio** | Aspeed AST2500 BMC |  |
**Management** | Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog | Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog |
**Drive Bays** | 32x 2.5” Drive slots | 32x NF1 Drive slots + 4x SATA M.2 drive slots |
**Peripheral Bays** | N/A | N/A |
**Power Supply** | Redundant(1+1) 1600W Platinum level high efficiency power supplies | Redundant Power Supplies: PWS-1K62A-1R |
**Cooling System** | 8x 40x56mm PWM fan; | 8x 40x56mm counter-rotation PWM fan; |
**Form Factor** | 1U Rackmount 1U 17.26” (438mm) x 1.7” (43mm) x 35.95” (913mm); Enclosure: 438 x 43 x 913mm (17.26” x 1.71” x 35.95”); Gross Weight: 93lbs (42.18kg); Net Weight: 58lbs (26.31kg) | 1U Rack mount 437 x 43 x 763 mm (17.2” x 1.7” x 30.0”) |

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*Please check with your Supermicro sales representative and website for compatibility and configuration details

1. 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
2. For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SSG-136R-N32JBF</th>
<th>SYS-136R-NEL32JBF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
| Key Applications | • High Throughput Ingest  
  High Density Hot Storage  
  Media/Video Streaming  
  Content Delivery Network (CDN)  
  Big Data Top of Rack Storage | • High Throughput Ingest  
  High Density Hot Storage  
  Media/Video Streaming  
  Content Delivery Network (CDN)  
  Big Data Top of Rack Storage |
| Outstanding Features | • Dual Drawer/Tray with a total of 32 NVMe 2.5" SSDs  
  4x PCI-E 3.0 x16 I/O ports, 2x X16 PCI-E 3.0 x16 slots  
  1000W Titanium Level high-efficiency power supply  
  IPMI management with dedicated LAN | • Front access to a total of 32 NVMe hot swap 9.5mm EDSFF Long SSDs  
  4x PCI-E 3.0 x16 I/O ports, 2x PCI-E 3.0 x16 slots  
  1000W Titanium Level high-efficiency power supply  
  IPMI management with dedicated LAN |
| Serverboard | N/A | N/A |
| Chipset | N/A | N/A |
| System Memory (Max.)* | N/A | N/A |
| Expansion Slots | 2x X16 PCIe Slots | 2x X16 PCIe Slots |
| Onboard Storage Controller | N/A | N/A |
| Connectivity | 4x X16 PCIe I/O ports | 4x X16 PCIe I/O ports |
| VGA/Audio | N/A | N/A |
| Management | IPMI 2.0 with Dedicated LAN | IPMI 2.0 with Dedicated LAN |
| Drive Bays | 32x 2.5” Drive slots | 32x 9.5mm EDSFF Long Drive slots |
| Peripheral Bays | N/A | N/A |
| Power Supply | Redundant(1+1) 1000W Titanium level high efficiency power supplies | Redundant(1+1) 1000W Titanium level high efficiency power supplies |
| Cooling System | 8x 40mm Fans, N/A | 8x 40mm Fans, N/A |
| Form Factor | 1U Rackmount 17.26” x 1.71” x 31.95”; Enclosure: 438 x 43 x 812mm (17.26” x 1.71” x 31.95”)  
  Gross Weight: 65lbs (29.48kg)  
  Net Weight: 49lbs (22.23kg) | 1U Rackmount 17.26” x 1.71” x 31.95”; Enclosure: 438 x 43 x 812mm (17.26” x 1.71” x 31.95”)  
  Gross Weight: 65lbs (29.48kg)  
  Net Weight: 49lbs (22.23kg) |

* Please check with your Supermicro sales representative and website for compatibility and configuration details
## Processor Support

- 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.
- Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 3 UPI up to 10.4 GT/s.
- Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable Processors (codenamed Cascade Lake Refresh).

## Key Applications

- Corporate Database
- Database Processing & Storage
- HPC
- Large Database
- Web Cache

## Outstanding Features

- 2 Optional Onboard NVMe M.2
- 24x 2.5" Hot-swap SAS3/SATA3 drive bays
- Up to 205W CPU support
- 16 DIMM support
- Dual 10G BaseT

## Storage Controller

- ACR24H: 3 Broadcom 3108 SAS3 add-on controller cards
- ACR24L: 3 Broadcom 3008 SAS3 add-on controller cards

## Connectivity

- Dual LAN with 10GBase-T with Intel® X557

## System Memory (Max.)*

- 16 DIMM slots; Up to 4TB DDR4-2933 MHz† with 256GB memory modules; Supports Intel® Optane™ DCPMM™†† (128/256/512GB)

## Expansion Slots

- 3 PCI-E 3.0 x16, 4 PCI-E 3.0 x8

## Power Supply

- 1200W Titanium Level high-efficiency power supply

## Form Factor

- 2U 17.2" (437mm) x 3.5" (89mm) x 24.8" (630mm)

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### Notes:

1. 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
2. For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
### Storage

#### MODEL | SSG-2029P-DN2R24L | SSG-2029P-DN2RR32L | SSG-2029P-DN2R48L
---|---|---|---
**Processor Support**
- 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.
  - Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 3 UPI up to 10.4 GT/s.
  - Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).
- 2nd Gen Intel® Xeon® Scalable Processors.
  - Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 3 UPI up to 10.4 GT/s.
  - Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).
- 2nd Gen Intel® Xeon® Scalable Processors.
  - Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 3 UPI up to 10.4 GT/s.
  - Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).

#### Key Applications
- High Availability Hardware Platform
- Enterprise File/Block Storage Server
- Failover Cluster
- Corporate Database
- HPC Virtualization
-Corporate Database
- HPC Virtualization
- Corporate Database
- HPC Virtualization

#### Outstanding Features
- Redundant DP SBB supporting 24x U.2 Dual-Port NVMe
- PMI management with dedicated LAN
- 2000W High Efficiency (96%) Titanium Level Redundant Power Supplies
- NV-DIMM support
- Shared storage between redundant controllers
  - Node to node heartbeat/NTB connectivity
- Redundant DP SBB supporting 48x U.2 Dual-Port NVMe
- PMI management with dedicated LAN
- 2000W High Efficiency (96%) Titanium Level Redundant Power Supplies
- NV-DIMM support
- Shared storage between redundant controllers
  - Node to node heartbeat/NTB connectivity

#### Serverboard
- **Chipset**
  - Intel® C624 chipset
- Intel® C627 chipset
  - Intel® C624 chipset

#### System Memory (Max.)*
- 12 DIMM slots; Up to 3TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB)
- Up to 2TB DDR4-2933MHz; in 12 DIMM slots
  - Up to 2TB Intel® Optane™ DC Persistent Memory in memory mode (Cascade Lake only)
  - 2 PCI-E 3.0 x16 Low-profile slots, 1 PCI-E 3.0 x16 SIOM slot from CPU2, x8 signals shared with QAT enabled board per node
- Up to 3TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB)

#### Expansion Slots
- 2 PCI-E 3.0 x16 (LPI/HL); 1 PCI-E 3.0 x16 SIOM

#### Onboard Storage Controller
- N/A

#### Connectivity
- Dual LAN with 10GBase-T with Intel® X557-AT2; Dual 10G private Ethernet between controller nodes; Dedicated B2B connection using NTB by PLX PCI-E 3.0 x8
- Dual LAN with 10GBase-T with Intel® X772 + PHY Intel® X557; Dual 10G private Ethernet between controller nodes;Node to node PCI-E x8 NTB link
- Dual LAN with 10GBase-T with Intel® X557-AT2; Dual 10G private Ethernet between controller nodes;Dedicated B2B connection using NTB by PLX PCI-E 3.0 x8

#### VGA/Audio
- 1 VGA D-Sub Connector, 1 Aspeed AST2500 BMC

#### Management
- Intel® Node Manager; IPMI v2.0 with KVM support; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSUM; SuperDoctor® 5; Watchdog
- Intel® Node Manager; IPMI v2.0 with KVM support; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSUM; SuperDoctor® 5; Watchdog
- Intel® Node Manager; IPMI v2.0 with KVM support; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSUM; SuperDoctor® 5; Watchdog

#### Drive Bays
- 24x U.2 hot-swap Dual-Port NVMe drive bays
- 32 hot-swappable Intel Ruler NVMe drive bays + 1x M.2 per node
- 48x U.2 hot-swap Dual-Port NVMe drive bays

#### Peripheral Bays
- 2 SATA DOM per node; 1 Optional onboard NVMe M.2 (up to 80mm) per node
- N/A
- 2 SATA DOM per node; 1 Optional onboard NVMe M.2 (up to 80mm)

#### Power Supply
- 2000W Redundant Titanium Level high-efficiency power supplies
- 2000W Redundant Titanium Level high-efficiency power supplies

#### Cooling System
- 5x 8cm high-performance PWM fans;
- 6x 6cm counter rotating fans
- 2U Rackmount, 17.2” (437mm) x 3.5” (89mm) x 25.6” (650mm)
- 2U Rackmount, 17.2” (437mm) x 3.5” (89mm) x 23.3” (646mm)

#### Form Factor
- 2U Rackmount 17.2” (437mm) x 3.5” (89mm) x 25.6” (650mm)
- 2U Rackmount 17.2” (437mm) x 3.5” (89mm) x 25.6” (650mm)
- 2U Rackmount 17.2” (437mm) x 3.5” (89mm) x 23.3” (646mm)

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* Please check with your Supermicro sales representative and website for compatibility and configuration details

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
### MODEL

<table>
<thead>
<tr>
<th>Feature</th>
<th>SSG-2029P-E1CR48H</th>
<th>SSG-6029P-E1CR12H</th>
<th>SSG-6029P-E1CR12T</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 3 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable Processors (codenamed Cascade Lake Refresh).</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 3 UPI up to 10.4 GT/s. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable Processors (codenamed Cascade Lake Refresh).</td>
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</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Corporate Database Data Center Database Processing &amp; Storage Enterprise Server</td>
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<td></td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 48x 2.5” Drive in 2U Form Factor</td>
<td>Broadcom 3008 SAS3 IT Mode controller 2 Optional Onboard NVMe M.2 12x 3.5” hot-swap SAS3/SATA3 drive bays Up to 205W CPU support 16 DIMM support Dual 10G BaseT Dual JBOD Expansion Ports 1200W Titanium Level high-efficiency power supply</td>
<td>• 24x 2.5” Drive in 2U Form Factor 2 Optional Onboard NVMe M.2 12x 3.5” hot-swap SAS3/SATA3 drive bays Up to 205W CPU support 16 DIMM support Dual 10G BaseT Dual JBOD Expansion Ports 1200W Titanium Level high-efficiency power supply</td>
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</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X11DSC+</td>
<td>SUPER® X11DPH-T</td>
<td>SUPER® X11DPH-T</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C621 chipset</td>
<td>Intel® C622 chipset</td>
<td>Intel® C622 chipset</td>
</tr>
<tr>
<td><strong>System Memory (Max).</strong>*</td>
<td>24 DIMM slots; Up to 6TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB)</td>
<td>Up to 128GB ECC RDIMM, DDR4-2933MHz, 2048 GB DDR4-2933MHz, 8x32GB LRDIMM, 4x64GB LRDIMM, 4x16GB 3DS RDIMM, 2x32GB 3DS LRDIMM, Supports Intel® Optane™ Persistent Memory in memory mode (Cascade Lake only);</td>
<td>16 DIMM slots; Up to 4TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB)</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>2 PCIe-3.0 x 16, 1 PCIe-3.0 x 8, 1 PCIe-E-3.0 x 16 for Add-On-Module (AOM)</td>
<td>3 PCIe-E-3.0 x 16, 4 PCIe-E-3.0 x 8, Slot 2 &amp; 3 occupied by controller and JBOD Expansion Port</td>
<td>3 PCIe-E-3.0 x 16, 4 PCIe-E-3.0 x 8, Slot 3 occupied by controller</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>N/A</td>
<td>Dual LAN with 10GBase-T with Intel® X557</td>
<td>Dual LAN with 10GBase-T with Intel® X557</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, KVM with dedicated LAN, NMI, SPN, SSM, SUM, SuperDoctor® 5, Watchdog</td>
<td>Intel® Node Manager, IPMI2.0, NMI, SPN, SUM, SuperDoctor® 5, Watchdog</td>
<td>Intel® Node Manager, IPMI2.0, NMI, SPN, SUM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>48x 2.5” hot-swap drive bay 2x 2.5” hot-swap drive bay</td>
<td>12x 3.5” hot-swap SAS3/SATA3 drive bays</td>
<td>12x 3.5” hot-swap SAS3/SATA3 drive bays</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>2x 2.5” rear hot-swap SAS3 drive bays; 2 Optional onboard NVMe M.2 (up to 110mm)</td>
<td>2x 2.5” rear hot-swap SAS3 drive bays; 2 Optional onboard NVMe M.2 (up to 110mm)</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>PWS-1K62P-1R</td>
<td>1200W Titanium Level high-efficiency power supply</td>
<td>1200W Titanium Level high-efficiency power supply</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>5x 8cm high-performance PWM fans; 3x 8cm hot-swap redundant PWM cooling fans.</td>
<td>3x 8cm hot-swap redundant PWM cooling fans.</td>
<td>3x 8cm hot-swap redundant PWM cooling fans.</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>2U 17.2” (437mm) x 3.5” (89mm)</td>
<td>2U 17.2” (437mm) x 3.5” (89mm) x 25.5” (647mm)</td>
<td>2U 17.2” (437mm) x 3.5” (89mm) x 25.5” (647mm)</td>
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* Please check with your Supermicro sales representative and website for compatibility and configuration details
† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
### Processor Support
- **2nd Gen Intel® Xeon® Scalable Processors** and Intel® Xeon® Scalable Processors.
- Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 3 UPI up to 10.4 GT/s.
- Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).

### Key Applications
- Corporate Database
- Database Processing & Storage
- Enterprise Server
- HPC
- Data Center
- iSCSI SAN

### Outstanding Features
- Broadcom 3108 SAS3 HW RAID controller
- 2 Optional Onboard NVMe M.2
- 16x 3.5" Hot-swap SAS3/SATA3 drive bays
- Up to 205W CPU support
- 16 DIMM support
- Dual 10G BaseT
- Redundant 1600W Titanium Level high-efficiency power supplies

### Serverboard
- **SUPER® X11DPH-T**
- **SUPER® X11DSC+**

### Chipset
- Intel® C622 chipset
- Intel® C621 chipset

### System Memory (Max.)*
- 16 DIMM slots; Up to 4TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB)
- 24 DIMM slots; Up to 6TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB)

### Expansion Slots
- 3 PCI-E 3.0 x16, 4 PCI-E 3.0 x8. Slot 1 occupied by controller
- 2 PCI-E 3.0 x16, 1 PCI-E 3.0 x8,
- 1 PCI-E 3.0 x16 for Add-On-Module (AOM)

### Onboard Storage Controller
- Broadcom 3108 SAS3 add-on controller card
- E1CR24H: Broadcom® 3108 SAS3 HW RAID controller
- E1CR24L: Broadcom® 3008 IT Mode SAS Controller

### Connectivity
- Dual LAN with 10GBase-T with Intel® X557
- N/A

### VGA/Audio
- Aspeed AST2500 BMC
- Aspeed AST2500 BMC

### Management
- Intel® Node Manager, IPMI2.0, NMI, SPM, SUM, SuperDoctor® 5, Watchdog
- Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog

### Drive Bays
- 16x 3.5" hot-swap SAS3/SATA3 drive bays
- 24x 3.5" hot-swap drive bay 2x 2.5" hot-swap drive bay

### Peripheral Bays
- 2x 2.5" rear hot-swap SATA3 drive bays; 2 Optional onboard NVMe M.2 (up to 110mm)
- N/A

### Power Supply
- 1600W Titanium Level high-efficiency power supply
- Redundant 1600W Titanium Level high-efficiency power supplies

### Cooling System
- 3x 8cm hot-swap redundant PWM cooling fans.
- 5x 8cm high-performance PWM fans;

### Form Factor
- 2U 17.2" (437mm) x 3.5" (89mm) x 27.75" (705mm)
- 2U 17.2" (437mm) x 3.5" (89mm) x 34" (863.6mm)

### Notes
- Please check with your Supermicro sales representative and website for compatibility and configuration details.
- 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
- For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
### Processor Support
- 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors.
- Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 3 UPI up to 10.4 GT/s.
- Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).

### Key Applications
- Corporate Database
- Data Center
- Database Processing & Storage
- Enterprise Server
- HPC
- iSCSI SAN

### Outstanding Features
- Optional Slim DVD support
- 2 Optional Onboard NVMe M.2
- 16x 3.5" Hot-swap SAS3/SATA3 drive bays
- Up to 205W CPU support
- 16 DIMM support
- Dual 10G BaseT
- Dual JBOD Expansion Ports
- 1200W Titanium Level high-efficiency power supply

### Serverboard
- SUPER® X11DPH-T

### Chipset
- Intel® C622 chipset
- Broadcom 3008 SAS3 IT Mode Controller

### System Memory (Max.)*
- 16 DIMM slots; Up to 4TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB)

### Expansion Slots
- 3 PCI-E 3.0 x16, 4 PCI-E 3.0 x8. Slot 2 & 3 occupied by controller and JBOD Expansion Port
- 3 PCI-E 3.0 x16, 4 PCI-E 3.0 x8. Slot 2 & 3 occupied by controller and JBOD Expansion Port

### Storage Controller
- E1CR116H: Broadcom 3108 SAS3 add-on controller card
- E1CR116L: Broadcom 3008 SAS3 add-on controller card
- E1CR24H: Broadcom 3108 SAS3 add-on controller card (optional)
- E1CR24L: Broadcom 3008 SAS3 add-on controller card (optional)

### Connectivity
- Dual LAN with 10GBase-T with Intel® X557
- Dual LAN with 10GBase-T with Intel® X557

### VGA/Audio
- Aspeed AST2500 BMC

### Management
- Intel® Node Manager, IPMI2.0, NMI, SPM, SUM, SuperDoctor® 5, Watchdog
- Intel® Node Manager, IPMI2.0, NMI, SPM, SUM, SuperDoctor® 5, Watchdog

### Drive Bays
- 16x 3.5" hot-swap SAS3/SATA3 drive bays
- 20x 2.5" hot-swap SATA3 drive bays
- 20x 2.5" hot-swap SATA3 drive bays

### Peripheral Bays
- 2x 2.5" rear hot-swap drive bays; 2 Optional onboard NVMe M.2 (up to 110mm)
- 2x 2.5" rear hot-swap SATA3 drive bays; 2 Optional onboard NVMe M.2 (up to 110mm)

### Power Supply
- 1200W Titanium Level high-efficiency power supply
- 1200W Titanium Level high-efficiency power supply

### Cooling System
- 3x 8cm hot-swap redundant PWM cooling fans. 2x 8cm rear hot-swap exhaust PWM fan
- 3x 8cm hot-swap redundant PWM cooling fans. 2x 8cm rear hot-swap exhaust PWM fan

### Form Factor
- 3U 17.2" (437mm) x 5.2" (132mm) x 25.5" (647mm)
- 4U 17.2" (437mm) x 7" (178mm) x 26" (660mm)

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*Please check with your Supermicro sales representative and website for compatibility and configuration details.
† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
### Processor Support
- 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors (codenamed Cascade Lake Refresh).
- Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 3 UPI up to 10.4 GT/s.

### System Memory
- Chipset: Intel® C622 chipset
- Supports Intel® Optane™ DCPMM™
- RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM
- LRIMM: Supports Intel® Optane™ DCPMM™

### Expansion Slots
- 24 DIMM slots; Up to 6TB DDR4-2933 MHz
- 24x 3.5" Drive in 4U Form Factor
- Supports Dual 205W Skylake CPU
- Support SMI Card for Multiple IO Options

### Storage Controller
- -E1CR36H: Broadcom 3108 SAS/SATA controller card
- -E1CR60H: Broadcom 3108 SAS/SATA controller card

### Connectivity
- Dual LAN with 10GBase-T with Intel® X557

### Management
- Intel® Management Engine, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, KVM with dedicated LAN, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog

### Drive Bays
- 36x 3.5" drive bays
- Support for 2nd Gen Intel® Xeon® Scalable Processors (codenamed Cascade Lake Refresh).

### Peripheral Bays
- 2x 2.5" rear hot-swap SATA3 drive bays
- 2x 2.5" hot-swap drive bay

### Power Supply
- 1600W Redundant Platinum Level High-Efficiency Power Supplies

### Cooling System
- 7x 8cm high-performance PWM fans, air shroud
- 5x 80mm rear hot-swap exhaust PWM fan

### Form Factor
- 4U 17.2" (437mm) x 7" (178mm) x 27.5" (699mm)
- 4U Rackmount 17.2" (437mm) x 7" (178mm) x 26" (660mm)

---

### Key Applications
- Enterprise Server
- Corporate Database
- Database Processing & Storage
- Data Center
- iSCSI SAN
- HPC
- Virtualization

---

### System Memory
- RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM
- LRIMM: Supports Intel® Optane™ DCPMM™
- 256GB memory modules; Supports Intel® Xeon® Scalable Processors (codenamed Cascade Lake Refresh).
- Note: BIOS version 3.2 or above is required to support 205W, 3 UPI up to 10.4 GT/s.

### Serverboard
- SSG-6049P-E1CR36H
- SSG-6049P-E1CR36L

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### Storage
- 4U Top-Loading Storage
- 36x 3.5" HDDs

---

### Website
- Please check with your Supermicro sales representative and website for compatibility and configuration details.

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### Notes
- For 2nd Gen Intel® Xeon® Scalable Processors, two DIMMs per channel can be achieved by using memory purchased from Supermicro.

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### Dimensions
- 4U Rackmount Storage: 17.2" (437mm) x 7" (178mm) x 26" (660mm)
- 4U Top-Loading Storage: 60x 3.5 HDDs

---

### Weight
- Net Weight: 118lbs (53.52kg)
- Gross Weight: 170.5lbs (77.34kg)
### MODEL

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>SYS-6019P-ACR12L+</th>
<th>SYS-5019D8-TR12P</th>
<th>SSG-5018A-AR12L</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Dual Socket P (LGA 3647) supported, CPU TDP support 205W, 2UPI up to 10.4 GT/s. Note: BIOS version 3.3 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>Intel® Xeon® D-2146NT SoC Processor 8-Core, 16 Threads 2.3 GHz, 80W</td>
<td>Intel® Atom® Processor C2750. Dual Socket FCBGA1283 supported, CPU TDP support 20W</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Object Storage Data Center Database Processing &amp; Storage Enterprise Server Big Data Analytics Hadoop &amp; Ceph storage solutions</td>
<td>• Warm Storage Content Delivery Networks (CDNs) MEC (Multi-access Edge Computing) VM and SMB Servers</td>
<td>• Storage Nodes</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• Broadcom® 3216 SAS3 IT mode controller 12x 3.5&quot; hot-swap SAS3/SATA3 drive bays 4x 2.5&quot; 7mm hot-swap NVMe/SATA drive bays 1x M.2 NVMe up to 110mm Front Panel HDD Locate LED Internal Cable Arm</td>
<td>• 2-Port 1Gig Base-T, 2-Port 10Gig Base-T and 2-port 10G SFP+ Network Port IPMI 2.0 (dedicated LAN) with Virtual Media/ KVM over LAN With cost-effective AOC support 12x 3.5&quot; SAS3, 2x fixed 2.5 SAS3/SATA3 Built-in Intel QAT up to 40Gbps Crypto/ Compression Redundant or Single PWS Option</td>
<td>• Hardware Drive Power Control 1 PCI-E 2.0 x4(in x8 slot) 12x 3.5&quot; data drives in 1U Cost optimized RAID: IT Mode only</td>
</tr>
</tbody>
</table>

### System Memory (Max.)*

- **Serverboard**: SUPER® X11DDW-NT
- **Chipsset**: Intel® C622 chipset
- **Up to**: Up to 3TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 3TB 3DS ECC LRDIMM, DDR4-2933MHz, in 12 DIMM slots; Up to 2TB Intel® Optane™ DC Persistent Memory in memory mode (Cascade Lake only).

### System Memory (Max.)*

- **Serverboard**: SUPER® X11SDV-8C-T
- **Chipsset**: Intel® Xeon® D-2146NT SoC Processor System on Chip chipset
- **Up to**: Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; Up to 512GB LRDIMM, in 4 DIMM slots

### Expansion Slots

- **3 PCI-E 3.0 x16**, 1 PCI-E 3.0 x16 for Add-On-Module (AOM)

### Onboard Storage Controller

- **Intel® C6222 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10;** Intel® RSTe RAID IT Mode

### Connectivity

- **N/A**, 2x USB 3.0, VGA
- **N/A**, 2x USB 3.0, VGA

### VGA/Audio

- **Aspeed AST2500 BMC**, Built-in VGA from BMC
- **Aspeed AST2400 BMC**

### Management

- **Intel® Node Manager, IPMI2.0, KVM with dedicated LAN port & KV; 4 Pin PWM Fan Speed control; Thermal and voltage monitoring**
- **IPMI 2.0 w/ dedicated LAN port & KV; 4 Pin PWM Fan Speed control; Thermal and voltage monitoring**

### Drive Bays

- **12x 3.5" hot-swap SAS3/SATA3 drive bays**
- **12x Hot-Swap 3.5" SATA3 drive bays (default); With optional AOC-S3216L-L16iT: support 12x 3.5" SAS3 + 2x 2.5" fixed SAS3/SATA3**
- **12x 3.5" hot-swap HDD bays for server chassis**

### Peripheral Bays

- **N/A**, SATADOM for OS drive

### Power Supply

- **800W 1U Platinum redundant power supply**
- **400W Redundant Power (PWS-407P-1R), 80PLUS Platinum**

### Cooling System

- **6x 40x40x56mm 20.5K-17.6K RPM Counter-rotating Fan;** 6x 4cm 4-pin PWM fans
- **6x 40x28mm PWM fans**

### Form Factor

- **1U 17.6" (447mm) x 1.7" (43mm) x 37.5" (952.5mm)**
- **437 x 43 x 813mm (17.2" x 1.7" x 32")**
- **1U 17.2" (437mm) x 1.7" (43mm) x 32" (813mm)**

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* Please check with your Supermicro sales representative and website for compatibility and configuration details

† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SSG-2028R-ACR24H</th>
<th>SSG-2028R-ACR24L</th>
<th>SSG-2028R-DE2CR24L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Redundant dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
</tbody>
</table>
| Key Applications | • High Performance NAS Servers  
• Web Cache  
• Corporate Database  
• Database Processing & Storage  
• HPC  
• Large Database  
• Web Cache | • Corporate Database  
• Database Processing & Storage  
• HPC  
• Large Database  
• Web Cache | • High Availability Storage Appliance Platform |
| Outstanding Features | • 145W CPU support  
• 3 3108 HW RAID controller  
• SAS 3.0 (12Gbps) support  
• 16 DIMM support DDR4-2133MHz  
• 2x 10GBase-T Ports  
• IPMI 2.0 + KVM with dedicated LAN | • 145W CPU support  
• 3 3008 HBA controller  
• 16 DIMM support DDR4-2133MHz  
• IPMI 2.0 + KVM with dedicated LAN  
• SAS 3.0 (12Gbps) support  
• 2x 10GBase-T Ports | • Redundant DP SBB supporting shared 24x 2.5” SAS HDD  
• Intel® X540 Dual port 10GBase-T  
• Dual JBOD Expansion Ports per node  
• NV-DIMM support  
• Up to 3 add-on cards per node  
• Redundant 1200W Titanium Level redundant power supplies |
| Serverboard | SUPER® X10DRH-iT | SUPER® X10DRH-iT | Redundant SUPER® X10DRS-2U |
| Chipset | Intel® C612 Express chipset | Intel® C612 Express chipset | Redundant Intel® C612 chipset |
| System Memory (Max.)* | Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots | Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots | Redundant up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots |
| Expansion Slots | 1 PCI-E 3.0 x16  
6 PCI-E 3.0 x8 | 1 PCI-E 3.0 x16  
6 PCI-E 3.0 x8 | Redundant 3 PCI-E 3.0 x8 Low profile expansion slots per controller |
| Onboard Storage Controller | 3 3108 HW RAID controller | 3 3008 HBA controllers | Redundant 3008 SAS controller |
| Connectivity | Dual LAN with 10GBase-T with Intel® X540 10GbE Controller | Dual LAN with 10GBase-T with Intel® X540 10GbE Controller | Redundant dual LAN with 10GBase-T with Intel® X540 10GbE Controller per node 100M private Ethernet between controller nodes |
| VGA/Audio | AST2400 VGA | AST2400 VGA | Redundant AST2400 VGA |
| Management | Intel® Node Manager, SLIM, SPM, SSM, SuperDoctor® 5, Watchdog | Intel® Node Manager, SLIM, SPM, SSM, SuperDoctor® 5, Watchdog | Redundant IPMI 2.0 + KVM with dedicated LAN |
| Drive Bays | 24x 2.5” hot-swap SAS3/SATA3 drive bay w/ full SES-II support | 24x 2.5” hot-swap SAS3/SATA3 drive bay w/ full SES-II support | Shared 24x 2.5” hot-swap SAS drive bay with SES2 |
| Peripheral Bays | Optional 2x 2.5” Rear Hot-Swap Drive Bays | Optional 2x 2.5” Rear Hot-Swap Drive Bays | N/A |
| Power Supply | Redundant 920W Platinum Level Digital high-efficiency power supplies | Redundant 920W Platinum Level Digital high-efficiency power supplies | Redundant 1200W Titanium Level high-efficiency power supplies with 16C and PMBus |
| Cooling System | 3x cooling fans | 3x cooling fans | Redundant 4x 4cm PWM cooling fans per node |
| Form Factor | 2U Rackmount | 2U Rackmount | 2U Rackmount |

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
**SBB Storage**

- **20x 2.5” NVMe drive bays**
- **24x 2.5” dual port NVMe drive bays**
- **40x 2.5” NVMe drive bays**

**Processor Support**

- Intel® Xeon® processor E5-2600 v3, Intel® Xeon® processor E5-2600 v4
- Dual Socket R3 (LGA 2011) supported, CPU TDP support Up to 145W TDP

**Key Applications**

- Corporate Database
- Lustre
- HPC
- Virtualization
- Corporate Database
- Lustre
- HPC
- Virtualization
- High Availability Storage Appliance Platform

**Outstanding Features**

- Dual port NVMe
- Support SIOM Card for Multiple IO Option
- 2000W High-Efficiency (96%) Titanium Level Redundant Power Supplies
- Redundant DP SBB supporting 24x U.2 dual port NVMe
- Shared storage between redundant controllers
- Node to node heartbeat/10G connectivity

**Serverboard**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SSG-2028R-DN2R20L</th>
<th>SSG-2028R-DN2R24L</th>
<th>SSG-2028R-DN2R40L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Intel® Xeon® processor E5-2600 V3, Intel® Xeon® processor E5-2600 V4 with QPI up to 9.6GT/s</td>
<td>Intel® Xeon® processor E5-2600 V3, Intel® Xeon® processor E5-2600 V4 with UPI up to 9.6GT/s</td>
<td>Intel® Xeon® processor E5-2600 V3, Intel® Xeon® processor E5-2600 V4 with UPI up to 9.6GT/s</td>
</tr>
<tr>
<td>Key Applications</td>
<td>Corporate Database</td>
<td>Corporate Database</td>
<td>Corporate Database</td>
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<td>Lustre</td>
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<td>HPC</td>
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<td>Virtualization</td>
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<tr>
<td>Outstanding Features</td>
<td>Dual port NVMe</td>
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<td></td>
<td>Support SIOM Card for Multiple IO Option</td>
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<td>Support SIOM Card for Multiple IO Option</td>
</tr>
<tr>
<td></td>
<td>2000W High-Efficiency (96%) Titanium Level Redundant Power Supplies</td>
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<td>2000W High-Efficiency (96%) Titanium Level Redundant Power Supplies</td>
</tr>
<tr>
<td></td>
<td>Redundant DP SBB supporting 24x U.2 dual port NVMe</td>
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<td>Redundant DP SBB supporting 24x U.2 dual port NVMe</td>
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<tr>
<td></td>
<td>Shared storage between redundant controllers</td>
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</tr>
<tr>
<td></td>
<td>Node to node heartbeat/10G connectivity</td>
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<td>Node to node heartbeat/10G connectivity</td>
</tr>
<tr>
<td>Driver Bays</td>
<td>20x 2.5” NVMe drive bay</td>
<td>24x 2.5” dual port NVMe drive bay</td>
<td>40x 2.5” NVMe drive bay</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Cooling System</td>
<td>5x 8cm high-performance PWM fans, N/A</td>
<td>5x 8cm high-performance PWM fans, N/A</td>
<td>5x 8cm high-performance PWM fans, N/A</td>
</tr>
<tr>
<td>Form Factor</td>
<td>2U Rackmount 17.2” (437mm) x 3.5” (89mm) x 25.6” (650mm)</td>
<td>2U Rackmount 17.2” (437mm) x 3.5” (89mm) x 25.6” (650mm)</td>
<td>2U Rackmount 17.2” (437mm) x 3.5” (89mm) x 33.3” (846mm)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
**Super SBB Storage**

**2U Storage**
- SAS3 HW RAID controller
- Storage Expandable

**2U Storage**
- SAS3 IT mode controller
- Storage Expandable

---

**MODEL**

<table>
<thead>
<tr>
<th>SSG-2028R-DN2R48L</th>
<th>SSG-2028R-E1CR24H</th>
<th>SSG-2028R-E1CR24L</th>
</tr>
</thead>
</table>

**Processor Support**
- Intel® Xeon® processor E5-2600 V3
- Corporate Database
- SAS3 HW RAID controller
- Storage Expandable

**Key Applications**
- Corporate Database
- Lustre
- HPC
- Virtualization
- High Availability Storage Appliance Platform

**Outstanding Features**
- Dual port NVMe
- Support SIOM Card for Multiple IO Option
- 2000W High-Efficiency (96%) Titanium Level Redundant Power Supplies
- Redundant DP SBB supporting 4x U.2 dual port NVMe
- Shared storage between redundant controllers
- Node to node heartbeat/10G connectivity

**Serverboard**
- Intel® C612 chipset
- Intel® C612 chipset
- Intel® C612 chipset

**Chipset**
- Intel® C612 chipset
- Intel® C612 chipset
- Intel® C612 chipset

**System Memory (Max.)**
- 1TB Registered ECC, DDR4-2400/2133 MHz in 16 DIMM slots (per node)
- Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots

**Expansion Slots**
- 1 PCI-E 3.0 x16 HHHL, 1 PCI-E 3.0 x8 HHHL, 1 SIOM (per node)
- 1 PCI-E 3.0 x16
- 6 PCI-E 3.0 x8
- Slot 1 & 2 occupied by controller and JBOD expansion port

**Onboard Storage Controller**
- Intel® C612 controller for 2 SATA3 (6 Gbps) ports (per node)
- 3108 SAS3 HW RAID controller
- 3008 SAS3 HBA controller

**Connectivity**
- Dual LAN with Intel® X540 10GBase-T Ethernet Controller (per node)
- Dual LAN with Intel® X540 10GBase-T Ethernet Controller
- Dual LAN with Intel® X540 10GBase-T Ethernet Controller

**VGA/Audio**
- 1 VGA by Aspeed AST2400 BMC (per node)
- AST2400 VGA
- AST2400 VGA

**Management**
- Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI
- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog
- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog

**Drive Bays**
- 48x 2.5" dual port NVMe drive bay
- 24x 2.5" hot-swap SAS3/SATA3 drive bay;
- 2x 2.5" optional rear hot-swap drive bay
- 24x 2.5" hot-swap SAS3/SATA3 drive bay;
- 2x 2.5" optional rear hot-swap drive bay

**Peripheral Bays**
- N/A
- N/A
- N/A

**Power Supply**
- Redundant PWS-2K05A-1R
- Redundant 1000W Titanium / 920W Platinum Level high-efficiency power supplies with FC and PMBus
- Redundant 1000W Titanium / 920W Platinum Level high-efficiency power supplies with FC and PMBus

**Cooling System**
- 5x 8cm high-performance PWM fans;
- 3x 8cm hot-swap redundant PWM cooling fans
- 3x 8cm hot-swap redundant PWM cooling fans

**Form Factor**
- 2U Rackmount 17.2" (437mm) x 3.5" (89mm) x 33.3" (846mm)
- 2U Rackmount 437 x 89 x 630mm (17.2" x 3.5" x 24.8")
- 2U Rackmount 437 x 89 x 630mm (17.2" x 3.5" x 24.8")

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*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
## Storage

### 2U Storage

- **SAS3** HW RAID controller
- Storage Expandable

### 2U Simply Double Storage

- 48 Bay SAS3
- Storage Expandable

### 2U Simply Double Storage

- 48 Bay SAS3
- Storage Expandable

### MODEL | SSG-2028R-E1CR24N | SSG-2028R-E1CR48N | SSG-2028R-E1CR48L
---|---|---|---
**Processor Support** | Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s | Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s | Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s
**Key Applications** | • Corporate Database • Data Center • Database Processing & Storage • Enterprise Server • HPC • iSCSI SAN | • Corporate Database • Data Center • Database Processing & Storage • Enterprise Server • HPC • iSCSI SAN | • Corporate Database • Data Center • Database Processing & Storage • Enterprise Server • HPC • iSCSI SAN
**Outstanding Features** | • 3108 SAS3 HW RAID controller • 24x 2.5" Hot-swap SAS3 bays • 145W CPU support • 24 DIMM slots • Quad 10GBase-T Ports • Dual JBOD Expansion Ports • 920W Redundant Platinum Level high-efficiency power supplies | • 48x 2.5" Drive in 2U Form Factor • 3108 SAS3 HW RAID controller; • 24 DIMM sockets • Support SIOM Card for Multiple IO Option • Redundant 1600W Titanium Level high-efficiency power supplies | • 48x 2.5" Drive in 2U Form Factor • 3008 SAS3 HBA controller • Supports dual 145W CPU • 24 DIMM sockets • Support SIOM Card for Multiple IO Option • Redundant 1600W Titanium Level high-efficiency power supplies

### Serverboard

- **SUPER® X10DRi-T4+**
- **SUPER® X10DSC+**
- **SUPER® X10DSC+**

### Chipset

- Intel® C612 chipset

### System Memory (Max.)*

- Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots
- Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots
- Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots

### Expansion Slots

- 2 PCI-E 3.0 x16
- 3 PCI-E 3.0 x8
- 1 PCI-E 3.0 x4 (in x8)
- Slot 3 & 4 occupied by controller and JBOD expansion port
- 2 PCI-E 3.0 x16
- 1 PCI-E 3.0 x8
- 2 PCI-E 3.0 x16
- 1 PCI-E 3.0 x8

### Onboard Storage Controller

- 3108 SAS3 HW RAID controller
- 3108 SAS3 HW RAID controller
- 3008 SAS3 HBA controller

### Connectivity

- Quad LAN with Intel® X540 10GBase-T Ethernet Controller
- SIOM card for multiple IO option.
- SIOM card for multiple IO option.

### VGA/Audio

- AST2400 VGA
- AST2400 VGA
- AST2400 VGA

### Management

- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog
- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog
- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog

### Drive Bays

- 24x 2.5" hot-swap SAS3/SATA3 drive bay; optional 2x 2.5" internal fixed drive bay
- 48x 2.5" hot-swap SAS3/SATA3 drive bays; Optional 4x NVMe hybrid drive bay support (4x 2.5" + 4x NVMe) • 48x 2.5" hot-swap SAS3/SATA3 drive bays; Optional 4x NVMe hybrid drive bay support (4x 2.5" + 4x NVMe)

### Peripheral Bays

- N/A
- Optional 2x 2.5" rear drive tray to support 4x rear 2.5" drives
- Optional 2x 2.5" rear drive tray to support 4x rear 2.5" drives

### Power Supply

- Redundant 1000W Titanium / 920W Platinum Level high-efficiency power supplies with I²C and PMBus
- 1600W Redundant Titanium Level high-efficiency power supplies with I²C & PMBus
- 1600W Redundant Titanium Level high-efficiency power supplies with I²C & PMBus

### Cooling System

- 3x 8cm hot-swap redundant PWM cooling fans
- 5x 8cm hot-swap redundant PWM cooling fans
- 5x 8cm hot-swap redundant PWM cooling fans

### Form Factor

- 2U Rackmount: 437 x 89 x 630mm (17.2" x 3.5" x 24.8")
- 2U Rackmount: 437 x 89 x 767mm (17.2" x 3.5" x 30.2")
- 2U Rackmount: 437 x 89 x 767mm (17.2" x 3.5" x 30.2")

* Please check with your Supermicro sales representative and website for compatibility and configuration details
## SSG-2028R-NR48N vs SSG-6028R-E1CR12T

<table>
<thead>
<tr>
<th>Feature</th>
<th>SSG-2028R-NR48N</th>
<th>SSG-6028R-E1CR12T</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Corporate Database &lt;br&gt; • Data Center &lt;br&gt; • Database Processing &amp; Storage &lt;br&gt; • Enterprise Server &lt;br&gt; • iSCSI SAN</td>
<td>• Corporate Database &lt;br&gt; • Data Center &lt;br&gt; • Database Processing &amp; Storage &lt;br&gt; • Enterprise Server &lt;br&gt; • iSCSI SAN</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• 48x 2.5&quot; NVMe Drive in 2U Form Factor &lt;br&gt; • Supports dual 145W CPU &lt;br&gt; • 24 DIMM sockets &lt;br&gt; • Support SIOM Card for Multiple IO Option &lt;br&gt; • Redundant 1600W <strong>Titanium Level</strong> high-efficiency power supplies</td>
<td>• Onboard 3108 SAS3 HW RAID controller &lt;br&gt; • 12x 3.5&quot; hot-swap SAS3/SATA3 drive bays &lt;br&gt; • Supports dual 145W CPU &lt;br&gt; • Supports 16 DIMM DDR4 up to 2133MHz &lt;br&gt; • Dual 10G BaseT &lt;br&gt; • Redundant 920W <strong>Platinum Level</strong> (94%+) Power Supplies</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X10DSC+</td>
<td>SUPER® X10DRH-CT</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
</tr>
<tr>
<td><strong>System Memory (Max.*)</strong></td>
<td>Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots</td>
<td>Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>2 PCI-E 3.0 x16 &lt;br&gt; 1 PCI-E 3.0 x8 &lt;br&gt; Slot 3 occupied by NVMe AOC</td>
<td>1 PCI-E 3.0 x16 &lt;br&gt; 6 PCI-E 3.0 x8</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Onboard NVMe controller</td>
<td>3108 SAS3 onboard controller card</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>SIOM card for multiple IO option.</td>
<td>Dual 10GBase-T with Intel® X540 10GbE Controller</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>AST2400 VGA</td>
<td>AST2400 VGA</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>48x 2.5&quot; hot-swap NVMe drive bays</td>
<td>12x 3.5&quot; hot-swap SAS3/SATA3 drive bays &lt;br&gt; Optional 4x NVMe hybrid drive bay support (8x 3.5&quot; + 4x NVMe)</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>2x 2.5&quot; rear hot-swap drive bays</td>
<td>2x 2.5&quot; optional rear-hot-swap drive bay</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>1600W Redundant <strong>Titanium Level</strong> high-efficiency power supplies with I²C &amp; PMBus</td>
<td>920W Redundant <strong>Platinum Level</strong> high-efficiency power supplies with I²C &amp; PMBus</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>5x 8cm hot-swap redundant PWM cooling fans</td>
<td>3x 8cm hot-swap redundant PWM cooling fans</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>2U 17.2&quot; (437mm) x 3.5&quot; (89mm) x 30&quot; (684mm)</td>
<td>2U Rackmount &lt;br&gt; 437 x 89 x 647mm (17.2&quot; x 3.5&quot; x 25.5&quot;)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details.
### Key Applications
- Corporate Database
- Data Center
- Database Processing & Storage
- Enterprise Server
- HPC
- iSCSI SAN

### Outstanding Features
- 3108 SAS3 HW RAID controller
- 12x 3.5” SAS3/SATA3 drive bays
- 145W CPU support
- 16 DIMM slots
- Dual 10G BaseT
- Dual JBOD Expansion Ports
- Redundant 920W Platinum Level High-Efficiency power supplies

### Serverboard
- SUPER® X10DRH-iT
- SUPER® X10DRH-iT
- SUPER® X10DRH-iT

### Chipset
- Intel® C612 chipset
- Intel® C612 chipset
- Intel® C612 chipset

### System Memory (Max.)*
- Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots
- Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots
- Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots

### Expansion Slots
- 1 PCI-E 3.0 x16
  - Slot 1 & 2 occupied by controller and JBOD expansion port
- 1 PCI-E 3.0 x16
  - Slot 1 & 2 occupied by controller and JBOD expansion port
- 2 PCI-E 3.0 x16
  - 1 PCI-E 3.0 x16 (in x8)
  - 1 PCI-E 3.0 x8 (in x8)
  - Slot 3 & 4 occupied by controller and JBOD expansion port

### Onboard Storage Controller
- 3108 SAS3 HW RAID controller
- 3008 SAS3 HBA controller
- 3108 SAS3 HW RAID controller card

### Connectivity
- Dual LAN with Intel® X540 10GBase-T Ethernet Controller
- Dual LAN with Intel® X540 10GBase-T Ethernet Controller
- Quad LAN with Intel® X540 10GBase-T Ethernet Controller

### VGA/Audio
- AST2400 VGA
- AST2400 VGA
- AST2400 VGA

### Management
- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog
- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog
- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog

### Drive Bays
- 12x 3.5” hot-swap SAS3/SATA3 drive bay; Optional 4x NVMe hybrid drive bay support (8x 3.5” + 4x NVMe)
- 12x 3.5” hot-swap SAS3/SATA3 drive bay; Optional 4x NVMe hybrid drive bay support (8x 3.5” + 4x NVMe)
- 12x 3.5” hot-swap SAS3/SATA3 drive bay; Optional 2x 2.5” internal fixed drive bay

### Peripheral Bays
- N/A
- N/A
- N/A

### Power Supply
- 920W Redundant Platinum Level high-efficiency power supplies with iIC & PMBus
- 920W Redundant Platinum Level high-efficiency power supplies with iIC & PMBus
- 920W Redundant Platinum Level high-efficiency power supplies with iIC & PMBus

### Cooling System
- 3x 8cm hot-swap redundant PWM cooling fans
- 3x 8cm hot-swap redundant PWM cooling fans
- 3x 8cm hot-swap redundant PWM cooling fans

### Form Factor
- 2U Rackmount
- 2U Rackmount
- 2U Rackmount

* Please check with your Supermicro sales representative and website for compatibility and configuration details
## STORAGE

### 2U Simply Double Storage

- 24 Bay SAS3 w/ IT Mode
- Storage Expandable

### 3U Storage

- SAS3 HW/IT mode controller
- Storage Expandable

### 3U Storage

- HW SAS3 controller
- Storage Expandable

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### MODEL | SSG-6028R-E1CR24L | SSG-6038R-E1CR16H | SSG-6038R-E1CR16L | SSG-6038R-E1CR16N
--- | --- | --- | --- | ---
Processor Support | Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s | Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s | Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s | Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s
Key Applications | • Corporate Database  
• Data Center  
• Database Processing & Storage  
• Enterprise Server  
• HPC  
• iSCSI SAN  
• 24x 3.5" Drive in 2U Form Factor  
• 3008 SAS3 HBA controller  
• Supports dual 145W CPU  
• 24 DIMM sockets  
• Support SMI Card for Multiple IO Option  
• Redundant 1600W Titanium Level high-efficiency power supplies | • Corporate Database  
• Data Center  
• Database Processing & Storage  
• Enterprise Server  
• HPC  
• iSCSI SAN  
• 16x 3.5" Hot-swap SAS3 drive bays  
• 130W CPU support  
• 16 DIMM slots  
• Dual 10G BaseT  
• Dual JBOD Expansion Ports  
• 920W Platinum Level High-Efficiency power supply | • Corporate Database  
• Data Center  
• Database Processing & Storage  
• Enterprise Server  
• HPC  
• iSCSI SAN  
• 3108 SAS3 HW RAID controller  
• 16x 3.5" SAS3/SATA3 drive bays  
• 130W CPU support  
• 24 DIMM slots  
• 4 x 10G BaseT  
• Dual JBOD Expansion Ports  
• 920W Platinum Level High-Efficiency power supply | • Corporate Database  
• Data Center  
• Database Processing & Storage  
• Enterprise Server  
• HPC  
• iSCSI SAN  
• Dual JBOD Expansion Ports  
• 920W Platinum Level High-Efficiency power supply

**Outstanding Features**

- 2x 2.5" optional rear drive bay to support 4x 2.5" drives
- 5x 8cm hot-swap redundant PWM cooling fans
- 2U Rackmount
- 437 x 89 x 683.6mm (17.2" x 3.5" x 27.7")
- With Cable Management Arm installed: 41" (1041.4mm)

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**Serverboard**

- SUPER® X10DSC+
- SUPER® X10DRH-iT
- SUPER® X10DRi-T4+

**Chipset**

- Intel® C612 chipset
- Intel® C612 chipset
- Intel® C612 chipset

**System Memory (Max.)**

- Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots
- Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots
- Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots

**Expansion Slots**

- 2 PCI-E 3.0 x16
- 1 PCI-E 3.0 x8
- 1 PCI-E 3.0 x16, 6 PCI-E 3.0 x8, Slot 1 & 2 occupied by controller and JBOD Expansion Port
- 1 PCI-E 3.0 x16, 3 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8)

**Onboard Storage Controller**

- 3008 SAS3 HBA controller
- E1CR16H: 3108 SAS3 HW RAID controller; E1CR16L: 3008 SAS3 HBA controller
- 3108 SAS3 HW RAID controller

**Connectivity**

- SIOM card for multiple IO option
- Dual LAN with 10Gbase-T with Intel® X540 10GbE Controller
- Quad LAN with Intel® X540 10GbE Controller

**VGA/Audio**

- 1 VGA, 1 Aspeed AST2400 BMC
- AST2400 VGA
- AST2400 VGA

**Management**

- Intel® Node Manager, IPMI2.0, NMI, SPM, SUM, SuperDoctor® 5, Watchdog
- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog
- IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog

**Drive Bays**

- 24x 3.5" hot-swap drive bay, Optional 4x NVMe hybrid drive bay support (20x 3.5" + 4x NVMe)
- 16x 3.5" hot-swap SAS3/SATA3 drive bay; 2x 2.5" optional rear hot-swap drive bay
- 16x 3.5" hot-swap SAS3/SATA3 drive bay; 2x 2.5" optional rear hot-swap drive bay

**Peripheral Bays**

- Optional 2x 2.5" rear drive bay to support 4x rear 2.5" drives
- 1 optional Slim DVD-ROM bay
- 1 optional Slim DVD-ROM bay

**Power Supply**

- 1600W Redundant Titanium Level high-efficiency power supplies with I²C & PMBus
- 920W Redundant Platinum Level high-efficiency power supplies with I²C & PMBus
- 920W Redundant Platinum Level high-efficiency power supplies with I²C & PMBus

**Cooling System**

- 3x 8cm hot-swap redundant PWM cooling fans, 2x 80mm rear hot-swap exhaust PWM fan
- 3x 8cm hot-swap redundant PWM cooling fans, 2x 80mm rear hot-swap exhaust PWM fan
- 3x 8cm hot-swap redundant PWM cooling fans, 2x 80mm rear hot-swap exhaust PWM fan

**Form Factor**

- 2U Rackmount
- 3U Rackmount
- 3U Rackmount

*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
**Storage (For Complete System Only)**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SSG-6048R-E1CR24H</th>
<th>SSG-6048R-E1CR24L</th>
<th>SSG-6048R-E1CR24N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Corporate Database</td>
<td>• Corporate Database</td>
<td>• Corporate Database</td>
</tr>
<tr>
<td></td>
<td>• Data Center</td>
<td>• Data Center</td>
<td>• Data Center</td>
</tr>
<tr>
<td></td>
<td>• Database Processing &amp; Storage</td>
<td>• Database Processing &amp; Storage</td>
<td>• Database Processing &amp; Storage</td>
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<tr>
<td></td>
<td>• Enterprise Server</td>
<td>• Enterprise Server</td>
<td>• Enterprise Server</td>
</tr>
<tr>
<td></td>
<td>• HPC</td>
<td>• HPC</td>
<td>• HPC</td>
</tr>
<tr>
<td></td>
<td>• iSCSI SAN</td>
<td>• iSCSI SAN</td>
<td>• iSCSI SAN</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• 24x 3.5” Hot-swap SAS3 bays</td>
<td>• 24x 3.5” Hot-swap SAS3 bays</td>
<td>• 3108 SAS3 HW RAID controller</td>
</tr>
<tr>
<td></td>
<td>• 145W CPU support</td>
<td>• 145W CPU support</td>
<td>• 24x 3.5” Hot-swap SAS3 bays</td>
</tr>
<tr>
<td></td>
<td>• 16 DIMM slots</td>
<td>• 16 DIMM slots</td>
<td>• 145W CPU support</td>
</tr>
<tr>
<td></td>
<td>• Dual 10G BaseT</td>
<td>• Dual 10G BaseT</td>
<td>• 24 DIMM slots</td>
</tr>
<tr>
<td></td>
<td>• Dual JBOD Expansion Ports</td>
<td>• Dual JBOD Expansion Ports</td>
<td>• 4x 10G BaseT</td>
</tr>
<tr>
<td></td>
<td>• 920W Platinum Level redundant high-efficiency power supplies</td>
<td>• 920W Platinum Level redundant high-efficiency power supplies</td>
<td>• Dual JBOD Expansion Ports</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 920W Platinum Level redundant high-efficiency power supplies</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10DRH-iT</td>
<td>SUPER® X10DRH-iT</td>
<td>SUPER® X10DRi-T4+</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
</tr>
<tr>
<td>System Memory  (Max.)*</td>
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<td>Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
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<tr>
<td>Expansion Slots</td>
<td>1 PCI-E 3.0 x16, 6 PCI-E 3.0 x8, Slot 1 &amp; 2 occupied by controller and JBOD Expansion Port</td>
<td>1 PCI-E 3.0 x16, 6 PCI-E 3.0 x8, Slot 1 &amp; 2 occupied by controller and JBOD Expansion Port</td>
<td>2 PCI-E 3.0 x16, 3 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8); Slot 3 &amp; 4 occupied by controller and JBOD Expansion Port</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>3108 SAS3 HW RAID controller;</td>
<td>3008 SAS3 HBA controller;</td>
<td>3108 SAS3 HW RAID controller</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Dual LAN with 10GBase-T with Intel® X540 10GbE Controller</td>
<td>Dual LAN with 10GBase-T with Intel® X540 10GbE Controller</td>
<td>Quad LAN with Intel® X540 10GBase-T Ethernet Controller</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>AST2400 VGA</td>
<td>AST2400 VGA</td>
<td>AST2400 VGA</td>
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<tr>
<td>Management</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SMM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SMM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SMM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>24x 3.5” hot-swap SAS3/SATA3 drive bay; 2x 2.5” optional rear hot-swap drive bay</td>
<td>24x 3.5” hot-swap SAS3/SATA3 drive bay; 2x 2.5” optional rear hot-swap drive bay</td>
<td>24x 3.5” hot-swap SAS3/SATA3 drive bay; 2x 2.5” optional rear hot-swap drive bay</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>920W Redundant Platinum Level high-efficiency power supplies with PCIe &amp; PMBus</td>
<td>920W Redundant Platinum Level high-efficiency power supplies with PCIe &amp; PMBus</td>
<td>920W Redundant Platinum Level high-efficiency power supplies with PCIe &amp; PMBus</td>
</tr>
<tr>
<td>Cooling System</td>
<td>3x 8cm hot-swap redundant PWM cooling fans. 2x 80mm rear hot-swap exhaust PWM fan</td>
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<td>3x 8cm hot-swap redundant PWM cooling fans. 2x 80mm rear hot-swap exhaust PWM fan</td>
</tr>
<tr>
<td>Form Factor</td>
<td>4U Rackmount 437 x 178 x 673mm (17.2”x7”x26.5”)</td>
<td>4U Rackmount 437 x 178 x 673mm (17.2”x7”x26.5”)</td>
<td>4U Rackmount 437 x 178 x 673mm (17.2”x7”x26.5”)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
# 4U Storage

**High Availability Storage Platform**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SSG-6048R-DE2CR24L</th>
<th>SSG-6048R-E1CR36H SSG-6048R-E1CR36L</th>
<th>SSG-6048R-E1CR36N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Redundant dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
<tr>
<td>Key Applications</td>
<td></td>
<td>High Availability Storage Appliance Platform</td>
<td></td>
</tr>
<tr>
<td>Outstanding Features</td>
<td></td>
<td>• Redundant DP SBB supporting shared 24x 3.5” HDD • Intel® X540 Dual port 10GBase-T • Dual JBOD expansion ports per node • NV-DIMM support • Up to 3 add-on cards per node • Titanium Level power supplies</td>
<td>• 3108 SAS3 HW RAID controller • 1280W Platinum Level redundant high-efficiency power supplies • 145W CPU support • 36x 3.5” Hot-swap SAS3 bays • Dual JBOD Expansion Ports • Dual 10G BaseT • 16 DIMM slots</td>
</tr>
<tr>
<td>Serverboard</td>
<td>Redundant SUPER® X10DRS-4U</td>
<td>SUPER® X10DRI-H-T</td>
<td>SUPER® X10DRI-T-4+</td>
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<tr>
<td>Chipset</td>
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<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Redundant up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 &amp; 16 DIMM slots</td>
<td>Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td>Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>Redundant 3 PCI-E 3.0 x8 (1x HHHL, 2x LPHL) expansion slots per controller</td>
<td>1 PCI-E 3.0 x16, 6 PCI-E 3.0 x8 Slot 1 &amp; 2 occupied by controller and JBOD Expansion Port</td>
<td>2 PCI-E 3.0 x16, 3 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8) Slot 3 &amp; 4 occupied by controller and JBOD Expansion Port</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Redundant dual LAN with 10GBase-T with Intel® X540 10GBE Controller per node; 100M private Ethernet between controller nodes</td>
<td>Dual LAN with 10GBase-T with Intel® X540 10GBE Controller</td>
<td>Quad LAN with Intel® X540 10GBase-T Ethernet Controller</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Redundant AST2400 VGA</td>
<td>AST2400 VGA</td>
<td>AST2400 VGA</td>
</tr>
<tr>
<td>Management</td>
<td>Redundant IPMI 2.0 + KVM with dedicated LAN</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>Shared 24x 3.5” hot-swap SAS drive bay with SES2</td>
<td>36x 3.5” hot-swap SAS3/SATA3 drive bays; 2x 2.5” optional rear hot-swap drive bays; 4x 2.5” internal fixed drive bays; Optional 4x NVMe hybrid drive bay support (32x 3.5” + 4x NVMe)</td>
<td>36x 3.5” hot-swap SAS3/SATA3 drive bay; 4x 2.5” internal fixed drive bay</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 1600W Titanium Level high-efficiency power supplies with I²C &amp; PMBus</td>
<td>1280W Redundant Platinum Level high-efficiency power supplies with I²C &amp; PMBus</td>
<td>1280W Redundant Platinum Level high-efficiency power supplies with I²C &amp; PMBus</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Redundant 2x 4cm PWM cooling fans and 4x 8cm system PWM cooling fans</td>
<td>7x 8cm high-performance PWM fans, air shroud</td>
<td>7x 8cm high-performance PWM fans, air shroud</td>
</tr>
<tr>
<td>Form Factor</td>
<td>4U Rackmount</td>
<td>4U Rackmount</td>
<td>4U Rackmount</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
4U Storage Capacity Maximized
Top-Loading 45 Bay

MODEL | SSG-6048R-E1CR45L | SSG-6048R-E1CR60L | SSG-6048R-E1CR60N
---|---|---|---
Processor Support | Intel® Xeon® processor E5-2600 V3 with QPI up to Dual 8.0GT/s | Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s; Supports up to 160W | Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s; Supports up to 160W
Key Applications | • Corporate Database | • Corporate Database | • Corporate Database
| • Data Center | • Data Center | • Data Center
| • Database Processing & Storage | • Database Processing & Storage | • Database Processing & Storage
| • Enterprise Server | • Enterprise Server | • Enterprise Server
| • HPC | • HPC | • HPC
| • iSCSI SAN | • iSCSI SAN | • iSCSI SAN
Outstanding Features | • 45x 3.5” Drive in 4U Form Factor | • 60x 3.5” Drive in 4U Form Factor | • 60x 3.5” Drive in 4U Form Factor
| • Supports up to Dual 160W Broadwell CPU | • Supports dual 145W CPU | • Supports dual 145W CPU
| • 24 DIMM sockets | • 24 DIMM sockets | • 24 DIMM sockets
| • Optional 6x NVMe drive bay | • Support SMI Card for Multiple IO Option | • Support SMI Card for Multiple IO Option
| • Support SMI Card for Multiple IO Option | • Redundant 2000W Titanium Level high-efficiency power supplies | • Redundant 2000W Titanium Level high-efficiency power supplies
| • 300B SAS3 controller, RAID 0, 1, 10 | • LCD screen | • LCD screen
Serverboard | SUPER® X10DSC+ | SUPER® X10DSC+ | SUPER® X10DSC+
Chipset | Intel® C624 chipset | Intel® C624 chipset | Intel® C612 chipset
System Memory (Max.)* | Up to 1TB 3DS ECC, DDR4-2666MHz in 16 DIMM slots | Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots | Up to 3TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 24 DIMM slots
Expansion Slots | 3 PCI-E 3.0 x16; 4 PCI-E 3.0 x8 | 2 PCI-E 3.0 x16 | 1 PCI-E 3.0 x8
Onboard Storage Controller | Intel® C624 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; 300B SAS3 controller | 300B SAS3 HBA controller | 300B SAS3 HBA controller
Connectivity | Dual LAN with 10GBase-T with Intel® X557; SIOM card for multiple IO option | SIOM card for multiple IO option | SIOM card for multiple IO option
VGA/Audio | 1 VGA | AST2400 VGA | AST2400 VGA
Management | Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog
Drive Bays | 45x 3.5” hot-swap SAS/SATA drive bay with SES3 | 60x 3.5” hot-swap SAS3/SATA3 drive bays; 6x optional NVMe drive bays | 60x 3.5” hot-swap SAS3/SATA3 drive bays; 6x optional NVMe drive bays
Peripheral Bays | 2x 2.5” hot-swap drive bay | 2x 2.5” rear hot-swap drive bays | 2x 2.5” rear hot-swap drive bays
Power Supply | Yes Redundant 2 Qty. PWS-1K66P-1R | 2000W Redundant Titanium Level high-efficiency power supplies with FC & PMBus | 2000W Redundant Titanium Level high-efficiency power supplies with FC & PMBus
Cooling System | 5x 80mm rear hot-swap exhaust PWM fan; | 5x 8cm hot-swap redundant PWM cooling fans | 5x 8cm hot-swap redundant PWM cooling fans
Form Factor | 4U Rackmount 437 x 178 x 660mm (17.2” x 7” x 26”) | 4U Rackmount 447 x 178 x 906mm (17.6”x7”x35.66”) | 4U Rackmount 447 x 178 x 906mm (17.6”x7”x35.66”)

* Please check with your Supermicro sales representative and website for compatibility and configuration details
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SSG-6048R-E1CR72L</th>
<th>SSG-6048R-E1CR90L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• CDN • Media/Streaming • NAS and IP-SAN • Unstructured Data Storage • Virtual Tape</td>
<td>• Corporate Database • Data Center • Database Processing &amp; Storage • Enterprise Server • HPC • iSCSI SAN</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• High Density 4U Server supports 72x 3.5&quot; SAS3 drives • Supports dual 145W CPU • Supports 16 DIMM DDR4 up to 2133MHz • Support 72x 3.5&quot; SAS3 HDD • 3 3008 SAS3 HBA controllers • Dual 10G BaseT</td>
<td>• 90x 3.5&quot; Drive in 4U Form Factor • 2 3008 SAS3 HBA controllers • Support Dual Intel® Boardwell CPU • 8 DIMM sockets • Support SIOM Card for Multiple IO Option • 4x 1000W Titanium Level high-efficiency power supplies • Quad LAN 10G SFP+ LAN ports</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10DRH-iT</td>
<td>SUPER® X10DSC-TP4S</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
</tr>
<tr>
<td>System Memory</td>
<td>Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots</td>
<td>Up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>3x slots occupied by IT Mode disk controllers 3008; 4x Low profile slots available</td>
<td>N/A</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>3 3008 SAS3 HBA controllers</td>
<td>2 3008 SAS3 HBA controllers</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Dual LAN with 10GBase-T with Intel® XS40 10GbE Controller</td>
<td>SIO M card for multiple IO option; On board Quad LAN 10G SFP+ with Intel® X710</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>AST2400 VGA</td>
<td>AST2400 VGA</td>
</tr>
<tr>
<td>Management</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>72x 3.5&quot; hot-swap SAS3/SATA3 drive bays with SES2</td>
<td>90x 3.5&quot; hot-swap SAS3/SATA3 drive bays</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>2x 2.5&quot; rear hot-swap drive bays</td>
<td>2x 2.5&quot; rear hot-swap drive bays</td>
</tr>
<tr>
<td>Power Supply</td>
<td>2000W Redundant Platinum Level high-efficiency power supplies with I²C &amp; PMBus</td>
<td>4x 1000W Redundant Titanium Level high-efficiency power supplies with I²C &amp; PMBus</td>
</tr>
<tr>
<td>Cooling System</td>
<td>7x 92mm hot-swap redundant PWM cooling fans</td>
<td>5x 8cm hot-swap redundant PWM cooling fans</td>
</tr>
<tr>
<td>Form Factor</td>
<td>4U Rackmount 437 x 178 x 889mm (17.2&quot;x7&quot;x35&quot;)</td>
<td>4U Rackmount 447 x 178 x 906mm (17.6&quot;x7&quot;x35.66&quot;)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
### MODEL

<table>
<thead>
<tr>
<th></th>
<th>SSG-927R-E2CJB</th>
<th>SSG-937R-E2CJB</th>
<th>SSG-947-E2CJB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• High Availability Storage Appliance Platform</td>
<td>• High Availability Storage Appliance Platform</td>
<td>• High Availability Storage Appliance Platform</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Redundant Hot-Swappable Expander Trays 4x SAS3.0 IO ports 1200W Titanium Level high-efficiency power supply IPMI management with dedicated LAN</td>
<td>• Redundant hot-swappable expander trays 4x SAS 3.0 IO ports 1200W Titanium Level high-efficiency power supply IPMI management with dedicated LAN</td>
<td>• Redundant hot-swappable expander trays 4x SAS 3.0 IO ports 1200W Titanium Level high-efficiency power supply IPMI management with dedicated LAN</td>
</tr>
<tr>
<td>Serverboard</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
</tr>
<tr>
<td>Chipset</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
</tr>
<tr>
<td>Connectivity</td>
<td>4x SAS 3.0 IO ports</td>
<td>4x SAS 3.0 IO ports</td>
<td>4x SAS 3.0 IO ports</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
</tr>
<tr>
<td>Management</td>
<td>IPMI 2.0 with dedicated LAN</td>
<td>IPMI 2.0 with dedicated LAN</td>
<td>IPMI 2.0 with dedicated LAN</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>24x 2.5&quot; Drive bays</td>
<td>16x 3.5&quot; hot-swap SAS drive bays</td>
<td>24x 3.5&quot; hot-swap SAS drive bays</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
<td>N/A (please refer to Server Model)</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 1200W Titanium Level high-efficiency power supplies with i²C and PMBus</td>
<td>Redundant 1200W Platinum Level high-efficiency power supplies with i²C &amp; PMBus</td>
<td>Redundant 1200W Platinum Level high-efficiency power supplies</td>
</tr>
<tr>
<td>Cooling System</td>
<td>8x 4cm PWM FANS</td>
<td>12x 4cm PWM cooling fans</td>
<td>4x 40mm Fans, 4x 80mm Fans</td>
</tr>
<tr>
<td>Form Factor</td>
<td>2U Rackmount 437 x 89 x 622.3mm (17.2” x 3.5” x 24.5”)</td>
<td>3U Rackmount 437 x 132 x 647mm (17.2” x 5.2” x 25.5”)</td>
<td>4U Rackmount 437 x 178 x 647mm (17.2” x 7” x 25.5”)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details
### MODEL

| Processor Support | 3rd Gen Intel® Xeon® Scalable processors  
| Quad Socket LGA-4189 (Socket P+) supported  
| TDP up to 250W; 6 UPI up to 10.4GT/s |

### Key Applications

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

### Outstanding Features

- Flexible networking options with AIOI/OCN NIC 3.0 support
- 24x 2.5" hybrid hot-swappable NVMe/SAS/SATA drive bays
- Flexible onboard networking options up to dual 10G Ethernet & dual SFP+
- Large memory footprint for up to 18TB

### Serverboard

**SUPER® X12QCH+**

### Chipset

Intel® C621

### System Memory (Max.)

| 48 DIMM slots  
| Up to 12TB ECC LRDIMM, DDR4-3200MHz  
| Up to 12TB ECC RDIMM, DDR4-3200MHz  
| Up to 18TB Intel® DCPMM, DDR4-2666MHz |

### Expansion Slots

| 2 PCI-E 3.0 x16 FHFL slot(s)  
| 2 PCI-E 3.0 x16 FHHL slot(s)  
| 2 PCI-E 3.0 x8 FHFL slot(s)  
| 4 PCI-E 3.0 x8 LP slot(s) |

### Onboard Storage Controller

Intel® SATA

### Connectivity

| 100Gb QSFP 28 with AIOI (optional)  
| 2x 10Gbe RJ45 and 2x 10Gbe SFP+ port(s) with Intel® Ethernet Controller X710-TM4 via AIOI |

### VGA/Audio

1 VGA port

### Management

SuperDoctor® S; Watch Dog; NMI; SUM; IPMI 2.0

### Drive Bays

24x 2.5" hot-swap NVMe/SAS/SATA3 drive bays; 24x 2.5" NVMe hybrid; Optional RAID support via RAID controller AOC

### Peripheral Bays

None

### Power Supply

Redundant 2000W Titanium level (80%)

### Cooling System

4x 8cm heavy duty fan(s)

### Form Factor

2U rackmount  
Enclosure: 439.5 x 89 x 803mm (17.3” x 3.5” x 31.6”)  
Package: 672 x 250 x 1100mm (26.5” x 9.75” x 43.5”)
### 7U 8-Way
- Up to 224 cores per system, 23 PCI-E 3.0 slots, 41 NVMe/24 SAS3 option

### 4U 4-Way
- Up to 112 cores, 16 PCI-E 3.0 slots, 8 NVMe/24 3.5" SAS3 option

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-7089P-TR4T</th>
<th>SYS-8049U-E1CR4T</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Octal Socket P (LGA 3647) supported, CPU TDP support 205W, 3 UPI up to 10.4 GT/s.</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Quad Socket P (LGA 3647) supported, CPU TDP support 205W, 3 UPI up to 10.4 GT/s.</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Virtualization ERP, CRM In-Memory Database Application Research lab/National Lab Scale-up HPC</td>
<td>• In-Memory Database Application ERP, CRM Business Intelligence Scientific Computing Scale-up HPC Cloud and Virtualization needs</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• 8 Sockets, up to 224 cores per system 96 DDR4 Memory DIMM slots, up to 6TB Up to 8 GPUs Optional up to 32 U.2 NVMe Default 4-port 10GBASE-T Ethernet SIOM with options</td>
<td>• 8 NVMe SSD ports Ready Up to 16 PCI-E 3.0 slots 4x 10GBASE-T + 1 Dedicated IPMI Support up to 6 double width passive GPUs 24 3.5&quot; SAS3/SATA3 HDD with 8 Hybrid Ports support NVMe</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X11OPi-CPU</td>
<td>SUPER® X11OPH+</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
</tr>
<tr>
<td>*<em>System Memory (Max)</em></td>
<td>8 CPU modules, 96 DIMM slots; Up to 24TB DDR4-2933 MHz1 with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM1 (128/256/512GB)</td>
<td>48 DIMM slots; Up to 12TB DDR4-2933 MHz1 with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM1 (128/256/512GB)</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>23 or 39 (OEM) PCI-E 3.0 slot includes 8 FH x16 PCI-E cards or 8 GPUs or 16 U.2 NVMe + 8 FHFL x16 PCI-E cards or 16 U.2 NVMe + 2 LP x8 (in x16 slot) PCI-E internal cards (storage module) + 8 FHHL x16 PCI-E cards (rear)</td>
<td>6 PCI-E 3.0 x16 and 10 PCI-E 3.0 x8 PCI-E slots</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel C621 including 2 SATA3 (SATA DOM), 2 M.2 (SATA3/NVMe), BHDD (SAT3), 1TPM Header, and 1 VROC key header</td>
<td>Intel® C621 including 2 SATA3 (SATA DOM), 1 TPM header, and 1 VROC key header</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>4-port 10GBASE-T Ethernet SIOM (Intel® X550 10GbE controller)</td>
<td>4 x 10GBASE-T ports via AOC-4UR66-1X4TF-P</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>1 VGA by Aspeed AST2500 BMC</td>
<td>1 x VGA, 1 Aspeed AST2500 BMC</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Aspeed 2500 1 Port IPMI on AOM</td>
<td>Intel® Node Manager; IPMI2.0; NMI; SMCBU and SMM; SuperDoctor® 5; Watchdog;</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>16 hot swap 2.5&quot; SAS3 HDDs (w/ RAID cards) 8 2.5&quot; or 6 3.5&quot; internal HDDs (w/ RAID cards)</td>
<td>24 hot-swap 3.5&quot; SAS3/SATA3 drives supported via optional Add-on RAID controller card; 8 Hybrid ports with NVMe supported via optional Add-on card</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>No Peripheral Drive</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>5 x 1600W (N+2 Redundant), Titanium Level power supply w/ PMBus</td>
<td>3+1 1600W Redundancy Platinum Level Power Supply</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>8 92x9x76 mm, 10.5K-10.8K RPM, Counter-rotating Exhaust Hot-Swappable Rear Fans</td>
<td>8x 9CM Heavy Duty Fans with Speed Control</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>7U Rackmount; Enclosure: 448 x 310 x 733mm (17.63&quot; x 12.2&quot; x 28.87&quot;) Package: 759 x 978 x 1199mm (29.9&quot; x 38.5&quot; x 47.2&quot;)</td>
<td>4U Rackmount 437 x177 x 876mm (17.2&quot;x 6.9&quot; x 34.5&quot;)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details
1 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
2 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-2049P-TN8R</th>
<th>SYS-2049U-TR4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, Quad Socket P (LGA 3647) supported, CPU TDP support 205W, 3UPI up to 10.4 GT/s.</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Quad Socket P (LGA 3647) supported, CPU TDP support 205W, 3UPI up to 10.4 GT/s.</td>
</tr>
<tr>
<td>Key Applications</td>
<td>Cloud and Virtualization needs, Data Center Scale-Out Density, VOD Delivery</td>
<td>• ERP, CRM, High End Enterprise Server, Business Intelligence, Scientific Virtualization, High Performance Computer Cluster (HPCC)</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>7 PCI-E Add-on cards, Front I/O, Front USB 3.0 ports, 2 M.2 M key (22110/2280), Support 8 NVMe SSD</td>
<td>• 4 Sockets, up to 112 cores per system, 48x DDR4 Memory DIMM slots, up to 6TB, 4 NVMe SSD ports Ready, Up to 11 x PCI-E 3.0 Slots, 4x GLAN + 1 Dedicated IPMI, 2U Rack Mount Chassis</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X11QPL</td>
<td>SUPER® X11QPH+</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C621 chipset</td>
<td>Intel® C621 chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>48 DIMM slots; Up to 12TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
<td>48 DIMM slots; Up to 12TB DDR4-2933 MHz with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM™ (128/256/512GB)</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>5 PCI-E 3.0 x8, 2 PCI-E 3.0 x16</td>
<td>2 LPHL PCI-E 3.0 x16 (Left-internal) + 2 LPHL PCI-E 3.0 x16 (Right-internal), 2 Double Width FH PCI-E 3.0 x16 (Rear) + 1 LPHL PCI-E 3.0 x8 (Rear) + 2 FHFL PCI-E 3.0 x8 (Rear) + 2 FHHL PCI-E 3.0 x8 (Rear)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® C621 including 2 SATA3, 2 M.2 M Key (22110/2280), 1 TPM header, and 1 VROC key header</td>
<td>Intel® C621 including 2 SATA3 (SATA DOM), 12 SATA3 (HDD/SSD), 1 TPM header, and 1 VROC key header</td>
</tr>
<tr>
<td>Connectivity</td>
<td>1 GbE(i210) RJ45</td>
<td>4 x Gigabit Ethernet ports via AOC-2UR66-i4G</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Onboard VGA</td>
<td>1 x VGA, 1x Aspeed AST2500 BMC</td>
</tr>
<tr>
<td>Management</td>
<td>IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, NMI, SMM, SuperDoctor® 5; Watchdog</td>
<td>Intel® Node Manager; IPMI2.0; NMI; SMCDU and SMM; SuperDoctor® 5; Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>Front 2.5” SATA and 8 U.2 NVMe 2.5” drive bays</td>
<td>24 hot-swap 2.5” SAS3/SATA drives supported via optional Add-on RAID controller card; 4 Hybrid ports with NVMe supported via optional Add-on card</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 2200W Titanium Level (96%-+) Digital High-efficiency Power Supplies with I2C &amp; PMBus</td>
<td>1600W Redundant Titanium Level Power Supply</td>
</tr>
<tr>
<td>Cooling System</td>
<td>4 Heavy duty fans w/ optimal fan speed control</td>
<td>4 X 8cm Heavy Duty Fan</td>
</tr>
<tr>
<td>Form Factor</td>
<td>17.2” (437mm) x 3.5” (89mm) x 30.2” (767.08mm); Enclosure: 437 x 89 x 767mm (17.2” x 3.5” x 30.2”)</td>
<td>2U; Enclosure: 437 x 89 x 780mm (17.2” x 3.5” x 30.7”)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-7088B-TR4FT</th>
<th>SYS-8028B-TR4F</th>
<th>SYS-8028B-C0R4FT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Octal Intel® Xeon® Processor E7-8800 v4/v3 product families supported, QPI up to 9.6GT/s</td>
<td>Quad Intel® Xeon® Processor E7-8800/8800 v4/v3 product families supported, QPI up to 9.6GT/s</td>
<td>Quad Intel® Xeon® Processor E7-8800/8800 v4/v3 product families supported, QPI up to 9.6GT/s</td>
</tr>
<tr>
<td>Key Applications</td>
<td>- High End Enterprise Server</td>
<td>- Compute Intensive Application</td>
<td>- Finance, Banking, e-Commerce</td>
</tr>
<tr>
<td></td>
<td>- ERP, CRM</td>
<td>- Mission-critical applications</td>
<td>- Compute Intensive Application</td>
</tr>
<tr>
<td></td>
<td>- Database Applications</td>
<td>- Enterprise Server</td>
<td>- Mission-critical applications</td>
</tr>
<tr>
<td></td>
<td>- Research lab/National Lab</td>
<td>- High-performance computing</td>
<td>- Enterprise Server</td>
</tr>
<tr>
<td></td>
<td>- Virtualization</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• X10 EX 8-Way 192 cores</td>
<td>• Up to 96 cores per system</td>
<td>• Up to 96 cores per system</td>
</tr>
<tr>
<td></td>
<td>• Up to 192 DDR4 Memory DIMMs</td>
<td>• Up to 4TB DDR4 memory capacity in 32 DIMM slots</td>
<td>• Up to 4TB DDR4 memory capacity in 32 DIMM slots</td>
</tr>
<tr>
<td></td>
<td>• Up to 24TB (Broadwell), or 12 TB (Haswell)</td>
<td>• 2U 4-way system</td>
<td>• 2U 4-way system</td>
</tr>
<tr>
<td></td>
<td>• Up to 15 PCI-E FH slots</td>
<td>• 4 PCI-E 3.0 support</td>
<td>• 4 PCI-E 3.0 support</td>
</tr>
<tr>
<td></td>
<td>• Up to 16 optional U.2 NVMe support</td>
<td>• 1400W Redundant Platinum Level Digital (94%-+) high-efficiency power supplies with I²C &amp; PMBus</td>
<td>• 1400W Redundant Platinum Level Digital (94%-+) high-efficiency power supplies with I²C &amp; PMBus</td>
</tr>
<tr>
<td></td>
<td>• Optional up to 8 GPUs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 4x 10G LAN + 1 dedicated IPMI</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X10OBI-CPU</td>
<td>SUPER® X10QLB-4</td>
<td>SUPER® X10QBL-4CT</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C602J chipset</td>
<td>Intel® C602J chipset</td>
<td>Intel® C602J chipset</td>
</tr>
<tr>
<td>*<em>System Memory (Max.)</em></td>
<td>Up to 24TB DDR4 (128GB LRDIMM); 192 DIMM slots</td>
<td>Up to 4TB ECC DDR4 (128GB LRDIMM), speed up to 1866MHz; 32 DIMM slots</td>
<td>Up to 4TB ECC DDR4 (128GB LRDIMM), speed up to 1866MHz; 32 DIMM slots</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>15 PCI-E 3.0 FH slots (8 PCI-E 3.0 x16 + 7 PCI-E 3.0 x8)</td>
<td>2 PCI-E 3.0 x16 LP slot; 2 PCI-E 3.0 x8 LP slot</td>
<td>2 PCI-E 3.0 x16 LP slot; 2 PCI-E 3.0 x8 LP slot</td>
</tr>
<tr>
<td></td>
<td>(16.25” NVMe optional support + 7 PCI-E slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C602J including 2 SATA3 (SATA DOM); 4 SATA2 (2 M.2, 2 HDD)</td>
<td>Intel® C602J for 2 SATA3 (6 Gbps) ports; 4 SATA2 (3 Gbps); RAID 0,1,5,10</td>
<td>Intel® C602J for 2 SATA3 (6 Gbps) ports; 4 SATA2 (3 Gbps); RAID 0,1,5,10; 3008 SW controller on board</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>4-port 10GBase-T Ethernet SIOM (Intel® X550 10GbE controller); 1 Port IPMI</td>
<td>Dual LAN with Intel® i350 Gigabit Ethernet Controller</td>
<td>Dual LAN with Intel® XS40 10GBase-T Ethernet Controller</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>AST2400 VGA</td>
<td>AST2400 VGA</td>
<td>AST2400 VGA</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>12x hot swap 2.5” SAS3 HDDs (w/ RAID cards); 20x 2.5” or 6x 3.5” internal HDDs (w/ RAID cards)</td>
<td>6x 3.5” hot-swap SATA drive bays</td>
<td>6x 3.5” hot-swap SAS2 drive bays (through SAS2 Backplane)</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>7U Rackmountable Rackmount Kit</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>5x 1600W (N+1 Redundant) Titanium Level power supplies with PMBus</td>
<td>1400W Redundant Platinum Level Digital (94%-+) high-efficiency power supplies</td>
<td>1400W Redundant Platinum Level Digital (94%-+) high-efficiency power supplies</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>8x 9cm Hot-Swappable Counter-Rotating Rear Fans</td>
<td>3x 8cm heavy duty fans with speed control</td>
<td>3x 8cm heavy duty fans with speed control</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>7U Rackmount</td>
<td>2U Rackmount</td>
<td>2U Rackmount</td>
</tr>
<tr>
<td><strong>Gross Weight</strong></td>
<td>448 x 310 x 733mm (17.63” x 12.2” x 28.87”)</td>
<td>437 x 89 x 709mm (17.2” x 3.5” x 27.9”)</td>
<td>437 x 89 x 709mm (17.2” x 3.5” x 27.9”)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
### SuperServer® X10QBi

#### Key Features
- **System Memory (Max.):**
  - Up to 24 3.5” HDDs, SAS 2.0 (6Gbps)
- **Drive Bays:**
  - 24 hot-swap 2.5” SAS2 drive support via extra Add-on RAID controller card
- **Peripheral Bays:**
  - N/A
- **Power Supply:**
  - (N+1) Redundant 1620W up to 4 Platinum Level (94%) power supplies
- **Cooling System:**
  - 4x 9cm mid fans + 3x 8cm rear fans with speed control; optional 2 additional 8cm rear fans
- **Form Factor:**
  - 4U Rackmount

#### Specifications
- **Model:**
  - SYS-2048U-TR4FT
  - SYS-4048B-TR4FT
  - SYS-8048B-TR4FT
- **Processor Support:**
  - Quad Intel® Xeon® Processor E7-8800/4800 v4/v3 product families supported, QPI up to 9.6GT/s
- **Key Applications:**
  - Business Intelligence
  - ERP, CRM
  - Database Applications
  - Research lab/National Lab
  - Virtualization
- **Outstanding Features:**
  - Up to 96 CPU cores per system
  - Up to 12TB in 96 memory DIMMs
  - Up to 11 PCI-E 3.0 slots
  - Up to 24.5” HDDs, SAS 2.0 (6Gbps)
  - Up to 4x 1620W Redundant Platinum Level (94%) power supplies
- **Serverboard:**
  - SuperServer® X10QBi
- **Chipset:**
  - Intel® C602J chipset
- **System Memory:**
  - Up to 12TB ECC DDR4 with 128G 3DS LRDIMM (8x memory module board: X10QBi-MEM2), speed up to 1866MHz; 96 DIMM slots
- **Expansion Slots:**
  - 11 PCI-E 3.0 slots (4x PCI-E 3.0 x16 + 7x PCI-E 3.0 x8) with 4 memory module boards;
  - 8 PCI-E 3.0 slots (4x PCI-E 3.0 x16 + 4x PCI-E 3.0 x8) with 8 memory module boards
- **Onboard Storage Controller:**
  - Intel® C602J for 2 SATA3 (6 Gbps) ports and 4 SATAT2 (3 Gbps)
- **Connectivity:**
  - Dual 10GBase-T ports with Intel® X540 controller on OAM card
- **VGA/Audio:**
  - AST2400 VGA
- **Management:**
  - IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog
- **Drive Bays:**
  - 24 hot-swap 3.5” SAS3 drive support via extra Add-on RAID controller card
- **Peripheral Bays:**
  - N/A
- **Power Supply:**
  - (N+1) Redundant 1620W up to 4 Platinum Level (94%) power supplies
- **Cooling System:**
  - 4x 9cm mid fans + 3x 8cm rear fans with speed control; optional 2 additional 8cm rear fans
- **Form Factor:**
  - 4U Rackmount

*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
**SuperServer® Solutions - June 2021**

**SuperServer® X11SPD-F**
- Form Factor: 438 x 132 x 589mm (17.26" x 5.21" x 23.2")
- Weight:
  - Net Weight: 62.2lbs
  - Gross Weight: 88lbs

**SuperServer® X11SCE-F**
- Form Factor: 438 x 132 x 589mm (17.26" x 5.21" x 23.2")
- Weight:
  - Net Weight: 62.2lbs
  - Gross Weight: 88lbs

**SuperServer® X11SCD-F**
- Form Factor: 438 x 132 x 589mm (17.26" x 5.21" x 23.2")
- Weight:
  - Net Weight: 62.2lbs
  - Gross Weight: 88lbs

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### Model Specifications

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-5039MP-H8TNR</th>
<th>SYS-5039MC-H8TRF</th>
<th>SYS-5039MC-H12TRF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Octal set of Intel® Xeon® Scalable Processor, Cascade Lake CPU TDP support 165W</td>
<td>Octal set of Intel® Coffee Lake Xeon® processor E-2100/2200, Intel® 8th Gen Core™ i3,6/8 cores, support up to 95W (BIOS 1.0b or above is required to support E-2200)</td>
<td>12 set of Intel® Coffee Lake Xeon® processor E-2100/2200, Intel® 8th Gen Core™ i3,6/8 cores, support up to 95W (BIOS 1.0b or above is required to support E-2200)</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Big Data Analytics Cloud and Virtualization needs Web Hosting, VM Social Networking CDN, Business Hosting</td>
<td>• Cloud Computing Web Cache Web Hosting, VM Social Networking Corporate-WINS, DNS, Print, Login</td>
<td>• Cloud Computing Web Cache Web Hosting, VM Social Networking Corporate-WINS, DNS, Print, Login</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Single Socket P (LGA 3647) supports Intel® Xeon® Scalable Processors(Cascade Lake) 2x 3.5” SATA3 or 2x 2.5” Hybrid SATA3/NVMe w/ optional kits Up to 1TB ECC 3DS RDIMM/LRDIMM, up to DDR4-2933MHz; 4 DIMM slots 1x PCIe3.0 x16, 1x Micro-LP, and 2x M.2 2x 1GbE port, 1x 1GbE centralized IPMI management port High-density, Enterprise Performance, Cost-effective</td>
<td>• Up to 8x hot-pluggable node in 3U chassis 1 PCI-E 3.0 (xB) Low-profile High density, enterprise performance, cost effective Redundant 2000W Titanium Level high-efficiency power supplies Hot-swappable SAS/SATA3 HDDs 2 M.2 SATA3 or NVMe support</td>
<td>• 12 UP hot-pluggable nodes in 3U Flexible HDD selection, 2x 3.5” SATA3 or 4x 2.5” SATA3 or 2x 2.5” NVME plus 2x 2.5” SATA3 or 2x 2.5” NVME plus 1x 3.5” SATA 3 1 M.2 SATA3 or NVMe support 2000W High Efficiency (96%) Titanium Level Redundant Power Supplies UID LED Centralized dedicated management switch port</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X11SPD-F Intel® C621 PCH</td>
<td>SUPER® X11SCD-F Intel® C246 chipset</td>
<td>SUPER® X11SCF-E Intel® C246 chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Octal set of Up to 1TBC ECC 3DS RDIMM/ LRDIMM, up to DDR4-2933MHz; 4 DIMM slots</td>
<td>8 set of up to 128GB Unbuffered ECC Low Profile DDR4 2666MHz in 4 DIMM sockets</td>
<td>12 set of up to 128GB Unbuffered ECC Very Low Profile DDR4 2666MHz in 4 DIMM sockets</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>8 set of PCI-E 3.0 x16 low profile and Micro-LP slots (MicroLP upgradable)</td>
<td>8 set of PCI-E 3.0 x8 LP slot and 8 set of Micro-LP slots (MicroLP upgradable)</td>
<td>12 set of Micro-LP slots (MicroLP upgradable)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>8 set of VROC NVMe RAID port</td>
<td>8 set of Intel® C246 controller for 2 SATA3 (6Gbps) ports; RAID 0, 1, 5, 10; Selected low-profile RAID or HBA RAID card to support SAS HDD</td>
<td>12 set of Intel® C246 controller for 2 SATA3 (6Gbps) ports; RAID 0, 1, 5,10</td>
</tr>
<tr>
<td>Connectivity</td>
<td>8 set of Dual LAN Intel® i350 GBE LAN controller (via MLP)</td>
<td>8 set of Dual LAN Intel® i350 Gbe LAN controller (via MLP)</td>
<td>12 set of Dual LAN Intel® i350 Gbe LAN controller (via MLP)</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>on board VGA by KVM connector</td>
<td>8 set of Aspeed AST2500 graphics</td>
<td>12 set of Aspeed AST2500 graphics</td>
</tr>
<tr>
<td>Management</td>
<td>8 set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>8 set of IPMI 2.0 + KVM with dedicated LAN, Intel Node Manager, SUM, SPM, SSM, SuperDoctor 5, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel Node Manager, SUM, SPM, SSM, SuperDoctor 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>8 set of 2x 3.5” SATA3 HDD, or 2x 2.5” Hybrid SATA3/NVMe w/ 3.5”-to-2.5” converter</td>
<td>8 set of 2x 3.5” SATA3 HDD or 2x 2.5” SATA3 w/ option kits</td>
<td>12 set of 2x 3.5” SATA3 HDD; or 2x 2.5” SATA3; or 2x 2.5” NVME plus 2x 2.5” SATA3; or 2x 2.5” NVME plus 3x 3.5” SATA3</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>2200W Redundant Titanium Level high-efficiency power supplies</td>
<td>2000W Redundant Titanium Level high-efficiency power supplies</td>
<td>2000W Redundant Titanium Level high-efficiency power supplies</td>
</tr>
<tr>
<td>Cooling System</td>
<td>4x 8cm hot-swap cooling fans with fan speed control</td>
<td>4x 8cm hot-swap cooling fans with fan speed control</td>
<td>4x 9cm Heavy duty fans with optional cooling zone</td>
</tr>
<tr>
<td>Form Factor</td>
<td>438 x 132 x 589mm (17.26” x 5.21” x 23.2”)</td>
<td>438 x 132 x 589mm (17.26” x 5.21” x 23.2”)</td>
<td>438 x 132 x 589mm (17.26” x 5.21” x 23.2”)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-5039MA8-H12RFT</th>
<th>SYS-5039MA16-H12RFT</th>
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</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>12 set of Intel® Atom® Processor C3750, Single Socket FCBGA1310 supported, CPU TDP support 21W</td>
<td>12 set of Intel® Atom® Processor C3955, Single Socket FCBGA1310 supported, CPU TDP support 32W</td>
</tr>
</tbody>
</table>
| Key Applications | • Cloud Computing  
Web Cache  
Web Hosting, VM  
Social Networking  
Corporate- WINS, DNS, Print, Login | • Cloud Computing  
Web Cache  
Web Hosting, VM  
Social Networking  
Corporate- WINS, DNS, Print, Login |
| Outstanding Features | • 12 UP hot-pluggable nodes in 3U  
Flexible HDD selection, 2x 3.5" SATA3 or 4x 2.5" SATA3 or 2x 2.5" NVME plus 1x 3.5" SATA 3  
2 M.2 SATA3 or NVMe support  
2000W High Efficiency (96%) Titanium Level Redundant Power Supplies  
UID LED  
Centralized dedicated management switch port | • 12 UP hot-pluggable nodes in 3U  
Flexible HDD selection, 2x 3.5" SATA3 or 4x 2.5" SATA3 or 2x 2.5" NVME plus 1x 3.5" SATA 3  
2 M.2 SATA3 or NVMe support  
2000W High Efficiency (96%) Titanium Level Redundant Power Supplies  
UID LED  
Centralized dedicated management switch port |
| Serverboard | SUPER® A2SD1-3750F                                                            | SUPER® A2SD1-3955F                                                            |
| Chipset    | Intel® Denverton SoC                                                              | Intel® Denverton SoC                                                              |
| System Memory (Max.)* | 12 set of up to 128GB ECC VLP RDIMM Or 64GB ECC VLP UDIMM, DDR4-2400MHz, in 4 DIMM slots | 12 set of up to 128GB ECC VLP RDIMM or 64GB ECC VLP UDIMM, DDR4-2400MHz, in 4 DIMM slots |
| Expansion Slots | no PCIe support                                                                  | no PCIe support                                                                  |
| Onboard Storage Controller | no RAID support                                                                  | no RAID support                                                                  |
| Connectivity | Dual LAN Intel® 10GBase-T on board controller                                    | Dual LAN Intel® 10GBase-T on board controller                                    |
| VGA/Audio  | 12 set of Aspeed AST2400 graphics                                                | 12 set of Aspeed AST2400 graphics                                                |
| Management | IPMI 2.0 + KVM with dedicated LAN, Intel Node Manager, SUM, SPM, SSM, SuperDoctor 5, Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel Node Manager, SUM, SPM, SSM, SuperDoctor 5, Watchdog |
| Drive Bays | 12 set of 2x 3.5" SATA3; or 4x 2.5" SATA3 or 2x 2.5" NVME plus 1x 3.5" SATA3 (support only 1 M.2) | 12 set of 2x 3.5" SATA3; or 4x 2.5" SATA3 or 2x 2.5" NVME plus 1x 3.5" SATA3 (support only 1 M.2) |
| Peripheral Bays | N/A                                                                              | N/A                                                                              |
| Power Supply | 2000W Redundant Titanium Level high-efficiency power supplies                   | 2000W Redundant Titanium Level high-efficiency power supplies                   |
| Cooling System | 4 x 9cm power efficient fans with optimal cooling zone                        | 4 x 9cm power efficient fans with optimal cooling zone                        |
| Form Factor | 3U Rackmount 444.5mm x 132.5mm x 749.3mm (17.5" x 5.21" x 29.5") (17.5" x 5.21" x 29.5") (28.35" x 16.1" x 42.38") Gross Weight: 123lbs Net Weight: 132lbs | 3U Rackmount 444.5mm x 132.5mm x 749.3mm (17.5" x 5.21" x 29.5") (17.5" x 5.21" x 29.5") (28.35" x 16.1" x 42.38") Gross Weight: 123lbs Net Weight: 132lbs |

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<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-5039MD8-H8TNR</th>
<th>SYS-5039MD18-H8TNR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Octal set of Intel® Xeon® Processor D-2141I, 8-Cores, 16 Threads, CPU TDP support 65W</td>
<td>Octal set of Intel® Xeon® Processor D-2191, 18-Cores, 36 Threads, CPU TDP support 86W</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Cloud Computing Web Cache Web Hosting, VM Social Networking CDN</td>
<td>• Cloud Computing Web Cache Web Hosting, VM Social Networking CDN</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• 2x M.2 support (2x 2280/22110) High-density, Enterprise Performance, Cost-effective • Intel® Xeon® Processor D-2141I, 8-Cores, 16 Threads, CPU TDP support 65W • 2x 3.5&quot; SATA3 or 2x 2.5&quot; Hybrid SATA3/NVMe w/ optional kits Up to 512GB ECC LRDIMM, up to 256GB ECC RDIMM DDR4-2133Mz; in 4 DIMM slots 1x PCIe3.0 x16, 1x Micro-LP, and 2x M.2 2x 1GbE port, 1x 1GbE centralized IPMI management port Redundant 1600W Titanium Level high-efficiency power supplies</td>
<td>• Intel® Xeon® D-2191, 18-Cores, 36 Threads, CPU TDP support 86W • 2x 3.5&quot; SATA3 or 2x 2.5&quot; Hybrid SATA3/NVMe w/ optional kits Up to 512GB ECC LRDIMM, up to 256GB ECC RDIMM DDR4-2400Mz; in 4 DIMM slots 1x PCIe-E 3.0 x16, 1x Micro-LP, and 2x M.2 • 2x 1GbE port, 1x 1GbE centralized IPMI management port • Redundant 1600W Titanium Level high-efficiency power supplies</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X11SDD-8C-F</td>
<td>SUPER® X11SDD-18C-F</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® Xeon® Processor D SoC</td>
<td>Intel® Xeon® Processor D SoC</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong>*</td>
<td>Up to 512GB ECC LRDIMM, up to 256GB ECC RDIMM DDR4-2133Mz; in 4 DIMM slots</td>
<td>Up to 512GB ECC LRDIMM, up to 256GB ECC RDIMM DDR4-2400Mz; in 4 DIMM slots</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>8 set of PCI-E 3.0 x16 low profile and Micro-LP slots (MicroLP upgradable)</td>
<td>8 set of PCI-E 3.0 x16 low profile and Micro-LP slots (MicroLP upgradable)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>8 set of VROC NVMe RAID port (not support Micro-LP PXE boot)</td>
<td>8 set of VROC NVMe RAID port (not support Micro-LP PXE boot)</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>8 set of Dual LAN Intel® i350 GbE LAN controller (via MLP)</td>
<td>8 set of Dual LAN Intel® i350 GbE LAN controller (via MLP)</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>on board VGA by KVM connector</td>
<td>on board VGA by KVM connector</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>8 set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
<td>8 set of IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>Octal set of 2x 3.5&quot; SATA3 HDD; or 2x 2.5&quot; Hybrid SATA3/NVMe w/ optional kits</td>
<td>Octal set of 2x 3.5&quot; SATA3 HDD; or 2x 2.5&quot; Hybrid SATA3/NVMe w/ optional kits</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>1600W Redundant Titanium Level high-efficiency power supplies</td>
<td>1600W Redundant Titanium Level high-efficiency power supplies</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>4x 8cm hot-swap cooling fans with fan speed control</td>
<td>4x 8cm hot-swap cooling fans with fan speed control</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>3U Rackmount 387 x 132 x 585mm (15.25&quot; x 5.2&quot; x 23&quot;); Enclosure: 438 x 132 x 589mm (17.26&quot; x 5.21&quot; x 23.2&quot;) Package: 667 x 296 x 864mm (26.26&quot; x 11.65&quot; x 34&quot;) Gross Weight: 88lbs (39.92kg) Net Weight: 62.2lbs (28.21kg)</td>
<td>438 x 132 x 589mm (17.26&quot; x 5.21&quot; x 23.2&quot;)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
## MicroCloud

MicroCloud
3U 12 nodes Intel® Xeon® E3-1200 v6

MicroCloud
3U 12 nodes Intel® Xeon® E3-1200 v6

---

### MODEL

<table>
<thead>
<tr>
<th>Processor Support</th>
<th>SYS-5039MS-H12TRF (For Complete System Only)</th>
<th>SYS-5039MS-H12NR</th>
<th>Processor Support</th>
<th>SYS-5039MS-H12TRF (For Complete System Only)</th>
<th>SYS-5039MS-H12NR</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 set of Intel® Xeon® processor E3-1200 v6, Intel® 7th Gen Core™ i3, Intel® Pentium®, Intel® Celeron® processors product family</td>
<td>12 set of Intel® Xeon® processor E3-1200 v6, Intel® 7th Gen Core™ i3, Intel® Pentium®, Intel® Celeron® processors product family up to 72W TDP</td>
<td></td>
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</tr>
</tbody>
</table>

### Key Applications

- Cloud Computing
- Web Cache
- Web Hosting, VM
- Social Networking
- Corporate - WINS, DNS, Print, Login

- Cloud Computing
- Web Cache
- Web Hosting, VM
- Social Networking
- All Flash Storage

### Outstanding Features

- 12 UP hot-pluggable nodes in 3U
  - Flexible HDD selection, 2x 3.5” SATA3 or 4x 2.5” SATA3 or 2x 2.5” NVMe plus 2x 2.5” SATA3 or 2x 2.5” NVMe plus 1x 3.5” SATA 3
  - 2000W High Efficiency (96%) Titanium Level Redundant Power Supplies
  - UID LED
  - Centralized dedicated management switch port

- 12 UP hot-pluggable nodes in 3U
  - 4 NVMe SSD ports Ready
  - M.2 Support
  - 2000W High Efficiency (96%) Titanium Level Redundant Power Supplies
  - UID LED
  - Centralized dedicated management switch port

### Serverboard

- SUPER® X11SSE-F

### Chipset

- Intel® C236 chipset

### System Memory (Max.)*

- 12 set of up to 64GB Unbuffered ECC Very Low Profile DDR4 2400MHz in 4 DIMM sockets

### Expansion Slots

- 12 set of Micro-LP slots (MicroLP upgradable)

### Onboard Storage Controller

- 12 set of Intel® C236 controller for 2 SATA3 (6Gbps) ports; RAID 0, 1, 5, 10

### Connectivity

- 12 set of Dual LAN Intel® i350 Gbe LAN controller

### VGA/Audio

- 12 set of Aspeed AST2400 graphics

### Management

- IPMI 2.0 + KVM with dedicated LAN, Intel Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog

### Drive Bays

- 12 set of 2x 3.5” SATA3 HDD or 4x 2.5” SATA3 or 2x 2.5” NVME + 2x 2.5” SATA3

### Peripheral Bays

- N/A

### Power Supply

- 2000W Redundant Titanium Level high-efficiency power supplies

### Cooling System

- 4 x 9cm Heavy duty fans with optimal cooling zone

### Form Factor

- (17.5” x 5.21” x 29.5”)

---

*Please check with your Supermicro sales representative and website for compatibility and configuration details
### MicroCloud

8 UP Nodes

(For Complete System Only)

**MicroCloud**

*PROMISE to Deliver the Cloud*

**MicroCloud**

*We Power the Cloud*

---

### Key Applications

- Cloud Computing
- Web Hosting, VM
- Social Networking

### Outstanding Features

- Up to 8x hot-pluggable node in 3U chassis
  - 1 PCI-E 3.0 (x8) Low-profile
  - High density, enterprise performance, cost effective
  - Redundant 1600W Titanium Level high-efficiency power supplies
  - Hot-swappable SAS/SATA3 HDDs
  - UID LED

### Serverboard

- **SUPER® X11SSD-F**
- **SUPER® X10SDD-F**
- **SUPER® X10SRD-F**

### Processor Support

- **SYS-5039MS-H8TRF**
  - Octal set of Intel® Xeon® processor E3-1200 v5/
v6, Intel® 7th Gen Core™ i3, Intel® Pentium®, Intel® Celeron® processors product family.
  - BIOS version 2.0 or above is required to support
  - 7th Generation Intel® Core™ Processors and
  - Intel® Xeon® Processor E3-1200 v6 series

- **SYS-5038MD-H8TRF**
  - Octal set of Intel® Xeon® D-1514, 8-Core, 45W

- **SYS-5038MR-H8TRF**
  - Octal set of Intel® Xeon® Processor E5-2600 v4/
v5 product families, and Intel® Xeon® Processor
  - E5-1600 v4/v3 product families

### System Memory

- Octal set of PCI-E 3.0 x8 low profile slot and
  - Octal set of up to 512GB DDR4 ECC RDIMMs

### Connectivity

- Octal set of Dual LAN Intel® I350 GBe Ethernet controllers

### Onboard Storage Controller

- Octal set of System on Chip

### Expansion Slots

- Octal set of up to 64GB Unbuffered ECC Low Profile
  - DDR4 2400MHz in 4 DIMM sockets

### Peripheral Bays

- N/A

### Power Supply

- 1600W Redundant Titanium Level high-efficiency power supplies

### Cooling System

- 4 x 8cm Heavy duty fans with optimal cooling zone
  - 4x8cm hot-swap cooling fans with fan speed control

### Form Factor

- 3U Rackmount
  - 438.4 x 132.5 x 589mm (17.26" x 5.21" x 23.2")

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* Please check with your Supermicro sales representative and website for compatibility and configuration details

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**SuperServer® Solutions - June 2021**
## X12 UP MAINSTREAM

### Processor Support
- 3rd Gen Intel® Xeon® Scalable processors
- Single Socket LGA-4189 (Socket P+) supported
- TDP up to 220W;

### Key Applications
- Small Business
- Web/Hosting Application
- Email/Firewall/Print Server

### Outstanding Features
- Short Depth
- Cost Effective
- 2x NVMe/SATA M.2 supported

### Serverboard
- SuperServer® X12SPO-F

### Chipset
- Intel® C621A

### System Memory (Max.)
- 8 DIMM slots
- ECC RDIMM, DDR4-3200MHz
- ECC LRDIMM, DDR4-3200MHz
- Intel® DCPMM, DDR4-3200MHz

### Expansion Slots
- PCI-E 4.0 x16 FHHL slot(s)

### Onboard Storage Controller
- Intel® SATA

### Connectivity
- 2x 1GbE RJ45 port(s) with Intel® Ethernet Controller i350

### VGA/Audio
- 1 onboard VGA port

### Management
- NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; iPMI2.0

### Drive Bays
- 4x 3.5" NVMe/SATA drive bays; 4x 3.5" NVMe hybrid;

### Peripheral Bays
- 2x 2.5"

### Power Supply
- 500W Platinum level (94%)

### Cooling System
- 4x (4cm x 4cm x 2.8cm) heavy duty fan(s)

### Form Factor
- 1U rackmount
- Enclosure: 437 x 43 x 507mm (17.2" x 1.7" x 19.98")
- Package: 609.6 x 215.9 x 749.3mm (24" x 8.5" x 29.5")

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### SYS-510P-M

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-510P-M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported TDP up to 220W;</td>
</tr>
<tr>
<td>Key Applications</td>
<td>Small Business, Web/Hosting Application, Email/Firewall/Print Server</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>Short Depth, Cost Effective, 2x NVMe/SATA M.2 supported</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SuperServer® X12SPO-F</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C621A</td>
</tr>
<tr>
<td>System Memory (Max.)</td>
<td>8 DIMM slots ECC RDIMM, DDR4-3200MHz ECC LRDIMM, DDR4-3200MHz Intel® DCPMM, DDR4-3200MHz</td>
</tr>
<tr>
<td>Expansion Slots</td>
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<td>2x 1GbE RJ45 port(s) with Intel® Ethernet Controller i350</td>
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<td>VGA/Audio</td>
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<td>Management</td>
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<td>Drive Bays</td>
<td>4x 3.5&quot; NVMe/SATA drive bays; 4x 3.5&quot; NVMe hybrid;</td>
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<td>Peripheral Bays</td>
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<tr>
<td>Power Supply</td>
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<tr>
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### SYS-510P-MR

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<tr>
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<td>Expansion Slots</td>
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<td>Intel® SATA</td>
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<tr>
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<td>Peripheral Bays</td>
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<tr>
<td>Power Supply</td>
<td>Redundant 400W Platinum level (94%)</td>
</tr>
<tr>
<td>Cooling System</td>
<td>4x (4cm x 4cm x 2.8cm) heavy duty fan(s)</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U rackmount</td>
</tr>
</tbody>
</table>

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UP Servers
### SuperServer® Solutions - June 2021

#### X11 UP MAINSTREAM

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-5019P-M</th>
<th>SYS-5019P-MR</th>
<th>SYS-5019P-MT</th>
<th>SYS-5019P-MTR</th>
</tr>
</thead>
</table>

#### Processor Support
- **SYS-5019P-M**: 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support 165W. *Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).*
- **SYS-5019P-MR**: 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support 205W. *Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).*

#### Key Applications
- **SYS-5019P-M**: Web Hosting, VM Compact Network Appliance
- **SYS-5019P-MR**: Application and data serving Database Applications Mission-critical applications

#### Outstanding Features
- **SYS-5019P-M**
  - Integrated IPMI 2.0 and KVM with Dedicated LAN
  - High-efficiency Power Supply Platinum Level Certified
  - Quick Release Rails
  - 2x 1GbE LAN

- **SYS-5019P-MR**
  - 1 TB LRDIMM 3DS M.2 2280, 22110 SUPPORT
  - Quick Release Rails

#### Serverboard
- **SYS-5019P-M**: SUPER® X11SPM-F
- **SYS-5019P-MR**: SUPER® X11SPI-TF

#### Chipset
- **SYS-5019P-M**: Intel® C621 chipset
- **SYS-5019P-MR**: Intel® C622 chipset

#### System Memory (Max.)*
- **SYS-5019P-M**: Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots
- **SYS-5019P-MR**: Up to 2TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots

#### Expansion Slots
- **SYS-5019P-M**: 1x PCI-E 3.0 x16(FH.HL)
- **SYS-5019P-MR**: 1 PCI-E 3.0 x16 slot

#### Onboard Storage Controller
- **SYS-5019P-M**: Intel® C621 controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10;
- **SYS-5019P-MR**: Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;

#### Connectivity
- **SYS-5019P-M**: Dual LAN with 1GbE
- **SYS-5019P-MR**: 4x USB 3.0 (front/rear), USB 2.0, VGA, Serial PORT

#### VGA/Audio
- **SYS-5019P-M**: Aspeed AST2500 BMC
- **SYS-5019P-MR**: Aspeed AST2500 BMC

#### Management
- **SYS-5019P-M**: Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® S, Watchdog
- **SYS-5019P-MR**: Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® S, Watchdog

#### Drive Bays
- **SYS-5019P-M**: 4x 3.5” hot-swap SAS/SATA
- **SYS-5019P-MR**: 4x 3.5” Hot-swap SATA3 bays w/ RAID

#### Peripheral Bays
- **SYS-5019P-M**: -M: 1x Slim DVD-ROM Drive(option)
- **SYS-5019P-MR**: -M: Option for 1x Slim DVD-ROM Drive 1x USB + COM port tray

#### Power Supply
- **SYS-5019P-M**: -M: PWS-350-1H
- **SYS-5019P-MR**: -M: 400W Redundant Platinum Level power supplies w/ BBP® option

#### Cooling System
- **SYS-5019P-M**: 4x 40x28mm PWM fan; 2x 40x28mm PWM fan(option)
- **SYS-5019P-MR**: 4x 40x28mm PWM fans; 2x fans for AOC cooling(option)

#### Form Factor
- **SYS-5019P-M**: 1U 17.2" (437mm) x 1.7" (43mm) x 19.85" (503mm); Enclosure: 437 x 43 x 503mm (17.2" x 1.7" x 19.8")
  - Package: 610 x 216 x 749mm (24" x 8.5" x 29.5")
  - Gross Weight: 30lbs (13.61kg)
  - Net Weight: 18lbs (8.16kg)
- **SYS-5019P-MR**: 1U rackmount, 1.7" H x 17.2" W x 19.8" D (43mm H x 437mm W x 503mm D); Enclosure: 437 x 43 x 503mm (17.2" x 1.7" x 19.8")
  - Package: 610 x 216 x 749mm (24" x 8.5" x 29.5")
  - Gross Weight: 30.4lbs (13.79kg)
  - Net Weight: 17.6lbs (7.98kg)

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
## X11 UP MAINSTREAM

### Key Applications
- General purpose, SMB, Web Hosting Application and data serving
- Archiving, Mail/Finance, Security

### Outstanding Features
- Short-Depth (19.8”) D Quick Release Rails
- Redundant 400W high-efficiency power supplies w/BBB module support
- Short-Depth (19.8”) D

### Serverboard
- **SUPER® X11SCM-F**
- **SUPER® X11SCM-F**
- **SUPER® X11SCL-LN4F**

### Chipset
- Intel® C246 chipset
- Intel® C246 chipset
- Intel® C242 chipset

### System Memory (Max.)*
- Up to Up to 128GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots
- Up to Up to 128GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots
- Up to Up to 128GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots

### Expansion Slots
- 1 PCI-E 3.0 x16
- 1 PCI-E 3.0 x16
- 1 PCI-E 3.0 x16 (FHHL)

### Onboard Storage Controller
- Intel® C246 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10;
- Intel® C246 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10;
- Intel® C242 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10;

### Connectivity
- Dual LAN with Intel® Ethernet Controller I210-AT
- Dual LAN with Intel® Ethernet Controller I210-AT
- Quad LAN with Intel® Ethernet Controller I210-AT

### VGA/Audio
- Aspeed AST2500 BMC
- Integrated video from Aspeed BMC
- Aspeed AST2500 BMC

### Management
- Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
- Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
- IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog

### Drive Bays
- 4x 3.5” hot-swap SAS/SATA
- 4x 3.5” hot-swap SAS/SATA
- Up to 2x internal 3.5”, 3x 2.5” drives (option)

### Peripheral Bays
- 1x Slim DVD-ROM Drive (option)
- 1x Slim DVD-ROM Drive (option)
- 1x slim DVD-ROM drive (option)

### Power Supply
- PWS-350-1H
- PWS-407P-1R
- PWS-350-1H

### Cooling System
- 4x 40x28mm PWM fan
- 4x 40x28mm PWM fan; 2x fans for AOC cooling (option)
- 2x 4cm counter-rotating PWM fan

### Form Factor
- 1U 17.2” (437mm) x 1.7” (43mm) x 19.85” (503mm); Enclosure: 25 x 25 x 483mm (17.2” x 1.7” x 19.8”) Package: 584 x 216 x 762mm (23.5” x 8.5” x 30”)
- 1U 17.2” (437mm) x 1.7” (43mm) x 19.85” (503mm); Enclosure: 437 x 43 x 503mm (17.2” x 1.7” x 19.8”)
- Package: 594 x 216 x 754mm (23.4” x 8.5” x 29.7”)
- Gross Weight: 32lbs (14.51kg)
- Net Weight: 18lbs (8.16kg)
- Gross Weight: 33lbs (14.97kg)
- Net Weight: 20lbs (9.07kg)

"* Please check with your Supermicro sales representative and website for compatibility and configuration details"
## X11 UP MAINSTREAM

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-5019C-L</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>8th/9th Generation Intel® Core™ i3/Pentium®/Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor.&lt;BR&gt;Single Socket LGA-1151 (Socket H4) supported, CPU TDP support Up to 95W TDP.&lt;BR&gt;BIOS version 1.0b or above is required to support Intel® Xeon® E-2200 and 9th Generation Intel® Core™ i3/Pentium®/Celeron® Processors.*95W 6C support up to 30 degree ambient temperature</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Appliance Server&lt;br&gt;Network Security Appliance&lt;br&gt;Office Server&lt;br&gt;• 8th Generation Intel® Core™ i3 Processors, Intel® Xeon® E-2100/2200 processor&lt;br&gt;2x 3.5” SATA3 or 4x 2.5” SATA3 w/ optional kits&lt;br&gt;Short-depth, space saving design</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• Appliance Server&lt;br&gt;Network Security Appliance&lt;br&gt;Office Server&lt;br&gt;• 8th Generation Intel® Core™ i3 Processors, Intel® Xeon® Processor E-2100/E-2200 series&lt;br&gt;• Short-depth, space saving design&lt;br&gt;• Front I/O</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X11SCL-IF</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C242 chipset</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong>*</td>
<td>Up to Up to 64GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 2 DIMM slots</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>1 PCI-E 3.0 x16(in x16 slot)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C242 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>Dual LAN with 1GbE with Intel® I210</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>Aspeed AST2500 BMC</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>IPMI2.0, KVM with dedicated LAN, SSM, SUM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>1x 3.5” Internal Drive Bay with 1 Full-height, Half-length PCI 2x 3.5” Internal Drive Bay 2x 2.5” Internal Drive Bay with 1 Full-height, Half-length PCI 4x 2.5” Internal Drive</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>PWS-203-1H</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>2x 40x40x28mm PWM fans</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>Mini-1U 17.2” (437mm) x 1.7” (43mm) x 9.8” (249mm); Enclosure: 432 x 43 x 229mm (17.2” x 1.7” x 9.8”) Package: 655 x 155 x 465mm (25.8” x 6.1” x 18.3”) Gross Weight: 12lbs (5.44kg) Net Weight: 8lbs (3.63kg)</td>
</tr>
</tbody>
</table>

### SYS-5019C-FL

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-5019C-FL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>8th/9th Generation Intel® Core™ i3/Pentium®/Celeron® Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor.&lt;BR&gt;Single Socket LGA-1151 (Socket H4) supported, CPU TDP support Up to 95W TDP.&lt;BR&gt;BIOS version 1.0b or above is required to support Intel® Xeon® E-2200 and 9th Generation Intel® Core™ i3/Pentium®/Celeron® Processors.*95W 6C support up to 30 degree ambient temperature</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Appliance Server&lt;br&gt;Network Security Appliance&lt;br&gt;Office Server&lt;br&gt;• 8th Generation Intel® Core™ i3 Processors, Intel® Xeon® Processor E-2100/E-2200 series&lt;br&gt;• Short-depth, space saving design&lt;br&gt;• Front I/O</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• Appliance Server&lt;br&gt;Network Security Appliance&lt;br&gt;Office Server&lt;br&gt;• 8th Generation Intel® Core™ i3 Processors, Intel® Xeon® Processor E-2100/E-2200 series&lt;br&gt;• Short-depth, space saving design&lt;br&gt;• Front I/O</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X11SCL-IF</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C242 chipset</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong>*</td>
<td>Up to Up to 64GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 2 DIMM slots</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>1 PCI-E 3.0 x16(in x16 slot)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C242 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>Dual LAN with 1GbE with Intel® I210</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>Aspeed AST2500 BMC</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>IPMI2.0, KVM with dedicated LAN, SSM, SUM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>1x 3.5” Internal Drive Bay with 1 Full-height, Half-length PCI 2x 3.5” Internal Drive Bay 2x 2.5” Internal Drive Bay with 1 Full-height, Half-length PCI 4x 2.5” Internal Drive</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>PWS-203-1H</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>2x 40x40x28mm PWM fans</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>Mini-1U 17.2” (437mm) x 1.7” (43mm) x 9.8” (249mm); Enclosure: 25 x 25 x 249mm (17.2” x 1.7” x 9.8”) Package: 655 x 155 x 465mm (25.8” x 6.1” x 18.3”) Gross Weight: 12lbs (5.44kg) Net Weight: 8lbs (3.63kg)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.
†† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
# X11 UP MAINSTREAM

![Quad LAN](image)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-5019S-M</th>
<th>SYS-5019S-MR</th>
<th>SYS-5019S-MN4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Applications</td>
<td>• High Flexibility, VM, Communication • File/Print, Web Hosting</td>
<td>• HA, File/Print Server • Web Hosting, VM</td>
<td>• General purpose, SMB, Web Hosting • Domain Controller, File/Print • Front USB 3.0 ports • Quick Release Rails</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>[M.2 mini-PCI-E support 2280 form factor • Up to 4 hot-swap 3.5&quot; drives • Front USB 3.0 ports • Quick Release Rails • 1x PCI-E 3.0 x8 (x16) expansion slot • SuperDOM support (SATA DOM support) • 2x GbE port, 1x dedicated IPMI port]</td>
<td>[M.2 PCI-E support 2280 form factor • Support Intel® VHD (with selected CPU) and NM • Redundant 400W high-efficiency power • Up to 4 hot-swap 3.5&quot; drives • Internal fixed drive options • 2x GbE port, 1x dedicated IPMI port • Front USB 3.0 ports • Quick Release Rails]</td>
<td>[M.2 mini-PCI-E support 2280 • Support Intel® VHD (with selected CPU) and NM • SATA DOM support • 4x GbE LAN ports]</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X11SSH - F</td>
<td>SUPER® X11SSH - F</td>
<td>SUPER® X11SSH - LN4F</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C236 Express chipset</td>
<td>Intel® C236 Express chipset</td>
<td>Intel® C236 Express chipset</td>
</tr>
<tr>
<td>System Memory (Max.)</td>
<td>Up to 4x ECC UDIMM slots, up to 64GB DDR4-2133MHz</td>
<td>Up to 4x ECC UDIMM slots, up to 64GB DDR4-2133MHz</td>
<td>Up to 4x ECC UDIMM slots, up to 64GB DDR4-2133MHz</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>1x PCI-E 3.0 x8 (in x16)</td>
<td>1x PCI-E 3.0 x8 (in x16)</td>
<td>1x PCI-E 3.0 x8 (in x16)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® C236 Express chipset</td>
<td>Intel® C236 Express chipset</td>
<td>Intel® C236 Express chipset</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2x USB 3.0 (front/rear), USB 2.0, VGA, Serial</td>
<td>2x USB 3.0 (front/rear), USB 2.0, VGA, Serial</td>
<td>Quad LAN with Intel® Ethernet Controller i210-AT; 2x USB 3.0 (front/rear), USB 2.0, VGA, Serial</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Integrated VGA from Aspeed BMC</td>
<td>Integrated video from Aspeed BMC</td>
<td>Integrated video from Aspeed BMC</td>
</tr>
<tr>
<td>Management</td>
<td>IPMI 2.0 + KVM with dedicated LAN, SuperDoctor® 4, Watchdog</td>
<td>Built-in Aspeed BMC with IPMI 2.0, KVM, and more</td>
<td>Built-in Aspeed BMC with IPMI 2.0, KVM, and more</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>4x 3.5&quot; Hot-swap SATA3 bays w/ RAID</td>
<td>4x 3.5&quot; Hot-swap SATA3 bays w/ RAID</td>
<td>4x 3.5&quot; Hot-swap SATA3 bays w/ RAID</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>1x slim DVD-ROM drive bay</td>
<td>1x slim DVD-ROM drive bay</td>
<td>1x slim DVD-ROM drive bay</td>
</tr>
<tr>
<td>Power Supply</td>
<td>350W high-efficiency power supply</td>
<td>Redundant 400W high-efficiency power Supermicro Battery Back Up (BBP®) option</td>
<td>350W high-efficiency power supply</td>
</tr>
<tr>
<td>Cooling System</td>
<td>4x 4cm chassis internal fan</td>
<td>4x 4cm chassis internal fan</td>
<td>4x 4cm chassis internal fan</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U Rackmount 437 x 43 x 503mm (17.2&quot; x 1.7” x 19.8&quot;)</td>
<td>1U Rackmount 437 x 43 x 503mm (17.2&quot; x 1.7” x 19.8&quot;)</td>
<td>1U Rackmount 437 x 43 x 503mm (17.2&quot; x 1.7” x 19.8&quot;)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
# X11 UP MAINSTREAM

**Low-Power, 12” Short-Depth**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-5019S-MT</th>
<th>SYS-5019S-ML</th>
<th>SYS-5019S-L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Applications</td>
<td>• Storage HN, VM, Hosting Server • Compact File Server</td>
<td>• Entry level, Cost effective</td>
<td>• Low-Power, Low Cost Applications</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Support Intel® VHD (with selected CPU) and NM • M.2 mini-PCI-E connector: Support 2280 • Compact, less than 15 inches depth • Up to 2x internal 3.5&quot;, 3x 2.5&quot; drives (option)</td>
<td></td>
<td>• Supports Low-Power CPU • Compact Form Factor • Less than 12 inches depth • 1x PCI-E 3.0 x8 expansion slot • Up to 1x internal 3.5&quot;, 2x 2.5&quot; drives (option)</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X11SSH-TF</td>
<td>SUPER® X11SSH-F</td>
<td>SUPER® X11SSL-F</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C236 Express Chipset</td>
<td>Intel® C236 Express chipset</td>
<td>Intel® C232 Express chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Up to 4x ECC UDIMM slots, up to 64GB DDR4-2133MHz</td>
<td>Up to 4x ECC UDIMM slots, up to 64GB DDR4-2133MHz</td>
<td>Up to 64GB Unbuffered ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>1x PCI-E 3.0 x8 (in x16) add-on card slot</td>
<td>1x PCI-E 3.0 x8 add-on card slot</td>
<td>1x PCI-E 3.0 x8 expansion slot</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® C236 Express Chipset</td>
<td>Intel® C236 Express chipset</td>
<td>Intel® C232 Express chipset</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2x USB 2.0, USB 3.0(front/rear), VGA, Serial</td>
<td>USB 3.0, 2x USB 2.0, VGA, Serial</td>
<td>2x USB 3.0, USB 3.0, VGA, Serial</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Integrated video from Aspeed BMC</td>
<td>Integrated VGA from Aspeed BMC</td>
<td>Integrated video from Aspeed BMC</td>
</tr>
<tr>
<td>Management</td>
<td>Built-in Aspeed BMC with IPMI 2.0, KVM, and more</td>
<td>IPMI 2.0 + KVM with dedicated LAN, SuperDoctor® 5, Watchdog</td>
<td>Built-in Aspeed BMC with IPMI 2.0, KVM, and more</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>Up to 4x hot-swap 3.5&quot; SATA3 drives</td>
<td>Up to 2x internal 3.5&quot;; 3x 2.5&quot; drives (option)</td>
<td>Up to 1x internal 3.5&quot;, 2x 2.5&quot; drives (option)</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>1x slim DVD-ROM drive bay</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>350W high-efficiency power supply</td>
<td>350W high-efficiency power supply</td>
<td>200W high-efficiency power supply</td>
</tr>
<tr>
<td>Cooling System</td>
<td>4x 4cm chassis internal fan</td>
<td>2x 4cm chassis internal fan</td>
<td>2x 4cm chassis internal fan</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U Rackmount 437 x 43 x 503mm (17.2” x 1.7” x 19.8”)</td>
<td>1U Rackmount 437 x 43 x 366mm (17.2” x 1.7” x 14.4”)</td>
<td>1U rackmount 437 x 43 x 287mm (17.2” x 1.7” x 11.3”)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
# X11 UP MAINSTREAM

**Performance Workstation**  
**Rich I/O and versatile storage options**

---

**MODEL** | **SYS-5039C-T** | **SYS-5039C-I**
--- | --- | ---
Processor Support | Single Intel® Xeon® E-2100/ E-2200 series/ 8th Intel® Core i3/Pentium®/ Celeron, H4 (LGA1511), up to 95W TDP | Single Intel® Xeon® E-2100/ E-2200 series (CFL-S, up to 6 cores)/ 8th Intel® Core i3/Pentium®/ Celeron, H4 (LGA1511), up to 95W TDP

Key Applications | 2D/3D and CAD Applications  
Digital Content Creation  
3D Animations | Entry Level server for SOHO and SMB  
Remote access for mobile users  
Data sharing/storage and centralized backup

Outstanding Features | Cost effective UP platform  
Versatile Storage with M.2, U.2 and SATA support  
Fast I/O with 2 GbE and USB 3.1 Gen 2 | Cost optimized tower server  
Remote management with IPMI 2.0  
Flexible and expandable

Serverboard | SUPER® X11SCA | SUPER® X11SCL-F

Chipset | Intel® C242 Chipset |

System Memory (Max.)* | Up to 4 DDR4 ECC UDIMM, Up to 2666MHz, max. capacity 64GB |

Expansion Slots | 2 PCI-E 3.0 x16 running at NA/16 or 8/8  
1 PCI-E 3.0 x4 slot  
1 PCI-E 3.0 x1 slot  
1 PCI 32bit 5V slot | 1 PCIe3.0 x8 (in x16), 2 PCIe3.0 x4 (in x8)

Onboard Storage Controller | 6 SATA 3.0 6Gb/s connector, support RAID 0, 1, 5, 10; 1x M.2 M-key (22110/2280, PCIe3.0 x4) | Dual GbE LAN, 1 LAN port for dedicated IPMI, 2 (front)USB3.0 ports, 4 (rear)USB ports, 1 COM port

Connectivity | Single LAN with Intel® Ethernet Controller I210-AT  
Single LAN with Intel® PHY I219LM LAN controller |

VGA/Audio | 1 HDMI 2.0a port, 1 DVI-D port, 1 DP 1.2 (DisplayPort) port | 1

Management | IPMI2.0, SSM, SUM, SuperDoctor 5, SPM, Watchdog |

Drive Bays | 4 Fixed 3.5” drive bays  
Optional 4 internal 2.5” drive bays | 4 internal 3.5” drive bays

Peripheral Bays | 2 external 5.25” drive bays  
1 3.5” external device bay | 2x 5.25” external peripheral bays

Power Supply | 400W 80PLUS Gold Certified |

Cooling System | 1 12cm rear exhaust fan  
Optional 12cm front cooling fan | 1x 9cm (rear) PWM fan w/ tool-less design, Optional 1x 8cm (front) cooling fan

Form Factor | 184 x 362 x 425mm (7.25” x 14.25” x 16.75”) |

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*Please check with your Supermicro sales representative and website for compatibility and configuration details.
### X11/X10 UP MAINSTREAM

#### Security and Surveillance Appliance Server, UP

#### Cost-Effective
- Redundant / Non-Redundant Options

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-1019S-MCOT</th>
<th>SYS-5019S-M2</th>
<th>SYS-5018R-M (shown)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td></td>
<td></td>
<td>Single Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Storage HN, VM, Hosting Server Compact File Server</td>
<td>• Security and Surveillance Appliance Server Secure Storage Rack Workstation</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td></td>
<td></td>
<td>• DataCenter Applications</td>
</tr>
<tr>
<td>2x 10G GbE port Quick Release Rails</td>
<td>• Intel Xeon E3-1200 v5; 6th Gen Core i7, i5, i3 in 1U 2x DP, DVI-I, total 3x independent display 4x 3.5&quot; SATA3 hot-swap drive bays Intel vPro™ and AMT 2x Gigabit LAN with AMT</td>
<td>• -MR: Redundant 400W high-efficiency power supplies w/ BBP™ module support • Short-depth (19.8”D)</td>
<td></td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X11SSH-CTF</td>
<td>SUPER® X11SSZ-F</td>
<td>SUPER® X10SRi-F</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C236 Express chipset</td>
<td>Intel® C236 chipset</td>
<td>Intel® C612 chipset</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>Up to 64GB Unbuffered ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots</td>
<td>Up to 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots</td>
<td>Up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>1x PCI-E 3.0 x8 (in x16) add-on card slot</td>
<td>1x PCI Express 3.0 x16 FH, HL slot</td>
<td>1x16 PCI-E 3.0 slot</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel® C236 Express chipset Avago/Broadcom 3008 SAS3 built-in</td>
<td>Intel® C236 chipset</td>
<td>Intel® C612 controller for 4 SATA3 (6Gbps) ports; RAID 0,1,10</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>2x USB 2.0, USB 3.0, VGA, Serial,Dual LAN with Intel® X550 10GbE-T Ethernet</td>
<td>4x USB 3.0 (2x rear), 9x USB 2.0 (2x rear) 1x USB 2.0 Type A 2x Serial header 1x SuperDOM (shared) Audio header/Audio header</td>
<td>4x USB 2.0 (front/rear), USB 3.0, VGA, Serial</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>Aspeed AST2400 BMC</td>
<td>Intel® HD Graphics, Aspeed AST2400 BMC</td>
<td>AST2400 VGA</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog</td>
<td>AMT, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, vPro, Watchdog</td>
<td>IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>Up to 8x hot-swap 2.5&quot; HDD</td>
<td>4x 3.5&quot; hot-swap SAS/SATA</td>
<td>4x 3.5&quot; hot-swap SATA3 bays</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>1x slim DVD-ROM drive bay(option)</td>
<td>1x Slim DVD-ROM Drive(option)</td>
<td>Optional slim optical device bay, optional FDD/USB bay</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>PWS-341P-1H</td>
<td>PWS-350-1H</td>
<td>-M: 350W high-efficiency power supply -MR: Redundant 400W high-efficiency power supplies with optional BBP™ module support</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>4x 40x28mm PWM fan; 2x fans for AOC cooling(option)</td>
<td>4x 40x28mm PWM fan; 2x 40x28mm PWM fan(option)</td>
<td>4x 40mm mid-fan</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>1U rackmount 1.7” x 17.2” x 19.98”; Enclosure: 437 x 43 x 507mm (17.2” x 1.7” x 19.98”) Package: 610 x 203 x 749mm (24” x 8” x 29.5”) Gross Weight: 31lbs (14.06kg) Net Weight: 18.1lbs (8.39kg)</td>
<td>1U rackmount 1.7” x 17.2” x 23.4” (43 x 437 x 503 mm); Enclosure: 437 x 43 x 594mm (17.2” x 1.7” x 23.4”) Package: 610 x 216 x 762mm (24” x 8.5” x 30”) Gross Weight: 30.4lbs (13.79kg) Net Weight: 17.6lbs (7.98kg)</td>
<td>Short-depth 1U Rackmount 437 x 43 x 503mm (17.2” x 1.7” x 19.8”)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-110P-WTR</th>
<th>SYS-510P-WT</th>
<th>SYS-510P-WTR</th>
<th>SYS-520P-WTR</th>
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</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
</tr>
<tr>
<td></td>
<td>Single Socket LGA-4189 (Socket P+) supported TDP up to 270W;</td>
<td>Single Socket LGA-4189 (Socket P+) supported TDP up to 270W;</td>
<td>Single Socket LGA-4189 (Socket P+) supported TDP up to 270W;</td>
<td>Single Socket LGA-4189 (Socket P+) supported TDP up to 270W;</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>Virtualization</td>
<td>Cloud Computing</td>
<td>Enterprise Server</td>
<td>Data Center Optimized</td>
</tr>
<tr>
<td></td>
<td>Data Center Optimized</td>
<td>Database Processing and Storage</td>
<td>Maximum I/O Support 3 x16 expansion slots in 1U form factor.</td>
<td>4x Gen4 NVMe drives supported in 1U Form Factor.</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>Cost Effective</td>
<td>Maximum I/O Support 3 x16 expansion slots in 1U form factor.</td>
<td>4x NVMe drives supported in 1U Form Factor.</td>
<td>Flexible I/O expansion. Up to 6 expansion slots with optional riser card.</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X12SPW-TF</td>
<td>SUPER® X12SPW-TF</td>
<td>SUPER® X12SPW-TF</td>
<td>SUPER® X12SPW-TF</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>8 DIMM slots ECC RDIMM, DDR4-3200MHz ECC LRDIMM, DDR4-3200MHz Intel® DCPMM, DDR4-3200MHz</td>
<td>8 DIMM slots ECC RDIMM, DDR4-3200MHz ECC LRDIMM, DDR4-3200MHz Intel® DCPMM, DDR4-3200MHz</td>
<td>8 DIMM slots ECC RDIMM, DDR4-3200MHz ECC LRDIMM, DDR4-3200MHz Intel® DCPMM, DDR4-3200MHz</td>
<td>8 DIMM slots ECC RDIMM, DDR4-3200MHz ECC LRDIMM, DDR4-3200MHz Intel® DCPMM, DDR4-3200MHz</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>2 PCI-E 4.0 x16 FHHL slot(s) PCI-E 4.0 x16 LP slot(s)</td>
<td>2 PCI-E 4.0 x16 FHHL slot(s) PCI-E 4.0 x16 LP slot(s)</td>
<td>2 PCI-E 4.0 x16 FHHL slot(s) PCI-E 4.0 x16 LP slot(s)</td>
<td>2 PCI-E 4.0 x16 FHHL slot(s) PCI-E 4.0 x16 LP slot(s)</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 RJ45 port(s) with Intel® Ethernet Controller X550</td>
<td>2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550</td>
<td>2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550</td>
<td>2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550</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>
<td>1 onboard VGA port</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; IPMI2.0</td>
<td>NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; IPMI2.0</td>
<td>NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; IPMI2.0</td>
<td>NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; IPMI2.0</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>10x 2.5” SATA drive bays; 4x 2.5” NVMe hybrid;</td>
<td>4x 3.5” NVMe/SATA drive bays; 4x 3.5” NVMe hybrid;</td>
<td>4x 3.5” NVMe/SATA drive bays; 4x 3.5” NVMe hybrid;</td>
<td>8x 3.5” SATA drive bays; 2x 2.5” NVMe dedicated;</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>Redundant 750W Platinum level (94%)</td>
<td>600W Platinum level (94%)</td>
<td>Redundant 500W Platinum level (94%)</td>
<td>Redundant 650W Platinum level (94%)</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>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 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>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 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>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>
### Processor Support

- 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors
- Single Socket P (LGA 3647) supported, CPU TDP support 205W.

Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable Processors (codenamed Cascade Lake Refresh).

### Key Applications

- Database Processing & Storage
- DataCenter Applications

### Outstanding Features

- 1 PCI-E x8 3.0 slots
- 2 PCI-E x16 3.0 slots
- 2x 10 Gigabit Ethernet Ports
- 2x NVMe w/AOC (option)

### System Memory

- Up to Up to 384GB Registered ECC RDIMM, DDR4-2933MHz; Up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots

### Expansion Slots

- 2 PCI-E 3.0 x16(FHFL), 1 PCI-E 3.0 x8(LP) slot

### Onboard Storage Controller

- Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10;

### Connectivity

- Dual LAN with 10GBase-T with Intel® X722 + X5S7

### VGA/Audio

- Aspeed AST2500 BMC

### Management

- Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog

### Drive Bays

- 10x 2.5” hot-swap SAS/SATA drive bay

### Peripheral Bays

- N/A

### Power Supply

- PWS-504P-1R

### Cooling System

- 5x 40x56mm counter-rotation PWM fan

### Form Factor

- 1U 17.2” (437mm) x 1.7” (43mm) x 23.5” (597mm); Enclosure: 25 x 43 x 597mm (17.2” x 1.7” x 23.5”)
- Package: 610 x 203 x 813mm (24” x 8” x 32”)
- Gross Weight: 40lbs (18.14kg)
- Net Weight: 25lbs (11.34kg)

- 1U 17.2” (437mm) x 1.7” (43mm) x 25.6” (650mm); Enclosure: 437 x 43 x 650mm (17.2” x 1.7” x 25.6”)
- Package: 597 x 216 x 856mm (23.5” x 8.5” x 33.7”)
- Gross Weight: 46lbs (20.87kg)
- Net Weight: 22lbs (9.98kg)

- 3x 8cm (7000 RPM) hot-swap PWM cooling fan;

### * Please check with your Supermicro sales representative and website for compatibility and configuration details

### † 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

### †† For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-5019C-WR</th>
<th>SYS-1019S-WR</th>
<th>SYS-5019S-WR</th>
<th>SYS-5019S-W4TR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Intel® Xeon® E-2100 Processor, Intel® Xeon® Processor E-2100/E-2200 series, 8th/9th Generation Intel® Core™i3, Pentium®/Celeron® Processor, Single Socket LGA-1151 (Socket H4) supported, CPU TDP up to 95W TDP * 95W CPU support up to 30 degree ambient.</td>
<td>Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v5/v6/v5 &lt;BR&gt;Socket H4 (LGA 1151) supported, CPU TDP support 80W</td>
<td>Intel® 7th/6th Generation Core i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v5 &lt;BR&gt;Socket H4 (LGA 1151) supported, CPU TDP support 80W</td>
<td>Intel® 6th/7th Generation Core™ i3 series, Intel® Celeron®, Intel® Pentium®, Intel® Xeon® processor E3-1200 v6/v6 &lt;BR&gt;Socket H4 (LGA 1151) supported, CPU TDP support 80W</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Processor Support</td>
<td>• Memory Support</td>
<td>• Management</td>
<td>• Watchdog</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• 2x PCI-E 3.0 x8 or 1x PCI-E 3.0 x16(HFHL), 1x PCI-E 3.0 x4 (x8) (LP) add-on card slot</td>
<td>• 1 x4, and 2 x8 or 1 x16 expansion options Support 1 double wide GPU cards</td>
<td>• 2x PCI-E 3.0 x8, 1x PCI-E 3.0 x4 (x8) add-on card slot M.2 mini-PCI-e connector (PCI-e 3.0 x2)</td>
<td>• Application and data serving Appliance Server</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X11SCW-F</td>
<td>SUPER® X11SSW-F</td>
<td>SUPER® X11SSW-F</td>
<td>SUPER® X11SSW-4TF</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C246 chipset</td>
<td>Intel® C236 chipset</td>
<td>Intel® C236 chipset</td>
<td>Intel® C236 chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Up to 128GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots</td>
<td>Up to 64GB Unbuffered ECC UDIMM, DDR4-2400MHz in 4 DIMM slots</td>
<td>Up to 64GB Unbuffered ECC UDIMM, DDR4-2400MHz in 4 DIMM slots</td>
<td>Up to 64GB Unbuffered ECC UDIMM, DDR4-2400MHz in 4 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>2x PCI-E 3.0 x8(HFHL) or 1x PCI-E 3.0 x16(HFHL), 1x PCI-E 3.0 x4(x8) (LP)</td>
<td>1 PCI-E 3.0 x16 or 2 x8 Left Riser Slot; 1 PCI-E 3.0 x4 (in x8 slot);</td>
<td>2x PCI-E 3.0 x8 or 1x PCI-E 3.0 x16 (by jumper), 1x PCI-E 3.0 x4 (x8) add-on card slot</td>
<td>1 PCI-E 3.0 x16 Left Riser Slot</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® C246 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C236 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C236 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
<td>Intel® C236 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10;</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Dual LAN with Intel® Ethernet Controller I210-AT</td>
<td>Dual LAN with Intel® Ethernet Controller I210-AT</td>
<td>Dual LAN with Intel® Ethernet Controller I210-AT</td>
<td>Dual LAN with Intel® X540 10GBase-T Ethernet Controller</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Aspeed AST2500 BMC; 1 VGA, 1 Aspeed AST2400 BMC; Integrated video from Aspeed BMC</td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
</tr>
<tr>
<td>Management</td>
<td>Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog</td>
<td>Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog</td>
<td>Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog</td>
<td>Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>4x 3.5&quot; hot-swap drive bay</td>
<td>Internal 2x 2.5&quot; SATA</td>
<td>4x 3.5&quot; hot-swap drive bay</td>
<td>4x 3.5&quot; hot-swap SAS/SATA</td>
</tr>
<tr>
<td>Peripheral Systems</td>
<td>1x Slim DVD-ROM Drive(option)</td>
<td>N/A</td>
<td>1x Slim DVD-ROM Drive(option)</td>
<td>1x slim DVD-ROM drive bay(option)</td>
</tr>
<tr>
<td>Power Supply</td>
<td>400W Platinum Level 1U Redundant Power Supplies with PMbus</td>
<td>404W Platinum Level 1U Redundant Power Supplies with PMbus</td>
<td>404W Platinum Level 1U Redundant Power Supplies with PMbus</td>
<td>404W Platinum Level 1U Redundant Power Supplies with PMbus</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Total 5x4cm heavy duty counter-rotating with optimal fan speed control; fans for AOC cooling</td>
<td>4x 40x56mm PWM fan; 2x fans for AOC cooling(option)</td>
<td>4x 4cm chassis internal fan</td>
<td>Total 4x 40x56mm counter-rotation PWM fan</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U rackmount 1.7&quot; x 1.7&quot; x 25.6&quot;; Horizontal: 437 x 43 x 650mm (17.2&quot; x 1.7&quot; x 9.8&quot;)</td>
<td>1U rackmount 1.7&quot; x 1.7&quot; x 25.6&quot;; Horizontal: 437 x 43 x 650mm (17.2&quot; x 1.7&quot; x 9.8&quot;)</td>
<td>1U rackmount 1.7&quot; x 1.7&quot; x 25.6&quot;; Horizontal: 437 x 43 x 650mm (17.2&quot; x 1.7&quot; x 9.8&quot;)</td>
<td>1U rackmount 1.7&quot; x 1.7&quot; x 25.6&quot;; Horizontal: 437 x 43 x 650mm (17.2&quot; x 1.7&quot; x 9.8&quot;)</td>
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**Model**

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-1018R-WR</th>
<th>SYS-1018R-WCOR</th>
<th>SYS-5018R-WR</th>
<th>SYS-5028R-WR</th>
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<tbody>
<tr>
<td>Key Applications</td>
<td>Appliance Server Embedded Applications</td>
<td>Data Center Data Deduplication &amp; Replication Database Processing &amp; Storage DataCenter Applications Engineering Design</td>
<td>Data Center Data Deduplication &amp; Replication Database Processing &amp; Storage DataCenter Applications Engineering Design</td>
<td>Database Processing &amp; Storage Connectivity/Storage Computer Nodes Data Warehouse</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>1 x 8, and 2 x 16 expansion slots Support 1 double wide GPU cards</td>
<td>Hot-swap 8x SAS3 + 2x SATA3 drive bays 1 PCI-E x8 slot 2 PCI-E x 3.0 x16 slots 2 Gigabit Ethernet Ports</td>
<td>1 PCI-E 3.0 x8 slot 2 PCI-E 3.0 x16 slots 2 Gigabit Ethernet Ports</td>
<td>8 x 3.5” Hot-swap SATA3 bays w/ RAID Redundant 500W Platinum Level power 5 PCI-E 3.0 x8 slots</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10SRW-F</td>
<td>SUPER® X10SRW-F</td>
<td>SUPER® X10SRW-F</td>
<td>SUPER® X10SRW-F</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
<td>Intel® C612 chipset</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Up to Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; Up to 512GB (8 DIMM slots; Up to 17B ECC 3DS RDIMM 8x 288-pin DDR4 DIMM slots)</td>
<td>Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; Up to 512GB (8 DIMM slots; Up to 17B ECC 3DS RDIMM 8x 288-pin DDR4 DIMM slots)</td>
<td>Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; Up to 512GB (8 DIMM slots; Up to 17B ECC 3DS RDIMM 8x 288-pin DDR4 DIMM slots)</td>
<td>Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; Up to 512GB (8 DIMM slots; Up to 17B ECC 3DS RDIMM 8x 288-pin DDR4 DIMM slots)</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>2 PCI-E 3.0 x16 Left Riser Slot; 1 PCI-E 3.0 x8 LP</td>
<td>2 PCI-E 3.0 x16, 1 PCI-E 3.0 x8 (total 3 add-on card slots)</td>
<td>2 PCI-E 3.0 x16, 1 PCI-E 3.0 x8 (total 3 add-on card slots)</td>
<td>5 PCI-E 3.0 x8 slots</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps ports; RAID 0,1,5,10)</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps ports; RAID 0,1,5,10)</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps ports; RAID 0,1,5,10)</td>
<td>Intel® C612 controller for 10 SATA3 (6 Gbps ports; RAID 0,1,5,10)</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Dual LAN with Intel® Ethernet Controller I350-AM2</td>
<td>2x GbE port, 2x USB 2.0, USB 3.0, VGA, Serial</td>
<td>2x GbE port, 2x USB 2.0, USB 3.0, VGA, Serial</td>
<td>Aspeed AST2400 BMC</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
<td>Aspeed AST2400 BMC</td>
</tr>
<tr>
<td>Management</td>
<td>IPMI2.0, SuperDoctor* 5, Watchdog</td>
<td>IPMI2.0, SuperDoctor* 5, Watchdog</td>
<td>IPMI2.0, SuperDoctor* 5, Watchdog</td>
<td>IPMI2.0, SuperDoctor* 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>2x 2.5” fixed with bracket</td>
<td>8x 3.5” hot-swap drive bay</td>
<td>8x 3.5” hot-swap drive bay</td>
<td>8x 3.5” hot-swap drive bay</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>PWS-407P-1R</td>
<td>PWS-706P-1R</td>
<td>PWS-504P-1R</td>
<td>PWS-609P-1R</td>
</tr>
<tr>
<td>Cooling System</td>
<td>4x 40x56mm PWM fans; 2x fans for AOC cooling(option)</td>
<td>4x 40x56mm counter-rotation PWM fans; 2x fans for AOC cooling(option)</td>
<td>4x counter-rotating 40mm fans</td>
<td>3x 8cm (7000 RPM) hot-swap PWM cooling fan;</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U 17.2” (437mm) x 1.7” (43mm) x 16.9” (429mm); Enclosure: 437 x 43 x 439mm (17.2” x 1.7” x 6.9”); Package: 605 x 203 x 686mm (23.8” x 8” x 27”)</td>
<td>1U rackmount, 1.7” H x 17.2” W x 23.5” D (43mm H x 437mm W x 650mm D); Enclosure: 437 x 43 x 439mm (17.2” x 1.7” x 25.5”)</td>
<td>1U rackmount, 1.7” H x 17.2” W x 23.5” D (43mm H x 437mm W x 650mm D); Enclosure: 437 x 43 x 439mm (17.2” x 1.7” x 25.5”)</td>
<td>1U rackmount, 1.7” H x 17.2” W x 23.5” D (43mm H x 437mm W x 650mm D); Enclosure: 437 x 43 x 439mm (17.2” x 1.7” x 25.5”)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
## X12 UP STORAGE

### 3rd Gen Intel® Xeon® Scalable processors Supported

![Image of X12 UP Storage solution](image)

**NEW!**

### Processor Support
- 3rd Gen Intel® Xeon® Scalable processors
- Single Socket LGA-4189 (Socket P+) supported
- TDP up to 270W;

### Key Applications
- Virtualization
- Cloud Computing
- All Flash Storage
- CDN Optimized

### Outstanding Features
- 2x NVMe/SATA M.2 supported
- Optimized Cooling with support up to 270W TDP processor
- 10x NVMe tool-less drive bays

### Serverboard
- SUPER® X12SPO -NTF

### Chipset
- Intel® C621A

### System Memory (Max.)
- 8 DIMM slots
- ECC RDIMM, DDR4-3200MHz
- ECC LRDIMM, DDR4-3200MHz
- Intel® DCPMM, DDR4-3200MHz

### Expansion Slots
- PCI-E 4.0 x16 FHHL slot(s)

### Onboard Storage Controller
- ACTR12H: Broadcom® 3916
- ACTR12L: Broadcom® 3816

### Connectivity
- 2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550

### VGA/Audio
- 1 onboard VGA port

### Management
- NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; IPMI2.0

### Drive Bays
- 10x 2.5" hot-swap NVMe drive bays;

### Peripheral Bays
- None

### Power Supply
- Redundant 860W Platinum level (94%)

### Cooling System
- 6x (4cm x 4cm x 5.6cm) heavy duty fan(s)

### Form Factor
- 1U rackmount
- Enclosure: 437 x 43 x 597mm (17.2" x 1.7" x 23.5")
- Package: 610 x 203 x 813mm (24" x 8" x 32")

### Model Comparison

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SSG-110P-NTR10</th>
<th>SSG-520P-ACTR12H</th>
<th>SSG-520P-ACTR12L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
<td>3rd Gen Intel® Xeon® Scalable processors</td>
</tr>
<tr>
<td>TDP up to 270W;</td>
<td>Single Socket LGA-4189 (Socket P+) supported</td>
<td>Single Socket LGA-4189 (Socket P+) supported</td>
<td>Single Socket LGA-4189 (Socket P+) supported</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Virtualization</td>
<td>• Enterprise Server</td>
<td>• Server remote management; IPMI 2.0/KVM over LAN/Media over LAN</td>
</tr>
<tr>
<td></td>
<td>• Cloud Computing</td>
<td>• Database Processing &amp; Storage</td>
<td>• 2x optional Gen 4 NVMe drives; onboard 1x M.2 NVMe/SATA</td>
</tr>
<tr>
<td></td>
<td>• All Flash Storage</td>
<td>• Appliance Optimized Storage</td>
<td>• Cost-effective 2U rackmount storage</td>
</tr>
<tr>
<td></td>
<td>• CDN Optimized</td>
<td></td>
<td>• Direct-attached 12x 3.5&quot; hot-swap SATA/SAS drive bays with PCI-E 4.0 SAS Controller</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• 2x NVMe/SATA M.2 supported</td>
<td>• Optimized Cooling with support up to 270W TDP processor</td>
<td>• 10x NVMe tool-less drive bays</td>
</tr>
<tr>
<td></td>
<td>• Optimized Cooling with support up to 270W TDP processor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X12SPO -NTF</td>
<td>SUPER® X12SPI -TF</td>
<td></td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
<td></td>
</tr>
<tr>
<td>System Memory (Max.)</td>
<td>8 DIMM slots</td>
<td>8 DIMM slots</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ECC RDIMM, DDR4-3200MHz</td>
<td>ECC RDIMM, DDR4-3200MHz</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ECC LRDIMM, DDR4-3200MHz</td>
<td>ECC LRDIMM, DDR4-3200MHz</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intel® DCPMM, DDR4-3200MHz</td>
<td>Intel® DCPMM, DDR4-3200MHz</td>
<td></td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>PCI-E 4.0 x16 FHHL slot(s)</td>
<td>2 PCI-E 4.0 x16 LP slot(s)</td>
<td>2 PCI-E 4.0 x8 LP slot(s)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td></td>
<td>ACTR12H: Broadcom® 3916</td>
<td>ACTR12L: Broadcom® 3816</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550</td>
<td>2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550</td>
<td></td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>1 onboard VGA port</td>
<td>1 onboard VGA port</td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; IPMI2.0</td>
<td>NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; IPMI2.0</td>
<td></td>
</tr>
<tr>
<td>Drive Bays</td>
<td>10x 2.5&quot; hot-swap NVMe drive bays;</td>
<td>12x 3.5&quot; hot-swap SATA/SAS drive bays;</td>
<td></td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>None</td>
<td></td>
<td>2x 2.5&quot; SATA or NVMe (optional)</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Redundant 860W Platinum level (94%)</td>
<td>Redundant 800W Titanium level (96%)</td>
<td></td>
</tr>
<tr>
<td>Cooling System</td>
<td>6x (4cm x 4cm x 5.6cm) heavy duty fan(s)</td>
<td>3x (8cm x 8cm x 3.8cm) heavy duty fan(s)</td>
<td></td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U rackmount</td>
<td>2U rackmount</td>
<td></td>
</tr>
<tr>
<td>Enclosure: 437 x 43 x 597mm (17.2&quot; x 1.7&quot; x 23.5&quot;)</td>
<td>Enclosure: 437 x 89 x 650mm (17.2&quot; x 3.5&quot; x 25.6&quot;)</td>
<td>Package: 613 x 292 x 864mm (24.6&quot; x 11.5&quot; x 34&quot;)</td>
<td>Package: 673 x 292 x 864mm (26.5&quot; x 11.5&quot; x 34&quot;)</td>
</tr>
</tbody>
</table>
## Processor Support
- 3rd Gen Intel® Xeon® Scalable processors
- Single Socket LGA-4189 (Socket P+) supported
- TDP up to 270W;

### Key Applications
- Enterprise Server
- Database Processing & Storage
- Appliance Optimized Storage

### Outstanding Features
- 2x optional Gen 4 NVMe drives; onboard 1x M.2 NVMe/SATA
- Expander chip and JBOD support, up to 36x SATA/SAS drives with PCI-E 4.0 SAS Controller
- 4U 36 Bay High Density Storage

### Serverboard
- Supermicro® X12SPI-TF

## Chipset
- Intel® C621A

## System Memory (Max.)
- 8 DIMM slots
  - ECC RDIMM, DDR4-3200MHz
  - ECC LRDIMM, DDR4-3200MHz
  - Intel® DCPMM, DDR4-3200MHz

### Expansion Slots
- 2 PCI-E 4.0 x16 LP slot(s)
- 2 PCI-E 4.0 x8 LP slot(s)

### Onboard Storage Controller
- E1CTR36H: Broadcom® 3908
- E1CTR36L: Broadcom® 3808

### Connectivity
- 2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550

### VGA/Audio
- 1 onboard VGA port

### Management
- NMI; SUM; KVM with dedicated LAN; SPM; Intel® Node Manager; SSM; Redfish API; IPMI2.0

### Drive Bays
- 36x 3.5" hot-swap SATA/SAS drive bays;

### Peripheral Bays
- 2x 2.5" SATA or NVMe (optional)

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

### Cooling System
- 7x (8cm x 8cm x 3.8cm) heavy duty fan(s)

### Form Factor
- 4U rackmount

---

### SSG-540P-E1CTR36H
- Enclosure: 437 x 178 x 699mm (17.2" x 7" x 27.5")
- Package: 656 x 445 x 1003mm (26" x 17.5" x 39.5")

### SSG-540P-E1CTR36L
- Enclosure: 437 x 178 x 660mm (17.2" x 7" x 26")
- Package: 711 x 559 x 1067mm (28" x 22" x 42")

---

## SSG-540P-E1CTR45H
- Enclosure: 437 x 178 x 699mm (17.2" x 7" x 27.5")
- Package: 656 x 445 x 1003mm (26" x 17.5" x 39.5")

### SSG-540P-E1CTR45L
- Enclosure: 437 x 178 x 660mm (17.2" x 7" x 26")
- Package: 711 x 559 x 1067mm (28" x 22" x 42")

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### Notes
- For Complete System Only

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**SuperServer® Solutions - June 2021**
**X11 UP STORAGE**

**Applications storage, Archive and cold storage**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SSG-5029P-E1CTR12L</th>
<th>SSG-5049P-E1CTR36L</th>
<th>SSG-5049P-E1CR45H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support 205W. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support 205W. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket P (LGA 3647) supported, CPU TDP support 165W. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• Connectivity/Storage Computer Nodes Database Processing &amp; Storage</td>
<td>• Connectivity/Storage Computer Nodes Database Processing &amp; Storage</td>
<td>• Backup storage Database Applications Data Warehousing, Archiving Cold Storage</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Optional 2x 2.5&quot; NVMe/SATA rear drive kit Remote management via dedicated IPMI BMC 12x 3.5&quot; hot-swap SAS3 drive bays Broadcom® 3008 SW controller</td>
<td>2x 10GBase-T Ports Remote management via dedicated IPMI BMC 36x 3.5&quot; Hot-swap SAS3 bays</td>
<td>• 45x 3.5&quot; Drive in 4U Form Factor</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Up to Up to 2TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots</td>
<td>Up to Up to 512GB Registered ECC RDIMM, DDR4-2933MHz; Up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots</td>
<td>Up to Up to 2TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>1 PCI-E 3.0 x16 (x16 or x8), 1 PCI-E 3.0 x8 (x0 or x8), 1 PCI-E 3.0 x4 (in x8 slot)</td>
<td>1 PCI-E 3.0 x16 (x16 or x8), 1 PCI-E 3.0 x8 (x0 or x8), 1 PCI-E 3.0 x4 (in x8 slot)</td>
<td>2 PCI-E 3.0 x8 (in x16 slot), 4 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot)</td>
</tr>
<tr>
<td>Storage Controller</td>
<td>Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,5,10; Broadcom® 3008 SW controller for 8 SAS3 (12Gb/s) ports; RAID 0,1,10;</td>
<td>Broadcom® 3008 SW controller with expander to support total 14x SATA/SAS3 (12Gb/s) IR mode RAID 0,1,10; or 36x SATA/SAS3 (12Gb/s) IT mode</td>
<td>E1CR45H: AOC-S3108L-H8IR-P E1CR45L: AOC-S3008L-L8E</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Dual LAN with 10GBase-T 2x 10GBase-T Ports</td>
<td>Dual LAN with 1Gbe with Intel® I210</td>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
</tr>
<tr>
<td>Management</td>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog</td>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog</td>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>12x 3.5&quot; hot-swap SAS/SATA drive bay with Optional 2x 2.5&quot; NVMe/SATA rear drive kit</td>
<td>Optional 2x2.5&quot; NVMe/SATA rear drive kit* to &quot;Peripheral Bays&quot;</td>
<td>45x 3.5&quot; SATA or SAS)+ 2x2.5&quot; SATA ( Rear)</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>2x 3.5&quot; internal fixed drive bay or 4x 2.5&quot; internal fixed drive bay, 2x M.2 Internal bays</td>
<td>2x 2.5&quot; (SATA or NVMe w/AOC) option</td>
</tr>
<tr>
<td>Power Supply</td>
<td>PWS-802A-1R</td>
<td>Redundant 1200W Platinum Level high-efficiency Power Supply</td>
<td>PWS-1K66P-1R</td>
</tr>
<tr>
<td>Cooling System</td>
<td>3x 8cm high-performance PWM fans; 7x 80mm high-performance fan;</td>
<td>5x 80mm rear hot-swap exhaust PWM fan;</td>
<td>4U Rackmount 437 x 178 x 660mm (17.2&quot; x 7&quot; x 26’); Enclosure: 437 x 178 x 660mm (17.2&quot; x 7&quot; x 26’);</td>
</tr>
<tr>
<td>Form Factor</td>
<td>432 x 76 x 635mm (17.2&quot; x 3.0&quot; x 25.6&quot;)</td>
<td>4U 17.2&quot; (437mm x 7” (178mm) x 27.5&quot; (699mm)); Enclosure: 445 x 686 x 1003mm (17.5” x 27” x 39.5”);</td>
<td>4U Rackmount 437 x 178 x 660mm (17.2&quot; x 7&quot; x 26’); Package: 711 x 584 x 1080mm (28” x 23” x 42.5”);</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details

1 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

2 For 2nd Gen Intel® Xeon® Scalable Processors (Cascade Lake Refresh / Cascade Lake) only. Contact your Supermicro sales rep for more info.
### X10 UP Storage

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SSG-5028R-E1CR12L</th>
<th>SSG-5048R-E1CR36L</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Single Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Intel® Xeon® Processor ES-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
</tbody>
</table>
| **Key Applications** | • Connectivity/Storage Computer Nodes  
• Application and data serving  
• High Availability Storage Appliance Platform | • Connectivity/Storage Computer Nodes  
• Database Processing & Storage |
| **Outstanding Features** | • 3008 controller onboard  
• Remote management via dedicated IPMI BMC  
• 12x 3.5" hot-swap SAS3 drive bays  
• Dual JBOD expansion ports | • 3008 SAS3 HBA controller onboard  
• Remote management via dedicated IPMI BMC  
• 36x 3.5" Hot-swap SAS3 bays  
• External port for JBOD connect |
| **Serverboard** | SUPER® X10SRH-CLN4F | SUPER® X10SRH-CLN4F |
| **Chipset** | Intel® C612 Express chipset | Intel® C612 Express chipset |
| **System Memory (Max).*** | Up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots | Up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots |
| **Expansion Slots** | 4x PCI-E 3.0 (x8/4, x16/8, x8) + 2x PCI-E 2.0 (x8/4, x4/2); Slot 1 occupied by JBOD expansion port | 4x PCI-E 3.0 (x8/4, x16/8, x8) + 2x PCI-E 2.0 (x8/4, x4/2) |
| **Onboard Storage Controller** | 3008 onboard controller IR mode | 3008 SAS3 HBA controller onboard |
| **Connectivity** | 4x GbE port, 1x dedicated IPMI port | 4x GbE port, 1x dedicated IPMI port |
| **VGA/Audio** | AST2400 VGA | AST2400 VGA |
| **Management** | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog |
| **Drive Bays** | 12x 3.5" Hot-swap SAS3 Drive Bays  
2x 2.5" optional hot-swap drive bays | 36x 3.5" Hot-swap SAS3 bays;  
2x 2.5" optional rear hot-swap drive bays |
| **Peripheral Bays** | N/A | N/A |
| **Power Supply** | Redundant 920W Platinum Level Digital high-efficiency power supplies | 1280W Redundant Platinum Level high-efficiency power supplies with I²C & PMBus |
| **Cooling System** | 3x cooling fans | 7x 80mm middle cooling fans |
| **Form Factor** | 2U Rackmount  
437 x 89 x 648mm (17.2" x 3.5" x 25.6") | 4U Rackmount  
437 x 178 x 699mm (17.2" x 7" x 27.5") |

* Please check with your Supermicro sales representative and website for compatibility and configuration details
### Cost-Efficient Cold Storage
12x 3.5 HDDs in 1U

### High-Density Cold Storage
12x 3.5 HDDs in 1U

### High-Density Warm Storage
12x 3.5 HDDs in 1U

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**MODEL** | **SSG-5018D2-AR12L** | **SSG-5018D4-AR12L** | **SSG-5018D8-AR12L**
--- | --- | --- | ---
Processor Support | Intel® Pentium® D 1508 Processor, SoC, 2 Core, 4 Thread 2.2 GHz (2.6 GHz Turbo), 25W | Intel® Xeon® D 1518 Processor, SoC, 4 Core, 2 Thread 2.2 GHz (2.2 GHz Turbo), 35W | Intel® Xeon® D 1537 Processor, SoC, 8 Core, 16 Thread 1.7 GHz (2.3 GHz Turbo), 35W

**Key Applications**
- Cold Storage
- Data Warehousing, Archiving
- Long Tail, Medical Records, Compliance Docs
- Low-Power Efficiency Appliance
- Cold Storage
- Archiving, Mail/Finance, Security
- Scale-Out Density, VOD Delivery
- Low-Power Efficiency Appliance
- Warm Storage
- CDN, Business Hosting
- OLTP/DB
- Low-Power Efficiency Appliance

**Outstanding Features**
- 12x Hot-Swap 3.5” SAS2/SATA3 bays (6 Gb/s)
- Option 4x 2.5” internal HDD drives
- Up to 128GB DDR4 2133MHz RDIMM or 64GB UDIMM
- 2-Port 1G Base-T and 2-port 10G SFP+
- Network Port
- M.2 2242, 2280, 22110 PCI-E 3.0 x4 with M-key
- IPMI 2.0 (dedicated LAN) with Virtual Media/KVM over LAN
- 12x Hot-Swap 3.5” SAS2/SATA3 bays (6 Gb/s)
- Option 4x 2.5” internal HDD drives
- Up to 128GB DDR4 2133MHz RDIMM or 64GB UDIMM
- 2-Port 1G Base-T and 2-port 10G SFP+
- Network Port
- M.2 2242, 2280, 22110 PCI-E 3.0 x4 with M-key
- IPMI 2.0 (dedicated LAN) with Virtual Media/KVM over LAN
- 12x Hot-Swap 3.5” SAS2/SATA3 bays (6 Gb/s)
- Option 4x 2.5” internal HDD drives
- Up to 128GB DDR4 2133MHz RDIMM or 64GB UDIMM
- 2-Port 1G Base-T and 2-port 10G SFP+
- Network Port
- M.2 2242, 2280, 22110 PCI-E 3.0 x4 with M-key
- IPMI 2.0 (dedicated LAN) with Virtual Media/KVM over LAN

**Serverboard**
- SUPER® X10SDV-2C-7TP4F
- SUPER® X10SDV-4C-7TP4F
- SUPER® X10SDV-7TP4F

**Chipset**
- Intel® Pentium® D 1508 SoC Processor
- Intel® Xeon® D 1518 SoC Processor
- Intel® Xeon® D 1537 SoC Processor

**System Memory (Max)*
- Up to 128GB DDR4 2133 MHz RDIMM or 64GB UDIMM
- Up to 128GB DDR4 2133 MHz RDIMM or 64GB UDIMM
- Up to 128GB DDR4 2133 MHz RDIMM or 64GB UDIMM

**Expansion Slots**
- 1 PCI-E 3.0 x8 full height
- 1 PCI-E 3.0 x8 full height
- 1 PCI-E 3.0 x8 full height

**Onboard Storage Controller**
- 2116 (IT mode)
- 2116 (IT mode)
- 2116 (IT mode)

**Connectivity**
- 2x USB 3.0, VGA
- 2x USB 3.0, VGA
- 2x USB 3.0, VGA

**VGA/Audio**
- Built-in VGA from Aspeed BMC
- Built-in VGA from Aspeed BMC
- Built-in VGA from Aspeed BMC

**Management**
- IPMI 2.0 w/ dedicated LAN port & KVM; 4 Pin PWM Fan Speed control; TPM option; Thermal and voltage monitoring
- IPMI 2.0 w/ dedicated LAN port & KVM; 4 Pin PWM Fan Speed control; TPM option; Thermal and voltage monitoring
- IPMI 2.0 w/ dedicated LAN port & KVM; 4 Pin PWM Fan Speed control; TPM option; Thermal and voltage monitoring

**Drive Bays**
- 12x Hot-Swap 3.5” SAS2/SATA3 drive bays (6 Gb/s), Option 4x 2.5” internal HDD drives
- 12x Hot-Swap 3.5” SAS2/SATA3 drive bays (6 Gb/s), Option 4x 2.5” internal HDD drives
- 12x Hot-Swap 3.5” SAS2/SATA3 drive bays (6 Gb/s), Option 4x 2.5” internal HDD drives

**Peripheral Bays**
- N/A
- N/A
- N/A

**Power Supply**
- 400W Redundant Gold Level power supplies
- 400W Redundant Gold Level power supplies
- 400W Redundant Gold Level power supplies

**Cooling System**
- 5x 4cm middle fan
- 5x 4cm middle fan
- 5x 4cm middle fan

**Form Factor**
- 1U rackmount 437 x 43 x 813mm (17.2” x 1.7” x 32”)
- 1U rackmount 437 x 43 x 813mm (17.2” x 1.7” x 32”)
- 1U rackmount 437 x 43 x 813mm (17.2” x 1.7” x 32”)

*Please check with your Supermicro sales representative and website for compatibility and configuration details.
### X12 IoT/EMBEDDED

*(For Complete System Only)*

#### Front I/O, Front DC PSU

#### Front I/O, Rear DC PSU

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-110P-FDWTR</th>
<th>SYS-110P-FRDN2T</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU up to 38 cores and 205W TDP</td>
<td>3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported, CPU up to 38 cores and 205W TDP</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>Telecom, Storage, GPU, DL/Al/ML</td>
<td>5G BBU DU applications, Telecom</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• 8-DIMM, DDR4 -3200MHz, ECC, RDIMM(3DS), LRDIMM(3DS) • 2x PCI-E 4.0 x16 FHFL slots, 1x PCI-E 4.0 x16 low profile slot • 600W DC Redundant power supplies • 2x 10G Based-T LAN Ports</td>
<td>• 8-DIMM, DDR4 -3200MHz, ECC, RDIMM(3DS), LRDIMM(3DS) • 2x PCI-E 4.0 x16 FHFL slots • 600W DC Redundant power supplies • 2x 10G Based-T LAN Ports</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X12SPW-TF</td>
<td>SUPER® X12SPW-TF</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Intel® C621A</td>
<td>Intel® C621A</td>
</tr>
<tr>
<td><strong>System Memory</strong></td>
<td>8-DIMM, DDR4 -3200MHz, ECC, RDIMM(3DS), LRDIMM(3DS)</td>
<td>8-DIMM, DDR4 -3200MHz, ECC, RDIMM(3DS), LRDIMM(3DS)</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>2x PCI-E 4.0 x16 FHFL slots 1x PCI-E 4.0 x16 low profile slot</td>
<td>2x PCI-E 4.0 x16 FHFL slots</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>Intel SATA</td>
<td>Intel SATA</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>2x 10G Based-T LAN Ports</td>
<td>2x 10G Based-T LAN Ports</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>1x onboard VGA port</td>
<td>1x onboard VGA port</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>KVM with dedicated LAN, Super Doctor, Watch Dog, Redfish API</td>
<td>KVM with dedicated LAN, Super Doctor, Watch Dog, Redfish API</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>2x Internal 2.5&quot; SATA drive bays</td>
<td>2x Internal 2.5&quot; SATA drive bays</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>600W DC Redundant power supplies</td>
<td>600W DC Redundant power supplies</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>6x (40x40x56 mm) cooling fans</td>
<td>5x (40x40x56 mm) cooling fans</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>1U rackmount (Front I/O) Enclosure: 437 x 429 x 43mm (17.2” x 16.9” x1.7”)</td>
<td>1U rackmount (Front I/O) Enclosure: 437 x 399 x 43mm (17.2” x 15.7” x1.7”)</td>
</tr>
</tbody>
</table>
# X12 IoT/Embedded

![X12 IoT/Embedded](image)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-110P-FRN2T</th>
<th>SYS-210P-FRDN6T</th>
<th>SYS-E403-9P-FN2T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>3rd Gen Intel® Xeon® Scalable processors (Up to 38 cores and 205W TDP)</td>
<td>3rd Gen Intel® Xeon® Scalable processors (Up to 38 cores and 205W TDP)</td>
<td>2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors (Up to 250W TDP)</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• 5G BBU DU applications, Telecom</td>
<td>• 5G Core and Edge</td>
<td>• Multi-Access Edge Computing (MEC)</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• 8-DIMM, DDR4 -3200MHz, ECC, RDIMM(3DS), LRDIMM(3DS)</td>
<td>• Front I/O</td>
<td>• Intel® Cascade Lake-SP Scalable Processors</td>
</tr>
<tr>
<td>System Memory (Max.)</td>
<td>8 DIMM slots, Up to 2TB ECC RDIMM, DDR4-3200MHz</td>
<td>2x PCI-E 4.0 x16 FHHL in certain configurations</td>
<td>Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz, in 6 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>2x PCI-E 4.0 x16 FHHL slots</td>
<td>PCI-E 4.0 x16 Low Profile or 2x8 Low Profile slot(s)</td>
<td>1x PCIe 3.0 x16 + 2x PCIe 3.0 x8, or 2x PCIe 3.0 x16 (FH3/4L)</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel SATA</td>
<td>Intel® SATA</td>
<td>Intel® C622 controller; RAID 0,1,5,10</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2x 10G Based-T LAN Ports</td>
<td>2x 1/10GbE and 4x 1GbE port(s)</td>
<td>2x 10GbE, 1x Dedicated IPMI LAN, 4 USB 3.0, 2 USB 2.0, 1x COM, 1x VGA</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>1x onboard VGA port</td>
<td>1 VGA port</td>
<td>Aspeed AST2500 BMC</td>
</tr>
<tr>
<td>Management</td>
<td>KVM with dedicated LAN, Super Doctor, Watch Dog, Redfish API</td>
<td>SuperDoctor® 5; Watch Dog; NMi; KVM with dedicated LAN; SPM; Intel® Node Manager; IPMI 2.0; Redfish API; SSM; SUM</td>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>2x Internal 2.5&quot; SATA drive bays; 2.5&quot; hot-swap SATA drive bays;</td>
<td>2x 2.5&quot; hot-swap SATA drive bays;</td>
<td>4x 2.5&quot; Internal Drive Bays</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>800W AC Redundant power supplies</td>
<td>600W -48V DC Redundant Power Supplies</td>
<td>600W multi-output Gold Level power supply</td>
</tr>
<tr>
<td>Cooling System</td>
<td>5x (40x40x56 mm) cooling fans</td>
<td>4 heavy duty fan(s)</td>
<td>3x 80x38mm PWM hot swap fans</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U rackmount (Front I/O)</td>
<td>2U rackmount</td>
<td>267 x 109 x 406mm (10.5” x 4.3” x 16”)</td>
</tr>
</tbody>
</table>

**Note:** BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).
**MODEL** | **SYS-1019P-FHN2T** | **SYS-1019P-FRDN2T** | **SYS-1019P-FRNN2T**
---|---|---|---
Processor Support | 2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. Single Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP. Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh). | 2nd Generation Intel® Xeon® Scalable Processors (Cascade Lake-SP), Intel® Xeon® Scalable Processors. Single Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP. | 2nd Generation Intel® Xeon® Scalable Processors (Cascade Lake-SP), Intel® Xeon® Scalable Processors. Single Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP. 


**Outstanding Features** | • Intel® Cascade Lake-SP Scalable Processors 2x PCIe 3.0 x16 FHFL 2x 10 Gigabit Ethernet Ports 2x USB 3.0, 2x USB 2.0 2x 2.5" Hot Swap SATA3 Drive Bays, 2x 2.5" Internal SATA3 Drive Bays (optional) | • Intel® Cascade Lake-SP Scalable Processors 2x PCIe 3.0 x16 FHFL 2x 10 Gigabit Ethernet Ports 2x USB 3.0, 2x USB 2.0 600W DC Redundant Power Supply 5x Hot-Swappable Fan Tray | • Intel® Cascade Lake-SP Scalable Processors 2x PCIe 3.0 x16 FHFL 2x 10 Gigabit Ethernet Ports 2x USB 3.0, 2x USB 2.0 800W AC Redundant Power Supply 5x Hot-Swappable Fan Tray

**Serverboard** | SUPER® X11SPW-TF | SUPER® X11SPW-TF | SUPER® X11SPW-TF

**Chipset** | Intel® C622 chipset | Intel® C622 chipset | Intel® C622 chipset

**System Memory (Max.)** | Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 3.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots | Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 3.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots | Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 3.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots

**Expansion Slots** | 2x PCIe 3.0 x16 FHFL | 2x PCIe 3.0 x16 FHFL | 2x PCIe 3.0 x16 FHFL

**Onboard Storage Controller** | Intel® C622 controller; RAID 0,1,5,10 | Intel SATA | Intel SATA

**Connectivity** | 2x 10GbE, 1x Dedicated IPMI LAN, 2x USB 3.0, 2x USB 2.0, 1x COM, 1x VGA | 2x 10GbE, 1x Dedicated IPMI LAN, 2 USB 3.0, 2 USB 2.0, 1x COM, 1x VGA | 2x 10GbE, 1x Dedicated IPMI LAN, 2 USB 3.0, 2 USB 2.0, 1x COM, 1x VGA

**VGA/Audio** | Aspeed AST2500 BMC | Aspeed AST2500 BMC | Aspeed AST2500 BMC

**Management** | Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog | Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog | Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog

**Drive Bays** | 2x 2.5" Hot Swap SATA3 Drive Bays, 2x 2.5" Internal SATA3 Drive Bays (optional) | 2x Fixed 2.5" Drive Bays | 2x Fixed 2.5" Drive Bays

**Peripheral Bays** | N/A | N/A | N/A

**Power Supply** | 1U 500W multi-output Platinum Level power supply w/ PMbus | 600W DC Redundant Power Supplies | 800W AC Redundant Power Supplies

**Cooling System** | 6x 40x28mm PWM fans | 5x 40x56 Hot-Swappable Fan Tray | 5x 40x56 Hot-Swappable Fan Tray

**Form Factor** | 437 x 43 x 381mm (17.2" x 1.7" x 15") | 437 x 43 x 399mm (17.2" x 1.7" x 15.7") | 437 x 43 x 399mm (17.2" x 1.7" x 15.7")

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
**MODEL** | **SYS-5019D-RN8TP** | **SYS-110A-FN10SP**
---|---|---
**Processor Support** | Intel® Skylake Xeon D-2146NT SoC, 2.3GHz, 8 Core, 80W † BIOS version 2.0 or above is required | Intel® Snow Ridge, 8-core SoC

**Key Applications**
- Network Security Appliance
- SDN-WAN, vCPE controller box
- NFV Edge Computing Server
- Virtualization Server
- IoT Edge Computing
- Built in Intel QAT up to 40Gbps Crypto/Compression
- Supports up to 8C high Density SKL-D SoC for Retail MEC
- 4 DDR4 DIMMs(ECC LRDIMM or ECC RDIMM) with up to 2133 MHz, Max memory capacity up to 512GB on LRDIMM
- 8 LAN ports support(2x 10G SFP+, 2x 10G Based-T, 4x 1GBe)
- Network Appliance
- Embedded IoT Computing
- SD-WAN and vCPE/uCPE
- Network Function Virtualization (NFV)
- Hyper Converged Infrastructure
- Cost Effective 1U Short-Depth Chassis and 4x 2.5” Internal Drive
- Plenty of M.2 selections (M.2 M-Key for SSD, B-Key for WAN or 4G-LTE module, E-Key for WiFi)  
- Intel CS5000 8-Core with embedded QAT support
- 1 PCIe3.0 x8 expansion for AOC
- Onboard TPM Header, IPMI with OOB support

**Serverboard** | X11SDV-8C-TP8F | A3SSV-16C-SPLN10F

**Chipset** | System On Chip | System on Chip chipset

**System Memory (Max).* | 4x DDR4 DIMM 512 GB Up to 2667MHz LRDIMM or 256GB RDIMM, ECC | Up to 256GB Registered ECC RDIMM, DDR4-2933MHz

| Or 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2933MHz, in 4 DIMM slots

**Expansion Slots** | 1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots
| 1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4

**Onboard Storage Controller** | SoC controller for 4 SATA3 (6 Gbps) ports | SoC controller for 6 ports

**Connectivity** | 2x 10G SFP+, 2x 10G Based-T, 4x 1GBe, 1x dedicated IPMI LAN, 2 USB 3.0 | N/A

**VGA/Audio** | VGA via BMC | Aspeed AST2500 BMC

**Management** | IPMI 2.0 | Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog

**Drive Bays** | 2x hot-swap 2.5” drive tray | 1x 3.5” Internal Drive Bay with 1 Full-height, Half-length PCI 2x 3.5” Internal Drive Bay 2x 2.5” Internal Drive Bay with 1 Full-height, Half-length PCI 4x 2.5” Internal Drive

**Peripheral Bays** | N/A | N/A

**Power Supply** | 300W AC Redundant PSU | 1U 200W Multi-output power supply Gold level w/20pin

**Cooling System** | 2x 40x28mm 4-PIN PWM Fan(FAN-0065LA, 13K RPM) | 1x High-efficiency power supply with thermal control fan

**Form Factor** | 437 x 43 x 381mm (17.2” x 1.7” x 15”) | 437 x 43 x 249mm (17.2” x 1.7” x 9.8”)

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* Please check with your Supermicro sales representative and website for compatibility and configuration details
## SuperServer® Solutions - June 2021

### IoT/Embedded

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-110A-24C-RN10SP</th>
<th>SYS-110A-16C-RN10SP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Intel® Atom® Processor P5342, Socket FCBGA-2106 supported, CPU TDP support 71W TDP</td>
<td>Intel® Atom® Processor P5342, Socket FCBGA-2106 supported, CPU TDP support 71W TDP</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Network Appliance</td>
<td>• Network Appliance</td>
</tr>
<tr>
<td></td>
<td>• Embedded IoT Computing</td>
<td>• Embedded IoT Computing</td>
</tr>
<tr>
<td></td>
<td>• Software Defined WAN (SD-WAN), Network Function Virtualization (NFV)</td>
<td>• Software Defined WAN (SD-WAN), Network Function Virtualization (NFV)</td>
</tr>
<tr>
<td></td>
<td>• Hyper Converged Infrastructure</td>
<td>• Hyper Converged Infrastructure</td>
</tr>
<tr>
<td></td>
<td>• Network Security Appliance</td>
<td>• Network Security Appliance</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• Cost Effective 1U Short-Depth Chassis and 4x 2.5” Internal Drive</td>
<td>• Cost Effective 1U Short-Depth Chassis and 4x 2.5” Internal Drive</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>A3SSV-24C-SPLN10F</td>
<td>A3SSV-16C-SPLN10F</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>System On Chip</td>
<td>System On Chip</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>DDR4 Up to 2933MT/s Up to 256GB RDIMM, Up to 64GB for ECC/Non-ECC UDIMM</td>
<td>DDR4 Up to 2933MT/s Up to 256GB RDIMM, Up to 64GB for ECC/Non-ECC UDIMM</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4</td>
<td>1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>SoC controller for 6 ports</td>
<td>SoC controller for 6 ports</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>Aspeed AST2500 BMC</td>
<td>Aspeed AST2500 BMC</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog</td>
<td>Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>1x 3.5” Internal Drive Bay with 1 Full-height, Half-length PCI 2x 2.5” Internal Drive Bay with 1 Full-height, Half-length PCI 4x 2.5” Internal Drive</td>
<td>1x 3.5” Internal Drive Bay with 1 Full-height, Half-length PCI 2x 2.5” Internal Drive Bay with 1 Full-height, Half-length PCI 4x 2.5” Internal Drive</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>1U 200W Multi-output power supply Gold level w/20pin</td>
<td>1U 200W Multi-output power supply Gold level w/20pin</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>1x High-efficiency power supply with thermal control fan</td>
<td>1x High-efficiency power supply with thermal control fan</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>437 x 43 x 249mm (17.2” x 1.7” x 9.8”)</td>
<td>437 x 43 x 249mm (17.2” x 1.7” x 9.8”)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
**Intel® Gen 8th Coffee Lake-S Compact 1U Embedded System**

**Intel® Gen 8th Coffee Lake-S Compact 1U Embedded System Short-Depth**

**MODEL**
- SYS-TN2
- SYS-1019C-FHTN8
- SYS-5019C-MHN2

**Processor Support**
- Intel® 8th/9th Generation Core™ i9/Core™ i7/Core™ i5/Core™ i3/Pentium®/Celeron® series Processor, Intel® Xeon® E-2100 series and E-2200 series Processor. Single Socket H4 (LGA 1151) supported, CPU TDP support Up to 80W TDP. A graphic integrated CPU is required to have onboard video from the DVI and DP ports.
- Intel® 8th/9th Generation Core™ i9/Core™ i7/Core™ i5/Core™ i3/Pentium®/Celeron® series Processor, Intel® Xeon® E-2100 and E-2200 Processor. Single Socket LGA-1151 (Socket H4) supported, CPU TDP support Up to 80W TDP. A graphic integrated CPU is required to have onboard video from the DVI and DP ports.

**Key Applications**
- Digital Signage
- DVR/NVR
- POS
- Office Server
- Network Security
- Security Appliance and Video Surveillance
- uCPE Network Appliance
- Network Security Appliance Virtualization Server
- General purpose, SMB, Web Hosting Application and data serving
- Archiving, Mail/Finance, Security

**Outstanding Features**
- 2 x 2.5” Hot Swap SATA3 Drive Bay
- M.2 (M key), Onboard TPM
- Coffee Lake-S, Xeon E-2100, 8th Gen Core i3, Pentium, Celeron Remote management via dedicated IPMI BMC
- 4 USB 3.1
- 2 DP, DVI-I, VGA, Audio
- PCIe 3.0 x16
- Dual M.2 M key (22110/2280)
- 2 x 2.5” Hot Swap, 2 x 2.5” Internal SATA3 Drive Bay
- Short-Depth (19.8”D)
- Quick Release Rails

**Serverboard**
- SUPER® X11SCZ-F
- SUPER® X11SCM-LN8F
- SUPER® X11SCZ-F

**Chipset**
- Intel® C246 chipset
- Intel® C246 chipset
- Intel® C246 chipset

**System Memory**
- Up to Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots
- Up to 128GB ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots
- Up to 128GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots

**Expansion Slots**
- PCIe 3.0 x 16 half height half length expansion slot; M.2 (M key, 22110/80, PCIe3.0 x4/SATA)
- PCIe 3.0 x 16 full height full length expansion slot (limited to two drives populated);
- 1 PCI-E 3.0 x16

**Onboard Storage Controller**
- Intel® C246 controller for 2 SATA3 (6 Gbps) ports; RAID 0,1;
- Intel® C246 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10;
- Intel® C246 controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10;

**Connectivity**
- Dual GBE LAN, 1 dedicate IPMI, 4 USB3.1 (3 TYPE A and 1 TYPE C)
- 8x 1GBE LAN, 1 dedicate IPMI LAN, 2 USB3.1, 2 USB2.0
- Dual LAN with Intel® Ethernet Controller I210-AT

**VGA/Audio**
- VGA via BMC
- VGA via BMC
- Aspeed AST2500 BMC, Intel® HD Graphics

**Management**
- IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SuperDoctor® 5, Watchdog
- Intel® Node Manager, IPMI2.0, NMI, SPM, SSIM, SUM, SuperDoctor® 5, Watchdog
- IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SuperDoctor® 5, Watchdog

**Drive Bays**
- 2 x 2.5” hot swap HDD (SATA3)
- 2 x 2.5” Hot Swap, 2 x 2.5” Internal(SSD recommended) SATA3 Drive Bay
- 4x 3.5” hot-swap SAS/SATA

**Peripheral Bays**
- N/A
- N/A
- 1x Slim DVD-ROM Drive

**Power Supply**
- 200W Low Noise AC-DC power supply with PFC, Gold Certified
- 350W AC-DC multiple output Platinum Level power supply
- 350W AC-DC multiple output Platinum Level power supply

**Cooling System**
- 4x 40x28mm chassi fan 4-PIN PWM FAN
- 4x 40x28mm PWM fan
- 5x 40x28mm PWM fan, 1x 40x28mm PWM fan

**Form Factor**
- 437 x 43 x 287mm (17.2” x 1.7” x 11.3”)
- 437 x 43 x 381mm (17.2” x 1.7” x 15”)
- 437 x 43 x 483mm (17.2” x 1.7” x 19.8”)

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
## IoT/Embedded

### Intel® Xeon® D-2123IT SoC, 4 Core, 8 Thread Short Depth System

- **Processor Support**: Intel® Xeon® D-2123IT
- **System Memory (Max)**: 4 DDR4 DIMM 512 GB up to 2667MHz LRDIMM or 256GB RDIMM, ECC/non-ECC
- **Expansion Slots**: 1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots
- **Onboard Storage Controller**: SoC controller for 4 SATA3 (6 Gbps) ports
- **Connectivity**: 2x 10G SFP+, 2x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2USB 3.0
- **VGA/Audio**: VGA via BMC
- **Management**: IPMI 2.0
- **Drive Bays**: 1x 3.5" or 4x 2.5"
- **Peripheral Bays**: N/A
- **Power Supply**: 200W Low Noise AC-DC power supply with PFC
- **Cooling System**: 3x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)
- **Form Factor**: 437 x 43 x 249mm (17.2" x 1.7" x 9.8")

### Intel® Xeon® D-2146NT SoC, 8 Cores System

- **Processor Support**: Intel® Xeon® D-2146NT
- **System Memory (Max)**: 4 DDR4 DIMM 512 GB up to 2667MHz LRDIMM or 256GB RDIMM, ECC/non-ECC
- **Expansion Slots**: 1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots
- **Onboard Storage Controller**: SoC controller for 4 SATA3 (6 Gbps) ports
- **Connectivity**: 2x 10G SFP+, 2x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2USB 3.0
- **VGA/Audio**: VGA via BMC
- **Management**: IPMI 2.0
- **Drive Bays**: 1x 3.5" or 4x 2.5"
- **Peripheral Bays**: N/A
- **Power Supply**: 200W Low Noise AC-DC power supply with PFC
- **Cooling System**: 3x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)
- **Form Factor**: 437 x 43 x 249mm (17.2" x 1.7" x 9.8")

### Intel® Atom® C3850, SoC, 12 Cores, Rear I/O Short-Depth System

- **Processor Support**: Intel® Atom™ C3850
- **System Memory (Max)**: 4 DDR4 DIMM 512 GB up to 2667MHz LRDIMM or 256GB RDIMM, ECC/non-ECC
- **Expansion Slots**: 1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots
- **Onboard Storage Controller**: SoC controller for 4 SATA3 (6 Gbps) ports
- **Connectivity**: 4x 1GbE LAN, 1 dedicated management port, 2USB3.0
- **VGA/Audio**: VGA via BMC
- **Management**: IPMI 2.0
- **Drive Bays**: 1x 3.5" or 4x 2.5"
- **Peripheral Bays**: N/A
- **Power Supply**: 200W Low Noise AC-DC power supply with PFC
- **Cooling System**: 2x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)
- **Form Factor**: 437 x 43 x 249mm (17.2" x 1.7" x 9.8")

### Intel® Atom® C3758, SoC, 8 Cores, Front I/O Short-Depth System

- **Processor Support**: Intel® Atom™ C3758
- **System Memory (Max)**: 4 DDR4 DIMM 512 GB up to 2667MHz LRDIMM or 256GB RDIMM, ECC/non-ECC
- **Expansion Slots**: 1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots
- **Onboard Storage Controller**: SoC controller for 4 SATA3 (6 Gbps) ports
- **Connectivity**: 4x 1GbE LAN, 1x dedicated IPMI LAN, 2 USB 2.0
- **VGA/Audio**: VGA via BMC
- **Management**: IPMI 2.0
- **Drive Bays**: 1x 3.5" or 4x 2.5"
- **Peripheral Bays**: N/A
- **Power Supply**: 200W Low Noise AC-DC power supply with PFC
- **Cooling System**: 2x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)
- **Form Factor**: 437 x 43 x 249mm (17.2" x 1.7" x 9.8")

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*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
## Intel® Skylake-D Compact Front Access
1U 2-Slot System

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-1019D-FHN13TP</th>
<th>SYS-1019D-4C-FHN13TP</th>
<th>SYS-1019D-14CN-FHN13TP</th>
<th>SYS-1019D-16C-FHN13TP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Intel® D-2146NT, 8 Cores, 16 Threads, 2.3 GHz, 80W</td>
<td>Intel® D-2146NT, 8 Cores, 16 Threads, 2.3 GHz, 80W</td>
<td>Intel® D-2146NT, 8 Core/16 Thread with built in QAT</td>
<td></td>
</tr>
<tr>
<td>Key Applications</td>
<td>- Multi-Access Edge Computing (MEC)</td>
<td>- Network Security Appliance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Centralized/Cloud Radio Access Network (C-RAN)</td>
<td>- FireWall Applications</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Universal Customer Premise Equipment (uCPE)</td>
<td>- Virtualization</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>- Software Defined WAN (SD-WAN)</td>
<td>- SD-WAN and vCPE/ucPE</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>- Network Function Virtualization (NFV)</td>
<td>- vCPE</td>
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<tr>
<td></td>
<td>- Artificial Intelligence (AI)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Dual PCI-E 3.0 x16 FHFL</td>
<td>• 400W Redundant Platinum PSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 2x 10GbE, 2x SFP+, 9x GbE (one for management), 1x dedicated IPMI LAN, 1x COM via RJ45</td>
<td>Built in Intel QAT up to 40 Gbps Crypto/Compresion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 1x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key</td>
<td>8 LAN w/ 2x10G SPF + 2x10Gbase-T and 4x1Gbe LAN</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SuperServer® X11SDW-8C-TP13F
-4C: SuperServer® X11SDW-16C-TP13F
-14CN: SuperServer® X11SDW-14CNT-TP13F
-16C: SuperServer® X11SDW-16C-TP13F

### SuperServer® X11SDV-8C-TP8F

## Intel® Xeon® D-2146NT
SoC 8 Core, 1U System

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-1019D-FHN13TP</th>
<th>SYS-1019D-4C-FHN13TP</th>
<th>SYS-1019D-14CN-FHN13TP</th>
<th>SYS-1019D-16C-FHN13TP</th>
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<tr>
<td>Processor Support</td>
<td>Intel® D-2146NT, 8 Cores, 16 Threads, 2.3 GHz, 80W</td>
<td>Intel® D-2146NT, 8 Cores, 16 Threads, 2.3 GHz, 80W</td>
<td>Intel® D-2146NT, 8 Core/16 Thread with built in QAT</td>
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<tr>
<td>Key Applications</td>
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<td>- Network Security Appliance</td>
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<td>- Centralized/Cloud Radio Access Network (C-RAN)</td>
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<td>- Universal Customer Premise Equipment (uCPE)</td>
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<td>- Software Defined WAN (SD-WAN)</td>
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<td>- Network Function Virtualization (NFV)</td>
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<td></td>
<td>- Artificial Intelligence (AI)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Dual PCI-E 3.0 x16 FHFL</td>
<td>• 400W Redundant Platinum PSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 2x 10GbE, 2x SFP+, 9x GbE (one for management), 1x dedicated IPMI LAN, 1x COM via RJ45</td>
<td>Built in Intel QAT up to 40 Gbps Crypto/Compresion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 1x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key</td>
<td>8 LAN w/ 2x10G SPF + 2x10Gbase-T and 4x1Gbe LAN</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SuperServer® X11SDW-8C-TP13F
-4C: SuperServer® X11SDW-16C-TP13F
-14CN: SuperServer® X11SDW-14CNT-TP13F
-16C: SuperServer® X11SDW-16C-TP13F

### SuperServer® X11SDV-8C-TP8F

* Please check with your Supermicro sales representative and website for compatibility and configuration details
**Model**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-1019D-4C-RAN13TP+</th>
<th>SYS-1019D-14CN-RAN13TP+</th>
<th>SYS-1019D-16C-RAN13TP+</th>
<th>1019D-4C-RDN13TP+</th>
<th>1019D-14CN-RDN13TP+</th>
<th>1019D-16C-RDN13TP+</th>
</tr>
</thead>
</table>

**Processor Support**

- 4C: Intel® Xeon® Processor D-2123IT
  - Single Socket FCBGA-2518 supported, CPU TDP support Up to 60W TDP
- 14CN: Intel® Xeon® Processor D-2177NT
  - Single Socket FCBGA-2518 supported, CPU TDP support Up to 105W TDP
- 16C: Intel® Xeon® Processor D-2183IT
  - Single Socket FCBGA-2518 supported, CPU TDP support Up to 100W TDP

**Key Applications**

- Multi-Access Edge Computing (MEC)
- Centralized/Cloud Radio Access Network (C-RAN)
- Universal Customer Premise Equipment (uCPE)
- Network Function Virtualization (NFV)
- Artificial Intelligence (AI)

**Outstanding Features**

- Intel® Xeon® Processor D-2123IT, 4 Cores, 8 Threads, 2.2 GHz, 60W TDP
  - 2x PCIe 3.0 x16 FHFL
  - 4x 10GbE SFP+, 9x GbE (one for management), 1x dedicated IPMI
  - 1x M.2 M-Key 2280/22110, 1x M.2 B-Key 2242, 1x M.2 E-Key 2230
  - 2x 2.5” Internal Drive Bay
  - 800W AC Redundant PSU, 5x Hot-Swappable Fans

- Intel® Xeon® Processor D-2183IT Processor, 16 Cores, 32 Threads, 2.2 GHz, 100W TDP
  - 2x PCIe3.0 x16 FHFL
  - 4x 10GbE SFP+, 9x GbE (one for management), 1x dedicated IPMI
  - 1x M.2 M-Key 2280/22110, 1x M.2 B-Key 2242, 1x M.2 E-Key 2230
  - 2x 2.5” Internal Drive Bay
  - 600W DC Redundant PSU, 5x Hot-Swappable Fans

**Serverboard**

- 4C: SUPER® X11SDW-4C-TP13F+
- 14CN: SUPER® X11SDW-14CN-TP13F+
- 16C: SUPER® X11SDW-16C-TP13F+

**Chipset**

- System on Chip (SoC)

**System Memory (Max.)***

- Up to 256GB Registered ECC RDIMM, DDR4-2400MHz
- Up to 512GB LRDIMM LRDIMM, DDR4-2400MHz, in 4 DIMM slots

**Expansion Slots**

- 2x PCIe 3.0 x16 FHFL

**Onboard Storage Controller**

- SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10

**Connectivity**

- 4 SFP+, 9 GbE (one for Ethernet management), 1 dedicated IPMI LAN, 1 COM via RJ45, 2 USB 3.0

**VGA/Audio**

- VGA via Aspeed AST2500 BMC

**Management**

- IPMI 2.0

**Drive Bays**

- 2x 2.5” Internal Drive Bays

**Peripheral Bays**

- N/A

**Power Supply**

- 800W Redundant Power Supply 80 PLUS Platinum

**Cooling System**

- 5x 40x56mm Hot Swappable Counter-Rotation PWM Fans

**Form Factor**

- 437 x 43 x 399mm (17.2” x 1.7” x 15.7”)

* Please check with your Supermicro sales representative and website for compatibility and configuration details
**Intel® Xeon® D2100 Series**
12/14/16-Core, Compact 1U
Front Access Modular I/O Edge Platform

**Intel® Atom® C3858**
SoC, 12 Cores

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<table>
<thead>
<tr>
<th>MODEL</th>
<th>Processor Support</th>
<th>Key Applications</th>
<th>Outstanding Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYS-1019D-16C-FRN5TP, SYS-1019D-14C-FRN5TP, SYS-1019D-12C-FRN5TP</td>
<td>Intel® D-2146NT, 8C/16T, 2.3GHz, 80W</td>
<td>- Centralized/Cloud Radio Access Network (C-RAN) Universal Customer Premise Equipment (uCPE) Software Defined Wide Area Network (SD-WAN) Network Function Virtualization (NFV)</td>
<td>- 4 x PCI-E 3.0 x8 slots for AIOM - 2 x 10GbE(share with IPMI), 2x SFP+, 1x Ethernet Management Port, 1x COM via RJ45/ micro USB - 2 x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key - 2 x EDSFF</td>
</tr>
<tr>
<td>SYS-1019D-FRN5TP</td>
<td>Intel® D-2146NT Processor, 8 Cores, 16 Threads, 2.3 GHz, 80W</td>
<td>- Intel® Skylake D-2146NT Processor, 8 Cores, 16 Threads, 2.3 GHz, 80W</td>
<td></td>
</tr>
<tr>
<td>SYS-E300-9A</td>
<td>Intel® Atom™ C3858, SoC 12 Cores, 25W, 2.0 GHz</td>
<td>- Dual SFP+, Dual 10GbE Base-T and Quad GbE Short depth (less than 10 depth) Best Performance per Watt 7 year life cycle IPMI 2.0 management and dedicated LAN</td>
<td></td>
</tr>
</tbody>
</table>

**Serverboard**
- 12C: SUPER® X11SDS-12C
- 14C: SUPER® X11SDS-14C
- 16C: SUPER® X11SDS-16C

**Chipset**
System on Chip (SoC)
System on Chip
System on Chip

**System Memory (Max)***
Up to 256GB Registered ECC RDIMM or 512GB LRDIMM, DDR4-2400MHz in 4 DIMM slots
Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; Up to 512GB LRDIMM, in 4 DIMM slots
Up to 64GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2400MHz, in 4 DIMM slots

**Expansion Slots**
- 4 PCI-E3.0 x8 slots for AIOM**
- 4 PCI-E3.0 x8 slots for AIOM**
- 4 PCI-E3.0 x8 slots for AIOM**

**Onboard Storage Controller**
SoC controller for 2 SATA3 (6 Gbps) ports
SoC controller for 2 SATA3 (6 Gbps) ports
SoC controller for 4x SATA3.0

**Connectivity**
- 2x 10GbE(share with IPMI), 2x SFP+, 1x Ethernet Management Port, 1x COM via RJ45/micro USB, 2x USB 3.0
- 2x 10GbE(share with IPMI), 2x SFP+, 1x Ethernet Management Port, 1x COM via RJ45/micro USB, 2x USB 3.0
- 2x 10GbE SFP+, 2x 10GbE LAN, 4x 1GbE LAN, 1 dedicated IPMI LAN, 2 USB 3.0

**VGA/Audio**
VGA via BMC
VGA via BMC
VGA via BMC

**Management**
Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SMM, S3M, SuperDoctor® 5, Watchdog
Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SMM, SUM, SuperDoctor® 5, Watchdog
Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog

**Drive Bays**
- 2x 2.5” Drive Bays(one drive space shares with M.2), 2x EDSFF
- 2x 2.5” Drive Bays(one drive space shares with M.2), 2x E1.S(35°C ambient temperature only)

**Peripheral Bays**
N/A
N/A
N/A

**Power Supply**
400W Redundant Power Supply, 80 PLUS Platinum
400W Redundant Power Supply, 80 PLUS Platinum
Lockable 12V DC 84W power adapter

**Cooling System**
5x 40x40x56 mm 13K-11K RPM Counter-rotating Fans
5x 40x40x56 mm 13K-11K RPM Counter-rotating Fans
2x 40x28mm 4-PIN PWM Fani/FAN-006L4, 13K RPM

**Form Factor**
1U Rackmount
1U Rackmount
1U Rackmount

**Chipset System on Chip (SoC)**
System on Chip
System on Chip
System on Chip

**Information:**
**DIMM Slots:**
- Max. RDIMM: 256GB, LRDIMM: 512GB
- DDR4-2400MHz, in 4 DIMM slots

**System Memory:**
Up to 256GB Registered ECC RDIMM or 512GB LRDIMM, DDR4-2400MHz in 4 DIMM slots
Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; Up to 512GB LRDIMM, in 4 DIMM slots
Up to 64GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2400MHz, in 4 DIMM slots

**VGA**
VGA plus
VGA plus
VGA plus

**Audio**
VGA audio
VGA audio
VGA audio

**KVM**
Integrated KVM
Integrated KVM
Integrated KVM

**Watchdog**
SuperDoctor® 5, Watchdog
SuperDoctor® 5, Watchdog
SuperDoctor® 5, Watchdog

**Net Weight:**
3.45lbs (1.56kg)

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* Please check with your Supermicro sales representative and website for compatibility and configuration details
**Intel® Atom® C3538 SoC, 4 Cores**

**Intel® Xeon® D Wall-mount System with 3 PCI-E slots**

**Intel® Xeon® D Wall-mount System with 3 PCI-E slots**

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**MODEL** | **SYS-E200-9A** | **SYS-E403-9D-4C-FN13TP** | **SYS-E403-9D-12CN-FN13TP** | **SYS-E403-9D-8CN-FN13TP**
---|---|---|---|---
**Processor Support** | Intel® Atom™ C3538, SoC 4 Cores, 16W, 2.2 GHz | -4C: Intel® D-2123IT, 4 Cores, 8 Threads, 2.2 GHz, 60W | -8CN: Intel® D-2146NT, 8 Cores, 16 Threads, 2.3 GHz, 80W | -14CN: Intel® D-2177NT, 14 Cores, 28 Threads, 1.9 GHz, 105W |
**Key Applications** | • Virtualization Server Virtualization Server Via Virtualization (V-CPE) | • Multi-Access Edge Computing (MEC) Universal Customer Premise Equipment (uCPE) Network Function Virtualization (NFV) Edge Computing, Vehicle to Everything Application (C-V2X / V2X) | • Multi-Access Edge Computing (MEC) Universal Customer Premise Equipment (uCPE) Network Function Virtualization (NFV) Edge Computing, Vehicle to Everything Application (C-V2X / V2X) |
**Outstanding Features** | • Intel TXT, improved AES-NI, QuickAssist Technology Intel VT-x and VT-d for virtualization NEW flexible I/O model for peripheral connectivity TDP lowered and increased from Rangeley 8 or more SATA III ports – Potentially with port multiplier support Significantly improved IPC compared to the Avoton/Rangeley cores. We expect a 70% or so raw performance improvement per core | • Dual PCI-E 3.0 x16 or Dual x8, One x16 PCI-E 3.0 (FHz/4L) • 2x 10GbE, 2x SFP+, 9x GbE (one for management), 1x dedicated IPMI LAN, 1x COM via RJ45 • 2x USB 3.0, 2x USB 2.0 • 1x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key 2320 | • Dual PCI-E 3.0 x16 or Dual x8, One x16 PCI-E 3.0 (FHz/4L) • 2x 10GbE, 2x SFP+, 9x GbE (one for management), 1x dedicated IPMI LAN, 1x COM via RJ45 • 2x USB 3.0, 2x USB 2.0 • 1x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key 2320 |
**Serverboard** | SUPER® A2SDi-4C-HLN4F | 4x Super® X11SDW-4C-TP13F | 4x Super® X11SDW-12C-TP13F | 4x Super® X11SDW-8C-TP13F |
**Chipset** | System on Chip | System on Chip | System on Chip | System on Chip |
**System Memory (Max)*** | 256GB Registered ECC, DDR4-2133MHz 64GB Unbuffered ECC/non-ECC, DDR4-2133MHz in 4 DIMM slots | Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2400-2133 MHz; in 4 DIMM slots | Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2667 MHz; in 4 DIMM slots | Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2133 MHz; in 4 DIMM slots |
**Expansion Slots** | 1 M.2 (M key , 2242/2280, PCIe3.0 x2 or SATA3) | Dual x16 or Dual x8, One x16 PCIe3.0 full height 3/4 length expansion slot SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10 | Dual x16 or Dual x8, One x16 PCIe3.0 full height 3/4 length expansion slot SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10 | Dual x16 or Dual x8, One x16 PCIe3.0 full height 3/4 length expansion slot SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10 |
**Onboard Storage Controller** | SoC controller for 4x SATA 3.0 | 2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2x USB 3.0, 2x USB 2.0 | 2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2x USB 3.0, 2x USB 2.0 | 2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2x USB 3.0, 2x USB 2.0 |
**Connectivity** | 4x 1GbE LAN, 1 dedicated IPMI LAN, 2 USB 2.0, 1 USB 3.0 type A | VISA via BMC | VISA via BMC | VISA via BMC |
**VGA/Audio** | VISA via BMC | Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog | Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog | Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog |
**Management** | Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog | 4x Internal 2.5" Drive Bays | 4x Internal 2.5" Drive Bays | 4x Internal 2.5" Drive Bays |
**Drive Bays** | 1x 2.5" SSD fixed drive bay | 4x Internal 2.5" Drive Bays | 4x Internal 2.5" Drive Bays | 4x Internal 2.5" Drive Bays |
**Peripheral Bays** | N/A | N/A | N/A | N/A |
**Power Supply** | Lockable 12V DC 60W power adapter | 600W Multi-output power supply, 80Plus Gold | 600W Multi-output power supply, 80Plus Gold | 600W Multi-output power supply, 80Plus Gold |
**Cooling System** | 2x 40x28mm 4-PIN PWM FAN/FAN-0065LA, 13K RPM | 3x 80x80mm PWM redundant fans | 3x 80x80mm PWM redundant fans | 3x 80x80mm PWM redundant fans |
**Form Factor** | 1U Compact Box: Enclosure: 195 x 43 x 226mm (7.68 x 1.7" x 8.9") Package: 381 x 142 x 276mm (15" x 5.59" x 10.87") Gross Weight: 6.5lbs (2.95kg) Net Weight: 3lbs (1.36kg) | Enclosure: 267 x 109 x 406mm (10.5" x 4.3" x 16") Package: 406 x 248 x 546mm (16" x 9.75" x 21.5") Gross Weight: 23lbs (10.43kg) Net Weight: 17lbs (7.71kg) | Enclosure: 267 x 109 x 406mm (10.5" x 4.3" x 16") Package: 406 x 248 x 546mm (16" x 9.75" x 21.5") Gross Weight: 23lbs (10.43kg) Net Weight: 17lbs (7.71kg) |

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
### Key Applications
- **SDN-WAN, vCPE controller box**
- **NFV Edge Computing Server**
- **Virtualization Server**
- **FireWall Applications**
- **IoT Edge Computing**

### Outstanding Features
- **Built in Intel QAT up to 40Gbps Crypto/Compression**
- **8 LAN ports support (2 x 10G SFP+, 2 x 10GBase-T, 4 x GbE)**
- **7 year life cycle**
- **IPMI 2.0 management with dedicated LAN Fanless compact design**
- **Support on board 1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/WAN card, 1 Mini PCI-E with mSATA Support**

### Serverboard
**Model:**
- **SUPER® X11SDV-8C-TP8F**
- **SUPER® A2SDi-4C-HLN4F**
- **SUPER® X11SDV-4C-TP8F-01**

### Chipset
- **System On Chip**
- **System on Chip chipset**
- **System on Chip chipset**

### System Memory (Max.)*
- **DDR4-2666 512GB LRDIMM or 256GB Registered ECC RDIMM in 4 DIMM slots**
- **Up to 256GB Registered ECC RDIMM, DDR4-2133MHz**
- **Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; Up to 512GB LRDIMM LRDIMM, DDR4-2133MHz, in 4 DIMM slots**

### Expansion Slots
- **1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots**
- **1x M.2 M Key 2242/2280(PCI-E 3.0 x2)**
- **1 PCI-E 3.0 x8**

### Onboard Storage Controller
- **SoC controller for 4x SATA3 (6 Gbps) ports, (or 2x NVMe U.2 / 8x SATA3 through two Port Eight Intel® PCH SATA3 SATA 3.0 Ports or Two MINI-SAS HD ports)**
- **SoC controller for 2x SATA 3.0**
- **SoC controller for 2 SATA3 ports; RAID 0,1**

### Connectivity
- **2x 10G SFP+, 2x 10Gbe LAN, 4x 1Gbe LAN, 1x dedicated IPMI LAN, 2x USB 3.0**
- **4x 1Gbe, 1x dedicated IPMI LAN, 2x USB 2.0**
- **2x 10G SFP+, 2x 10Gbe LAN, 4x 1Gbe LAN, 1x dedicated IPMI LAN, 2 USB 3.0**

### VGA/Audio
- **VGA via BMC**
- **Aspeed AST2400 BMC**
- **Aspeed AST2500 BMC**

### Management
- **IPMI 2.0, KVM with dedicated LAN, Watchdog**
- **IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog**
- **IPMI2.0, KVM with dedicated LAN, Watchdog**

### Drive Bays
- **Support up to 4x 7mm SSD**
- **2x 2.5” 7mm fixed drive bay**
- **2x 2.5” fixed drive bay with bracket**

### Peripheral Bays
- **N/A**
- **N/A**
- **N/A**

### Power Supply
- **DC power adapter**
- **Lockable 12V DC 60W power adapter**
- **150W 12V Lockable DC Power Adapter; Optional 180W 12V Lockable DC Power Adapter**

### Cooling System
- **Passive CPU heat sink, 3x 40x28mm 4-PIN PWM Fan for System level (FAN-0100LA, 8.5K RPM)**
- **Fanless**
- **Fanless**

### Form Factor
- **254 x 66 x 226mm (10” x 2.6” x 8.9”)**
- **295 x 76 x 206mm (11.6” x 3” x 8.1”)**
- **295 x 76 x 206mm (11.6” x 3” x 8.1”)**

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*Please check with your Supermicro sales representative and website for compatibility and configuration details*
Intel® Atom® C3558/C3758, SoC, 4/8 Cores

**Key Applications**
- Virtual-CPE White Box Solution
- Network Security Appliance
- Embedded IoT Gateway
- Networking Edge Device

**Outstanding Features**
- 8 x 1GbE RJ45 and 2x 1G SFP ports onboard
- LED indicator for each LAN port
- Best Performance per Watt
- 7 year life cycle
- IPMI 2.0 management with dedicated LAN

**Processor Support**
- **SYS-E300-9A-4CN10P**
  - Intel® Atom™ Processor Denverton C3558, SoC 4 Cores, 16W, 2.2 GHz
- **SYS-E300-9A-8CN10P**
  - Intel® Atom™ Processor Denverton C3758, SoC 8 Cores, 25W, 2.2 GHz
- **SYS-E300-9A-4CN8**
  - Intel® Atom™ Processor Denverton C3558, SoC 4 Cores, 16W, 2.2 GHz
- **SYS-E300-9A-8CN8**
  - Intel® Atom™ Processor Denverton C3758, SoC 8 Cores, 25W, 2.2 GHz
- **SYS-E300-9A-4C**
  - Intel® Atom™ Processor Denverton C3558, SoC 4 Cores, 16W, 2.2 GHz
- **SYS-E300-9A-8C**
  - Intel® Atom™ Processor Denverton C3758, SoC 8 Cores, 25W, 2.2 GHz

**System Memory**
- **SYS-E300-9A-4CN10P**
  - Up to 256GB Registered ECC DDR4-2133MHz, in 4 DIMM slots
- **SYS-E300-9A-8CN10P**
  - Up to 256GB Registered ECC DDR4-2400MHz, in 4 DIMM slots
- **SYS-E300-9A-4CN8**
  - Up to 256GB Registered ECC DDR4-2400MHz, in 4 DIMM slots
- **SYS-E300-9A-8CN8**
  - Up to 256GB Registered ECC DDR4-2400MHz, in 4 DIMM slots

**System on Chip (SoC)**
- **SYS-E300-9A-4CN10P**
  - System on Chip
- **SYS-E300-9A-8CN10P**
  - System on Chip
- **SYS-E300-9A-4CN8**
  - System on Chip
- **SYS-E300-9A-8CN8**
  - System on Chip

**Chipset**
- **SYS-E300-9A-4CN10P**
  - A2SDV-4C-LN10PF
- **SYS-E300-9A-8CN10P**
  - A2SDV-8C-LN10PF
- **SYS-E300-9A-4CN8**
  - A2SDV-4C-LN8F
- **SYS-E300-9A-8CN8**
  - A2SDV-8C-LN8F
- **SYS-E300-9A-4C**
  - A2SDi-4C-HLN4F
- **SYS-E300-9A-8C**
  - A2SDi-8C-HLN4F

**Expansion Slots**
- **SYS-E300-9A-4CN10P**
  - 1x PCI Express 3.0 x2 AOC slot (LP) when SSD isn’t populated, 1 M.2 B Key 3042/2280 (PCIe 3.0 x2)
- **SYS-E300-9A-8CN10P**
  - 1x PCI Express 3.0 x4 AOC slot (LP) when SSD isn’t populated, 1x M.2 M Key 2242/2280 (PCIe 3.0 x2) or SATA3.0, 1x M.2 B Key 3042/2280 (PCIe 3.0 x2)
- **SYS-E300-9A-4CN8**
  - 1x PCI Express 3.0 x2 AOC slot (LP) when only 1 SSD populated, 1 M.2 B Key 3042/2280 (PCIe 3.0 x2)
- **SYS-E300-9A-8CN8**
  - 1x PCI Express 3.0 x4 AOC slot (LP), 1x M.2 M Key 2242/2280 (PCIe 3.0 x2)

**Onboard Storage Controller**
- **SYS-E300-9A-4CN10P**
  - SoC controller for 3x SATA3.0
- **SYS-E300-9A-8CN10P**
  - SoC controller for 4x SATA3.0
- **SYS-E300-9A-4CN8**
  - SoC controller for 3x SATA3.0
- **SYS-E300-9A-8CN8**
  - SoC controller for 4x SATA3.0

**Connectivity**
- **SYS-E300-9A-4CN10P**
  - 8x 1GbE RJ45 and 2x 1G SFP, 1 dedicated IPMI LAN, 2 USB3.0, Optional Console port by request
- **SYS-E300-9A-8CN10P**
  - 8x 1GbE, 1 dedicated IPMI LAN, 2 USB3.0, Optional Console port by request
- **SYS-E300-9A-4CN8**
  - 4x 1GbE, 1 dedicated IPMI LAN, 2 USB 2.0, Optional Console port by request
- **SYS-E300-9A-8CN8**
  - 4x 1GbE, 1 dedicated IPMI LAN, 2 USB 2.0, Optional Console port by request

**VGA/Audio**
- **SYS-E300-9A-4CN10P**
  - VGA via BMC
- **SYS-E300-9A-8CN10P**
  - VGA via BMC
- **SYS-E300-9A-4CN8**
  - VGA via BMC
- **SYS-E300-9A-8CN8**
  - VGA via BMC

**Management**
- **SYS-E300-9A-4CN10P**
  - OOB, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor®, Watchdog
- **SYS-E300-9A-8CN10P**
  - OOB, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor®, Watchdog
- **SYS-E300-9A-4CN8**
  - OOB, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor®, Watchdog
- **SYS-E300-9A-8CN8**
  - OOB, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor®, Watchdog

**Drive Bays**
- **SYS-E300-9A-4CN10P**
  - 1x 2.5” fixed drive bay when AOC area is not occupied.
- **SYS-E300-9A-8CN10P**
  - 1x 2.5” fixed drive bay when AOC area is not occupied.
- **SYS-E300-9A-4CN8**
  - 1x 2.5” fixed drive bay when AOC area is not occupied.
- **SYS-E300-9A-8CN8**
  - 1x 2.5” fixed drive bay when AOC area is not occupied.

**Peripheral Bays**
- **SYS-E300-9A-4CN10P**
  - N/A
- **SYS-E300-9A-8CN10P**
  - N/A
- **SYS-E300-9A-4CN8**
  - N/A
- **SYS-E300-9A-8CN8**
  - N/A

**Power Supply**
- **SYS-E300-9A-4CN10P**
  - Lockable 12V DC 84W power adapter
- **SYS-E300-9A-8CN10P**
  - Lockable 12V DC 84W power adapter
- **SYS-E300-9A-4CN8**
  - Lockable 12V DC 84W power adapter
- **SYS-E300-9A-8CN8**
  - Lockable 12V DC 84W power adapter

**Cooling System**
- **SYS-E300-9A-4CN10P**
  - 1x 40x28mm 4-PIN PWM Fan/FAN-006SL4, 13K RPM, Optional 1x Fan by request
- **SYS-E300-9A-8CN10P**
  - 1x 40x28mm 4-PIN PWM Fan/FAN-006SL4, 13K RPM, Optional 1x Fan by request
- **SYS-E300-9A-4CN8**
  - 1x 40x28mm 4-PIN PWM Fan/FAN-006SL4, 13K RPM, Optional 1x Fan by request
- **SYS-E300-9A-8CN8**
  - 1x 40x28mm 4-PIN PWM Fan/FAN-006SL4, 13K RPM, Optional 1x Fan by request

**Form Factor**
- **SYS-E300-9A-4CN10P**
  - 254 x 43 x 226mm (10” x 1.7” x 8.9”)
- **SYS-E300-9A-8CN10P**
  - 254 x 43 x 226mm (10” x 1.7” x 8.9”)
- **SYS-E300-9A-4CN8**
  - Package: 381 x 276 x 142mm (15” x 10.87” x 5.59”). Gross Weight: 6.3lbs (2.86kg). Net Weight: 3.6lbs (1.63kg)
- **SYS-E300-9A-8CN8**
  - Package: 381 x 276 x 142mm (15” x 10.87” x 5.59”). Gross Weight: 6.3lbs (2.86kg). Net Weight: 3.6lbs (1.63kg)

*Please check with your Supermicro sales representative and website for compatibility and configuration details.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-E300-9C</th>
<th>SYS-E300-9D-8CN8TP</th>
<th>SYS-E300-9D-4CN8TP</th>
<th>SYS-E300-9A-16CN8TP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>8th Generation Intel® Core™ i7/15/13/Pentium®/Celeron® Processor</td>
<td>Intel Skylake Xeon D-2146NT SoC, 2.3GHz, 8 Core, 80W</td>
<td>Intel® Xeon® D-2123IT, 4 Cores, 60W</td>
<td>Intel® Atom™ Processor Denverton C3958, SoC 16 Cores, 31W, 2.0 GHz</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• IoT Edge Computing DVR/NVR Machine Automation Digital Signage Medical Applications IoT Gateway • Coffee Lake 8th Gen Intel Core i3/i5/i7 Embedded long life 1U Box Edge Devices TPM onboard</td>
<td>• SDN-WAN, vCPE controller box NFFV Edge Computing Server Virtualization Server FireWall Applications IoT Edge Computing • Built in Intel QAT up to 40Gbps Crypto/Compression Supports up to 8C high Density SKL-D SoC processor for edge networking High Memory Bandwidth-Supports 4 DDR4 channel (DIMM ECC/LRDIMM or ECC RDIMM) with up to 2133 MHz memory speed. Max memory capacity up to 512GB on DDR4DIMM 8 LAN ports support (2 x 10G SFP+, 2 x 10GBase-T, 4 x GbE) Support on board 1 M 2 slot M key for SSD, 2242/80, 1 M 2 B Key for SSD/ WAN card, 1 Mini PCI-E with mSATA Support 2 x USB 3.0, 4 x SATA 3.0 ports (SATA/SAS HDD/SDD)</td>
<td>• SDN-WAN, VCPE controller box NFFV Edge Computing Server Virtualization Server FireWall Applications IoT Edge Computing • 8 LAN ports support (2 x 10G SFP+, 2 x 10GBase-T, 4 x GbE) • 1 M 2 slot M key for SSD, 2242/80, 1 M 2 B Key for SSD/ WAN card, 1 Mini PCI-E with mSATA Support</td>
<td>• Embedded Networking Applications Network Security Appliance FireWall Applications Virtualization Server • Dual SFP+, Dual 10GBase-T and Quad GbE Short depth (less than 10 depth) Best Performance per Watt 7 year life cycle</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X11SCV-Q</td>
<td>SUPER® X11SDV-8-TP8F</td>
<td>SUPER® X11SDV-4-TP8F</td>
<td>SUPER® A2SDI-16-TP8F</td>
</tr>
<tr>
<td>System Memory (Max)*</td>
<td>Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2666MHz, in 2 DIMM slots</td>
<td>DDR4-2666 512GB LRDIMM or 256GB Registered ECC RDIMM in 4 DIMM slots</td>
<td>DDR4-2666 512GB LRDIMM or 256GB Registered ECC RDIMM in 4 DIMM slots</td>
<td></td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>1x PCI Express 3.0 x16 AOC slot (LP) and M.2 M key: SATA/PCEI-E 3.0 x4, support 2242/2280 length; M.2 E KEY: PCEI-E 3.0 x1, support 2230 length</td>
<td>1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0 x8 slots,</td>
<td>1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0 x8 slots,</td>
<td>1 PCI Express 3.0 x4 AOC slot (LP), 1 M.2M Key for SSD 2242/80, PCIe/ SATA3.0, 1 Mini-PCIe /w mSATA Half Size</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Q370 controller for 2 SATA3 ports; RAID 0,1</td>
<td>SoC controller for 4x SATA3 (6 Gbps) ports</td>
<td>SoC controller for 4x SATA3 (6 Gbps) ports</td>
<td>SoC controller for 4x SATA3.0</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2 X 1GbE LAN with AMT, 4 x USB 3.1 (2 type A &amp; 2 type C in rear), HD Audio,(Mic In/Line Out)</td>
<td>2 x 10G SFP+, 2 x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2 USB 3.0</td>
<td>2 x 10G SFP+, 2 x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2 USB 3.0</td>
<td>2 x 10GbE SFP+, 2 x 10GbE LAN, 4x 1GbE LAN, 1 dedicated IPMI LAN, 2 USB 3.0</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>1 DVI-D, 1HDMI, 1DP(DisplayPort), 3 Independent displays; 1 eDP(Embedded DisplayPort)</td>
<td>VGA via BMC</td>
<td>VGA via BMC</td>
<td>VGA via BMC</td>
</tr>
<tr>
<td>Management</td>
<td>AMT, NMI, SuperDoctor® 5, vPro, Watchdog</td>
<td>IPMI 2.0, KVM with dedicated LAN, Watchdog</td>
<td>IPMI 2.0, KVM with dedicated LAN, Watchdog</td>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>2x 2.5” fixed drive bay</td>
<td>1x 2.5” fixed drive bay with bracket. (No 2.5” fixed drive bay when AOC area is occupied.)</td>
<td>1x 2.5” fixed drive bay with bracket. (No 2.5” fixed drive bay when AOC area is occupied.)</td>
<td>2x 2.5” fixed drive bay: one with bracket, one on base mount. (Tx 2.5” fixed drive bay when AOC area is occupied.)</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Lockable 12V DC 150W power adapter</td>
<td>DC power adapter</td>
<td>DC power adapter</td>
<td>Lockable 12V DC 84W power adapter</td>
</tr>
<tr>
<td>Cooling System</td>
<td>2x 4cm high performance PWM fan; optional for 1x fan to add-on card area cooling</td>
<td>Passive CPU heat sink, 3x 40x28mm 4-PIN PWM Fan for System level (FAN-0100L4, 8.5K RPM)</td>
<td>2x 40x28mm 4-PIN PWM Fan for System level (FAN-0100L4, 8.5K RPM)</td>
<td>2x 40x28mm 4-PIN PWM Fan (FAN-0065L4, 13K RPM)</td>
</tr>
<tr>
<td>Form Factor</td>
<td>254 x 43 x 226mm (10” x 1.7” x 8.9”)</td>
<td>254 x 43 x 226mm (10” x 1.7” x 8.9”)</td>
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<td>254 x 43 x 226mm (10” x 1.7” x 8.9”)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details.
### MODEL | SYS-E300-9D | SYS-E300-8D | SYS-E200-8D
--- | --- | --- | ---
Processor Support | Intel® Xeon® D-2123IT SoC, 2.2GHz, 4 Core, 8 Thread, TDP 60W | Intel® Xeon® Processor D-1518, SoC 4 Core | Intel® Xeon® Processor D-1528, SoC 6 Core, 35W, 1.9GHz

#### Key Applications

- **Network Security Appliance**
  - SDN-WAN, vCPE controller box
  - Virtualization Server
  - IoT Edge Computing

- **IoT Gateway**

- **High Memory Bandwidth**
  - 4 DDR4 channel DIMMs (ECC LRDIMM or ECC RDIMM)
  - 2400 MHz memory speed,
  - Max memory capacity up to 512GB on LRDIMM
  - 1x Low Profile PCIe x8 slot, 1 on board Oculink port (or 1x PClex4 NVMe for NVMe SSD)
  - 2x 10GBase-T ethernet ports RMDA support
  - 2x USB 3.0, 1x SATA 3.0 ports (SATA/SAS HDD/SSD)

- **Dual SFP+ and 6 GbE**
  - Short depth (less than 10 depth)
  - Low Power Xeon D SoC 4 Core

- **Best Performance per Watt**

- **7 year life cycle**

- **IPMI 2.0 management with dedicated LAN**

#### Outstanding Features

- **Supports up to 4C high Density SKL-D SoC processor for edge network computing**
- **High Memory Bandwidth**
- **Supports 4 DDR4 channel DIMMs (ECC LRDIMM or ECC RDIMM) with up to 2400 MHz memory speed, Max memory capacity up to 512GB on LRDIMM**
- **1x Low Profile PCIe x8 slot, 1 on board Oculink port (or 1x PClex4 NVMe for NVMe SSD)**
- **2x 10GBase-T ethernet ports RMDA support**
- **2x USB 3.0, 1x SATA 3.0 ports (SATA/SAS HDD/SSD)**
- **1x TPM 2.0 header**

- **Dual SFP+ and 6 GbE**
  - Short depth (less than 10 depth)
  - Low Power Xeon D SoC 4 Core
- **Best Performance per Watt**
- **7 year life cycle**
- **IPMI 2.0 management with dedicated LAN**

- **Smallest Xeon Server BOX**
  - Low Power Xeon D SoC 6 Core
  - Best Performance per Watt
  - 7 year life cycle
  - **IPMI 2.0 management with dedicated LAN**

### Additional Specifications

- **Memory**
  - 4 x DDR4 DIMM 512GB up to 2400MHz LRDIMM or 256GB RDIMM, ECC/non-ECC
  - 128GB Registered ECC, DDR4-2133MHz
  - 64GB Unbuffered ECC/non-ECC, DDR4-2133MHz in 4 DIMM slots

- **Expansion Slots**
  - 1x PCI-E 3.0x8 (L/P)
  - 1 M.2 (M Key for SSD 2242/80/110, PCIe/SATA3.0, 1 Mini-PCIe /w mSATA)
  - 1 M.2 (M Key for SSD 2242/80, PCIe/SATA3.0)

- **Serverboard**
  - Super® X11SDV-4C-TLN2F
  - System On Chip
  - 4 x DDR4 DIMM 512 GB up to 2400MHz LRDIMM or 256GB RDIMM, ECC/non-ECC
  - Up to 128GB ECC RDIMM DDR4 2133MHz or 64GB ECC/non-ECC UDIMM in 4 sockets
  - 1 PCIe 3.0x8 AOC slot (LP), 1 M.2 Key for SSD 2242/80/110, PCIe/SATA3.0, 1 Mini-PCIe /w mSATA

- **Chipset**
  - Up to 128GB ECC RDIMM DDR4 2133MHz or 64GB ECC/non-ECC UDIMM in 4 sockets
  - 1 PCIe 3.0x8 AOC slot (LP), 1 M.2 Key for SSD 2242/80/110, PCIe/SATA3.0, 1 Mini-PCIe /w mSATA

- **Onboard Storage Controller**
  - SoC controller for 4 SATA3 (6 Gbps) ports; support RAID 0,1,5,10, 4 SATA ports via OcuLink (or PCIE3.0 x4 for NVMe)
  - SoC controller for 4x SATA3.0

- **Connectivity**
  - 2x 10GBase-T LAN, 1 dedicated IPMI LAN, 2 USB 3.0
  - 6x GbE and 2 SFP+, 1 dedicated management port, 2x USB 3.0
  - 2x GbE and 2x 10G LAN ports, 1 dedicated management port, 2 USB 3.0
  - 1x 2.5G fixed drive bay with bracket. (Design for 9.5mm thickness HDD with Low Profile Memory)

- **VGA/Audio**
  - VGA via BMC
  - Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor’ 5, Watchdog
  - Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor’ 5, Watchdog

- **Management**
  - IPMI 2.0
  - Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor’ 5, Watchdog
  - IPMI 2.0

- **Drive Bays**
  - 1x 2.5” internal drive bay
  - 1x 2.5G fixed drive bay with bracket. (Design for 9.5mm thickness HDD with Low Profile Memory)

- **Peripheral Bays**
  - N/A
  - N/A

- **Power Supply**
  - MCP-250-10128-0N (150W)
  - DC power adapter

- **Cooling System**
  - 3x 40x28mm 4-PIN PWM Fan (FAN-0065L4, 13K RPM), none
  - Passive CPU heat sink and 2x 40mm chassis fans

- **Form Factor**
  - 254 x 43 x 226mm (10” x 1.7” x 8.9”)
  - Gross Weight: 6.1lbs (2.77kg)
  - Net Weight: 3.45lbs (1.56kg)

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-E100-9S</th>
<th>SYS-E100-9S-E</th>
<th>SYS-E100-9S-L</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>7th Generation Intel® Core™ i7-7600U Processor</td>
<td>7th Generation Intel® Core™ i5-7300U Processor</td>
<td>7th Generation Intel® Core™ i3-7100U Processor</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• IoT Edge Computing Kiosk, Interactive information system Environmental Monitor</td>
<td>• IoT Edge Computing Kiosk, Interactive information system Environmental Monitor</td>
<td>• IoT Edge Computing Kiosk, Interactive information system Environmental Monitor</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• Core i Fanless Compact Ruggedized Box PC 1 HDMI and 1 Display Port 1 USB3.1, 2 USB 3.0, 4 USB 2.0 4 COM (RS-232/422/485), 1 DIO via DB9 2 Gigabit Ethernet Ports TPM2.0 onboard</td>
<td>• Core i Fanless Compact Ruggedized Box PC Support Cloud-based Management Software Support Dual Independent Displays by HDMi &amp; DP Fanless compact design</td>
<td>• 1 HDMI and 1 Display Port 1 USB3.1, 2 USB 3.0, 4 USB 2.0 4 COM (RS-232/422/485), 1 DIO via DB9 2 Gigabit Ethernet Ports TPM2.0 onboard</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X11SSN-H-WOHS</td>
<td>SUPER® X11SSN-E-WOHS</td>
<td>SUPER® X11SSN-L-WOHS</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>System on Chip</td>
<td>System on Chip</td>
<td>System on Chip</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong>*</td>
<td>Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots</td>
<td>Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots</td>
<td>Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>1 Full size Mini-Pcie; 1 M.2 2280 B-Key</td>
<td>1 Full size Mini-Pcie; 1 M.2 2280 B-Key</td>
<td>1 Full size Mini-Pcie; 1 M.2 2280 B-Key</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>1 M.2 2280 B-Key for SATA SSD</td>
<td>1 M.2 2280 B-Key for SATA SSD</td>
<td>1 M.2 2280 B-Key for SATA SSD</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>Dual LAN with Intel®PHY I219LM, 1 USB3.1, 2 USB3.0, 4 USB2.0, 4 COM (RS-232/422/485), 1 DIO via DB9, TPM2.0 onboard</td>
<td>Dual LAN with Intel®PHY I219LM, 1 USB3.1, 2 USB3.0, 4 USB2.0, 4 COM (RS-232/422/485), 1 DIO via DB9, TPM2.0 onboard</td>
<td>Dual LAN with Intel®PHY I219LM, 1 USB3.1, 2 USB3.0, 4 USB2.0, 4 COM (RS-232/422/485), 1 DIO via DB9, TPM2.0 onboard</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>1 DisplayPort, 1 HDMI</td>
<td>1 DisplayPort, 1 HDMI</td>
<td>1 DisplayPort, 1 HDMI</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td>AMT, SuperDoctor® 5, vPro, Watchdog</td>
<td>SuperDoctor® 5, Watchdog</td>
<td>SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>Lockable 12V DC 60W power adapter</td>
<td>Lockable 12V DC 60W power adapter</td>
<td>Lockable 12V DC 60W power adapter</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>Fanless</td>
<td>Fanless</td>
<td>Fanless</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>195 x 44 x 151mm (7.68” x 1.73” x 5.94”)</td>
<td>195 x 44 x 151mm (7.68” x 1.73” x 5.94”)</td>
<td>195 x 44 x 151mm (7.68” x 1.73” x 5.94”)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details.
### IP51 Fanless IoT Gateway/Server

#### Key Applications
- IoT Gateway
- Commercial Appliance
- Support Cloud-based Management Software

#### Outstanding Features
- IPS1 with plastic chassis design for water/dust proof
- Palm-size for space-limited environment
- Built-in Antenna

#### Processor Support
- Intel® Atom™ Processor x5-E3940

#### MODEL | SYS-E50-9AP | SYS-E50-9AP-L | SYS-E50-9AP-N5
--- | --- | --- | ---
**Processor Support** | Intel® Atom™ Processor x5-E3940 | Intel® Atom™ Processor x5-E3940 | Intel® Atom™ Processor x5-E3940
**Key Applications** | IoT Gateway | Cost Optimized IoT Gateway | 5 LAN Fanless Embedded System
Commercial Appliance | Commercial Appliance | Entry Networking Appliance IoT Gateway
Support Cloud-based Management Software | | IoT Gateway
**Outstanding Features** | IPS1 with plastic chassis design for water/dust proof | Palm-size for space-limited environment | 5 LAN Fanless Embedded System
Palm-size for space-limited environment | Cost optimized | Built-in Antenna
**Serverboard** | SUPER® A2SAP-H | SUPER® A2SAP-H | SUPER® A2SAP-H
**Chipset** | System on Chip | System on Chip | System on Chip
**System Memory (Max.)*** | Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket | Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket | Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket
**Expansion Slots** | 1 Full size Mini-PCIe; 1 Half size Mini-PCIe; 1 M.2 B-Key 2242; 1 M.2 E-Key 2230 | 1 Half size Mini-PCIe; 1 M.2 B-Key 2242 | 1 Half size Mini-PCIe; 1 M.2 B-Key 2242; 1 M.2 E-Key 2230
**Onboard Storage Controller** | 1 M.2 B-Key 2242 for SATA SSD, 1 SATA 3.0 for 7mm 2.5" SATA SSD | 1 M.2 B-Key 2242 for SATA SSD | 1 M.2 B-Key 2242 for SATA SSD, 1 SATA 3.0 for 7mm 2.5" SATA SSD
**Connectivity** | Dual LAN with Intel® I210-IT, 2 USB3.0, 2 USB2.0, 2 COM (RS-232/422/485), TPM2.0 onboard | Dual LAN with Intel® I210-IT, 2 USB3.0 | 5 LAN with Intel® I210-IT, 2 USB3.0, 2 USB2.0, 1 COM, TPM2.0 onboard
**VGA/Audio** | 2 HDMI | 1 HDMI | 2 HDMI
**Management** | SuperDoctor® 5, Watchdog | SuperDoctor® 5, Watchdog | SuperDoctor® 5, Watchdog
**Drive Bays** | 1 SATA 3.0 for 7mm 2.5" SATA SSD | N/A | 1 SATA 3.0 for 7mm 2.5" SATA SSD
**Peripheral Bays** | N/A | N/A | N/A
**Power Supply** | Lockable 12V DC 40W power adapter | Lockable 12V DC 40W power adapter | Lockable 12V DC 40W power adapter
**Cooling System** | Fanless | Fanless | Fanless
**Form Factor** | 148 x 44 x 118mm (5.82” x 1.72” x 4.64”) | 148 x 44 x 118mm (5.82” x 1.72” x 4.64”) | 148 x 44 x 118mm (5.82” x 1.72” x 4.64”)

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
## Support Wireless communication

### Compact Embedded Server

![Image of a compact embedded server](image)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-E50-9AP-Wifi**</th>
<th>SYS-E102-9AP-L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Intel® Atom® X5-E3940</td>
<td>Intel® Atom® X5-E3930</td>
</tr>
<tr>
<td>Key Applications</td>
<td>• IoT Gateway Commercial Appliance</td>
<td>• Embedded Applications</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Built-in Antenna and Dual band Wireless/Bluetooth combo module IPS1 with plastic chassis design for water/dust proof Cable-less design for easy maintenance Fanless design with palm-size dimension Support Cloud-based Management Software</td>
<td>• Building Block Solution for Embedded Applications Easy integration</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® A2SAP-H</td>
<td>SUPER® A2SAN-L</td>
</tr>
<tr>
<td>Chipset</td>
<td>System on Chip</td>
<td>System on Chip</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket</td>
<td>Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>1 Full size Mini-PCIe; 1 Half size Mini-PCIe; 1 M.2 B-Key 2242</td>
<td>1 Full Size Mini-PCI-E; 1 M.2 2280 B-Key</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>1 M.2 B-Key 2242 for SATA SSD, 1 SATA 3.0 for 7mm 2.5&quot; SATA SSD</td>
<td>1 M.2 B-Key 2280 for SATA SSD, 1 SATA 3.0 for 7mm 2.5&quot; SATA SSD</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Dual LAN with Intel I120-IT, 2 USB3.0, 2 USB2.0, 2 COM (RS-232/422/485), TPM 2.0 onboard, Dual Band Wireless and Bluetooth 4.2</td>
<td>Dual LAN with Intel I210-IT, 2 USB3.0, TPM2.0 onboard</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>2 HDMI</td>
<td>1 VGA 1 HDMI</td>
</tr>
<tr>
<td>Management</td>
<td>SuperDoctor® 5, Watchdog</td>
<td>SuperDoctor® 5; Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>1 SATA 3.0 for 7mm 2.5&quot; SATA SSD</td>
<td>1 SATA 3.0 for 7mm 2.5&quot; SATA SSD</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Lockable 12V DC 40W power adapter</td>
<td>Lockable 12V DC 40W power adapter</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Fanless</td>
<td>Passive CPU heat sink and 1x 40mm chassis fans</td>
</tr>
<tr>
<td>Form Factor</td>
<td>148 x 44 x 118mm (5.82&quot; x 1.72&quot; x 4.64&quot;)</td>
<td>1U Box; Enclosure: 190 x 44 x 120mm (7.48&quot; x 1.72&quot; x 4.72&quot;) Package: 241 x 140 x 203mm (9.5&quot; x 5.5&quot; x 8&quot;)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details

**Only available for NA and EU region. For other regions, please contact your sale representatives

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**SuperServer® Solutions - June 2021**
## Extended Temperature
**Fanless IoT Gateway/Server**
**Industrial Ruggedized Fanless PC**

### Processor Support
- **MODEL**
  - SYS-E100-9AP: Intel® Atom® X5-E3940
  - SYS-E100-9APP: Intel® Pentium™ N4200
  - SYS-E100-9AP-IA: Intel® Atom® X5-E3940

### Key Applications
- IoT Gateway for Smart Factory, Smart Building, Smart Home
  - Kiosk, Interactive information system
  - Environmental Monitor
  - Industrial Application

### Outstanding Features
- Low power Apollo Lake Atom E3940, 4C
- Fanless Compact Ruggedized Box PC
- Supports wide-temp: -20~60°C
- TPM2.0 onboard
- Operational vibration: 5Grms, IEC 60068-2-64
- Operational Shock: 30G, IEC 60068-2-27

### Serverboard
- **Model**
  - SUPER® A2SAN-E-WOHS
  - SUPER® X11SAN-WOHS
  - SUPER® A2SAN-E-WOHS

### Chipset
- System on Chip

### System Memory (Max.)
- Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket

### Expansion Slots
- Dual LAN with Intel I210-IT, 2 USB3.0, 4 USB2.0, 4 COM (RS-232/422/485), 1 DIO via DB9, TPM2.0 onboard

### Onboard Storage Controller
- 1 M.2 2280 B-Key for SATA SSD

### Connectivity
- Dual LAN with Intel I210-IT, 2 USB3.0, 1 USB3.1, 1 USB2.0, 4 COM (RS-232/422/485), 1 DIO via DB9, TPM2.0 onboard

### VGA/Audio
- 1 VGA 1 HDMI

### Management
- SuperDoctor® 5, Watchdog

### Drive Bays
- N/A

### Peripheral Bays
- N/A

### Power Supply
- Lockable 12V DC 40W power adapter

### Cooling System
- Fanless

### Form Factor
- 195 x 44 x 151mm (7.68” x 1.73” x 5.94”)

---

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
## Fanless IoT Gateway/Server

**MODEL**
- SYS-E100-9W-H
- SYS-E100-9W-E
- SYS-E100-9W-L
- SYS-E100-9W-C

### Processor Support
- 8th Generation Intel® Core™ i7-8665UE Processor
- 8th Generation Intel® Core™ i5-8365UE Processor
- 8th Generation Intel® Core™ i3-8145UE Processor
- Intel® Celeron® Processor 4305UE

### Key Applications
- Industrial Automation, Retail, Smart Medical Expert Systems
- Kiosk, Interactive information system
- Digital Signage
- Industrial Automation, Retail, Smart Medical Expert Systems
- Kiosk, Interactive information system
- Digital Signage
- Industrial Automation, Retail, Smart Medical Expert Systems
- Kiosk, Interactive information system
- Digital Signage
- Industrial Automation, Retail, Smart Medical Expert Systems
- Kiosk, Interactive information system
- Digital Signage

### Outstanding Features
- Supports wide-temp: 0~50°C
- TPM2.0 onboard
- Operational vibration: 5Grms, IEC 60068-2-64
- Operational Shock: 30G, IEC 60068-2-27
- Supports wide-temp: 0~50°C
- TPM2.0 onboard
- Operational vibration: 5Grms, IEC 60068-2-64
- Operational Shock: 30G, IEC 60068-2-27
- Supports wide-temp: 0~50°C
- TPM2.0 onboard
- Operational vibration: 5Grms, IEC 60068-2-64
- Operational Shock: 30G, IEC 60068-2-27
- Supports wide-temp: 0~50°C
- TPM2.0 onboard
- Operational vibration: 5Grms, IEC 60068-2-64
- Operational Shock: 30G, IEC 60068-2-27

### Serverboard
- SUPER® X11SWN-H-WOHS
- SUPER® X11SWN-E-WOHS
- SUPER® X11SWN-L-WOHS
- SUPER® X11SWN-C-WOHS

### Chipset
- System on Chip chipset
- System on Chip chipset
- System on Chip chipset
- System on Chip chipset

### System Memory (Max.)*
- Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
- Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
- Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
- Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots

### Expansion Slots
- N/A
- N/A
- N/A
- N/A

### Onboard Storage Controller
- N/A
- N/A
- N/A
- N/A

### Connectivity
- Single LAN with Intel® Ethernet Controller I210T; Single LAN with Intel® PHY I219LM LAN controller
- Single LAN with Intel® Ethernet Controller I210T; Single LAN with Intel® PHY I219LM LAN controller
- Single LAN with Intel® Ethernet Controller I210T; Single LAN with Intel® PHY I219LM LAN controller
- Single LAN with Intel® Ethernet Controller I210T; Single LAN with Intel® PHY I219LM LAN controller

### VGA/Audio
- Intel® UHD Graphics 610, ALC 888S HD Audio
- Intel® UHD Graphics 610, ALC 888S HD Audio
- Intel® UHD Graphics 610, ALC 888S HD Audio
- Intel® UHD Graphics 610, ALC 888S HD Audio

### Management
- SuperDoctor® 5, Watchdog
- SuperDoctor® 5, Watchdog
- SuperDoctor® 5, Watchdog
- SuperDoctor® 5, Watchdog

### Drive Bays
- N/A
- N/A
- N/A
- N/A

### Peripheral Bays
- N/A
- N/A
- N/A
- N/A

### Power Supply
- Lockable 12V DC 60W power adapter
- Lockable 12V DC 60W power adapter
- Lockable 12V DC 60W power adapter
- Lockable 12V DC 60W power adapter

### Cooling System
- Fanless
- Fanless
- Fanless
- Fanless

### Form Factor
- 195 x 44 x 159mm (7.68” x 1.73” x 6.25”)
- 195 x 44 x 159mm (7.68” x 1.73” x 6.25”)
- 195 x 44 x 159mm (7.68” x 1.73” x 6.25”)
- 195 x 44 x 159mm (7.68” x 1.73” x 6.25”)

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
### SuperServer Solutions - June 2021

### Industrial Fanless SuperServer

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-E100-9W-H-IA-H</th>
<th>SYS-E100-9W-IA-E</th>
<th>SYS-E100-9W-IA-L</th>
<th>SYS-E100-9W-IA-C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>8th Generation Intel® Core™ i7-8665UE Processor Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP</td>
<td>8th Generation Intel® Core™ i5-8360UE Processor Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP</td>
<td>8th Generation Intel® Core™ i3-8145U Processor Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP</td>
<td>8th Generation Intel® Celeron® 4305U Processor Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Industrial Automation &amp; Control • Machine Automation</td>
<td>• Industrial Automation &amp; Control • Machine Automation</td>
<td>• Industrial Automation &amp; Control • Machine Automation</td>
<td>• Industrial Automation &amp; Control • Machine Automation</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• 1 HDMI and 1 Display Port • 4 USB 3.1 • 2 Gigabit Ethernet Ports • 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key • 9-36 VDC Wide Range Power • 4 COM (RS-232/422/485), 1 DIO via DB9</td>
<td>• 1 HDMI and 1 Display Port • 4 USB 3.1 • 2 Gigabit Ethernet Ports • 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key • 9-36 VDC Wide Range Power • 4 COM (RS-232/422/485), 1 DIO via DB9</td>
<td>• 1 HDMI and 1 Display Port • 4 USB 3.1 • 2 Gigabit Ethernet Ports • 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key • 9-36 VDC Wide Range Power • 4 COM (RS-232/422/485), 1 DIO via DB9</td>
<td>• 1 HDMI and 1 Display Port • 4 USB 3.1 • 2 Gigabit Ethernet Ports • 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key • 9-36 VDC Wide Range Power • 4 COM (RS-232/422/485), 1 DIO via DB9</td>
</tr>
<tr>
<td><strong>Serverboard</strong></td>
<td>SUPER® X11SWN-H-WOHS</td>
<td>SUPER® X11SWN-E-WOHS</td>
<td>SUPER® X11SWN-L-WOHS</td>
<td>SUPER® X11SWN-C-WOHS</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>System on Chip chipset</td>
<td>System on Chip chipset</td>
<td>System on Chip chipset</td>
<td>System on Chip chipset</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots</td>
<td>Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots</td>
<td>Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots</td>
<td>Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>System on Chip</td>
<td>System on Chip</td>
<td>System on Chip</td>
<td>System on Chip</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>1 SATA SSD</td>
<td>1 SATA SSD</td>
<td>1 SATA SSD</td>
<td>1 SATA SSD</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>12V DC 60W power adapter with Terminal Block</td>
<td>12V DC 60W power adapter with Terminal Block</td>
<td>12V DC 60W power adapter with Terminal Block</td>
<td>12V DC 60W power adapter with Terminal Block</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td>Fanless</td>
<td>Fanless</td>
<td>Fanless</td>
<td>Fanless</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>194 x 115 x 126mm (7.64” x 4.52” x 4.96”)</td>
<td>194 x 115 x 126mm (7.64” x 4.52” x 4.96”)</td>
<td>194 x 115 x 126mm (7.64” x 4.52” x 4.96”)</td>
<td>194 x 115 x 126mm (7.64” x 4.52” x 4.96”)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details.*
### FEATURES

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>8th Generation Intel® Core® i7-8865U Processor</td>
<td>8th Generation Intel® Core® i7-8850U Processor</td>
<td>8th Generation Intel® Core® i7-8845U Processor</td>
<td>Intel® Celeron® Processor 4303U. Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP</td>
</tr>
<tr>
<td>1 BIOS version 2.0 or above is required</td>
<td>1 BIOS version 2.0 or above is required</td>
<td>1 BIOS version 2.0 or above is required</td>
<td>1 BIOS version 2.0 or above is required</td>
<td></td>
</tr>
</tbody>
</table>

### Key Applications
- Industrial Automation, Retail, Smart Medical Expert Systems
- Digital Signage
- Retail, Smart Medical Expert Systems

### Outstanding Features
- 1 HDMI and 1 Display Port
- 4 USB 3.1
- 4 COM (RS-232/422/485), 1 DIO via DB9
- 2 Gigabit Ethernet Ports
- 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key

### Serverboard
- SUPER® X11SWN-H
- SUPER® X11SWN-E
- SUPER® X11SWN-L
- SUPER® X11SWN-C

### Chipset
- System on Chip chipset
- System on Chip chipset
- System on Chip chipset
- System on Chip chipset

### System Memory (Max.)*
- Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
- Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
- Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots

### Expansion Slots
- N/A
- N/A
- N/A
- N/A

### Onboard Storage Controller
- N/A
- N/A
- N/A
- N/A

### Connectivity
- Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PH219LM LAN controller
- Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PH219LM LAN controller
- Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PH219LM LAN controller
- Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PH219LM LAN controller

### VGA/Audio
- Intel® UHD Graphics 610
- Intel® UHD Graphics 610
- Intel® UHD Graphics 610
- Intel® UHD Graphics 610

### Management
- SuperDoctor® 5, Watchdog
- SuperDoctor® 5, Watchdog
- SuperDoctor® 5, Watchdog
- SuperDoctor® 5, Watchdog

### Drive Bays
- 1 SATA 3.0 for 2.5" 7mm SATA HDD/SSD 1 M.2 2242/3042/2280 B-Key (USB3.0/2.0x1, SATA Gen3x1) 1 M.2 2242/2280 M-Key (PCI-E 3.0x4, SATA Gen3x1), NVMe support
- 1 SATA 3.0 for 2.5" 7mm SATA HDD/SSD 1 M.2 2242/3042/2280 B-Key (USB3.0/2.0x1, SATA Gen3x1) 1 M.2 2242/2280 M-Key (PCI-E 3.0x4, SATA Gen3x1), NVMe support
- 1 SATA 3.0 for 2.5" 7mm SATA HDD/SSD 1 M.2 2242/3042/2280 B-Key (USB3.0/2.0x1, SATA Gen3x1) 1 M.2 2242/2280 M-Key (PCI-E 3.0x4, SATA Gen3x1), NVMe support
- 1 SATA 3.0 for 2.5" 7mm SATA HDD/SSD 1 M.2 2242/3042/2280 B-Key (USB3.0/2.0x1, SATA Gen3x1) 1 M.2 2242/2280 M-Key (PCI-E 3.0x4, SATA Gen3x1), NVMe support

### Peripheral Bays
- N/A
- N/A
- N/A
- N/A

### Power Supply
- Lockable 12V DC 60W power adapter
- Lockable 12V DC 60W power adapter
- Lockable 12V DC 60W power adapter
- Lockable 12V DC 60W power adapter

### Cooling System
- Passive CPU Heat Sink and 1x 40mm Chassis Fan
- Passive CPU Heat Sink and 1x 40mm Chassis Fan
- Passive CPU Heat Sink and 1x 40mm Chassis Fan
- Passive CPU Heat Sink and 1x 40mm Chassis Fan

### Form Factor
- 190 x 44 x 120mm (7.48" x 1.72" x 4.72")
- 190 x 44 x 120mm (7.48" x 1.72" x 4.72")
- 190 x 44 x 120mm (7.48" x 1.72" x 4.72")
- 190 x 44 x 120mm (7.48" x 1.72" x 4.72")

* Please check with your Supermicro sales representative and website for compatibility and configuration details
## IoT/Embedded

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-5029C-TN2</th>
<th>SYS-5029A-2TN4</th>
<th>SYS-5029AP-TN2</th>
<th>SYS-5029S-TN2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Intel® 8th/9th Generation Core™</td>
<td>Intel® Atom™ C3338 Denverton Processor, Soc 2 Core, 9W, 1.5 GHz</td>
<td>Intel® Atom™ E3940 Apollo Lake Processor, Soc 4 Core, 9.5W, 1.6 GHz</td>
<td>Intel® 8th/7th Generation Core™</td>
</tr>
<tr>
<td><strong>Key Applications</strong></td>
<td>• Surveillance Security Server Compact Storage Appliance Video processing and streaming Small Medium Business Edge Server</td>
<td>• Quad Gigabit Ethernet LAN Up to 4x hot-swap 3.5” SATA3 drives IPMI 2.0 (dedicated LAN) with Virtual Media/KVM over LAN 7 year life cycle</td>
<td>• Database Processing &amp; Storage High Performance NAS Servers Medical Applications Security Appliance and Video Surveillance Web Server for Small and Medium Business Indoor Kiosk</td>
<td>• Database Processing &amp; Storage Web Server for Small and Medium Business Medical Applications Security Appliance and Video Surveillance Indoor Kiosk</td>
</tr>
<tr>
<td><strong>Outstanding Features</strong></td>
<td>• Up to 32GB Non ECC SO-DIMM DDR4 2666 MHz TPM chip onboard with jumper disable Up to 4 Hot-Swap 3.5” SATA3 HDD and 2 internal 2.5” fixed HDD 4 x USB 3.1 (2 type A &amp; 2 type C in rear) M.2 Key: M-Key, E-Key for WiFi (or CNVi) card</td>
<td>• Quad Gigabit Ethernet LAN Up to 4x hot-swap 3.5” SATA3 drives IPMI 2.0 (dedicated LAN) with Virtual Media/KVM over LAN 7 year life cycle</td>
<td>• Quad Gigabit Ethernet LAN Up to 4 Hot-Swap 3.5” SATA3 HDD, 1 internal 2.5” fixed HDD and 1 M.2 (M key 2242/80 PCIe 2.0x2) Embedded long life 2x Gigabit LAN ports Quiet Operation</td>
<td>• DP, HDMI and DVI-i: 3 independent displays Remote management via vPro technology 2x Gigabit LAN ports Quiet Operation</td>
</tr>
<tr>
<td><strong>Serverboard Chipset</strong></td>
<td>SUPER® X11SCV-Q System on Chip</td>
<td>SUPER® A2SD1-2C-HLN4F System on Chip</td>
<td>SUPER® A2SAY System on Chip</td>
<td>SUPER® X11S5V-Q Intel® Q170</td>
</tr>
<tr>
<td><strong>System Memory (Max.)</strong></td>
<td>Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2666MHz, in 2 DIMM slots</td>
<td>Up to 128GB RDIMM or 32GB ECC/ NON ECC UDIMM, DDR4-1866MHz in 2 DIMM slots</td>
<td>8GB Unbuffered non-ECC DDR3-1866MHz SO-DIMM in 1 DIMM slot 1 PCIe 2.0 x2 in x8 slot, 1 M.2 (M key 2242/80 PCIe 2.0x2), 1 Mini PCIe with mSATA support</td>
<td>32GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots 1 x PCIe 3.0 x16 slot 1 x M.2 (M key 2242/80 PCIe 3.0x4) 1 x Mini PCIe with mSATA support</td>
</tr>
<tr>
<td><strong>Expansion Slots</strong></td>
<td>1 PCI-E 3.0 x16 (Low Profile); 1 M.2 PCIe 3.0x4 M Key 2242/2280 1x PCIe 3.0 x2 (in x4 open ended slot)</td>
<td>1x PCIe 3.0 x2 (in x4 open ended slot)</td>
<td>1 PCIe 2.0 x2 &amp; 1 PCIe 1.0 x1 (4x4 open ended slot)</td>
<td>1 PCIe 2.0 x2 &amp; 1 PCIe 1.0 x1 (4x4 open ended slot)</td>
</tr>
<tr>
<td><strong>Onboard Storage Controller</strong></td>
<td>SoC controller for 6 SATA3 (6 Gbps) ports</td>
<td>SUPER® 88SE9230 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10; SoC controller for 2 SATA3 (6 Gbps) ports 2x 1GbE LAN, 2 USB3.0, 3 USB2.0 (2 front, 1 Type A), 1 Serial Port (RJ45), ALC 8889 HD Audio</td>
<td>Marvel 88SE9230 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10; SoC controller for 2 SATA3 (6 Gbps) ports</td>
<td>Intel® Q170 Express controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10; SoC controller for 2 SATA3 (6 Gbps) ports</td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>4 x USB 3.1 (2 type A &amp; 2 type C in rear) 4 x 1GbE LAN, 1 dedicated IPMI LAN, 2 USB2.0</td>
<td>4 x 1GbE LAN, 1 dedicated IPMI LAN, 2 USB2.0</td>
<td>2x 1GbE, 4 USB3.0, 3 USB2.0 (2 front, 1 Type A), 2x 1GbE, 2x USB3.0, 4 USB2.0 (Front)</td>
<td>2x 1GbE</td>
</tr>
<tr>
<td><strong>VGA/Audio</strong></td>
<td>VGA via BMC</td>
<td>1 HDMI, 1 DP, 1 VGA or 1 eDP, Intel HD Graphic 3 independent displays</td>
<td>vPro and AMT 4x 3.5” hot-swap SAS/SATA 2x 2.5” fixed drive bay</td>
<td>1 HDMI, 1 DP (Display Port), 1 DVI - D, 1 Intel® HD Graphics 3 Independent Displays</td>
</tr>
<tr>
<td><strong>Management</strong></td>
<td></td>
<td>vPro and AMT</td>
<td></td>
<td>vPro and AMT</td>
</tr>
<tr>
<td><strong>Drive Bays</strong></td>
<td>4 x 3.5” SATA Hot Swap drive bay and 2 x2.5” internal drive bay</td>
<td>4x 3.5” hot-swap drive bay, 2x 2.5” fixed drive bay</td>
<td>1x slim DVD-ROM drive bay (shared with 1 x 2.5” fixed drive bay) PWS-251-1H 250W Flex ATX Multi-output Bronze Power Supply</td>
<td>4x 3.5” hot-swap SAS/SATA 1x 2.5” fixed drive bay</td>
</tr>
<tr>
<td><strong>Peripheral Bays</strong></td>
<td>N/A</td>
<td>1x slim DVD-ROM drive bay (shared with 1 x 2.5” fixed drive bay) PWS-251-1H 250W Flex ATX Multi-output Bronze Power Supply</td>
<td>1x slim DVD-ROM drive bay (shared with 1 x 2.5” fixed drive bay) PWS-251-1H 250W Flex ATX Multi-output Bronze Power Supply</td>
<td>1x slim DVD-ROM drive bay (shared with 1 x 2.5” fixed drive bay) PWS-251-1H 250W Flex ATX Multi-output Bronze Power Supply</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>1x Active CPU cooler</td>
<td>1x 12cm rear exhaust fan; SNK- P0046A4 - optional</td>
<td>1x 12cm rear exhaust fan; SNK- P0046A4 - optional</td>
<td>1x 12cm rear exhaust fan; SNK- P0046A4 - optional</td>
</tr>
<tr>
<td><strong>Cooling System</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>210 x 240 x 279mm (8.27” x 9.45” x 11”)</td>
<td>210 x 240 x 279mm (8.27” x 9.45” x 11”)</td>
<td>210 x 240 x 279mm (8.27” x 9.45” x 11”)</td>
<td>210 x 240 x 279mm (8.27” x 9.45” x 11”)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
### Processor Support

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-E200-9AP</th>
<th>SYS-E200-9B</th>
<th>SYS-E200-8B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Atom™ E3940 Apollo Lake Processor, SoC</td>
<td>Intel® Pentium® N3700 Processor, SoC, 4 Cores, 6W, 1.6GHz</td>
<td>Intel® Celeron™ J1900 Processor, SoC, 4-Core, 10W, 2.0GHz</td>
<td></td>
</tr>
</tbody>
</table>

### Key Applications

- **Intel® Atom™ E3940**
  - Digital Signage
  - Security Appliance and Video Surveillance
  - Indoor Kiosk

- **Intel® Pentium® N3700**
  - Embedded Applications
  - Thin Client
  - Networking Appliance

- **Intel® Celeron™ J1900**
  - Embedded Applications
  - Thin Client
  - Digital Signage
  - Indoor Kiosk

### Outstanding Features

- **Intel® Atom™ E3940**
  - Cost Effective Embedded Mini ITX System
  - Low Power Consumption
  - 1U Compact Mini ITX BOX System
  - Low power SoC Intel® Pentium™ N3700 (10W, 4C)
  - Dual display for HDMI, Display Port, VGA
  - Intel® i210AT Quad GbE LAN
  - 2x USB 3.0 ports, 2x USB 2.0 (Rear I/O)
  - COM port (Rear I/O)

- **Intel® Pentium® N3700**
  - 2x Gbe LAN
  - Intel® i210AT dual port GbE LAN

### Serverboard

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SUPER® A2SAV-L</th>
<th>SUPER® X11SBA-LN4F</th>
<th>SUPER® X10SBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chipset</td>
<td>System on Chip</td>
<td>System on Chip</td>
<td>System on Chip</td>
</tr>
</tbody>
</table>

### System Memory (Max.)*

- **SYS-E200-9AP**
  - 8GB Unbuffered non-ECC DDR3L-1866MHz SODIMM
  - Up to 8GB 1600MHz DDR3 Non-ECC SO-DIMM in 2 sockets

### Expansion Slots

- **SYS-E200-9AP**
  - 1 M.2 PCIe 2.0 x2, M Key 2242/2280
  - 1 mini-PCIe slot with mSATA support

### Onboard Storage Controller

- **SYS-E200-9AP**
  - N/A
  - SoC controller for 2 SATA3 (6 Gbps) ports
  - Up to 8GB 1333MHz DDR3L Non-ECC SO-DIMM in 2 socket

### Connectivity

- **SYS-E200-9AP**
  - 2x 1Gbe LAN, 2 USB3.0, 2 USB2.0, 2 Serial Port (RJ45 and DB9)
  - 4x 1Gbe, 1 dedicate IPMI LAN, 2 USB3.0, 2 USB2.0Realtek ALC888S HD Audio

### VGA/Audio

- **SYS-E200-9AP**
  - 1 HDMI, 1 DP, 1 VGA or 1 eDP, Intel HD Graphic 3 independent displays
  - 1 Display Port, 1 HDMI, 1 VGA (Two Independent Displays)

### Management

- **SYS-E200-9AP**
  - SuperDoctor® 5; Watchdog; IPMI 2.0 with KVM support

### Drive Bays

- **SYS-E200-9AP**
  - N/A
  - 1x 2.5" internal HDD support

### Peripheral Bays

- **SYS-E200-9AP**
  - N/A
  - N/A

### Power Supply

- **SYS-E200-9AP**
  - Lockable 12V DC 60W power adapter
  - Lockable 12V DC 60W power adapter
  - Lockable 12V DC 60W power adapter

### Cooling System

- **SYS-E200-9AP**
  - 1x 4cm fan
  - 1x 4cm high performance PWM fan, support up to 2 chassis fans

### Form Factor

- **SYS-E200-9AP**
  - 1U Compact Box; Enclosure: 195 x 44 x 195mm (7.68” x 1.75” x 7.68”)
  - Package: 381 x 276 x 142mm (15” x 10.87” x 5.59”)
  - Gross Weight: 6.5lbs (2.96kg)
  - Net Weight: 2.45lbs (1.11kg)

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
Intel® Atom® C2758, 8-Cores, 7 LAN with 3-pair LAN bypass

Intel® Xeon® D-1537, SoC, 8 Core

Intel® Pentium® D1508, SoC, Dual Core

### Processor Support
- **SYS-5018A-TN7B**: Intel® Atom™ C2758 Processor, SoC 8-Core, 20W, 2.4GHz
- **SYS-5018D-MHR7N4P**: Intel® Xeon® Processor D-1537, SoC 8 Core, 35W, 1.7-2.3GHz
- **SYS-5018D-LN4T**: Intel® Pentium® Processor D1508, FCBGA1667 supported, CPU TDP support 25W

### Key Applications
- **SYS-5018A-TN7B**: Network Security Appliance, FireWall Applications, Virtualization Server, Embedded Applications
- **SYS-5018D-MHR7N4P**: Hyper-Converged Appliance, Enterprise Server, Edge Computing Server, Virtualization Server, Embedded Applications
- **SYS-5018D-LN4T**: Compact Network Appliance, FireWall Applications, Software Defined WAN

### Outstanding Features
- **SYS-5018A-TN7B**: 7x GbE LAN with 3-pair bypass, Embedded long life
- **SYS-5018D-MHR7N4P**: 4 Hot Swap SATA3/SA5 Drive Bays, Dual SFP+ and Dual GbE, Low Power Xeon D SoC 8 Core with Dual 10GbE and Dual GbE, Remote management via dedicated IPMI BMC, 400W high-efficiency redundant power supply, 7 year life cycle
- **SYS-5018D-LN4T**: Compact Network Appliance, FireWall Applications, Software Defined WAN

### Serverboard
- **SYS-5018A-TN7B**: SUPER® A1SRM-LN7F-2758
- **SYS-5018D-MHR7N4P**: SUPER® X10SDV-7TP4F
- **SYS-5018D-LN4T**: SUPER® X10SDV-2C-TP4F

### Chipset
- System on Chip
- System on Chip
- System on Chip

### System Memory (Max.)*
- **SYS-5018A-TN7B**: 64GB Unbuffered ECC/non-ECC, DDR3-1600MHz in 4 DIMM slots
- **SYS-5018D-MHR7N4P**: Up to 128GB Registered ECC RDIMM, DDR4-2133MHz
- **SYS-5018D-LN4T**: Up to 128GB Registered ECC RDIMM, DDR4-2133MHz, 64GB ECC/non-ECC UDIMM in 4 sockets 4x 2.5" SATA3 HDD, and 1 M.2 (M key 2242/80/110 PCIe 3.0x4)

### Expansion Slots
- **SYS-5018A-TN7B**: 1 PCI-E 2.0 x4 (in x8) slot
- **SYS-5018D-MHR7N4P**: PCI-E 3.0 x8 full height expansion slot; M.2 PCIe 3.0x4, M Key 2242/2280/22110, Mini-PCIe with mSATA support
- **SYS-5018D-LN4T**: 1 PCI-E 3.0 x8; M.2 PCIe 3.0x4, M Key 2242/2280/22110, Mini-PCIe with mSATA support

### Onboard Storage Controller
- **SYS-5018A-TN7B**: SoC controller for 4 SATA2 (3 Gbps) ports; 2 SATA3 ports (6 Gbps)
- **SYS-5018D-MHR7N4P**: 4 SATA3 support RAID 0,1,5,10 RSTe or 4 SAS2 (No RAID support and require one optional cable, CBL-SAST-0811)
- **SYS-5018D-LN4T**: SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10 RSTe

### Connectivity
- **SYS-5018A-TN7B**: 7x 1GbE (3-pair bypass), 1 dedicated IPMI LAN (share with one LAN), 4x USB2.0, 1 Serial Port (RJ45)
- **SYS-5018D-MHR7N4P**: 2x 1GbE LAN, 2x 10G SFP+, 1 dedicate IPMI LAN, 2 USB3.0, 1 USB2.0 Type A
- **SYS-5018D-LN4T**: 2x 1GbE LAN, 2x 10G SFP+, 1 dedicate IPMI LAN, 2 USB3.0

### VGA/Audio
- **SYS-5018A-TN7B**: VGA via BMC
- **SYS-5018D-MHR7N4P**: VGA via BMC
- **SYS-5018D-LN4T**: VGA via BMC

### Management
- **SYS-5018A-TN7B**: Intel® Node Manager, IPMI2.0, NMI; SUM, SuperDoctor® 5; Watchdog
- **SYS-5018D-MHR7N4P**: Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
- **SYS-5018D-LN4T**: Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog

### Drive Bays
- **SYS-5018A-TN7B**: 1x 3.5" fixed drive bay or 4x2.5" drive bay with optional bracket
- **SYS-5018D-MHR7N4P**: 4x 3.5" hot-swap SATA3/SA52 (require one optional cable, CBL-SAST-0811)
- **SYS-5018D-LN4T**: 1x 3.5" fixed drive bay or up to 4x 2.5" fixed drive bay

### Peripheral Bays
- **SYS-5018A-TN7B**: N/A
- **SYS-5018D-MHR7N4P**: 1 slim DVD-ROM drive bay
- **SYS-5018D-LN4T**: N/A

### Power Supply
- **SYS-5018A-TN7B**: 200W Multi-output 80Plus Gold PWS
- **SYS-5018D-MHR7N4P**: Redundant 400W Platinum level power supplies, PWS-407P-1R
- **SYS-5018D-LN4T**: 200W Low-Noise AC-DC power supply with PFC

### Cooling System
- **SYS-5018A-TN7B**: 2x 4cm counter-rotating PWM fan, support up to three system fans
- **SYS-5018D-MHR7N4P**: 3x 40x28mm PWM fan for CPU and Memories; 1x 40x28mm PWM fan for AOC cooling
- **SYS-5018D-LN4T**: 1x 40x28mm 13K RPM 4-PIN PWM FAN

### Form Factor
- **SYS-5018A-TN7B**: Short Depth 1U Rack Mount; Enclosure: 437 x 43 x 287mm (17.2" x 1.7" x 11.3")
  - Package: 645 x 155 x 503mm (25.4" x 6.1" x 19.8")
  - Gross Weight: 12.55lbs (5.69kg)
  - Net Weight: 8.45lbs (3.83kg)
- **SYS-5018D-MHR7N4P**: 1U Rackmount; Enclosure: 437 x 43 x 503mm (17.2" x 1.7" x 19.8")
  - Package: 610 x 216 x 749mm (24" x 8.5" x 29.5")
  - Gross Weight: 33lbs (14.97kg)
  - Net Weight: 20lbs (9.07kg)
- **SYS-5018D-LN4T**: 1U Short Depth Rackmount; Enclosure: 437 x 43 x 249mm (17.2" x 1.7" x 9.8")
  - Package: 655 x 155 x 465mm (25.8" x 6.1" x 18.3")
  - Gross Weight: 12lbs (5.44kg)
  - Net Weight: 8lbs (3.63kg)

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
### Processor Support

<table>
<thead>
<tr>
<th>Model</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Xeon® Processor D-1518, SoC 4 Core, 35W, 2.2 GHz</td>
<td>Intel® Xeon® Processor D-1587 SoC 16 Core, 65W 1.7-2.3GHz</td>
<td></td>
</tr>
</tbody>
</table>

### Key Applications

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Networking Appliance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network Security Appliance</td>
<td></td>
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<tr>
<td>FireWall Applications</td>
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<tr>
<td>Embedded Applications</td>
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<tr>
<td>Virtualization</td>
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<td>SD-WAN</td>
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<td>vCPE</td>
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### Outstanding Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual SFP+ and 6x GbE</td>
<td></td>
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<tr>
<td>Short depth (less than 10 inch)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Power Xeon D SoC 4 Core</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Best Performance per Watt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 year life cycle</td>
<td></td>
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</tr>
<tr>
<td>IPMI 2.0 management with dedicated LAN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>400W Redundant Platinum PSU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1x Low Profile PCIe 3.0 x 8 and 1x M.2 PCIe 3.0 x 4, MiniPCIe with mSata</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 LAN w/ 2x10G SPF+ and 6x1GbE LAN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>128G DDR4 RAM</td>
<td></td>
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</tr>
</tbody>
</table>

### Serverboard

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPER® X10SDV-TP8F</td>
<td></td>
<td>SUPER® X10SDV-7TP8F</td>
</tr>
</tbody>
</table>

### Chipset

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>System on Chip</td>
<td></td>
<td>System on Chip</td>
</tr>
</tbody>
</table>

### System Memory

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 128GB ECC RDIMM DDR4 2133MHz or 64GB ECC/non-ECC UDIMM in 4 sockets</td>
<td>128 GB of DDR4 ECC RDIMM 2133MHz or 64 GB of DDR4 ECC UDIMM 2133MHz</td>
<td></td>
</tr>
</tbody>
</table>

### Expansion Slots

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 PCI-E 3.0 x8; M.2 PCIe 3.0x4, M Key 2242/2280/22110, Mini-PCIe with mSATA support</td>
<td>1 PCI-E 3.0 x8; M.2 PCIe 3.0x4, M Key 2242/2280/22110, Mini-PCIe with mSATA support</td>
<td></td>
</tr>
</tbody>
</table>

### Onboard Storage Controller

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>SoC controller for 4x SATA3.0</td>
<td></td>
<td>SoC controller for 2 SATA3 (6 Gbps) ports; RAID 0,1,5,10RStE; Broadcom® 2116 5W controller for 16 SATA3/ 5A52 (6 Gbps) ports</td>
</tr>
</tbody>
</table>

### Connectivity

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>6x 1GbE LAN, 2x 10G SFP+, 1 dedicate IPMI LAN, 2 USB3.0</td>
<td>6x 1GbE LAN, 2x 10G SFP+, 1 dedicate IPMI LAN, 2 USB3.0</td>
<td></td>
</tr>
</tbody>
</table>

### VGA/Audio

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>VGA via BMC</td>
<td></td>
<td>VGA via BMC</td>
</tr>
</tbody>
</table>

### Management

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog</td>
<td>IPMI 2.0 (RJ45) with dedicated LAN port and KVM via BMC VGA</td>
<td></td>
</tr>
</tbody>
</table>

### Drive Bays

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x 3.5” fix drive bay or 4x 2.5” fixed drive bay with bracket</td>
<td>4x 2.5” HDD</td>
<td></td>
</tr>
</tbody>
</table>

### Peripheral Bays

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Power Supply

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>200W Multi-output power supply Gold level w/20pin</td>
<td>Redundant 400W Platinum Level power supplies</td>
<td></td>
</tr>
</tbody>
</table>

### Cooling System

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passive CPU heat sink and 3x 40mm chassis fans</td>
<td>4x 40x56mm cooling fan</td>
<td></td>
</tr>
</tbody>
</table>

### Form Factor

<table>
<thead>
<tr>
<th>Feature</th>
<th>SYS-5018D-FN8T</th>
<th>SYS-1018D-FRN8T</th>
</tr>
</thead>
<tbody>
<tr>
<td>437 x 43 x 249mm (17.2” x 1.7” x 9.8”)</td>
<td>1U Rackmount; Enclosure: 437 x 43 x 249mm (17.2” x 1.7” x 9.8”)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Package: 686 x 203 x 610mm (27” x 8” x 24&quot;)</td>
<td></td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
**Best Performance per Watt, Less than 10” Depth**

**Low-Power**

### MODEL

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-5018D-FN4T</th>
<th>SYS-5018A-TN4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Intel® Xeon® Processor D-1541. &lt;BR&gt;Socket FCBGA1667 supported, CPU TDP support 45W</td>
<td>Intel® Atom® C2750</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• 2x Gigabit + 2x 10G LAN ports &lt;BR&gt;Less than 10” depth &lt;BR&gt;Up to 2x 3.5” or 4x 2.5” SATA3 device &lt;BR&gt;1x PCI-E x16 Gen 3 add-on card slot &lt;BR&gt;Dedicated management port</td>
<td>• 1 PCI-E x8 slot &lt;BR&gt;200W Low-Noise power supply &lt;BR&gt;4x 2.5” SATA drives &lt;BR&gt;Compact size chassis, cost-effective UP platform &lt;BR&gt;IPMI 2.0 + KVM with dedicated LAN &lt;BR&gt;Optimized for small business</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10SDV-8C-TLN4F</td>
<td>SUPER® A1SAi-2750F</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel Xeon D-1540, SoC</td>
<td>System on Chip</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>Up to Up to 128GB Registered ECC RDIMM, DDR4-2133MHz &lt;BR&gt;Up to 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2133MHz, in 4 DIMM slots</td>
<td>Up to 32GB ECC DDR3 1600/1333MHz SODIMM in 4 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>1x PCI Express 3.0 x16 add-on card slot</td>
<td>1x PCI-E 2.0 x8 slot via riser card</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>Intel SoC-based 2x 3.5” or 4x 2.5” SATA3 bays, SATA DOM support</td>
<td>SoC controller for 4 SATA2 (3Gbps) ports; 2 SATA3 (6Gbps)</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2x GbE + 2x 10G LAN ports 1x dedicated management port 2x USB 3.0 (rear) 2x USB 3.0, 4x USB 2.0 ports (via header), 1x M.2 slot (M key for SSD, 2242/2280, PCIe3.0 x4)</td>
<td>4x RJ45 Gigabit Ethernet LAN ports 1x RJ45 Dedicated IPMI LAN port 4x USB 3.0 ports (2 rear, 1 Type A, 1 via header) 2x USB 2.0 ports (2 rear) 2x Fast UART 16550 Serial Port (1 rear, 1 via header)</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Aspeed AST2400 BMC</td>
<td>AST2400 VGA 4x USB3.0, 2x USB2.0</td>
</tr>
<tr>
<td>Management</td>
<td>Integrated remote management with dedicated port</td>
<td>IPMI 2.0 + KVM with dedicated LAN, SuperDoctor® 5, Watchdog</td>
</tr>
<tr>
<td>Drive Bays</td>
<td>Intel® SoC-based 2x 3.5” or 4x 2.5” SATA3 bays</td>
<td>2x 3.5” fixed HDD (no expansion slot), or 1x 3.3” fixed HDD (low profile slot only), or 4x 2.5” fixed HDD (no expansion slot), or 2x 2.5” fixed HDD (full height and half length)</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Supply</td>
<td>PWS-203-1H</td>
<td>200W Low-Noise AC-DC power supply with PFC</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Active CPU fan, 40mm chassis fan</td>
<td>Built-in CPU heatsink; optional 40x28mm fan; 1x high-efficiency power supply with thermal control fan</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1U rackmount form factor, less than 10” depth; Enclosure: 437 x 43 x 249mm (17.2” x 1.7” x 9.8”)&lt;br&gt;Packaging: 655 x 155 x 465mm (25.8” x 6.1” x 18.3&quot;)&lt;br&gt;Gross Weight: 12lbs (5.44kg)&lt;br&gt;Net Weight: 8lbs (3.63kg)</td>
<td>Mini-1U Rackmount &lt;br&gt;437 x 43 x 249mm (17.2” x 1.7” x 9.8”)</td>
</tr>
</tbody>
</table>

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
## Front I/O Network Appliance for Security Atom Appliance

**Intel® Atom® C2758, 8-Core Rangeley**

### Processor Support
- Intel Atom 2758 SoC, 8C, 22nm (Rangeley, 20W)
- Intel® Processor C2758, SoC 8-Core, 20W, 2.4GHz

### Key Applications
- Cloud and Virtualization needs
- Cloud Computing
- Embedded Applications
- Gateway, provisioning servers
- Industrial Automation & Control
- Security

### Outstanding Features
- 1 PCI-E x8 slot
- 4x 2.5” SATA drives
- IPMI 2.0 + KVM with dedicated LAN
- Optimized for Power Saving and Improved Cooling
- 4 hot-swap 3.5” SATA/SAS Drive Bays

### Serverboard
- SUPER® A1SRi-2758F
- SUPER® A1SRM-2758F

### Chipset
- System on Chip chipset
- System on Chip

### System Memory (Max.)*
- Up to 32GB DDR3-1600 Un-buffered ECC-SODIMM
- Up to 64GB ECC/non-ECC UDIMM, DDR3-1600MHz in 4 sockets

### Expansion Slots
- 1 PCI Express 2.0 x8 on riser
- 1 PCI-E 2.0 x8(FH,HL)

### Onboard Storage Controller
- N/A
- SoC controller for 4 SATA2 (3 Gbps); 2 SATA3 (6 Gbps)

### Price Connectivity
- 4x RJ45 Gigabit Ethernet LAN ports 1x RJ45 Dedicated IPMI LAN port 4x USB 3.0 ports (2 rear, 1 Type A, 1 via header) 2x USB 2.0 ports (2 rear) 2x Fast UART 16550 Serial Port (1 rear, 1 via header) 1x SATA DOM (Disk on Module) power connector
- 4x 1GbE LAN, 1 dedicate IPMI LAN, 4 USB2.0, 1 serial port(DB9)

### VGA/Audio
- BMC integrated Aspeed AST2400, 1x VGA port
- VGA via BMC

### Management
- IPMI 2.0 on dedicated LAN port
- IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog

### Drive Bays
- 2x 3.5” fixed SATA3 (opt 4x 2.5”)
- 1x 3.5” fixed drive bay or up to 4x 2.5” fixed drive bay

### Peripheral Bays
- N/A
- 1 slim DVD-ROM drive bay

### Power Supply
- 200W
- 200W Low Noise AC-DC power supply with PFC

### Cooling System
- 1x High-efficiency power supply with thermal control fan; Up to 3x 40mm fan (optional, require mounting bracket)
- 2x 4cm high performance PWM fan

### Form Factor
- 1U compact, less than 10 *
- 1U Rackmount; Enclosure: 437 x 43 x 504mm (17.2” x 1.7” x 19.85”)
  Package: 594 x 216 x 754mm (23.4” x 8.5” x 29.7”)

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
## MODEL

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-5028L-TN2</th>
<th>SYS-5028A-TN4</th>
<th>SYS-5028D-TN4T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Support</td>
<td>Intel® Xeon® E3-1200 v3 and 4 Gen. Core i3/i5/i7, Celeron®, Pentium®</td>
<td>Intel® Atom® C2758 Processor, SoC 8-Core, 20W, 2.4GHz</td>
<td>Intel® Xeon® Processor D-1541 SoC 8 Core 16 Thread, TDP 45W</td>
</tr>
<tr>
<td>Outstanding Features</td>
<td>• Up to 4 Hot-Swap 3.5” SATA3 HDD and 2 internal 2.5” fixed HDD DP, HDMI and DVI-I: 3 independent displays 2x Gigabit LAN ports TPM 1.2 Headers Up to 16GB DDR3 non-ECC 1600MHz SODIMM 1x PCI-E 3.0 x16 slot</td>
<td>• 4x 3.5” SATA Hot Swap Tray and 2x2.5” internal HDD bay Support up to 64G ECC SODIMM One low profile expansion slot for PCIe2.0x8</td>
<td>• Up to 128GB ECC RDIMM DDR4 2133MHz or 64GB ECC/non-ECC UDIMM in 4 sockets 2x Gigabit + 2x 10G LAN ports Up to 4 Hot-Swap 3.5” SATA3 HDD and 2 internal 2.5” fixed HDD IPMI 2.0 + KVM with dedicated LAN 1x Low Profile PCIe 3.0 x16 and 1x M.2 PCIe 3.0 x4, M Key 2242/2280</td>
</tr>
<tr>
<td>Serverboard</td>
<td>SUPER® X10SLV-Q</td>
<td>SUPER® A1SRi-2758F</td>
<td>SUPER® X10SDV-TLN4F</td>
</tr>
<tr>
<td>Chipset</td>
<td>Intel® Q87 chipset</td>
<td>System on Chip</td>
<td>System on Chip</td>
</tr>
<tr>
<td>System Memory (Max.)*</td>
<td>16 GB, DDR3-1600MHz non-ECC SODIMM in 2 sockets</td>
<td>Up to 64GB DDR3 1600MHz ECC SODIMM in 4 DIMM sockets</td>
<td>128GB Registered ECC, DDR4-2133MHz 64GB Unbuffered ECC/non-ECC, DDR4-2133MHz in 4 DIMM slots</td>
</tr>
<tr>
<td>Expansion Slots</td>
<td>1x PCI-E 3.0 x16 slot 1x Mini-PCIe w/ mSATA support</td>
<td>PCI-E 2.0x8</td>
<td>1x PCI-E 3.0 x16 (Low Profile); 1x M.2 PCIe 3.0x4 M Key 2242/2280</td>
</tr>
<tr>
<td>Onboard Storage Controller</td>
<td>SoC controller for 4x SATA 3.0 ports (6Gbps) with RAID 0,1,5,10</td>
<td>SoC controller for 4 SATA2 (3 Gbps) ports; 2 SATA3 (6 Gbps)</td>
<td>SoC controller for 6 SATA3 (6 Gbps) ports</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2x 1GbE LAN, 2 USB3.0, 2 USB2.0</td>
<td>4x 1GbE LAN, 1 dedicated PMI LAN, 2 USB3.0, 2 USB2.0, 1 serial port(AB9)</td>
<td>2x 1GbE LAN, 2x 10GBase-T LAN, 1 dedicated PMI LAN, 2 USB3.0(rear), 2 USB2.0(front)</td>
</tr>
<tr>
<td>VGA/Audio</td>
<td>Intel HD 4600 Graphics, 1 DisplayPort, 1 HDMI, 1 DVI-I, 3 Independent Displays</td>
<td>VGA via BMC</td>
<td>VGA via BMC</td>
</tr>
<tr>
<td>Management</td>
<td>SuperDoctor® III Watch Dog NMI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drive Bays</td>
<td>4x 3.5” hot-swap SAS/SATA drive bay</td>
<td>4x 3.5” SATA Hot Swap drive bay and 2x2.5” internal drive bay</td>
<td>4x 3.5” SATA Hot Swap drive bay and 2x2.5” internal drive bay</td>
</tr>
<tr>
<td>Peripheral Bays</td>
<td>1 slim DVD-ROM drive bay (share with one 3.5” drive bay)</td>
<td>1 slim DVD-ROM drive bay (share with one 2.5” drive bay)</td>
<td>1 slim DVD-ROM drive bay (shared with 1x 2.5” fixed drive bay)</td>
</tr>
<tr>
<td>Power Supply</td>
<td>No Redundant 1 Qty. PWS-251-1H</td>
<td>250W Flex ATX Multi-output Bronze Power Supply</td>
<td></td>
</tr>
<tr>
<td>Cooling System</td>
<td>1x 12cm rear exhaust fan, SNK-P0046A4 (optional)</td>
<td>1x 12cm rear exhaust fan</td>
<td>1x Active CPU cooler</td>
</tr>
<tr>
<td>Form Factor</td>
<td>210 x 240 x 279mm (8.27” x 9.45” x 11”)</td>
<td>210 x 240 x 279mm (8.27” x 9.45” x 11”)</td>
<td>210 x 240 x 279mm (8.27” x 9.45” x 11”)</td>
</tr>
</tbody>
</table>

* Please check with your Supermicro sales representative and website for compatibility and configuration details
### Processor Support
- Intel® 6th/7th Generation Core™ i3, i5, i7 series Intel®, Pentium®, Celeron*
- Intel® Xeon® Processor Skylake-H E3-1585v5 SoC, 4 Cores, 65W

### Key Applications
- Industrial Automation & Control
- Military Compact Server
- VOIP and Network Appliances
- Medical Applications
- 7 Years Life Cycle
- Faster Transcoding for Web Streaming
  - 4x SATA3(6Gbps) via C236; RAID 0, 1, 5, 10
  - Intel Iris Pro Graphics with 128MB of on-package cache (eDRAM) for high performance graphics
  - VHD, Media CODEC (HEVC, JPEG, VP8) and IPMI 2.0 (Shared LAN)
  - Up to 18 AVC streams or 8 HEVC streams at 1080p 30FPS, or 2 HEVC streams at 4K 30FPS

### Outstanding Features
- 6th/7th Generation Intel Core i7, i5, i3, Pentium and Celeron Processor
- Remote management via IPMI or vPro
- 2x Gigabit LAN ports, HDMI/DP/DVI-I, 3 independent displays
- Full Height and Full Length add on card support
- Power redundancy or BBP support
- Faster Transcoding for Web Streaming
- 4x SATA3(6Gbps) via C236; RAID 0, 1, 5, 10
- Intel Iris Pro Graphics with 128MB of on-package cache (eDRAM) for high performance graphics
- VHD, Media CODEC (HEVC, JPEG, VP8) and IPMI 2.0 (Shared LAN)
- Up to 18 AVC streams or 8 HEVC streams at 1080p 30FPS, or 2 HEVC streams at 4K 30FPS

### Serverboard
- SUPER® X11SSZ-QF
- SUPER® X11SSV-M4F

### Chipset
- Intel® Q170 Express chipset
- System On Chip

### System Memory
- Up to Up to 64GB Unbuffered non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots
- Up to 32GB ECC Unbuffered SO-DIMM DDR4 2133MHz; 2 DIMM slots

### Expansion Slots
- 1 PCI-E 3.0 x16
- 1x PCIe 3.0 x16 1x M.2 (M key, 2242/80/110, PCIe3.0 x4 or SATA3) 1x Mini PCIe w/mSATA

### Onboard Storage Controller
- Intel® Q170 Express controller for 2 SATA3 (6 Gbps) ports; RAID 0, 1
- Intel® C236 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Intel RSTe

### Connectivity
- 2x 1GbE, 1 dedicated IPMI LAN, 2 USB3.0, 2 USB2.0
- 4x 1GbE LAN, 1 dedicated IPMI LAN, 4 USB 3.0

### VGA/Audio
- 2 DP (DisplayPort), 1 DVI-I, 1 VGA, Intel® HD Graphics, Aspeed AST2400 BMC
- DVI-A via BMC

### Management
- AMT, IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, vPro, Watchdog
- IPMI2.0; NMI; SPM; SSM; SUM; SuperDoctor® 5; Watchdog;

### Drive Bays
- 2x 2.5" fixed with bracket
- 1x 3.5" or 4x 2.5" HDD

### Peripheral Bays
- N/A

### Power Supply
- 1x PWS-407P-1R, Platinum Level and support 2nd redundant PSU
- PWS-407P-1R or battery backup unit PWS-206B-1R
- 200W Low Noise AC-DC power supply with PFC

### Cooling System
- 4x 40x56mm PWM fan; 2x fans for AOC cooling
- 3x 40x28mm 4-PIN PWM FAN (FAN-0154L4, 22K RPM) with air shroud

### Form Factor
- 1U rackmount; Enclosure: 437 x 43 x 429mm (17.2” x 1.7” x 16.9”)
- Package: 686 x 203 x 610mm (27” x 8” x 24”)
- 1U Short Depth Rackmount; Enclosure: 437 x 43 x 249mm (17.2” x 1.7” x 9.8”)
- Package: 655 x 155 x 465mm (25.8” x 6.1” x 18.3”)

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
### Model Comparison Table

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYS-1028R-MCT</th>
<th>SYS-1028R-MCTR (shown)</th>
<th>SYS-1028R-TDW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Support</strong></td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
<td>Dual Intel® Xeon® Processor E5-2600 v4/v3 product families supported; QPI up to 9.6GT/s</td>
</tr>
</tbody>
</table>
| **Key Applications** | • Data Center  
• Web Server  
• Enterprise Server  
• Managed Hosting | • Data Center  
• Cloud and Virtualization needs  
• Hosting & Application delivery  
• Database Processing & Storage  
• Simulation & Automation | • Data Center  
• Cloud and Virtualization needs  
• Hosting & Application delivery  
• Database Processing & Storage  
• Simulation & Automation |
| **Outstanding Features** | • IPMI 2.0 + KVM with dedicated LAN  
• Redundant 600W Platinum Level high-efficiency power supplies  
• Short-Depth  
• 2x 10GBase-T Ports  
• 3108 controller for 8 SAS3 (12Gbps) hot-swappable drives | • IPMI 2.0 + KVM with dedicated LAN  
• Redundant 600W Platinum Level high-efficiency power supplies  
• Short-Depth  
• 2x 10GBase-T Ports  
• 3108 controller for 8 SAS3 (12Gbps) hot-swappable drives | • IPMI 2.0 + KVM with dedicated LAN  
• Redundant 600W Platinum Level high-efficiency power supplies  
• Short-Depth  
• 2x 10GBase-T Ports  
• 3108 controller for 8 SAS3 (12Gbps) hot-swappable drives |
| **Serverboard** | SUPER® X10DRL-CT | SUPERTM X10DDW-i | |
| **Chipset** | Intel® C612 Chipset | Intel® C612 Chipset | Intel® C612 Chipset |
| **System Memory (Max.)*** | Up to 1TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 8 DIMM slots | Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots | Up to 2TB ECC 3DS LRDIMM or RDIMM DDR4-2400MHz in 16 DIMM slots |
| **Expansion Slots** | 1 PCI-E 3.0 x8 | 2 PCI-E 3.0 x16 (Full-Height, Half-Length)  
1 PCI-E 3.0 (LP)  
1 slot for SAS controller mezzanine card | 2 PCI-E 3.0 x16 (Full-Height, Half-Length)  
1 PCI-E 3.0 (LP)  
1 slot for SAS controller mezzanine card |
| **Onboard Storage Controller** | 3108 HW with 2G Cache controller for 8 SAS3 (12Gbps) ports; RAID 0,1,5,10,6,10; Intel® C612 controller for 6 SATA3 (6Gbps) ports; RAID 0,1,5,10 | Intel® C612 controller for 8 SATA3 (6Gbps) Ports; RAID 0,1,5,10 | Intel® C612 controller for 8 SATA3 (6Gbps) Ports; RAID 0,1,5,10 |
| **Connectivity** | Dual LAN with Intel® Ethernet Controller I210; Dual LAN with Intel® X540 10GBase-T Ethernet Controller | Dual LAN with Intel® i350 Gigabit Ethernet controller | Dual LAN with Intel® i350 Gigabit Ethernet controller |
| **VGA/Audio** | AST2400 VGA | AST2400 VGA | AST2400 VGA |
| **Management** | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog | IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, SUM, SPM, SSM, SuperDoctor® 5, Watchdog |
| **Drive Bays** | 8x 2.5” hot-swap SATA/SAS drive bays | 8x 2.5” hot-swap SATA HDD drive bays | 8x 2.5” hot-swap SATA HDD drive bays |
| **Periperal Bays** | 1 slim DVD-ROM drive (optional) | 1 slim DVD-ROM drive (optional) | 1 slim DVD-ROM drive (optional) |
| **Power Supply** | -MCT: 600W Platinum Level high-efficiency power supply  
-MCTR: Redundant 600W Platinum Level high-efficiency power supplies | 600W Platinum Level high-efficiency power supply | 600W Platinum Level high-efficiency power supply |
| **Cooling System** | 4x 4cm high performance PWM fans with optional fan speed control | 5x 4cm heavy duty counter-rotating fans with optional fan speed control | 5x 4cm heavy duty counter-rotating fans with optional fan speed control |
| **Form Factor** | 1U Rackmount  
437 x 43 x 503mm (17.2” x 1.7” x 19.8”) | 1U Rackmount  
437 x 43 x 597mm (17.2” x 1.7” x 23.5”) | 1U Rackmount  
437 x 43 x 597mm (17.2” x 1.7” x 23.5”) |

* Please check with your Supermicro sales representative and website for compatibility and configuration details.
## 4-Core Intel® Atom® Processor

**AVOTON Solution**  
**Best for Entry Web Hosting**  
**Low-Power**

---

### Key Applications

- Cloud and Virtualization needs, Cloud Computing, Corporate-WINS, DNS, Print, Login, Data Center, Database Applications, DataCenter Applications
- e-Business, Enterprise Server
- FireWall Applications, Gateway, provisioning servers, High End Enterprise Server, Server Appliance
- Virtualization Server
- Web Server, Web Server for Small and Medium Business

---

### Outstanding Features

- 1 PCI-E x8 slot
- 200W low-power supply
- 4 hot-swap 3.5" SATA/SAS Drive Bays
- IPMI 2.0 + KVM with dedicated LAN
- Optimized for Power Saving and Improved Cooling
- SATA 3.0 (6Gbps) support

---

### Serverboard

**SUPER® A1SAM-2550F**  
**SUPER® A1SAM-2550F**

---

### Chipset

System on Chip chipset  
System on Chip chipset

---

### System Memory (Max.)*

Up to 64GB ECC/non-ECC UDIMM, DDR3-1600MHz in 4 DIMM slots  
Up to 64GB Unbuffered ECC/non-ECC, DDR3-1600MHz in 4 DIMM slots

---

### Expansion Slots

- 1 PCI-E 2.0 x8 (FH/HL)
- 1 PCI-E 2.0 x8 (FH/HL)

---

### Onboard Storage Controller

SoC controller for 4 SATA2 (3Gbps) ports; RAID 2 SATA3 (6Gbps);  
SoC controller for 4 SATA2 (3Gbps) ports; RAID 2 SATA3 (6Gbps);

---

### Connectivity

Quad LAN with SoC  
Quad LAN with SoC

---

### VGA/Audio

AST2400 VGA  
AST2400 VGA

---

### Management

IPMI2.0; NMI; SuperDoctor V; Watchdog  
IPMI2.0; NMI; SuperDoctor V; Watchdog

---

### Drive Bays

4x 3.5" hot-swap SAS/SATA  
2x 3.5" internal drive bays

### Peripheral Bays

N/A  
N/A

---

### Power Supply

200W Low Noise AC-DC power supply with PFC  
200W Low Noise AC-DC power supply with PFC

---

### Cooling System

2x 4cm high performance PWM fan  
1x 10cm 3,800 RPM PWM blower fan

---

### Form Factor

1U rackmount  
1U rackmount

---

*Please check with your Supermicro sales representative and website for compatibility and configuration details*
X12 AIOM Networking

New Supermicro Advanced I/O Module (AIOM) Cards Provide I/O Flexibility with OCP Superset

Optimized Shared Resources for up to 50% Reduction in Power and Cooling TCO

<table>
<thead>
<tr>
<th>Model</th>
<th>AOC-AG-i4SM</th>
<th>AOC-AG-i2M</th>
<th>AOC-AG-i4M</th>
<th>AOC-ATG-i2TM</th>
<th>AOC-ATG-i2SM</th>
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<tr>
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<td>Quad-Port GbE</td>
<td>Dual-Port GbE</td>
<td>Quad-Port GbE</td>
<td>Dual-Port 10GbE</td>
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<td>4x SFP</td>
<td>2x RJ45</td>
<td>4x RJ45</td>
<td>2x RJ45</td>
<td>2x SFP+</td>
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<td>10Gbps</td>
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<td>10Gbps</td>
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<td>Intel® i350-AM2</td>
<td>Intel® i350-AM4</td>
<td>Intel® X550-AT2</td>
<td>Intel® X710-BM2</td>
<td>Intel® X710-BM1</td>
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<td>PCI-E 2.1 x4</td>
<td>PCI-E 2.1 x4</td>
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<tr>
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<th>AOC-ATGC-i2TM</th>
<th>AOC-A25G-b2SM</th>
<th>AOC-AH25G-m2S2TM</th>
<th>AOC-A25G-m2SM</th>
<th>AOC-A100G-b2CM</th>
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<td>Quad-Port 10GbE</td>
<td>Dual-Port 10GbE</td>
<td>Dual-Port 25GbE</td>
<td>2-Port25GbE &amp; 2-Port 10GbE</td>
<td>Dual-Port 25GbE</td>
<td>Dual-Port 100GbE</td>
<td>Dual-Port 100GbE</td>
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<tr>
<td>Port</td>
<td>2x RJ45 2x SFP+</td>
<td>2x RJ45</td>
<td>2x SFP28 2x RJ45</td>
<td>2x SFP28</td>
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<td>Mellanox® ConnectX-4 Lx EN</td>
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## Ultra Networking Riser Cards

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<thead>
<tr>
<th>Model</th>
<th>AOC-UR-i4G</th>
<th>AOC-UR-i4XTF</th>
<th>AOC-UR-i4XT</th>
<th>AOC-UR-i2XT</th>
<th>AOC-URN2-i4XT</th>
<th>AOC-URN6-i2XT</th>
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<td>1U Ultra Riser</td>
<td>1U Ultra Riser</td>
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<tr>
<td>Controller Type</td>
<td>GbE</td>
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<td>10GBase-T</td>
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<tr>
<td>Chipset</td>
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<td>Intel® XL710</td>
<td>Intel® X540</td>
<td>Intel® X540</td>
<td>Intel® X540</td>
<td>Intel® X540</td>
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<td>4x PCI-E 3.0 x8 (internal)</td>
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<td>X110PU, X100RU-i+</td>
<td>X100RU-i+</td>
<td>X100RU-i+</td>
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<th>AOC-URN2-i4XS</th>
<th>AOC-URN4-b2XT</th>
<th>AOC-URN4-i2TS</th>
<th>AOC-URN4-m2TS</th>
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<td>1U Ultra Riser</td>
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<td>1U Ultra Riser</td>
<td>1U Ultra Riser</td>
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<td>Controller Type</td>
<td>10GBase-T</td>
<td>10G SFP+</td>
<td>GbE &amp; 10G SFP+</td>
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<td>25GbE</td>
<td>25GbE</td>
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<td>Chipset</td>
<td>Intel® X540</td>
<td>Intel® 82599ES</td>
<td>Intel® i350 &amp; Intel® X710</td>
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<td>Intel® XXV710</td>
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<td>RJ45 &amp; SFP+</td>
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<td>1x PCI-E 3.0 x8 (internal)</td>
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<td>1x PCI-E 3.0 x16 (internal)</td>
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\[202\]
## Ultra Networking Riser Cards

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<tr>
<th>Model</th>
<th>AOC-2UR66-i4XTF</th>
<th>AOC-2UR68-i4G</th>
<th>AOC-2UR6-i4XT</th>
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<tr>
<td>Chipset</td>
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<td>Intel® X540</td>
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<td>X11DPU, X10DRU-i+</td>
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<td>X10DRU-i+</td>
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*Available as integrated solutions with Supermicro servers.

---

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<tr>
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<th>AOC-2UR8N4-i2XT</th>
<th>AOC-2UR68-12XS</th>
<th>AOC-2UR6N4-i4XT</th>
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<td>X11DPU, X10DRU-i+, X10DRU-X</td>
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*Available as integrated solutions with Supermicro servers.

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SuperServer® Solutions - June 2021
Faster, More Flexible Networking

With outstanding performance, high power efficiency and excellent value, Supermicro’s network adapters can help improve network throughput and application performance through features that maximize bandwidth and offload CPU resources. From 100G, 50G, 40G, 25G Ethernet to InfiniBand technologies, multi-port connectivity, in SIO M, Ultra, microLP and standard form factors, Supermicro’s network adapters are optimized for the most demanding multi-core computing systems.

100G Controllers

<table>
<thead>
<tr>
<th>Model</th>
<th>AOC-S100G-b1C</th>
<th>AOC-SHFI-i1C</th>
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<tr>
<td>Description</td>
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10GbE Controllers

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<th>AOC-STG-b4S</th>
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<td>Standard Low-profile</td>
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<td>PCI-E 2.0 x8</td>
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<td>2 RJ45</td>
<td>2 RJ45</td>
<td>2 RJ45</td>
<td>2 SFP+</td>
<td>1 SFP+</td>
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<td>10Gb/port</td>
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<td>4.5&quot; x 1.54&quot; (11.4 x 3.9cm)</td>
<td>4.5&quot; x 1.54&quot; (11.4 x 3.9cm)</td>
<td>4.5&quot; x 1.54&quot; (11.4 x 3.9cm)</td>
<td>4.5&quot; x 1.54&quot; (11.4 x 3.9cm)</td>
<td>4.5&quot; x 1.54&quot; (11.4 x 3.9cm)</td>
<td>4.5&quot; x 1.54&quot; (11.4 x 3.9cm)</td>
</tr>
<tr>
<td>Compatible Motherboards</td>
<td>All MBs with a PCI-E x8 slot</td>
<td>All MBs with a PCI-E x8 slot</td>
<td>All MBs with a PCI-E x8 slot</td>
<td>All MBs with a PCI-E x8 slot</td>
<td>All MBs with a PCI-E x8 slot</td>
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<tr>
<td>Compatible Servers</td>
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25GbE Controllers

<table>
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<td>Type</td>
<td>Standard Low-profile</td>
<td>Standard Low-profile</td>
<td>MicroLP</td>
<td>MicroLP</td>
<td>Proprietary</td>
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<tr>
<td>Description</td>
<td>Dual-port 25GbE</td>
<td>Dual-port 25GbE</td>
<td>25GbE controller with 1x SFP28 port</td>
<td>Dual-port 25GbE</td>
<td>Dual-port 25GbE</td>
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<td>Interface</td>
<td>PCI-E x8</td>
<td>PCI-E x8</td>
<td>PCI-E 3.0 x8</td>
<td>PCI-E 3.0 x8</td>
<td>PCI-E 2.0 x8</td>
<td>PCI-E 2.0 x8</td>
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<td>Port</td>
<td>2 SFP28</td>
<td>2 SFP28</td>
<td>2 SFP28</td>
<td>2 SFP28</td>
<td>2 SFP+</td>
<td>2 SFP+</td>
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<tr>
<td>Speed</td>
<td>25Gb/port</td>
<td>25Gb/port</td>
<td>25GbE (Ethernet)</td>
<td>2 GbE</td>
<td>1 GbE</td>
<td>1 GbE</td>
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<tr>
<td>Controller</td>
<td>ConnectX-4 LX</td>
<td>ConnectX-4 LX</td>
<td>ConnectX-4 LX</td>
<td>Intel® X540</td>
<td>Intel® X540</td>
<td>Intel® X540</td>
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<tr>
<td>Dimension (LxW) (without end brackets)</td>
<td>6.6&quot; x 2.713&quot; (16.76 x 6.89cm)</td>
<td>6.6&quot; x 2.713&quot; (16.76 x 6.89cm)</td>
<td>6.6&quot; x 2.713&quot; (16.76 x 6.89cm)</td>
<td>6.6&quot; x 2.713&quot; (16.76 x 6.89cm)</td>
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<td>6.6&quot; x 2.713&quot; (16.76 x 6.89cm)</td>
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<td>All MBs with a PCI-E x8 slot</td>
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<td>All MBs with a PCI-E x8 slot</td>
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SFP+ Transceiver

<table>
<thead>
<tr>
<th>Model</th>
<th>AOC-E10GSFSPS</th>
<th>AOC-PTG-b1S</th>
<th>AOC-CTG-i2T</th>
<th>AOC-CTG-i2S</th>
<th>AOC-CTG-i1S</th>
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<tbody>
<tr>
<td>Type</td>
<td>SFP+ Transceiver</td>
<td>SFP+ Transceiver</td>
<td>SFP+ Transceiver</td>
<td>SFP+ Transceiver</td>
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<tr>
<td>Description</td>
<td>100GBase-SR plug-in module</td>
<td>100GBase-SR plug-in module</td>
<td>100GBase-SR plug-in module</td>
<td>100GBase-SR plug-in module</td>
<td>100GBase-SR plug-in module</td>
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<tr>
<td>Port</td>
<td>All servers with a PCI-E x8 slot</td>
<td>All servers with a PCI-E x8 slot</td>
<td>All servers with a PCI-E x8 slot</td>
<td>All servers with a PCI-E x8 slot</td>
<td>All servers with a PCI-E x8 slot</td>
</tr>
<tr>
<td>Speed</td>
<td>2.5 GbE</td>
<td>2.5 GbE</td>
<td>2.5 GbE</td>
<td>2.5 GbE</td>
<td>2.5 GbE</td>
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<tr>
<td>Controller</td>
<td>BCM57412</td>
<td>BCM57414</td>
<td>BCM57414</td>
<td>BCM57414</td>
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<td>Dimension (LxW) (without end brackets)</td>
<td>5.6&quot; x 2.713&quot; (14.22 x 6.89cm)</td>
<td>5.6&quot; x 2.713&quot; (14.22 x 6.89cm)</td>
<td>5.6&quot; x 2.713&quot; (14.22 x 6.89cm)</td>
<td>5.6&quot; x 2.713&quot; (14.22 x 6.89cm)</td>
<td>5.6&quot; x 2.713&quot; (14.22 x 6.89cm)</td>
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<tr>
<td>Compatible Motherboards</td>
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<td>All MBs with a PCI-E x8 slot</td>
<td>All MBs with a PCI-E x8 slot</td>
<td>All MBs with a PCI-E x8 slot</td>
<td>All MBs with a PCI-E x8 slot</td>
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<tr>
<td>Compatible Servers</td>
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<td>All servers with a PCI-E x8 slot</td>
<td>All servers with a PCI-E x8 slot</td>
<td>All servers with a PCI-E x8 slot</td>
<td>All servers with a PCI-E x8 slot</td>
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* Standard form factor is available as integrated solution with Supermicro server and motherboards.
### SIOM Networking Adapters

<table>
<thead>
<tr>
<th>Model</th>
<th>AOC-MGP-i2</th>
<th>AOC-MGP-i4</th>
<th>AOC-MTGN-i2S</th>
<th>AOC-MTG-I4S</th>
<th>AOC-MTG-b2T</th>
<th>AOC-MTG-i2T</th>
<th>AOC-MTG-i4T</th>
<th>AOC-MH25G-m252T</th>
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</thead>
<tbody>
<tr>
<td>Type</td>
<td>SIOM</td>
<td>SIOM</td>
<td>SIOM</td>
<td>SIOM</td>
<td>SIOM</td>
<td>SIOM</td>
<td>SIOM</td>
<td>SIOM</td>
</tr>
<tr>
<td>Description</td>
<td>Dual-port GbE</td>
<td>Quad-port GbE</td>
<td>Dual-port 10GbE</td>
<td>Quad-port 10GbE</td>
<td>Dual-port 10GbE</td>
<td>Dual-port 10GbE</td>
<td>Dual-port 10GbE</td>
<td>Dual-port 25GbE &amp; Dual-port 10GbE</td>
</tr>
<tr>
<td>Speed</td>
<td>1Gb/port</td>
<td>1Gb/port</td>
<td>10Gb/port</td>
<td>10Gb/port</td>
<td>10Gb/port</td>
<td>10Gb/port</td>
<td>10Gb/port</td>
<td>25Gb/port 10Gb/port</td>
</tr>
<tr>
<td>Controller</td>
<td>Intel® i350</td>
<td>Intel® i350</td>
<td>Intel® 82599ES</td>
<td>Intel® XL710</td>
<td>BCM57416</td>
<td>Intel® X550</td>
<td>Intel® X550</td>
<td>ConnectX-4 Lx En</td>
</tr>
<tr>
<td>Dimension (LxW) (without end brackets)</td>
<td>3.622&quot; x 3.428&quot; (9.2 x 8.700cm)</td>
<td>3.622&quot; x 3.428&quot; (9.2 x 8.700cm)</td>
<td>3.622&quot; x 3.428&quot; (9.2 x 8.700cm)</td>
<td>3.622&quot; x 3.428&quot; (9.2 x 8.700cm)</td>
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<td>3.622&quot; x 3.428&quot; (9.2 x 8.700cm)</td>
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</tr>
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</table>

Compatible Motherboards:
- Supermicro® Motherboards
- Supermicro® Motherboards
- Supermicro® Motherboards
- Supermicro® Motherboards
- Supermicro® Motherboards
- Supermicro® Motherboards
- Supermicro® Motherboards

Compatible Servers:
- Supermicro® Servers
- Supermicro® Servers
- Supermicro® Servers
- Supermicro® Servers
- Supermicro® Servers
- Supermicro® Servers
- Supermicro® Servers

### Storage Mezzanine Cards

**NEW!**

<table>
<thead>
<tr>
<th>Model</th>
<th>AOM-S3008M-L8</th>
<th>AOM-S3108M-H8L</th>
<th>AOM-S3108-H8</th>
<th>AOM-B3108-H8</th>
<th>AOM-S3108-H8</th>
<th>AOM-S3108M-H8</th>
<th>AOM-S3008-L8-SB</th>
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</thead>
<tbody>
<tr>
<td>Compatible MBs</td>
<td>X100S5+</td>
<td>X100S5+</td>
<td>X9DRW-CF31</td>
<td>X9DRW-CF31</td>
<td>X9DRW-CF31</td>
<td>X9DRW-CF31</td>
<td>X100RS</td>
</tr>
<tr>
<td>Features</td>
<td>8 internal ports, 12Gb/s per port, 240 SATA/SAS drives, IT mode</td>
<td>8 internal ports, 12Gb/s per port, 240 SATA/SAS drives, RAID 0, 1, 10, 60 2 GB cache with protection BTR-CV3108-U1</td>
<td>8 internal ports, 12Gb/s per port, 16 SATA/SAS drives, RAID 0, 1, 10, 60 2 GB cache with protection BTR-TFMAG-CVM02</td>
<td>8 internal ports, 12Gb/s per port, 8 SATA/SAS drives, RAID 0, 1, 10, 60 2 GB onboard cache with protection BTR-TFMAG-CVM02</td>
<td>8 internal ports, 12Gb/s per port, 16 SATA/SAS drives, RAID 0, 1, 10, 60 2 GB onboard cache with protection BTR-TFMAG-CVM02</td>
<td>8 internal ports, 12Gb/s per port, 112 SATA/SAS drives, IR mode, RAID 0, 1, 1e, 10</td>
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### Features

<table>
<thead>
<tr>
<th>Model name</th>
<th>Type</th>
<th>Controller/IOP</th>
<th>SAS Port</th>
<th>RAID IT/HBA Mode</th>
<th>Onboard Cache</th>
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</thead>
<tbody>
<tr>
<td>AOC-S3616L-L16T</td>
<td>Standard</td>
<td>SAS 3616</td>
<td>16 ports, 126Gbps per port, 16 Internal, Low Profile, 1024 SATA/SAS Drives</td>
<td>RAID 0,1,5,6,10,50,60</td>
<td>-</td>
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<tr>
<td>AOC-S3216L-L16IT</td>
<td>Standard</td>
<td>SAS 3216</td>
<td>16 ports, 126Gbps per port, 16 Internal, Low Profile, 1024 SATA/SAS Drives</td>
<td>RAID 0,1,5,10,60</td>
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<tr>
<td>AOC-S3108L-H8iR</td>
<td>Standard</td>
<td>SAS 3108</td>
<td>8 ports, 126Gbps per port, 8 Internal, Low Profile, 16 SATA/SAS Drives</td>
<td>RAID 0,1,5,10,50,60</td>
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<tr>
<td>AOC-S3108L-H8iR*</td>
<td>Standard</td>
<td>SAS 3108</td>
<td>8 ports, 126Gbps per port, 8 Internal, Low Profile, 16 SATA/SAS Drives</td>
<td>RAID 0,1,5,10,60</td>
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<tr>
<td>AOC-S3108L-H8iR+</td>
<td>Standard</td>
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<td>8 ports, 126Gbps per port, 8 Internal, Low Profile, 16 SATA/SAS Drives</td>
<td>RAID 0,1,5,10,50,60</td>
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<tr>
<td>AOC-S3108L-H8iR**</td>
<td>Standard</td>
<td>SAS 3108</td>
<td>8 ports, 126Gbps per port, 8 Internal, Low Profile, 16 SATA/SAS Drives</td>
<td>RAID 0,1,5,10,60</td>
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<tr>
<td>AOC-S3008L-L8i</td>
<td>Standard</td>
<td>SAS 3008</td>
<td>8 ports, 126Gbps per port, 8 Internal, Low Profile, 16 SATA/SAS Drives</td>
<td>RAID 0,1,5,10,60</td>
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<tr>
<td>AOC-S3008L-L8i*</td>
<td>Standard</td>
<td>SAS 3008</td>
<td>8 ports, 126Gbps per port, 8 Internal, Low Profile, 16 SATA/SAS Drives</td>
<td>RAID 0,1,5,10,60</td>
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<tr>
<td>AOC-S3008L-L8i+</td>
<td>Standard</td>
<td>SAS 3008</td>
<td>8 ports, 126Gbps per port, 8 Internal, Low Profile, 16 SATA/SAS Drives</td>
<td>RAID 0,1,5,10,60</td>
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</tr>
<tr>
<td>AOC-S3008L-L8i**</td>
<td>Standard</td>
<td>SAS 3008</td>
<td>8 ports, 126Gbps per port, 8 Internal, Low Profile, 16 SATA/SAS Drives</td>
<td>RAID 0,1,5,10,60</td>
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<tr>
<td>AOC-S2308L-L8e</td>
<td>Standard</td>
<td>SAS 2308</td>
<td>8 ports, 66Gbps per port, 8 Internal, Low Profile, 16 SATA/SAS Drives</td>
<td>RAID 0,1,6,5,10,50,60</td>
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<tr>
<td>AOC-S2308L-L8i</td>
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<td>RAID 0,1,6,5,10,50,60</td>
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<td>AOC-S2308L-L8i*</td>
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<td>RAID 0,1,6,5,10,50,60</td>
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<tr>
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<td>RAID 0,1,6,5,10,50,60</td>
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<tr>
<td>AOC-S2308L-L8i**</td>
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<td>SAS 2308</td>
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<td>RAID 0,1,6,5,10,50,60</td>
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<tr>
<td>AOC-USAS2-L8e</td>
<td>Standard</td>
<td>SAS 2008</td>
<td>8 ports, 66Gbps per port, 8 Internal, Low Profile, 16 SATA/SAS Drives</td>
<td>RAID 0,1,6,5,10,50,60</td>
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<tr>
<td>AOC-USAS2-L8i</td>
<td>Standard</td>
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<td>RAID 0,1,6,5,10,50,60</td>
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<tr>
<td>AOC-USAS2-L8i*</td>
<td>Standard</td>
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* HW restrictions may apply
### Riser Card

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<th>Character</th>
<th>Representation</th>
<th>Options</th>
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<tbody>
<tr>
<td>1st</td>
<td>Part Number Prefix</td>
<td>RSC: Riser Cards (New Naming Convention) CSE: Riser Cards (Old Naming Convention)</td>
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<tr>
<td>3rd</td>
<td>Form Factor</td>
<td>1: 1U 2: 2U 3: 3U 4: 4U 5: 5U</td>
</tr>
<tr>
<td>4th</td>
<td>Location</td>
<td>R: Right hand side F: Front IO/Front of the MB N6 = 6 NVMe ports B: Rear IO/Back of the MB M: Middle of the MB</td>
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### SATA DOM Module

<table>
<thead>
<tr>
<th>Character</th>
<th>Representation</th>
<th>Options</th>
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<td>Storage Module Type</td>
<td>SSD = Solid State Disk</td>
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<tr>
<td>2nd</td>
<td>Form Factor (DM)</td>
<td>SATA DOM</td>
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<tr>
<td>3rd</td>
<td>Capacity (AAA)</td>
<td>016 = 16GB 032 = 32GB 064 = 64GB 128 = 128GB</td>
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<tr>
<td>4th</td>
<td>Controller (BB)</td>
<td>PHI = Vendor A SM = Vendor B</td>
</tr>
<tr>
<td>5th</td>
<td>Temperature Rating (C)</td>
<td>C = Commercial Temperature I = Industrial Temperature</td>
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<tr>
<td>6th</td>
<td>Flash Type (D)</td>
<td>S = SLC M = MLC T = TLC</td>
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<tr>
<td>7th</td>
<td>Profile (E)</td>
<td>V = Vertical H = Horizontal</td>
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<td>8th</td>
<td>Configuration (F)</td>
<td>N = Normal S = SED</td>
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<tr>
<td>9th</td>
<td>Reserved (G)</td>
<td>1 = Initial Released Version</td>
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## Riser Cards

### 1U GPU (Left Hand Side)

| Product Image | Model Name | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
| RSC-G-A66-X1  | 1U GPU LHS  | 1 PCI-E x168         | 2 PCI-E x16 | Active                 | No          | X11DGQ,   | 118G0QPTS- | 1029GQ-TXRT, 1029GQ-TXRT, Yes Yes Yes Yes |
| RSC-GN2-66    | 1U GPU LHS  | 1 PCI-E x163         | 2 PCI-E x16 | Passive                | No          | X11DGQ,   | 118G0QPTS- | 1029GQ-TXRT, 1029GQ-TXRT, Yes Yes Yes Yes |
| RSC-G-A6      | 1U GPU LHS  | 1 PCI-E x16          | 2 PCI-E x16 | Active                 | No          | X11DGQ,   | 118G0QPTS- | 1029GQ-TXRT, 1029GQ-TXRT, Yes Yes Yes Yes |
| RSC-G-A66     | 1U GPU LHS  | 1 PCI-E x32          | 2 PCI-E x16 | Active                 | No          | X11DGQ,   | 118G0QPTS- | 1029GQ-TXRT, 1029GQ-TXRT, Yes Yes Yes Yes |
| RSC-GN2-A68   | 1U GPU LHS  | 1 PCI-E x32          | 2 PCI-E x16 | Active                 | No          | X11DGQ,   | 118G0QPTS- | 1029GQ-TXRT, 1029GQ-TXRT, Yes Yes Yes Yes |
| RSC-G-A66-X   | 1U GPU LHS  | 1 Universal Slot (GPU) | 2 PCI-E x8  | Passive                | No          | X8D7G-QF | N/A         | N/A     | Yes Yes Yes Yes |
| RSC-R1UG-2EG  | 1U GPU LHS  | Universal Slot (GPU) | 2 PCI-E x8  | Passive                | No          | N/A        | N/A         | N/A     | Yes Yes Yes Yes |

### 1U GPU (Left Hand Side)

| Product Image | Model Name | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
| RSC-G-C6      | 1U GPU RHS  | 1 PCI-E x16          | 1 PCI-E x16 | Passive                | Yes         | X9DCE, X9CCE, SC 919H-R1K63B | AOM-CIBF-M1M, AOM-CTG-I3SM | No Yes Yes No No |
| RSC-R1UG-E16-X9 | 1U GPU LHS  | PCI-E x16            | 1 PCI-E x16 | Passive                | Yes         | X9DCE, X9CCE, SC 919H-R1K63B | AOM-CIBF-M1M, AOM-CTG-I3SM | No Yes Yes No No |

### 1U GPU (Right Hand Side)

| Product Image | Model Name | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
| RSC-MLP-E8R   | 1U MLP RHS  | PCI-E x8             | 1 PCI-E x8  | Passive                | Yes         | X9DCE, X9CCE-F | SC 919H-R1K63B | AOM-CIBF-M1M, AOM-CIBF-M1M, AOM-CIBF-M1M | No Yes Yes No No |

### 1U DCO (Left Hand Side)

| Product Image | Model Name | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
| RSC-D-6G4     | 1U DCO LHS  | PCI-E x16            | PCI-E x16   | Passive                | No          | X12DDW-46 | N/A         | N/A     | No No Yes Yes Yes Yes |
### 1U DCO (Right Hand Side)

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<th>MB Fit Type</th>
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<td>Passive</td>
<td>No</td>
<td>611354-46L, 611356-45L, 611350-45L</td>
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### 1U Standard (Left Hand Side)

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### Notes
- **Riser Cards**
- **Motherboards Chassis**
- **GPU Support**
- **Gen2 Support**
- **Gen3 Support**
- **Auto Detection**
- **Sup- port**
- **Design**
- **Support**
- **MB**
- **Riser Card**
- **Output Type**
- **Detection**
- **X9 Port**
### 1U Standard (Left Hand Side)

| Product Image | Model Name | Category/ Form Factor | MB Fit Type | Riser Card Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|-----------------------|-------------|----------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
| ![Image](image1.png) | RSC-R1U-E16 | 1U Standard LHS | PCIe x16 | 1 PCIe x16 | Passive | Yes | Yes | Yes | Yes | No | Yes, depending on MB | Yes | Yes |

### 1U Ultra (Left Hand Side)

| Product Image | Model Name | Category/ Form Factor | MB Fit Type | Riser Card Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|-----------------------|-------------|----------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
| ![Image](image2.png) | RSC-UN4-88 | 1U Ultra LHS | 1x Slot | 2 PCIe x8 | Passive | No | No | No | No | No | Yes | Yes | Yes |

### 1U Ultra (Right Hand Side)

| Product Image | Model Name | Category/ Form Factor | MB Fit Type | Riser Card Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|-----------------------|-------------|----------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
| ![Image](image3.png) | RSC-UMR-8 | 1U Ultra RHS | 1x Slot | 1 PCIe x8 | Passive | No | No | No | No | No | Yes | Yes | Yes |

### 1U Twin (Left Hand Side)

| Product Image | Model Name | Category/ Form Factor | MB Fit Type | Riser Card Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|-----------------------|-------------|----------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
| ![Image](image4.png) | RSC-P-6-X2 | 1U TwinPro LHS | PCIe x16 | 1 PCIe x16 | Passive | No | No | No | No | No | Yes | Yes | Yes |
| ![Image](image5.png) | RSC-P-6 | 1U TwinPro LHS | PCIe x16 | 1 PCIe x16 | Passive | No | No | No | No | No | Yes | Yes | Yes |
| ![Image](image6.png) | RSC-R1UFLF-E8 | 1U Twin LHS | PCIe x8 | 1 PCIe x8 | Passive | No | No | No | No | No | Yes | Yes | Yes |
### 1U UIO (Left Hand Side)

| Product Image | Model Name | Category/ Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|-----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|--------------|----------------|
| RSC-PR-6-X2   | 1U TwinPro RHS | 1 PCI-E x16 | 1 PCI-E x16 | Passive | No | A320S-16 | NA | NA | No | No | Yes | Yes |

### 1U Storage (Left Hand Side)

| Product Image | Model Name | Category/ Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|-----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|--------------|----------------|
| RSC-X-6G4     |            |                       |             |                        |             |            |              |         |             |             |              |              |              |                |
| RSC-X-6       | 1U Storage LH | 1 PCI-E x16 | 1 PCI-E x16 | Passive | No | X1020-E8E16 | X2150-E8E16 | NA | NA | No | Yes | Yes | Yes |
| RSC-X-66      | 1U Storage LH | 1 PCI-E x32 | 2 PCI-E x16 | Passive | No | X1020-E8E16 | X2150-E8E16 | NA | NA | No | Yes | Yes | Yes |
| RSC-X-66-C    | 1U Storage LH | 1 SXB1 (WDO - Left) | 2 PCI-E x16 | Passive | No | X1020-E8E16 | X2150-E8E16 | NA | NA | No | Yes | Yes | Yes |

### 1U Twin (Right Hand Side)

| Product Image | Model Name | Category/ Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|-----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|--------------|----------------|
| RSC-RIU-E16R | 1U Twin RHS | PCI-E x16             | 1 PCI-E x16 | Passive | No | X1020-E8E16 | X2150-E8E16 | NA | NA | No | Yes | Yes | Yes |
| RSC-R1UFF-E8R| 1U Twin RHS | PCI-E x8              | 1 PCI-E x8  | Passive | Yes | X1020-E8E16 | X2150-E8E16 | NA | NA | No | Yes | Yes | Yes |
## Riser Cards

### 1U UIO (Right Hand Side)

| Product Image | Model Name   | Category/ Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|--------------|-----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
| ![Image](image1) | RSC-R1UU-E8PR | 1U UIO RHS            | PCI-E x8    | 1 PCI-E x8             | Passive     | No         |             |         |             |             |              |              | No            | No             |
| ![Image](image2) | RSC-R1UU-E8R+| 1U UIO RHS            | PCI-E x8    | 1 PCI-E x8             | Passive     | No         |             |         |             |             |              |              | No            | No             |

### 1U WIO (Left Hand Side)

| Product Image | Model Name   | Category/ Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|--------------|-----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
| ![Image](image3) | RSC-W-66G4   | 1U WIO LHS            | PCI-E x16   | PCI-E x8               | Passive     | No         |             |         |             |             |              |              | No            | No             |
| ![Image](image4) | RSC-W-68     | 1U WIO LHS            | PCI-E x8    | PCI-E x16              | Passive     | No         |             |         |             |             |              |              | No            | No             |
| ![Image](image5) | RSC-W-88     | 1U WIO LHS            | PCI-E x16   | 2 PCI-E x8             | Passive     | No         |             |         |             |             |              |              | No            | No             |

### 1U WIO (Right Hand Side)

| Product Image | Model Name   | Category/ Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|--------------|-----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
| ![Image](image6) | RSC-R1UW-2E16| 1U WIO RHS            | PCI-E x16   | PCI-E x8               | Passive     | Yes        |             |         |             |             |              |              | Yes           | Yes            |

### 1U WIO (Left Hand Side)

| Product Image | Model Name   | Category/ Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|--------------|-----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
| ![Image](image7) | RSC-WR-6     | 1U WIO RHS            | PCI-E x16   | PCI-E x16              | Active      | No         |             |         |             |             |              |              | No            | Yes            |
| ![Image](image8) | RSC-WR-6     | 1U WIO RHS            | PCI-E x16   | PCI-E x16              | Active      | No         |             |         |             |             |              |              | No            | Yes            |
| ![Image](image9) | RSC-R1UW-E8R | 1U WIO RHS            | PCI-E x8    |PCI-E x8               | Passive     | Yes        |             |         |             |             |              |              | No            | No             |

### 2U GPU (Left Hand Side)

| Product Image | Model Name   | Category/ Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|--------------|-----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
| ![Image](image10) | RSC-G2B-A66-X1| 2U GPU LHS            | PCI-E x16   | PCI-E x16              | Active      | Yes        |             |         |             |             |              |              | Yes           | Yes            |
| ![Image](image11) | RSC-G2F-A66-X1| 2U GPU LHS            | PCI-E x16   | PCI-E x16              | Active      | Yes        |             |         |             |             |              |              | Yes           | Yes            |
| ![Image](image12) | RSC-G2F-A66  | 2U GPU LHS            | PCI-E x16   | PCI-E x16              | Active      | Yes        |             |         |             |             |              |              | Yes           | Yes            |
## Riser Cards

### 2U GPU (Right Hand Side)

| Product Image | Model Name   | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|--------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|--------------|----------------|
| RSC-G2FR-A66  | 2U GPU RHS   | 1 PCI-E x16          | 2 PCI-E x16 | Active                 | Yes         | 1600-14,   | 2126G-1R238P | 2027TR-D7FR | Yes         | Yes         | Yes         | Yes         | Yes          |
| RSC-R2UG-E16R-X9 | 2U GPU RHS | PCI-E x16           | 1 PCI-E x16 | Passive               | Yes         | 1600-14,   | 2126G-1R238P | 2027TR-D7FR | Yes         | Yes         | Yes         | Yes         | N/A          |

### 2U Standard (Left Hand Side)

| Product Image | Model Name   | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|--------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|--------------|----------------|
| RSC-S2-88     | 2U Standard LHS | 1 PCI-E x8          | 2 PCI-E x8  | Passive               | No          | 1600-14,   | CSE-218U-A1K02P | 2027TR-D7FR | No          | Yes         | Yes         | Yes         | Yes          |

### 2U Standard (Left Hand Side)

| Product Image | Model Name   | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|--------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|--------------|----------------|
| RSC-S2-66     | 2U Standard LHS | 2 PCI-E x16         | 2 PCI-E x16 | Passive               | No          | 1600-14,   | CSE-218U-A1K02P | 2027TR-D7FR | No          | Yes         | Yes         | Yes         | Yes          |

### 2U Ultra (Left Hand Side)

| Product Image | Model Name   | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|--------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|--------------|----------------|
| RSC-U2N4-6    | 2U Ultra LHS | 1 WIO Slot           | 2 PCI-E x8  | Passive               | No          | 1600-14,   | CSE-218U-A1K02P | 2027TR-D7FR | Yes         | Yes         | Yes         | Yes         | Yes          |

### 2U Twin (Left Hand Side)

| Product Image | Model Name   | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|--------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|--------------|----------------|
| RSC-F2B-88G4  | 2U FatTwin RHS | 1 PCI-E x16          | 2 PCI-E x8  | Passive               | No          | X10DPT-L+,  | 8279H-R1K238P | 6027TR-D7FR | No          | Yes         | Yes         | Yes         | Yes          |
| RSC-P2-88     | 2U TwinPro RHS | 1 PCI-E x16          | 2 PCI-E x8  | Passive               | No          | X10DPT-B,  | 1000-14,   | CSE-218U-A1K02P | 2027TR-D7FR | Yes         | Yes         | Yes         | Yes         | Yes          |

### 2U Twin (Right Hand Side)

| Product Image | Model Name   | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|--------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|--------------|----------------|
| RSC-P2R-88G4  | 2U TwinPro RHS | 1 PCI-E x16          | 2 PCI-E x8  | Passive               | No          | X10DPT-L+,  | 8279H-R1K238P | 6027TR-D7FR | No          | Yes         | Yes         | Yes         | Yes          |
| RSC-T2R-88A   | 2U Twin RHS | 2 PCI-E x16          | 1 PCI-E x8  | Passive               | No          | X10DPT-L+,  | 8279H-R1K238P | 6027TR-D7FR | No          | Yes         | Yes         | Yes         | Yes          |

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## Riser Cards

### 2U UIO (Left Hand Side)

| Product Image | Model Name | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
|               | RSC-R2UUA4E8+ | 2U UIO LHS | SXS-E Universal Slot (UIO) | 4 PCI-E x8 | Active | No | MB21, MB20, MB19, MB18, MB16, MB14, MB12, MB10+ | MB Chassis | N/A | No | Yes | No | No |
|               | RSC-R2UUA3E8+ | 2U UIO LHS | SXS-E Universal Slot (UIO) | 3 PCI-E x8; 1 LRD | Active | No | MB21, MB20, MB19, MB18, MB16, MB14, MB12, MB10+ | MB Chassis | N/A | No | Yes | No | No |
|               | RSC-R2UUE8 | 2U UIO LHS | Universal SXB Slot (UIO) | 2 PCI-E x8 | Passive | No | MB21, MB20, MB19, MB18, MB16, MB14, MB12, MB10+ | MB Chassis | N/A | No | Yes | No | No |

### 2U UIO (Right Hand Side)

| Product Image | Model Name | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
|               | RSC-R2UUA4E8+ | 2U UIO LHS | SXS-E Universal Slot (UIO) | 4 PCI-E x8 | Active | No | MB21, MB20, MB19, MB18, MB16, MB14, MB12, MB10+ | MB Chassis | N/A | No | Yes | No | No |
|               | RSC-R2UUA3E8+ | 2U UIO LHS | SXS-E Universal Slot (UIO) | 3 PCI-E x8; 1 LRD | Active | No | MB21, MB20, MB19, MB18, MB16, MB14, MB12, MB10+ | MB Chassis | N/A | No | Yes | No | No |
|               | RSC-R2UUE8 | 2U UIO LHS | Universal SXB Slot (UIO) | 2 PCI-E x8 | Passive | No | MB21, MB20, MB19, MB18, MB16, MB14, MB12, MB10+ | MB Chassis | N/A | No | Yes | No | No |

### 2U WIO (Left Hand Side)

| Product Image | Model Name | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
|               | RSC-W2-888G4 | 2U WIO LHS | 1 PCI-E x32 | 4 PCI-E x8 | Passive | No | H12SSW-NT, N/A | N/A | N/A | No | No | Yes | Yes |
|               | RSC-W2-66G4 | 2U WIO LHS | 1 SXB1 (WRD-Left) | 2 PCI-E x16 | Passive | No | H12SSW-NT, N/A | N/A | N/A | No | Yes | No | Yes |
|               | RSC-R2UWE8 | 2U WIO LHS | WIO Slot | 2 PCI-E x8; 1 LRD | Passive | No | H12SSW-NT, N/A | N/A | N/A | No | Yes | Yes | Yes |
|               | RSC-R2UWE8 | 2U WIO LHS | WIO Slot | 2 PCI-E x8; 1 LRD | Passive | No | H12SSW-NT, N/A | N/A | N/A | No | Yes | Yes | Yes |
|               | RSC-R2UWE8 | 2U WIO LHS | WIO Slot | 4 PCI-E x8 | Passive | No | H12SSW-NT, N/A | N/A | N/A | No | Yes | Yes | Yes |

### 2U WIO (Right Hand Side)

| Product Image | Model Name | Category/Form Factor | MB Fit Type | Riser Card Output Type | Design Type | X9 Support | Motherboards | Chassis | SuperServer | GPU Support | Gen2 Support | Gen3 Support | Auto Detection |
|---------------|------------|----------------------|-------------|------------------------|-------------|------------|--------------|---------|-------------|-------------|--------------|--------------|---------------|----------------|
|               | RSC-W2-888G4 | 2U WIO RHS | 1 PCI-E x16 | 2 PCI-E x8 | Passive | No | H12SSW-NT, N/A | N/A | N/A | No | No | Yes | Yes |
|               | RSC-R2UWE8 | 2U WIO RHS | WIO Slot | 1 PCI-E x8 | Passive | No | H12SSW-NT, N/A | N/A | N/A | No | No | Yes | Yes |
|               | RSC-R2UWE8 | 2U WIO RHS | WIO Slot | 2 PCI-E x8 | Passive | No | H12SSW-NT, N/A | N/A | N/A | No | Yes | Yes | Yes |
### Provisioned TPM

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### TPM Products

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<th>TXT*</th>
<th>MB Platform</th>
<th>Supported CPUs</th>
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<td>Intel® Xeon® Processor E5, Intel® Xeon® Processor E7</td>
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*TPM Provisioning is required for TXT function, selecting server or client provisioning depends on the CPU and MB that is going to be used.
### SAS 3.0 (12Gbps) Devices

**Model Part#**: CSE-M14TQC

- **Occupancy**: 1x 5.25" drive bays
- **Capacity**: 4x 2.5" hot-swap SAS 3.0/SATA 3.0 hard drives
- **Cooling Subsystem**: 40mm exhaust fan
- **System Monitoring**: Overheat LED & alarm, Drive activity LED, Fan fail detection LED & alarm
- **Dimensions**: 5.8"W x 1.6"H x 7.9"H (147mm x 40mm x 200mm)
- **Gross Weight**: 4 lbs

**Model Part#**: MCP-220-82616-ON

- **Occupancy**: 3x 5.25" drive bays
- **Capacity**: 5x 3.5" hot-swap SAS/SATA hard drives
- **Cooling Subsystem**: 90mm exhaust fan
- **System Monitoring**: Fan fail detection LED & alarm, Overheat LED indication
- **Dimensions**: 5.8"W x 5.1"H x 9.7"D (146 x 129 x 245mm)
- **Gross Weight**: 7.5 lbs

### SAS 3.0 (12Gbps) Devices

**Model Part#**: CSE-M28SACB / CSE-M28SACB-OEM

- **Occupancy**: 2x 5.25" drive bays
- **Capacity**: 8x 2.5" hot-swap SAS 3.0/SATA 3.0 hard drives
- **Cooling Subsystem**: 40mm exhaust fan (CSE-M28SACB only)
- **System Monitoring**: Overheat LED & alarm, Drive activity LED & failure LED, Fan fail detection LED & alarm
- **Dimensions**: 5.8"W x 3.4"H x 7.4"D (146 x 85 x 187mm)(CSE-M28SACB-OEM)
- **Gross Weight**: 5 lbs

**Model Part#**: MCP-220-83608-ON

- **Occupancy**: 1x rear drive bay
- **Capacity**: 2x 2.5" hot-swap SAS/SATA3 hard drives
- **Cooling Subsystem**: N/A
- **System Monitoring**: Monitoring drive activity, rebuild or failure
- **Dimensions**: 5.8"W x 5.1"H x 9.7"D (146 x 129 x 245mm)
- **Gross Weight**: 1.5 lbs

### SAS 3.0 (12Gbps) Devices

**Model Part#**: CSE-M28SAB / CSE-M28SAB-OEM

- **Occupancy**: 2x 5.25" drive bays
- **Capacity**: 8x 2.5" hot-swap SAS 2.0/SATA 3.0 hard drives
- **Cooling Subsystem**: 40mm exhaust fan (CSE-M28SAB only)
- **System Monitoring**: Fan fail detection LED & alarm, Overheat LED indication
- **Dimensions**: 5.8"W x 3.4"H x 6.2"D (146 x 85 x 157mm)
- **Gross Weight**: 5 lbs

**Model Part#**: MCP-220-81506-ON

- **Occupancy**: 1x slim DVD or slim floppy size drive bay
- **Capacity**: 1x 2.5" hot-swap SAS3/SATA3 hard drive
- **Cooling Subsystem**: N/A
- **System Monitoring**: Monitoring drive activity, rebuild or failure
- **Dimensions**: Slim DVD size: 5.05" W x 0.5" H x 6.3" D (128x13x160mm)
- **Gross Weight**: 1 lbs

### SAS/SATA Devices

**Model Part#**: CSE-M35TQ

- **Occupancy**: 3x 5.25" drive bays
- **Capacity**: 5x 3.5" hot-swap SAS/SATA hard drives
- **Cooling Subsystem**: 90mm exhaust fan
- **System Monitoring**: Monitoring drive activity, rebuild or failure
- **Dimensions**: 5.8"W x 5.1"H x 9.7"D (146 x 129 x 245mm)
- **Gross Weight**: 7.5 lbs

**Model Part#**: MCP-220-83608-ON

- **Occupancy**: 1x rear drive bay
- **Capacity**: 2x 2.5" hot-swap SAS/SATA3 hard drives
- **Cooling Subsystem**: N/A
- **System Monitoring**: Monitoring drive activity, rebuild or failure
- **Dimensions**: 5.8"W x 5.1"H x 9.7"D (146 x 129 x 245mm)
- **Gross Weight**: 1.5 lbs

### Mobile Racks & Drive Kits

- **High Performance, Scalability & Flexibility for Next Generation Enterprise Server/Storage Solutions**
- **New! SAS 3.0 (12Gbps)**
- **New! SAS 3.0 (12Gbps)**
Digital Switching Power Supplies

96% Titanium Level Power Efficiency!

- New generation Digital Switching Power Supplies
- Improved power efficiency (5~10%) in light loading
- Improved power factory correction (5~10%) in light loading
- Reduce current THD (15%) power transmission loss
- Real-time monitoring & enhanced system reliability

### Digital Titanium Level Power Supply

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<th>PWS-1K03A-1R</th>
<th>PWS-1K04A-1R</th>
<th>PWS-1K62A-1R</th>
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<td>800W / 1000W</td>
<td>800W / 1000W</td>
<td>800W / 1200W</td>
<td>800W / 1200W</td>
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<tr>
<td>Input</td>
<td>100-127Vac / 200-240Vac / 50-60Hz</td>
<td>100-127Vac / 200-240Vac / 50-60Hz</td>
<td>100-127Vac / 200-240Vac / 50-60Hz</td>
<td>100-127Vac / 200-240Vac / 50-60Hz</td>
<td>100-127Vac / 200-240Vac / 50-60Hz</td>
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<td>33.6 x 7.6 x 4</td>
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<td>Backplane (gold finger)</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>FRU Data and PMBus</td>
<td>FRU Data and PMBus</td>
<td>FRU Data and PMBus</td>
<td>FRU Data and PMBus</td>
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### Power Factor Comparison

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<th>PWS-2K20A-1R</th>
<th>PWS-2K60A-1R</th>
<th>PWS-1K68A-1R</th>
<th>PWS-1K23A-1R</th>
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### Input Current THD Comparison

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<td>100-127Vac / 200-240Vac / 50-60Hz</td>
<td>100-127Vac / 200-240Vac / 50-60Hz</td>
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<td>1000W / 1600W</td>
<td>1000W / 1600W</td>
<td>750W</td>
<td>600W</td>
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<td>100-240Vac / 50-60Hz</td>
<td>100-240Vac / 50-60Hz</td>
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<td>FRU Data and PMBus</td>
<td>FRU Data and PMBus</td>
<td>FRU Data and PMBus</td>
<td>FRU Data and PMBus</td>
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<td>82A (100-127Vac)</td>
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<td>12Vsb 3.5A</td>
<td>12Vsb 2A</td>
<td>12Vsb 2.1A</td>
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<td>200-240Vac / 100-140Vac / 200-240Vac / 50-60Hz</td>
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<td>100-240Vac / 50-60Hz</td>
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<tr>
<th>Model</th>
<th>PWS-351-1H</th>
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<th>PWS-903-PQ</th>
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<td>668W</td>
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<td>100-240Vac / 50-60Hz</td>
<td>100-240Vac / 50-60Hz</td>
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<td>Mid-Tower</td>
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## DC Power Solutions

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<th>PWS-601D-1R</th>
<th>PWS-1K11P-1R</th>
<th>PWS-711-1R</th>
<th>PWS-1K30D-1R</th>
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<td>FRU Data and PMBus</td>
<td>FRU Data and PMBus</td>
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# Heatsinks

## X12 Heatsinks support 3rd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors

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<th>SNK-P0078P</th>
<th>SNK-P0081AP4</th>
<th>SNK-P0079PC</th>
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<th>SNK-P0077P</th>
<th>SNK-P0077PW</th>
<th>SNK-P0077PM</th>
<th>SNK-P0077V</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form Factor</strong></td>
<td>2U UP DP</td>
<td>4U UP DP</td>
<td>1U UP DP</td>
<td>1U UP DP</td>
<td>1U UP DP</td>
<td>1U UP DP</td>
<td>1U UP DP</td>
</tr>
<tr>
<td><strong>CPU Type</strong></td>
<td>3rd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## X11 Heatsinks 1U/2U/4U Passive/Active CPU Heatsinks for UP, DP, and MP Systems

<table>
<thead>
<tr>
<th>Part Number</th>
<th>SNK-P0067PS</th>
<th>SNK-P0067PSM</th>
<th>SNK-P0067PSMB</th>
<th>SNK-P0068PS</th>
<th>SNK-P0068PSC</th>
<th>SNK-P0068APS4</th>
<th>SNK-P0070APS4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form Factor</strong></td>
<td>1U Passive Narrow Retention Mechanism UP/DP</td>
<td>1U Passive Proprietary (Middle Air Channel) Narrow Retention Mechanism DP</td>
<td>1U Passive Proprietary (Middle Air Channel) Narrow Retention Mechanism DP</td>
<td>2U Passive Narrow Retention Mechanism UP/DP</td>
<td>2U Passive Proprietary (Side Air Channel) Narrow Retention Mechanism DP</td>
<td>2U Active Narrow Retention Mechanism UP/DP</td>
<td>4U Active Narrow Retention Mechanism UP/DP</td>
</tr>
<tr>
<td><strong>CPU Type</strong></td>
<td>Intel® Xeon® Scalable Processors</td>
<td>Intel® Xeon® Scalable Processors</td>
<td>Intel® Xeon® Scalable Processors</td>
<td>Intel® Xeon® Scalable Processors</td>
<td>Intel® Xeon® Scalable Processors</td>
<td>Intel® Xeon® Scalable Processors</td>
<td>Intel® Xeon® Scalable Processors</td>
</tr>
<tr>
<td><strong>Socket Type</strong></td>
<td>LGA 3647-0</td>
<td>LGA 3647-0</td>
<td>LGA 3647-0</td>
<td>LGA 3647-0</td>
<td>LGA 3647-0</td>
<td>LGA 3647-0</td>
<td>LGA 3647-0</td>
</tr>
<tr>
<td><strong>Major Integrated Part</strong></td>
<td>Copper Fins Copper + Aluminium Base Heat Pipes</td>
<td>Copper Fins Copper + Aluminium Base Heat Pipes</td>
<td>Copper Fins Copper + Aluminium Base Heat Pipes</td>
<td>Copper Fins Copper + Aluminium Base Heat Pipes</td>
<td>Copper Fins Copper + Aluminium Base Heat Pipes</td>
<td>Aluminium Fins Copper + Aluminium Base Heat Pipes Cooling Fan (Front Side)</td>
<td>Aluminium Fins Copper + Aluminium Base Heat Pipes Cooling Fan (Front Side)</td>
</tr>
<tr>
<td><strong>Dimension (mm)</strong></td>
<td>108L x 78W x 25.5H</td>
<td>108L x 78W x 25.5H</td>
<td>108L x 78W x 25.5H</td>
<td>108L x 78W x 64H</td>
<td>108L x 78W x 64H</td>
<td>108L x 78W x 64H</td>
<td>108L x 92.5W x 126H</td>
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<tr>
<td><strong>Mounting Method</strong></td>
<td>Springs + Screws</td>
<td>Springs + Screws</td>
<td>Springs + Screws</td>
<td>Springs + Screws</td>
<td>Springs + Screws</td>
<td>Springs + Screws</td>
<td>Springs + Screws</td>
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# X11 Heatsinks 1U/2U/4U Passive/Active CPU Heatsinks for UP, DP, and MP Systems

<table>
<thead>
<tr>
<th>Part Number</th>
<th>SNK-P0067PS</th>
<th>SNK-P0067PSM</th>
<th>SNK-P0067PSMB</th>
<th>SNK-P0068PS</th>
<th>SNK-P0068PSC</th>
<th>SNK-P0068APS4</th>
<th>SNK-P0070APS4</th>
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</thead>
<tbody>
<tr>
<td>Form Factor</td>
<td>1U Passive, Narrow Retention Mechanism UP/DP</td>
<td>1U Passive, Proprietary (Middle Air Channel) Narrow Retention Mechanism</td>
<td>1U Passive, Proprietary (Middle Air Channel) Narrow Retention Mechanism</td>
<td>2U Passive, Narrow Retention Mechanism UP/DP</td>
<td>2U Passive, Proprietary (Side Air Channel) Narrow Retention Mechanism UP/DP</td>
<td>2U Active, Narrow Retention Mechanism UP/DP</td>
<td>4U Active, Narrow Retention Mechanism UP/DP</td>
</tr>
<tr>
<td>CPU Type</td>
<td>Intel® Xeon® Scalable processors</td>
<td>Intel® Xeon® Scalable processors</td>
<td>Intel® Xeon® Scalable processors</td>
<td>Intel® Xeon® Scalable processors</td>
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<td>Socket Type</td>
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<td>LGA 3647-0</td>
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<td>LGA 3647-0</td>
<td>LGA 3647-0</td>
<td>LGA 3647-0</td>
</tr>
<tr>
<td>Major Integrated Part</td>
<td>Copper Fins + Copper + Aluminium Base Heat Pipes</td>
<td>Copper Fins + Copper + Aluminium Base Heat Pipes</td>
<td>Copper Fins + Copper + Aluminium Base Heat Pipes</td>
<td>Copper Fins + Copper + Aluminium Base Heat Pipes</td>
<td>Copper Fins + Copper + Aluminium Base Heat Pipes</td>
<td>Copper Fins + Copper + Aluminium Base Heat Pipes</td>
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<tr>
<td>Dimension (mm)</td>
<td>108L x 78W x 25.5H</td>
<td>108L x 78W x 25.5H</td>
<td>108L x 78W x 25.5H</td>
<td>108L x 78W x 25.5H</td>
<td>108L x 78W x 25.5H</td>
<td>108L x 78W x 25.5H</td>
<td>108L x 78W x 25.5H</td>
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<tr>
<td>Mounting Method</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
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# X11/X10, 1U Passive CPU Heatsinks for UP, DP, and MP Systems

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<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Form Factor</td>
<td>1U Passive, DP</td>
<td>Proprietary 1U Passive, DP (X10BL Front CPU)</td>
<td>1U Passive, UP (X11/X10/X9)</td>
<td>1U Passive, UP, DP</td>
<td>1U Passive, Proprietary, DP</td>
<td>1U Passive, UP, DP, MP</td>
</tr>
<tr>
<td>Socket Type</td>
<td>LGA 1356</td>
<td>LGA 1356</td>
<td>LGA 1151/1155/1150</td>
<td>LGA 1151/1155/1150</td>
<td>LGA 1151/1155/1150</td>
<td>LGA 1151/1155/1150</td>
</tr>
<tr>
<td>Major Integrated Part</td>
<td>Copper + Aluminium Base Heat Pipes</td>
<td>Copper Base Aluminium Fins Heat Pipes</td>
<td>Copper + Aluminium Base Aluminium Fins Heat Pipes</td>
<td>Copper + Aluminium Base Aluminium Fins Heat Pipes</td>
<td>Copper + Aluminium Base Aluminium Fins Heat Pipes</td>
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<tr>
<td>Dimension (mm)</td>
<td>90L x 90W x 27mm</td>
<td>90L x 90W x 27mm</td>
<td>90L x 90W x 27mm</td>
<td>90L x 90W x 27mm</td>
<td>90L x 90W x 27mm</td>
<td>90L x 90W x 27mm</td>
</tr>
<tr>
<td>Mounting Method</td>
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<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
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# X11/X10, 1U Passive CPU Heatsinks for UP, DP, and MP Systems

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<thead>
<tr>
<th>Part Number</th>
<th>SNK-P0047PSC</th>
<th>SNK-P0047PSM</th>
<th>SNK-P0047PSR</th>
<th>SNK-P0047PS+</th>
<th>SNK-P0047PW</th>
<th>SNK-P0057P</th>
<th>SNK-P0057PS</th>
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</thead>
<tbody>
<tr>
<td>Socket Type</td>
<td>LGA 2011 (Narrow ILM)</td>
<td>LGA 2011 (Narrow ILM)</td>
<td>LGA 1155 &amp; LGA1155</td>
<td>LGA 1155 &amp; LGA1155</td>
<td>LGA 1155 &amp; LGA1155</td>
<td>LGA 1155 &amp; LGA1155</td>
<td>LGA 1155 &amp; LGA1155</td>
</tr>
<tr>
<td>Dimension (mm)</td>
<td>104L x 80W x 26H mm</td>
<td>104L x 80W x 26H mm</td>
<td>104L x 80W x 13H mm</td>
<td>104L x 80W x 13H mm</td>
<td>90L x 116W x 26H mm</td>
<td>104L x 80W x 26H mm</td>
<td>104L x 80W x 26H mm</td>
</tr>
<tr>
<td>Mounting Method</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
</tr>
</tbody>
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## X10 and X9 2U Passive CPU Heatsinks for UP, DP, and MP Systems

<table>
<thead>
<tr>
<th>Part Number</th>
<th>SNK-P0038P</th>
<th>SNK-P0048P</th>
<th>SNK-P0048PS</th>
<th>SNK-P0048PSC</th>
<th>SNK-P0048PW</th>
<th>SNK-P2048P</th>
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</thead>
<tbody>
<tr>
<td>Socket Type</td>
<td>LGA 1356</td>
<td>LGA2011 (Square ILM)</td>
<td>LGA2011 (Narrow ILM)</td>
<td>LGA2011 (Narrow ILM)</td>
<td>LGA 2011 (Square ILM)</td>
<td>LGA2011 (Square ILM)</td>
</tr>
<tr>
<td>Major Integrated Part</td>
<td>Copper + Aluminum Base</td>
<td>Aluminum Base</td>
<td>Aluminum Base</td>
<td>Aluminum Base</td>
<td>Aluminum Base</td>
<td>Aluminum Base</td>
</tr>
<tr>
<td>Dimension</td>
<td>90L x 90W x 64H mm</td>
<td>90L x 90W x 64H mm</td>
<td>104L x 80W x 64H mm</td>
<td>104L x 80W x 64H mm</td>
<td>90L x 116W x 64H mm</td>
<td>90L x 170W x 64H mm</td>
</tr>
<tr>
<td>Mounting Method</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
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## X11/X10/X9 Active CPU Heatsinks for UP and DP Systems

<table>
<thead>
<tr>
<th>Part Number</th>
<th>SNK-P0035AP4</th>
<th>SNK-P0040AP4</th>
<th>SNK-P0046A4</th>
<th>SNK-P0048AP4</th>
<th>SNK-P0050AP4</th>
<th>SNK-P2050AP4</th>
<th>SNK-P0051AP4</th>
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</thead>
<tbody>
<tr>
<td>Form Factor</td>
<td>4U Active, DP</td>
<td>4U Active, DP</td>
<td>2U(+) Active, UP (X11/X10/X9)</td>
<td>2U(+) Active, UP, DP</td>
<td>4U Active, UP</td>
<td>4U Active, UP (X11/X10/X9)</td>
<td>4U Active, UP (HFT Series Servers)</td>
</tr>
<tr>
<td>Socket Type</td>
<td>LGA 1356</td>
<td>LGA 1356</td>
<td>LGA1155/1151/1150</td>
<td>LGA 2011 (Square and Narrow ILMs)</td>
<td>LGA 2011 (Square and Narrow ILMs)</td>
<td>LGA 2011 (Square ILM)</td>
<td>LGA1155/1151/1150</td>
</tr>
<tr>
<td>Material</td>
<td>Copper Base</td>
<td>Copper Base</td>
<td>Copper Base</td>
<td>Copper Base</td>
<td>Copper Base</td>
<td>Copper Base</td>
<td>Copper Base</td>
</tr>
<tr>
<td></td>
<td>Cooling Fan (Front Side)</td>
<td>Cooling Fan (Rear Side)</td>
<td>Cooling Fan (Top)</td>
<td>Cooling Fan (Front Side)</td>
<td>Cooling Fan (Front Side)</td>
<td>Cooling Fan (Middle Side)</td>
<td>Cooling Fan (Front Side)</td>
</tr>
<tr>
<td>Dimension</td>
<td>105L x 100W x 126H mm</td>
<td>105L x 100W x 126H mm</td>
<td>90D x 65H mm</td>
<td>90L x 80W x 65L mm</td>
<td>85L x 80W x 65L mm</td>
<td>96L x 130W x 125H mm</td>
<td>105L x 93W x 128H mm</td>
</tr>
<tr>
<td>Mounting Method</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs</td>
<td>Screws + Springs; Mounting Brackets (BKT-0048L-RS and BKT-0048L-RN Included)</td>
<td>Screws + Springs; Mounting Brackets (For Square and Narrow ILMs Included)</td>
<td>Screws + Springs</td>
</tr>
</tbody>
</table>
Onboard IPMI 2.0 for (-F) Motherboards/Servers

Many Supermicro (-F) motherboards now offer IPMI 2.0 capabilities onboard through a dedicated LAN port to support remote management. This convenient remote management capability is provided through an onboard BMC (Baseboard Management Controller) that improves reliability and maintainability while reducing costs. X10 DP motherboards support IPMI 2.0 as a standard feature.

**Monitoring Features:**
- Monitor CPU and system temperature
- Monitor on-board voltage (12V, 5V, 5Vst_by, Vbat, Vcore, memory voltage)
- Monitor and control fan speed
- Chassis intrusion
- Power status (including PMbus support)
- Memory errors
- CPU errors

**Management Features:**
- Remote system power control (including ACPI power off)
- Virtual Media and Java based KVM HTML5 (included with price of motherboard)
- SOL (included with price of motherboard)
- E-mail alerts and SNMP traps
- Support for Node Manager
- Mount ISO images

**Security Features:**
- Firmware firewall
- Restricted access using pre-defined IP address
- Added security with SSL
- Protection from shell injection
- Select/Deselect Services

**Easy Maintenance:**
- Configuration utility for DOS, Windows, Linux
- Firmware flash utilities for DOS, Windows, Linux (easy to script)
- Firmware flash using web-browser
- Fail-over access to IPMI over network
- CLI, WEBUI, API and GUI tools to maintain large deployments
- Support OOB BIOS management (for selected HW)

**Added-value Features:**
- SMASH
- DCMI
- Active directory and LDAP
- RADIUS

---

**SuperDoctor® Server Management**

![SuperDoctor® Server Management](image)
Supermicro Server Management Utilities

Server management utilities assist data center system administrators to manage hardware issues such as server availability and firmware upgrades to reduce server downtime. Supermicro has developed a multifunction suite of tools that can perform health monitoring, power management, and firmware maintenance to help deploy and maintain servers in data centers. Our solutions are designed for easy automation with existing management infrastructure using CLI and REST APIs. In data centers, Supermicro Server Management Utilities provides you all the necessary functions like:

**Remotely managing the health of hardware and operating system services:**

Helps IT operators to monitor the health of system components through Agent and Agent-less based solutions

**Managing power consumption of nodes in cluster:**

Optimize the power consumption of your server rack. Monitor and apply polices to maximize compute density per rack and avoid unexpected server shutdowns.

**Managing BIOS provisioning through BMC/IPMI:**

Allows you to manage system BIOS upgrades and configurations uniformly across multi-environment deployments through baseboard management controller.

**Execute commands on multiple target systems in parallel:**

Perform parallel firmware upgrades, system memory and power commands, and many more through SSL and RMCP+.

**Execute commands on multiple target systems through Redfish API:**

Perform API execution for server health, system inventory, power info, event notification and many more through secure socket layer (SSL).

Software SKUs:

<table>
<thead>
<tr>
<th>SKU</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFT-DCMS-Single</td>
<td>Per node license for System Management Suite (all packages)</td>
</tr>
<tr>
<td>SFT-008-LIC</td>
<td>Per node license for OOB firmware maintenance mechanisms</td>
</tr>
<tr>
<td>SFT-SPM-LIC</td>
<td>Per node license for Power Management Utility</td>
</tr>
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</table>

* AMD platform not supported.
# 1U Rackmount Chassis

<table>
<thead>
<tr>
<th>LCD Kit &amp; Accessories</th>
<th>MCP-220-00095-0B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard 3.5&quot; drive with 0.95 OLED, fit 1x 2.5&quot; HDD, digital color</td>
<td>MCP-220-00119-0B</td>
</tr>
</tbody>
</table>

| SC813, SC813M, SC815, SC819 (Redundant Power) series | MCP-210-00007-01 (Black) |
| SC819(U)* (Redundant Power) series | CSE-PTFB-813LB (Black) |
| Does not support SC818G series | CSE-PTFB-813L (Beige) |
| SC113, SC113M, SC116, SC119(U)*, SC514 series | MCP-210-11601-0B (Black) |
| No front LED indicator support | CSE-PTFB-813-02B (Black) |
| SC812 series | CSE-PTFB-813-02 (Beige) |
| Does not support SC818G series | CSE-PTFB-813-02 (Beige) |
| SCS12, SCS12L, SCS12F-260 series | MCP-210-000028-01 (Black) |
| Does not support SCS12F-200/350/441/520/600 series | MCP-210-000028-02 (Beige) |
| SCS12, SCS12L, SCS12F-260 series | MCP-210-00005-01 (Black) |
| Does not support SCS12F-200/350/441/520/600 series | MCP-210-00005-02 (Beige) |
| SCS12, SCS12L, SCS12F-260 series | MCP-210-00033-01 (OEM) (Black) |

* Exception: Do not support auto-latch design handles

# 2U Rackmount Chassis

| SC822, SC823 series | CSE-PTFB-820B (Black) |
| SC825, SC828 series | CSE-PTFB-820 (Beige) |

| SC825M series | MCP-210-82503-0B (Black) |

| SC213, SC216, SC217, SC219(U)*, SC226S, SC227(S), SC826(S) SC227, SC829(U)* series | MCP-210-82601-0B (Black) |

# 3U Rackmount Chassis

| SC835 series | MCP-210-83501-0B (Black) |

| SC836, SC837 series | MCP-210-83601-0B (Black) |

# 4U Rackmount Chassis

| SC842 series | MCP-210-84201-0B (Black) |

| SC846, SC847, SC417, SC418 series | MCP-210-84601-0B (Black) |

* Exception: Do not support auto-latch design handles
Supermicro’s SuperRack® systems were designed for ease of integration, implementation, and deployment. Their easy rear access and modularized Building Block design makes them ideal for hot-swap-capable servers, such as Supermicro’s Twin and Double-Sided Storage® families. For a rack system that is convenient, reliable, and customizable, the Supermicro SuperRack® is the ideal choice.

Key Features:

- **Per-U Design** - Ground-breaking Per-U design concept simplifies cable management and minimizes integration time
- **Accessible** - Versatile Front and Rear access hot-plug optimizations provide an improved service experience
- **Optimized Air Flow** - Reduced cabling optimizes air flow and improves cooling
- **Building Block Design** - Building-block design and intuitive installation process reduce overall deployment schedules
- **Expandable** - With unique add-on expansion units the SuperRack® easily accommodates many different server configurations
- **Customizable** - Fully customizable options offer a well-rounded total Rack solution and service

**SuperRack® Total Solution** - Supermicro provides rack configuration, integration, testing, burn-in, and shipping services delivering an integrated rack system to the end-user. Please contact your Supermicro sales representative for details.

**SuperRack® Solutions: Pre-Configured, Fully Tested and Application Optimized**

- Hadoop Clusters for Big Data Analytics
- Rack Solutions for Virtualization and Cloud Computing
- Rack Solutions for Search Engine, Web 2.0
- HPC Clusters with GPU Accelerator
- Scale-Out Storage with Extreme Drive Density
- Rack Integration Service from Design to Delivery

For detailed information, please contact your Supermicro sales representative; visit: [http://www.supermicro.com/products/rack](http://www.supermicro.com/products/rack)
The Supermicro Tool-less, Quick-release Slide Rails

Designed for quick and easy installation and access to Supermicro's server equipment. Several different sizes are provided to accommodate a variety of Supermicro server systems.

<table>
<thead>
<tr>
<th>Model Part#</th>
<th>MCP-290-00054-ON</th>
<th>MCP-290-00062-ON</th>
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<tbody>
<tr>
<td>Product</td>
<td>Optional rail set</td>
<td>Optional rail set</td>
</tr>
<tr>
<td>Content</td>
<td>Quick-release inner rail + quick-release outer rail</td>
<td>Quick-release inner rail + quick-release outer rail</td>
</tr>
<tr>
<td>Chassis Type</td>
<td>1U, 17.2&quot; width</td>
<td>1U, 17.2&quot; width</td>
</tr>
<tr>
<td>Mechanism</td>
<td>Linear</td>
<td>Linear</td>
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<tr>
<td>Outer Rail</td>
<td>25.6&quot; – 33.05&quot;</td>
<td>25.6&quot; – 33.05&quot;</td>
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<td>Extendable Length</td>
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<td>Compatible Chassis</td>
<td>Optional for SC813, 815</td>
<td>Optional for SC118, 119, 808, 809, 816, 818, 819</td>
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For Short-depth Chassis Rack

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<tr>
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<th>MCP-290-00056-ON</th>
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<tbody>
<tr>
<td>Product</td>
<td>Optional outer rail bulk pack</td>
<td>Optional short-depth outer rail</td>
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<tr>
<td>Content</td>
<td>Quick-release outer rail (10 set/pack)</td>
<td>Short quick-release outer rail</td>
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<tr>
<td>Chassis Type</td>
<td>1U, 17.2&quot; width</td>
<td>1U, 17.2&quot; width in short-depth rack</td>
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<tr>
<td>Mechanism</td>
<td>Linear</td>
<td>Linear</td>
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<tr>
<td>Outer Rail</td>
<td>25.6&quot; – 33.05&quot;</td>
<td>19&quot; – 26.4&quot;</td>
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<tr>
<td>Extendable Length</td>
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For Short-depth Chassis Rack

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<tr>
<th>Model Part#</th>
<th>MCP-290-00053-ON</th>
<th>MCP-290-00057-ON</th>
<th>MCP-290-00058-ON</th>
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<tr>
<td>Product</td>
<td>Default rail set</td>
<td>Default rail set</td>
<td>Optional short-depth rail set</td>
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<tr>
<td>Content</td>
<td>Quick-release inner rail + quick-release outer rail</td>
<td>Quick-release inner rail + quick-release outer rail</td>
<td>Quick-release inner rail + quick-release outer rail</td>
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<td>Chassis Type</td>
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<td>4U, 17.2&quot; width</td>
<td>2~4U, 17.2&quot; width in short-depth rack</td>
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<td>Mechanism</td>
<td>Ball-bearing, support round hole racks with adapter MCP-290-00060-ON</td>
<td>Ball-bearing, support round hole racks with adapter MCP-290-00060-ON</td>
<td>Ball-bearing, support round hole racks with adapter MCP-290-00060-ON</td>
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<td>Outer Rail</td>
<td>26.5&quot; – 36.4&quot;</td>
<td>26.5&quot; – 36.4&quot;</td>
<td>19&quot; – 26.6&quot;</td>
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Quick-Release Slide Rails

SuperServer® Solutions - June 2021

SuperServer® Solutions - June 2021
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<th>Connector</th>
<th>Cable type</th>
<th>Media</th>
<th>Date Rate</th>
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<tbody>
<tr>
<td>CBL-NTWK-0944-SS28C10M</td>
<td>ETHERNET, SFP28, 28GbE, PASSIVE, 30 AWG, 1M</td>
<td>1</td>
<td>SFP28</td>
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<td>Copper</td>
<td>25 Gb/s</td>
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<td>CBL-NTWK-0944-SS28C20M</td>
<td>ETHERNET, SFP28, 28GbE, PASSIVE, 30 AWG, 2M</td>
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<td>CBL-NTWK-0944-SS28C30M</td>
<td>ETHERNET, SFP28, 28GbE, PASSIVE, 30 AWG, 3M</td>
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<td>SFP28</td>
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<tr>
<td>CBL-NTWK-0944-SS28C50M</td>
<td>ETHERNET, SFP28, 28GbE, PASSIVE, 26 AWG, 5M</td>
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<tr>
<td>CBL-NTWK-0943-SQ28C10M</td>
<td>ETHERNET, QSFP28, 100GbE, PASSIVE, 32 AWG, 1M</td>
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<td>CBL-NTWK-0942-MQ28C30M</td>
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<tr>
<td>CBL-NTWK-0942-MQ28E10M</td>
<td>InfiniBand, EDR, QSFP28, 100GbE, PASSIVE, LSZH, 1m</td>
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<td>100 Gb/s</td>
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<td>InfiniBand, EDR, QSFP28, 100GbE, PASSIVE, LSZH, 2m</td>
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<td>CBL-NTWK-0347</td>
<td>ETHERNET, SFP+, 10GbE, PASSIVE, PUSH, 1M, 30AWG</td>
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<tr>
<td>CBL-NTWK-0456</td>
<td>ETHERNET, SFP+, 10GbE, PASSIVE, PUSH, 2M, 30AWG</td>
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<td>CBL-NTWK-0912</td>
<td>ETHERNET, SFP+, 10GbE, PASSIVE, PUSH, 3M, 30AWG</td>
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<td>CBL-NTWK-1009</td>
<td>ETHERNET, SFP+, 10GbE, PASSIVE, PUSH, 5M, 30AWG</td>
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<tr>
<td>CBL-NTWK-0592</td>
<td>ETHERNET, SFP+, 10GbE, PASSIVE, PULL, 1M, 30AWG</td>
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<td>CBL-NTWK-0525</td>
<td>ETHERNET, SFP+, 10GbE, PASSIVE, PULL, 3M, 30AWG</td>
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<td>CBL-NTWK-0552</td>
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<tr>
<td>CBL-SFP+ADC-1M-1</td>
<td>ETHERNET, SFP+, 10GbE, FIBER, ACTIVE, PULL, 1M</td>
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<td>CBL-SFP+ADC-3M-1-ORG</td>
<td>ETHERNET, SFP+, 10GbE, FIBER, ACTIVE, PULL, 3M, Orange</td>
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<td>Active</td>
<td>Fiber</td>
<td>10 Gb/s</td>
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<td>CBL-SFP+ADC-5M-1-ORG</td>
<td>ETHERNET, SFP+, 10GbE, FIBER, ACTIVE, PULL, 5M, Orange</td>
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<td>SFP+</td>
<td>Active</td>
<td>Fiber</td>
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<td>CBL-SFP+ADC-10M</td>
<td>ETHERNET, SFP+, 10GbE, FIBER, ACTIVE, PULL, 10M</td>
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<th>SMCI P/N</th>
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<tr>
<td>CBL-NTWK-0417-01</td>
<td>ETHERNET, QSFP, 40GbE, PASSIVE, 1M, 30AWG</td>
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<td>Copper</td>
<td>40 Gb/s</td>
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<td>CBL-NTWK-0425-02</td>
<td>ETHERNET, QSFP, 40GbE, PASSIVE, 2M, 26AWG</td>
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<td>QSFP+</td>
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<td>Copper</td>
<td>40 Gb/s</td>
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<tr>
<td>CBL-NTWK-0446-01</td>
<td>ETHERNET, QSFP, 40GbE, PASSIVE, 3M, 28AWG</td>
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<td>QSFP+</td>
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<td>40 Gb/s</td>
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<tr>
<td>CBL-NTWK-0422-01</td>
<td>ETHERNET, QSFP, 40GbE, PASSIVE, 5M, 26AWG</td>
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<td>40 Gb/s</td>
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### External Copper 40 Gb/s to 4x 10 Gb/s

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<tr>
<td>CBL-NTWK-0719</td>
<td>ETHERNET, 40GbE/QSFP+ to 4x 10GbE/SFP+, PASSIVE, 1M, 30AWG</td>
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<td>Passive</td>
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<td>40G to 4x 10G</td>
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<td>CBL-NTWK-0720</td>
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<tr>
<td>CBL-NTWK-0721</td>
<td>ETHERNET, 40GbE/QSFP+ to 4x 10GbE/SFP+, PASSIVE, 5M, 25AWG</td>
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### External Fiber 40 Gb/s

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<tr>
<td>CBL-QSFP+AOC-1M</td>
<td>IB-ETHERNET, QSFP, ODR, 40GbE, FIBER, ACTIVE, PULL, 1M</td>
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<td>QSFP+</td>
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<td>40 Gb/s</td>
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<td>CBL-QSFP+AOC-5M-1</td>
<td>ETHERNET, QSFP, ODR, 40GbE, FIBER, ACTIVE, PULL, 5M</td>
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<td>QSFP+</td>
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<td>ETHERNET, QSFP, ODR, 40GbE, FIBER, ACTIVE, PULL, 10M</td>
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### External Copper 12 Gb/s

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<tr>
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<td>MINI SAS HD, 12G, EXT, 1M, 28AWG</td>
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<td>CBL-SAST-0600-1</td>
<td>MINI SAS HD, 12G, EXT, 2M, 30AWG</td>
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<td>CBL-SAST-0677</td>
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<td>CBL-SAST-1035-1</td>
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<td>CBL-SAST-1036-1</td>
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### Internal Copper 12 Gb/s – Oculink 1.0

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<td>CBL-SAST-0972</td>
<td>OcuLink v 1.0 source to MiniSAS HD, INT, PCI-E, 70CM,34AWG</td>
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<td>OcuLink 1.0</td>
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<tr>
<td>CBL-SAST-0847</td>
<td>OcuLink v 1.0, INT, PCI-E NVMe SSD, 76CM,34AWG</td>
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<td>OcuLink 1.0</td>
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<tr>
<td>CBL-SAST-0818</td>
<td>OcuLink v 1.0, INT, PCI-E NVMe SSD, 55CM,34AWG</td>
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<td>CBL-SAST-0974-1</td>
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### Internal Copper 6 Gb/s

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<td>SATA, INT, ROUND, ST-ST, 21CM, 30AWG</td>
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<td>CBL-0483L</td>
<td>SATA, INT, ROUND, ST-ST, 29CM, 30AWG</td>
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<td>7-Pin SATA</td>
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<tr>
<td>CBL-0484L</td>
<td>SATA, INT, ROUND, ST-ST, 55CM, 30AWG</td>
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<tr>
<td>CBL-0481L</td>
<td>SATA, INT, ROUND, ST-ST, 81CM, 30AWG</td>
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<td>7-Pin SATA</td>
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<tr>
<td>CBL-0109L-02</td>
<td>MINI SAS, INT, 22CM, 26AWG</td>
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<td>CBL-0421L</td>
<td>MINI SAS, INT, 55CM, 26AWG</td>
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<td>CBL-0281L-01</td>
<td>MINI SAS, INT, 75CM, 30AWG</td>
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### Internal Copper 12 Gb/s

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<td>MINI SAS HD, INT, 25CM, 30AWG</td>
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<td>CBL-SAST-0532</td>
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<td>CBL-SAST-0531</td>
<td>MINI SAS HD, INT, 80CM, 30AWG</td>
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<td>CBL-SAST-0623</td>
<td>MINI SAS HD, INT, 45CM, 85 OHM, 30AWG</td>
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<tr>
<td>CBL-SAST-0590</td>
<td>MINI SAS HD, INT, 70CM, 30, 85 OHM, 30AWG</td>
<td>70</td>
<td>miniSAS HD</td>
<td>Passive</td>
<td>Copper</td>
</tr>
<tr>
<td>CBL-SAST-0957</td>
<td>MiniSAS HD to PCI-E SFF-8639 w/ Power, 55CM, 45CM,34 AWG</td>
<td>55</td>
<td>miniSAS HD</td>
<td>Passive</td>
<td>Copper</td>
</tr>
<tr>
<td>CBL-SAST-0956</td>
<td>OcuLink v1.0 to PCI-E SFF-8639 w/ Power, 55CM, 34 AWG</td>
<td>55</td>
<td>OcuLink to</td>
<td>Passive</td>
<td>Copper</td>
</tr>
<tr>
<td>CBL-SAST-1011</td>
<td>OcuLink v1.0 to PCI-E SFF-8639 w/ Power, 75CM, 34 AWG</td>
<td>75</td>
<td>OcuLink to</td>
<td>Passive</td>
<td>Copper</td>
</tr>
</tbody>
</table>

---

Cables

SuperServer® Solutions - June 2021
100G 48-port Intel® Omni Path Top-of-Rack Switch SSH-C48Q
High Performance, High Density, Low latency, 100-Gigabit Intel® Omni Path Architecture, Meets the Most Demanding Applications for HPC.

Supermicro SuperSwitch Solution Benefit Highlights
- 1U TOR 100 Gb/s 48-Port
- 9.6 Tbps Switching Capacity
- Optimized for High Message Rates and Low End-to-End Latency
- Out-of-Band Fabric Management Card (Optional)
  - Ethernet (10/100/1000 Base-T) and USB Serial Console
  - Redundant Hot-Pluggable 750W Platinum Level Power Supplies
  - Redundant Cooling

The Supermicro SSH-C48Q 1U 48-port top-of-rack network SuperSwitch supports the 100Gbps Intel® Omni Path Architecture (OPA) providing a unique HPC cluster solution offering excellent bandwidth, latency and message rates that is highly scalable and easily serviceable.

The SSH-C48Q leverages the Intel Scalable System Framework (SSF) to address evolving demands across high performance data analytics, machine learning, visualization, traditional modeling and simulation workloads. Designed specifically for HPC, the 48-port SSH-C48Q offers 9.6 Tbps total fabric bandwidth and high scalability with the capability of 27,648 nodes in a 2-tier configuration. The Supermicro SSH-C48Q is designed to overcome the scaling challenges of large-sized clusters.

High Message Rate Throughput
The SSH-C48Q is designed to support high message rate traffic from each node through the fabric. That means the fabric can support the high bandwidth as well as high message rate throughput associated with the ever-increasing processing power and core counts of Intel® Xeon® Processor and Coprocessors.

48-port Switch ASIC
With a 48-port design the SSH-C48Q provides improved fabric scalability, reduced latency, increased density, reduced cost, and lower power demand. It is the basis of the SSH-C48Q capacity of 9.6 Tbps fabric bandwidth and high scalability to 27,648 nodes in 2-tier configurations.

Deterministic Latency
Features in the Intel OPA optimize the performance impacts of large Maximum Transmission Units (MTUs) on small messages. They help maintain consistent latency for inter-process communication (IPC) messages, such as Message Passing Interface (MPI) messages, when large messages—typically storage—are being simultaneously transmitted in the fabric. Intel® OPA can bypass lower priority large packets, giving higher priority to small packets, creating a lower and more predictable latency through the fabric.

Enhanced End-to-End Reliability
The Supermicro SSH-C48Q also delivers its own unique error detection and correction which is more efficient than the forward error correction (FEC) defined in the InfiniBand standard. Enhancements include zero load for detection - if a correction is required, packets only need to be retransmitted from the last link—not all the way from the sending node. This gives near-zero additional latency.

<table>
<thead>
<tr>
<th>Ports</th>
<th>48 x 100 Gb/s ports – QSFP28</th>
<th>48 x 100 Gb/s ports – QSFP28</th>
<th>9.6 Tbps total fabric bandwidth</th>
<th>Configurable MTU size of 2KB, 4KB, 8KB, or 10KB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RJ45 1G optional management port</td>
<td>RJ45 1G optional management port</td>
<td>Optimized high message rate</td>
<td>Maximum multicast table size: 8192 entries</td>
</tr>
<tr>
<td></td>
<td>USB serial console port</td>
<td>USB serial console port</td>
<td>Optimized error detection/correction and low latency</td>
<td>Maximum unicast table size: 49151 entries</td>
</tr>
<tr>
<td></td>
<td>Switching capacity</td>
<td>Switching capacity</td>
<td>Capability of 27,648 nodes in 2-tier configuration</td>
<td>Passive copper or active fiber cables</td>
</tr>
<tr>
<td></td>
<td>Virtual lanes: Configurable from one to eight VLs plus one management VL</td>
<td>Virtual lanes: Configurable from one to eight VLs plus one management VL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>Out-of-band management card (optional)</td>
<td>Out-of-band management card (optional)</td>
<td>Enables Serial Console through USB Serial Port</td>
<td>Enables Serial Console through USB Serial Port</td>
</tr>
<tr>
<td></td>
<td>Enables Command Line Interface and Chassis Management GUI through 10/100/1000 Base-T Ethernet</td>
<td>Enables Command Line Interface and Chassis Management GUI through 10/100/1000 Base-T Ethernet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical/Environmental</td>
<td>Dimensions 17.2” W x 16.6” D x 1.72” H</td>
<td>Dimensions 17.2” W x 16.6” D x 1.72” H</td>
<td>Operating Temperature: 0°C to 40°C (32°F to 104°F)</td>
<td>Operating Temperature: 0°C to 40°C (32°F to 104°F)</td>
</tr>
<tr>
<td></td>
<td>Weight 16 lbs / 7.26 kg</td>
<td>Weight 16 lbs / 7.26 kg</td>
<td>Forward Direction Air Flow</td>
<td>Forward Direction Air Flow</td>
</tr>
<tr>
<td>Power</td>
<td>Redundant Hot-Pluggable 750W Platinum Level Power Supplies</td>
<td>Redundant Hot-Pluggable 750W Platinum Level Power Supplies</td>
<td>Power consumption:</td>
<td>Power consumption:</td>
</tr>
<tr>
<td></td>
<td>AC Input: 100-127V/200-240 V, 50-60 Hz</td>
<td>AC Input: 100-127V/200-240 V, 50-60 Hz</td>
<td>- 210 W (Copper)</td>
<td>- 210 W (Copper)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 380 W (All max 3W Optical)</td>
<td>- 380 W (All max 3W Optical)</td>
</tr>
</tbody>
</table>
## Layer 2/3 Ethernet Switches

Enterprise-class performance with advanced switching capabilities in a 1U form factor. Highly cost-effective 1/10-Gigabit Ethernet Networking – Standalone or Top-of-Rack.

### Port Attributes

<table>
<thead>
<tr>
<th>Model</th>
<th>SSE-X3348S/SR</th>
<th>SSE-X3348T/TR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port Attributes</td>
<td>• 48 Ten-Gigabit Ethernet ports - SFP+ Connectors</td>
<td>• 48 Ten-Gigabit Ethernet ports - 10GBase-T RJ45 connectors</td>
</tr>
<tr>
<td></td>
<td>• 4 Forty-Gigabit Ethernet ports - QSFP Connectors</td>
<td>• 4 Forty-Gigabit Ethernet ports - QSFP Connectors</td>
</tr>
<tr>
<td></td>
<td>• 2 One-Gigabit Ethernet ports - RJ45 Connectors</td>
<td>• 2 One-Gigabit Ethernet ports - RJ45 Connectors</td>
</tr>
<tr>
<td></td>
<td>• Out-of-band RS-232 Management port</td>
<td>• Out-of-band RS-232 Management port</td>
</tr>
<tr>
<td></td>
<td>• Energy Efficient Ethernet-IEEE 802.3az</td>
<td>• Energy Efficient Ethernet-IEEE 802.3az</td>
</tr>
</tbody>
</table>

### Switching Capacity

- 1284 Gb/s
- 1284 Gb/s

### Stacking Performance

- Power Consumption: 326W (Redundant Power Supplies) + Reverse airflow model available
- Weight: 18.1 lbs / 8.2 kg
- Dimensions (WxDxH): 438 x 473 x 43mm (17.3” x 18.6” x 1.7”)
- Availability: Spanning Tree (802.1D) + Multiple Spanning Trees (802.1s)

### VLAN Attributes

- 802.1Q tagging, port and protocol based
- Dynamic VLAN Support (GVRP)
- 4K Static VLANs
- 802.1Q tagging, port and protocol based
- Dynamic VLAN Support (GVRP)
- 4K Static VLANs

### Quality of Service and DiffServ

- 8 priority queues per port
- Adjusted WRR and Strict Priority Scheduling
- Layer 2, 3, 4 Prioritization
- Marking
- Metering / Rate limiting

### Switching Features

- Link Aggregation - 24 groups with 8 members per group
- MLAG support
- LACP Support
- Link Layer Discovery Protocol (802.1AB)
- Jumbo Frames up to 9KB
- Port Mirroring – N to 1, Tx & Rx Configurable

### Routing Features

- Static Routing, RIP v1/v2, RIPng, OSPF v1/v2/v3 and BGP
- IPv4 and IPv6 Routing
- VRRP (Virtual Router Redundancy Protocol)
- DVMRP (Distance Vector Multicast Routing Protocol)

### Multicast

- IGMP Snooping v1, v2, v3
- IGMP v1, v2, v3
- PIM SM, PIM DM
- PIM Smv6

### Security Features

- 802.3x Port Based Authentication
- Switch access password protection
- Layer 2, 3, 4 Access Control Lists (256 rules)
- RADIUS and TACACS+ Authentication
- SSH, SSL Encryption

### Management Features

- Web-based management interface – HTTP/HTTPS
  - Telnet
  - SNMP
- Industry standard CLI with telnet, SSH, or local management port
  - Scripting capability
  - Command completion
  - Context-sensitive “Help”
- Multiple levels of user privilege (CLI and Web UI)
- SNMP v1, v2, v3
- Four RMON Groups - (1, 2, 3 and 9)
- Logging – syslog
- Dual firmware images
- Configuration file - upload / download

### Operating Temperature

- 0 – 40°C
- 0 – 47°C

---

**Supervisor Solutions - June 2021**
Non-blocking connectivity, 1U form factor for flexible installation

New!
Convenient, Cost-effective way to ease the transition from 10G to 25G Ethernet

### Model Attributes

<table>
<thead>
<tr>
<th>Model</th>
<th>Port Attributes</th>
<th>Switching Capacity</th>
<th>Power Consumption</th>
<th>Weight</th>
<th>Dimensions (WxDxH)</th>
<th>Availability</th>
<th>VLAN</th>
</tr>
</thead>
</table>
| SSE-F3548SR (54 Ports) | • 48 Twenty-Five Gigabit Ethernet Ports - SFP28 Connectors  
 • 6 100G Ethernet Ports - QSFP28 Connectors  
 • 1 One-Gigabit Ethernet ports - RJ45 Connector  
 • 1 RJ4S Console port  
 • 1 USB port  
 • Reverse Airflow | 3.6Tb                | <400W (Redundant Power Supplies) | 18.1 lbs / 8.2 kg | 445 x 515 x 43.5mm (17.5” x 20.2” x 1.7”) | Multiple Spanning Tree (802.1D) | 4K Static VLANs  
 802.1Q tagging, port and protocol based |
| SSE-F3548S (54 Ports)   | • 48 Twenty-Five Gigabit Ethernet Ports - SFP28 Connectors  
 • 6 100G Ethernet Ports - QSFP28 Connectors  
 • 1 One-Gigabit Ethernet ports - RJ45 Connector  
 • 1 RJ4S Console port  
 • 1 USB port | | | | | |

### Quality of Service and DiffServ

- 8 priority queues per port
- Metering / Rate limiting
- COS
- QoS (with DiffServ)
- Storm Control
- Flow Control
- Marking

### Switching Features

- 64K MAC address entries
- Jumbo frames up to 9kB
- Spanning tree
- Link Aggregation
- LACP Support
- MLAG
- Storm protection
- Loop Protection
- Port Mirroring - N to 1, Tx & RX

### Routing Features

- Future Release

### Multicast

- IGMP Snooping v1, v2, v3

### Security Features

- RADIUS and TACACS+ Authentication
- SSH/SSL Encryption
- Switch acces password protection
- ACL

### Management Features

- Multiple levels of user privilege (CLI and Web UI)
- DHCP Client
- Logging - syslog
- Configuration file - upload / download
- Multiple configuration file upload / download by TFTP and HTTP
- NTP
- Software upgrade/download
- SNMP v1, v2, v3
- Uplink Failure Detection
- Web-based management interface HTTP/HTTPS
- OpenConf
- RESTCONF

### Operating Temperature

- 0°C ~ 45°C (32°F - 113°F)
With these bare metal switches Supermicro customers have the opportunity to choose the hardware/software combination that best suits their own individual networking environment. And with Supermicro product reliability and support, customers can rest assured that their investment is truly protected.

<table>
<thead>
<tr>
<th>Model</th>
<th>SSE-G3648B/BR</th>
<th>SSE-X3648S/SR</th>
<th>SSE-C3632S/SR</th>
</tr>
</thead>
</table>
| Port Specifications | • 48 x 1Gbps Ethernet RJ45 ports  
• 4 x 10Gbps Ethernet SFP+ ports  
• RJ-45 Ethernet management port  
• RJ45 (for console cable)  
• 48x Ten-Gigabit Ethernet ports – SFP+  
• 6x Forty-Gigabit Ethernet ports – QSFP+  
• RJ-45 (for console cable)  
• RJ-45 1G Ethernet Management Port  
• USB | • 48x Ten-Gigabit Ethernet ports – SFP+  
• 6x Forty-Gigabit Ethernet ports – QSFP+  
• RJ-45 (for console cable)  
• RJ-45 1G Ethernet Management Port  
• USB | • 32 x 40Gbps Ethernet QSFP28 ports  
• 32 x 100Gbps Ethernet QSFP28 ports  
• 1 x 10Gbps Ethernet SFP+ ports  
• RJ-45 Gigabit Ethernet management port  
• RJ-45 serial console  
• Type A USB 2.0 port |
| Data Forwarding | • Switching Capacity – 176 Gbps  
• Helix4 Switch Chip  
• Wire-speed Layer 3 Routing  
• 1:1 Non-blocking connectivity | • Switching Capacity – 1440 Gbps  
• Trident II Switch Chip  
• Wire-speed Layer 3 Routing  
• 1:1 Non-blocking connectivity | • Switching Capacity - 6.4Tbps  
• Tomahawk Switch Chip  
• Wire-speed Layer 3 Routing  
• 1:1 Non-blocking connectivity |
| Control Plane   | • Intel® CPU  
• 2GB DRAM  
• 8GB SSD  
• ONIE  
• Cumulus Linux Ready | • Intel® CPU  
• 4GB DRAM  
• 16GB SSD  
• ONIE  
• Cumulus Linux Ready | • Intel® CPU  
• 4GB DRAM  
• 16GB SSD  
• ONIE  
• Cumulus Linux Ready |
| Power           | • Hot-pluggable 200W power supply  
• Optional second redundant power supplies  
• AC Input: 100-127/200-240 V, 50/60 Hz  
• Power Consumption: < 85.2 Watts | • Redundant, hot-pluggable, 460W power supplies  
• AC Input: 100-127/200-240 V, 50/60 Hz  
• Power Consumption: 305 Watts | • Redundant, hot-pluggable, 800W power supplies  
• AC Input: 100-127/200-240 V, 50/60 Hz  
• Power Consumption: 650 Watts |
| Physical/Environmental | • Weight: Net weight: 8.18kg (with 2 PSUs)  
• Regular and Reverse Airflow Models  
• Size (W x D x H): 434 x 320 x 44 mm (17.1 x 11.2 x 1.73 in.)  
• Temperature: Operating 0°C to 45 °C (32°F to 113°F)  
• Humidity - Operating: 5% to 95% (non-condensing) | • Weight: Net weight: 10.13kg (22.29 lb with 2 PSUs)  
• Regular and Reverse Airflow Models  
• Size (W x D x H): 434 x 550 x 44 mm (17.1 x 21.6 x 1.73 inches)  
• Temperature: Operating 0°C to 40 °C (32°F to 104°F)  
• Humidity - Operating: 5% to 95% (non-condensing) | • Weight: Net weight: 10.18kg (22.29 lb with 2 PSUs)  
• Regular and Reverse Airflow Models  
• Size (W x D x H): 434 x 520 x 44 mm (17.1 x 20.47 x 1.73 inches)  
• Temperature: Operating 0°C to 40 °C (32°F to 104°F)  
• Humidity - Operating: 5% to 95% (non-condensing) |
| General         | • Bare metal - ONIE Installed  
• 1U form factor for flexible installation  
• Mounting Flanges (included) | • Bare metal - ONIE Installed  
• 1U form factor for flexible installation  
• Mounting Rails (included) | • Bare metal - ONIE Installed  
• 1U form factor for flexible installation  
• Mounting Rails (included) |
| Optional Power Supply | • PWS-FRU-G3648-1F  
Second (for redundancy) power supply for SSE-G3648 Ethernet Switch. Forward Airflow  
• PWS-FRU-G3648-1R  
Second (for redundancy) power supply for SSE-G3648R Ethernet Switch. Reverse Airflow | | |
### Naming Guide

#### 2.5" Hard Drives

<table>
<thead>
<tr>
<th>Character</th>
<th>Representation</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Form Factor</td>
<td>1 = 1U</td>
</tr>
<tr>
<td>2nd</td>
<td>Reserved</td>
<td>0 = Reserved</td>
</tr>
<tr>
<td>3rd</td>
<td>Generation</td>
<td>2 = Dual processor</td>
</tr>
<tr>
<td>4th</td>
<td>System Generation</td>
<td>9 = X11 Series</td>
</tr>
<tr>
<td>5th</td>
<td>Chipset</td>
<td>B = BigTwin</td>
</tr>
<tr>
<td>6th</td>
<td>HDD Interface</td>
<td>70 = 2908</td>
</tr>
<tr>
<td>7th</td>
<td>Power Redundancy</td>
<td>71 = 2108</td>
</tr>
<tr>
<td>8th</td>
<td>Connectivity</td>
<td>F: IB FDR / 40G Ethernet</td>
</tr>
<tr>
<td>9th</td>
<td>Power Type</td>
<td>R = Redundant Power Supplies</td>
</tr>
<tr>
<td>10th</td>
<td>Others</td>
<td>+ = 24 DIMM (X10) / 16 DIMM (older X9)</td>
</tr>
</tbody>
</table>

#### 3.5" Hard Drives

<table>
<thead>
<tr>
<th>Character</th>
<th>Representation</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Form Factor</td>
<td>1 = 1U</td>
</tr>
<tr>
<td>2nd</td>
<td>Reserved</td>
<td>0 = Reserved</td>
</tr>
<tr>
<td>3rd</td>
<td>Form Factor</td>
<td>1 = 1U</td>
</tr>
<tr>
<td>4th</td>
<td>Generation</td>
<td>9 = X11 Series</td>
</tr>
<tr>
<td>5th</td>
<td>Chipset / System Platform</td>
<td>B = BigTwin</td>
</tr>
<tr>
<td>6th</td>
<td>Interface / Other</td>
<td>70 = 2008</td>
</tr>
<tr>
<td>7th</td>
<td>Interface / Other</td>
<td>71 = 2108</td>
</tr>
<tr>
<td>8th</td>
<td>Connectivity</td>
<td>F: IB FDR / 40G Ethernet</td>
</tr>
<tr>
<td>9th</td>
<td>Power Type</td>
<td>R = Redundant Power Supplies</td>
</tr>
<tr>
<td>10th</td>
<td>Others</td>
<td>+ = 24 DIMM (X10) / 16 DIMM (older X9)</td>
</tr>
</tbody>
</table>

### FatTwin Naming Guide

#### FatTwin Servers with 2.5" Hard Drives

<table>
<thead>
<tr>
<th>Character</th>
<th>Representation</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Product Series</td>
<td>F = FatTwin</td>
</tr>
<tr>
<td>2nd</td>
<td>Number of processor(s)</td>
<td>5 = UP</td>
</tr>
<tr>
<td>3rd</td>
<td>Tray Height / Form Factor</td>
<td>1 = 1U</td>
</tr>
<tr>
<td>4th</td>
<td>System Generation</td>
<td>9 = X11 Series</td>
</tr>
<tr>
<td>5th</td>
<td>Chipset / Socket / Platform</td>
<td>P = Socket P</td>
</tr>
<tr>
<td>6th</td>
<td>HDD/Tray Form Factor</td>
<td>2 = Half width tray with 2.5&quot; drives</td>
</tr>
<tr>
<td>7th</td>
<td>I/O Direction</td>
<td>F = Front I/O</td>
</tr>
<tr>
<td>8th</td>
<td>Controller Interface</td>
<td>B = Rear HDOs</td>
</tr>
<tr>
<td>9th and 10th</td>
<td>Additional</td>
<td>B = Rear HDOs</td>
</tr>
</tbody>
</table>

#### FatTwin Servers with 3.5" Hard Drives

<table>
<thead>
<tr>
<th>Character</th>
<th>Representation</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Product Series</td>
<td>F = FatTwin</td>
</tr>
<tr>
<td>2nd</td>
<td>Number of processor(s)</td>
<td>5 = UP</td>
</tr>
<tr>
<td>3rd</td>
<td>Tray Height / Form Factor</td>
<td>1 = 1U</td>
</tr>
<tr>
<td>4th</td>
<td>System Generation</td>
<td>9 = X11 Series</td>
</tr>
<tr>
<td>5th</td>
<td>Chipset / Socket / Platform</td>
<td>P = Socket P</td>
</tr>
<tr>
<td>6th</td>
<td>HDD/Tray Form Factor</td>
<td>3 = Half width tray with 3.3&quot; drives</td>
</tr>
<tr>
<td>7th</td>
<td>I/O Direction</td>
<td>F = Front I/O</td>
</tr>
<tr>
<td>8th</td>
<td>Controller Interface</td>
<td>B = Rear HDOs</td>
</tr>
<tr>
<td>9th and 10th</td>
<td>Additional</td>
<td>B = Rear HDOs</td>
</tr>
</tbody>
</table>
### Ultra Servers with 2.5” Hard Drives

<table>
<thead>
<tr>
<th>Character</th>
<th>Representation</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Form Factor</td>
<td>1 = 1U, 2 = 2U, 3 = 3U, 4 = 4U, 5 = 5U</td>
</tr>
<tr>
<td>2nd</td>
<td>Reserved Digit</td>
<td>0 = Reserved</td>
</tr>
<tr>
<td>3rd</td>
<td>Number of processor slots</td>
<td>1 = Single processor slot, 2 = Dual processor slots, 4 = Quad processor slots, 8 = Oct processor slots (8 way server)</td>
</tr>
<tr>
<td>4th</td>
<td>System Generation</td>
<td>5 = X7 Series, 6 = X8 Series, 7 = X9 Series, 8 = X10 Series, 9 = X11 Series</td>
</tr>
<tr>
<td>5th</td>
<td>Chipset</td>
<td>P = Socket P (X11) / Panther Point (X7), K = Xeon Phi / Socket P, GQ = Quad GPGPU, GR = GPGPU, A = Workstation, B = Bigby / Socket B2, C = Cougar Point, D = Denlow platform, E = Foxhollow, M = Mukitree, B = Socket R, S = Skylake, T = Tylersburg, U = Ultra, UX = Ultra Hyper-Speed, AX = Overclocking</td>
</tr>
<tr>
<td>6th</td>
<td>HDD Interface</td>
<td>3 = SAS (SCU) (X8), 5 = SAS (SCU) (X10), 6 = SAS2 (X8), 70 = LSI 2008, 71 = LSI 2108, 72 = LSI 2208, 73 = LSI 2308, B = Brickland, C = SAS3, C0 = SAS3 IT Mode, C1 = SAS3 HW RAID, D = Data Center Optimized (X10) / Desktop (X8), E = Extension Slot with Riser, E1C = Single SAS3 Expander, H = Hot Swap (X8) / Support x16 device (GPGPU), I = Internal Drives, L = InfiniBand (IB), M = Mini-Chassis, N = NVMe (X10), NT = SATA without UIO (X8), NT = SATA without UIO (X8), P = Internal slot / Passive, T = SATA, U = UIO (X11), W = WIO, X = MaxIO (Socket R) / NVLink (GPGPU)</td>
</tr>
<tr>
<td>7th</td>
<td>Power Redundancy</td>
<td>R = Redundant power supplies, E = Expansion Slot</td>
</tr>
<tr>
<td>8th</td>
<td>Additional</td>
<td>1 = 18/36/24/32/90/32/90 Quad DIMM memory, F = On board BMC (IPMI), T = 10 Gigabit Ethernet, Z = 2nd Gen GPU, 4 = 4 Independent LAN ports</td>
</tr>
</tbody>
</table>

### Ultra Servers with 3.5” Hard Drives

<table>
<thead>
<tr>
<th>Character</th>
<th>Representation</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Number of processor slots</td>
<td>5 = Single processor slot, 6 = Dual processor slots, 7 = Dual processor slots (Tower), 8 = Quad processor slots (4 way Server)</td>
</tr>
<tr>
<td>2nd</td>
<td>Reserved Digit</td>
<td>0 = Reserved</td>
</tr>
<tr>
<td>3rd</td>
<td>Form Factor</td>
<td>1 = 1U, 2 = 2U, 3 = 2U, 4 = 4U</td>
</tr>
<tr>
<td>4th</td>
<td>System Generation</td>
<td>5 = X7 Series, 6 = X8 Series, 7 = X9 Series, 8 = X10 Series, 9 = X11 Series</td>
</tr>
<tr>
<td>5th</td>
<td>Chipset</td>
<td>P = Socket P (X11) / Panther Point (X7), K = Xeon Phi / Socket P, GP = GPU (X11), GQ = Quad GPGPU, GR = GPGPU, A = Workstation, B = Bigby / Socket B2, C = Cougar Point, D = Denlow platform, E = Foxhollow, M = Mukitree, B = Socket R, S = Skylake, T = Tylersburg, U = Ultra, UX = Ultra Hyper-Speed, AX = Overclocking</td>
</tr>
<tr>
<td>6th</td>
<td>HDD Interface</td>
<td>3 = SAS (SCU) (X8), 6 = SAS2 (X8), 70 = LSI 2008, 71 = LSI 2108, 72 = LSI 2208, 73 = LSI 2308, C0 = SAS3 IT Mode, C1 = SAS3 HW RAID, D = Data Center Optimized (X10) / Desktop (X8), E = Extension Slot with Riser, E1C = Single SAS3 Expander, H = Hot Swap (X8) / Support x16 device (GPGPU), I = Internal Drives, M = Mini-Chassis, N = NVMe (X10), NT = SATA without UIO (X8), NT = SATA without UIO (X8), P = Internal slot / Passive, T = SATA, U = UIO (X8), W = WIO, X = MaxIO (Socket R) / NVLink (GPGPU)</td>
</tr>
<tr>
<td>7th</td>
<td>Power Redundancy</td>
<td>R = Redundant power supplies, E = Expansion Slot</td>
</tr>
<tr>
<td>8th</td>
<td>Additional</td>
<td>1 = 18 DIMM (X8) / 24 DIMM (X9,X10) / FPGA (X11), 2 = 2 LAN ports, 4 = 4 LAN ports, B = 8 Internal Drives, F = IPMI (onboard BMC) (X7, X8), N# = Xeon Phi 72## Processor, P = SEP+, T = 10GbE</td>
</tr>
</tbody>
</table>
### SuperStorage with 2.5” Hard Drives

<table>
<thead>
<tr>
<th>Character</th>
<th>Representation</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Form Factor</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>2 = 2U</td>
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<tr>
<td></td>
<td></td>
<td>3 = 3U</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 = 4U</td>
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<tr>
<td>2nd</td>
<td>Reserved</td>
<td>0 = Reserved</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = MegaDC</td>
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<tr>
<td>3rd</td>
<td>CPU</td>
<td>1 = UP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = DP</td>
</tr>
<tr>
<td>4th</td>
<td>System Generation</td>
<td>9 = X11 Series</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 = X10 Series</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7 = X9 Series</td>
</tr>
<tr>
<td>5th</td>
<td>Socket / Family</td>
<td>P = Socket P</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R = Socket R</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D2 = Socket F / 2-Core</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D4 = Socket F / 4-Core</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D8 = Socket F / 8-Core</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T = Tylersberg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A = Atom SoC</td>
</tr>
<tr>
<td>6th</td>
<td>Interface Type</td>
<td>A: Direct Attached</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AC: Direct Attached SAS3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DC: Dual Motherboard SAS3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E1: Single Expander</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E1C: Single SAS3 Expander</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E2: Dual Expander</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E2C: Dual SAS3 Expander</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N: NVMe</td>
</tr>
<tr>
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<td>Power Redundancy</td>
<td>R = Redundant Power Supplies</td>
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<tr>
<td>8th</td>
<td>Additional</td>
<td># #: Number of drive bays</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4: Quad LAN ports</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L: IT Mode</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H: Hardware RAID</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N: Hardware RAID &amp; 24 DIMMs (X9/X10) / NVMe (X10 Simply Double)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NV: NVDIMM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T: HW RAID up to 16 drives</td>
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</tbody>
</table>

### SuperStorage with 3.5” Hard Drives

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<thead>
<tr>
<th>Character</th>
<th>Representation</th>
<th>Options</th>
</tr>
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<tbody>
<tr>
<td>1st</td>
<td>CPU</td>
<td>5 = UP</td>
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<tr>
<td></td>
<td></td>
<td>6 = DP</td>
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<td></td>
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<td>7 = DP (Tower)</td>
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<td></td>
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<td>1 = MegaDC</td>
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<td>3rd</td>
<td>Form Factor</td>
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<td>3 = 3U</td>
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<td>4 = 4U</td>
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<td>4th</td>
<td>System Generation</td>
<td>9 = X11 Series</td>
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<td></td>
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<td>8 = X10 Series</td>
</tr>
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<td></td>
<td></td>
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<tr>
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<td>Socket / Family</td>
<td>P = Socket P</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>E2: Dual Expander</td>
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<tr>
<td></td>
<td></td>
<td>E2C: Dual SAS3 Expander</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N: NVMe</td>
</tr>
<tr>
<td>7th</td>
<td>Power Redundancy</td>
<td>R = Redundant Power Supplies</td>
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<td>Additional</td>
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<td></td>
<td>NV: NVDIMM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T: HW RAID up to 16 drives</td>
</tr>
</tbody>
</table>
### Network Adapter

<table>
<thead>
<tr>
<th>Character</th>
<th>Representation</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Product Family</td>
<td>AOC = Add On Card</td>
</tr>
</tbody>
</table>
| 2nd       | Form Factor    | U = URO  
S = Standard  
P = Proprietary  
C = MicroLP  
M = Supermicro IO Module (SIOM)  
MH = SIOM Hybrid |
| 3rd       | Product Type/Speed | G = GbE (1Gb/s)  
TG = 10GbE (10Gb/s)  
IBF = IB FDR (56Gb/s)  
IBQ = IB QDR (40Gb/s)  
HFI = Host Fabric Interface (100Gb/s) |
| 4th       | Chipset Model (optional) | N = Niantec (82599)  
F = Fortville (XL710/X710)  
S = Sageville (X550) |
| 5th       | Chipset Manufacturer (optional) | i = Intel  
b = |
| 6th       | Number of Ports | 1 = 1 port  
2 = 2 ports  
4 = 4 ports |
| 7th       | Connector Type (optional) | S = SFP+/SFP28  
Q = QSFP+  
T = 100Base-T  
C = QSFP28 |

### SIOM Network Adapter

<table>
<thead>
<tr>
<th>Character</th>
<th>Representation</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Product Family</td>
<td>AOC = Add On Card</td>
</tr>
</tbody>
</table>
| 2nd       | Form Factor    | S = Standard  
P = Proprietary  
C = MicroLP  
M = Super IO Module (SIOM)  
MH = SIOM Hybrid |
| 3rd       | Product Type/Speed | G = GbE (1Gb/s)  
TG = 10GbE (10Gb/s)  
IBF = IB FDR (56Gb/s)  
IBQ = IB QDR (40Gb/s)  
HFI = Host Fabric Interface |
| 4th       | Chipset Model (optional) | N = Niantec (82599)  
F = Fortville (XL710/X710)  
S = Sageville (X550) |
| 5th       | Chipset Manufacturer | i = Intel  
b = |
| 6th       | Number of Ports | 1 = 1 port  
2 = 2 ports  
4 = 4 ports |
| 7th       | Connector Type (optional) | S = SFP+/SFP28  
Q = QSFP+  
T = 100Base-T  
C = QSFP28 |

### NVMe Add On Card

<table>
<thead>
<tr>
<th>Character</th>
<th>Representation</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Product Family</td>
<td>AOC = Add On Card</td>
</tr>
<tr>
<td>2nd</td>
<td>Expansion slot interface</td>
<td>S = Standard PCI</td>
</tr>
</tbody>
</table>
| 3rd       | Card height | L = Low Profile  
M = Smaller Profile |
| 4th       | Expansion slot interface version | G3 = PCIe Gen3 |
| 5th       | Ports | 12 = 12 ports  
8 = 8 ports  
4 = 4 ports  
2 = 2 ports |
| 6th       | Protocol | E = NVMe  
H = Hybrid |
| 7th       | Total # of PCIe-E lanes per port (dedicated or distributed) or PCIe-E expansion slot length | 2 = 2 lanes per port  
4 = 4 lanes per port  
8 = 8x slot  
F = 16x slot |
| 8th       | AOC type | R = MiniSAS HD Re-driver  
T = OCuLink Re-timer  
P = OCuLink PX switch (no “P” means MiniSAS HD PX)  
M = M2 Carrier |
| 9th       | Additional | F = Unique form factor |

### Ultra Networking Riser Card

<table>
<thead>
<tr>
<th>Character</th>
<th>Representation</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Product Family</td>
<td>AOC = Add On Card</td>
</tr>
</tbody>
</table>
| 2nd       | Form Factor    | UR = Ultra Riser for 1U  
2UR = Ultra Riser for 2U |
| 3rd       | PCI-E Expansion Slots | 8 = PCI-E x8  
6 = PCI-E x6 |
| 4th       | NVMe Ports (Optional) | N2 = Two NVMe ports  
N4 = Four NVMe ports  
N6 = Six NVMe ports |
| 5th       | LAN Chipset Manufacturer | i = Intel  
b = |
| 6th       | Number of Ports | 1 = One port  
2 = Two ports  
4 = Four ports |
| 7th       | Controller Type | G = GbE  
X = 10Gbe  
T = 25GbE  
Q = 40GbE  
F = 50GbE  
C = 100GbE |
| 8th       | Connector Type (Optional) | S = SFP+  
T = 10GBase-T |
| 9th       | Chipset Model (Optional) | F = Fortville (XL710/X710) |
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