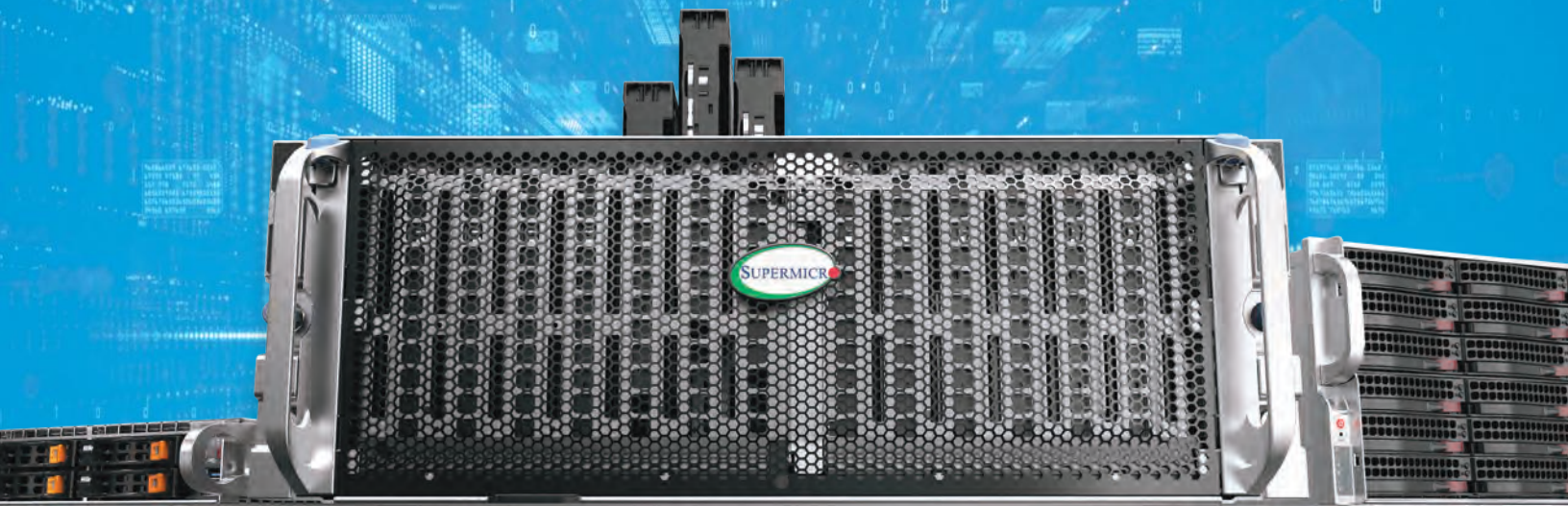




# SuperStorage Systems

Scalable and Flexible NVMe and Hybrid Storage Architectures



Optimize Your Cloud, AI, and 5G Infrastructure  
with the Industry's Broadest Portfolio of All-Flash NVMe,  
Top-Loading, and High-Density Storage Systems



Transform Your Data Center TCO with  
Supermicro servers based on 2nd and 3rd  
Generation Intel® Xeon® Scalable processors

July 2021



## Optimize Your Cloud, AI, and 5G Infrastructure with the Industry's Broadest Portfolio of All-Flash NVMe, Top-Loading, and High-Density Storage Systems

### Industry-leading Petascale Capacity and Density for All-Flash NVMe in 1U

Supermicro 1U Petascale solid-state platforms provide industry-leading density in a 1U profile across a wide choice of NVMe form factors. By offering 32 hot-swappable drives, Petabyte-scale capacity can be achieved to enable an unprecedented combination of storage performance, density, efficiency, and enterprise serviceability. This combination optimizes IOPS per watt and data center footprint, which is ideal for transitioning capacity tiers of storage based on legacy HDDs to all-flash NVMe SSDs.

### Accelerate Workloads with Ultra-High-Throughput Compute-Optimized Storage

Optimize CPU-to-drive ratios to unlock maximum, balanced bandwidth on the latest U.2 and E1.S NVMe drives with Supermicro Ultra and BigTwin® systems.

All-flash NVMe-based configurations deliver extremely high-performance storage

with the highest IOPS per system and per Gigabyte to enable a rich set of data services across your IT infrastructure.

### Unparalleled Flexibility, Density, and Adaptable Architecture for the Cloud

The Supermicro top-loading storage family combines best-in-class cost per Terabyte and a new adaptable dual-node modular design to enable unparalleled system flexibility, serviceability, and cost- optimization for better data center agility, scalability, and storage density in multi-cloud environments.

### Application-Optimized Solutions without Compromising Affordability or Performance

Gain freedom by leveraging Supermicro's unmatched portfolio of resource-saving and enterprise-grade server and storage building blocks to design and build your custom solutions without compromising affordability and performance.

# 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 pull-out drive drawer design

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

### Adaptable Dense Storage Architectures for Cloud



1U 12x Drives 	2U 12x Drives 	2U 16x Drives 	2U Simply Double, 24x Drives 	4U 24x Drives 	4U 36x Drives 	4U 60x Top-loading 
SSG-610P-ACR12N4H/L	SSG-620P-ACR12H/L	SSG-620P-ACR16H/L	SSG-620P-EICR24H/L	SSG-640P-E1CR24H/L	SSG-640P-E1CR36H/L	SSG-640SP-E1CR60
4U 90x Top-loading 	4U 60x Top-loading 	4U 90x Top-loading 	1U UP 10 NVMe 	2U UP 12x Drives 	4U UP 36x Drives 	4U UP 45x Drives 
SSG-640SP-E1CR90	SSG-640SP-DE1CR60 SSG-640SP-DE2CR60	SSG-640SP-DE1CR90 SSG-640SP-DE2CR90	SSG-110P-NTR10	SSG-520P-ACR12H SSG-520P-ACR12L	SSG-540P-E1CTR36H SSG-540P-E1CTR36L	SSG-540P-E1CTR45H SSG-540P-E1CTR45L

### Three Families of Storage Servers

#### Enterprise-Optimized:

- Open standards based x86 systems

#### Cloud Density:

- Highest density 3.5" servers with up to 90 HDDs and dual server nodes

#### 1U Petascale:

- All Flash Servers and JBOFs 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 and maintenance with data center operations in mind, X12 servers are optimized for data availability with a new drawer design and hot-swappable drives, power supplies and fans.

### Key Applications

- Object Storage
- Data Intensive HPC/AI
- Private & Hybrid Cloud
- Backup & Active Archive

# CLOUD DENSITY STORAGE

## Adaptable Dense Storage Architectures for Cloud

**Optimized Cost per Terabyte  
for Multi-Cloud Environments**

Easy-to-deploy 45-bay, 60-bay and 90-bay  
Top-Loading storage systems

Double the storage density in a 2U space with  
Simply Double systems

Cost-effective 1U cold storage systems  
supporting 12x 3.5" drives + 4x NVMe drives

Maximum Hot-Swappable Storage Bays

Tiered Storage and I/O Expandability



1U/12 3.5 Data Drives



**SYS-6019P-ACR12L+**

2 CPUs (up to 205W CPU TDP),  
12 DIMMs, DDR4-2933MHz,  
Flexible networking w/ dedicated IPMI,  
800W Platinum Redundant

2U/24 3.5 Drives, Simply Double



**SSG-620P-E1CR24H/L**

2 CPUs (up to 205W CPU TDP),  
16 DIMMs, DDR4-3200MHz,  
2x 10GbE, w/ dedicated IPMI,  
1500W Titanium Redundant

**New! 4U 60-Bay Top-Loading**



**SSG-640SP-E1CR60 (single-node)**  
**SSG-640SP-DE1CR60 (dual-node)**  
**SSG-640SP-DE2CR60 (HA)**  
2 CPUs (up to 205W CPU TDP),  
16 DIMMs DDR4-3200MHz,  
Flexible networking w/ dedicated IPMI,  
Choice of IT Mode / HW RAID,  
2000W/2600W Redundant

**New! 4U 90-Bay Top-Loading**



**SSG-640SP-E1CR90 (single-node)**  
**SSG-640SP-DE1CR90 (dual-node)**  
**SSG-640SP-DE2CR90 (HA)**  
2 CPUs (up to 205W CPU TDP),  
16 DIMMs DDR4-3200MHz,  
Flexible networking w/ dedicated IPMI,  
Choice of IT Mode / HW RAID,  
2000W/2600W Redundant

## Unparalleled Flexibility, Capacity, and Density for the Cloud

The next generation Supermicro Top-Loading Storage family combines best-in-class TCO featuring a new modular design to enable unprecedented levels of flexibility, serviceability, and cost-optimization for improving data center agility, scalability, and storage density in use cases like Backup and Recovery, Deep Archive and Active Archive, Big Data & Analytics, Data Lake, HPC and AI/ML workloads, and Content Repositories.

### Optimized for:

- Hosting & Content Delivery
- Data Replication
- Hyperscale / Hyperconverged
- Data Center
- Software-defined Storage

# HYPER-CONVERGED STORAGE

## Scalable and Ready to Deploy HCI Platforms

**Highest Performance  
Single- and Multi-Node Systems**

Dual socket, up to 270W TDP

Up to 24 DIMM slots DDR4-3200 MHz;  
Up to 4TB flexible onboard networking  
options

Up to 12x 2.5" hot swap NVMe/SAS/SATA;  
Up to 12x 2.5" NVMe hybrid drive bays

Platinum and Titanium Level (96%) efficiency



1U Ultra 12 NVMe



**SYS-120U-TNR**

2 CPUs (up to 270W CPU TDP)  
24 DIMMs DDR4-3200 MHz,  
Ultra Riser Flexible Networking,  
4 PCI-E Slots, 1200W Redundant Power

2U Ultra 24 NVMe



**SYS-220U-TNR**

2 CPUs (up to 270W CPU TDP)  
24 DIMMs DDR4-3200 MHz,  
Quad 10GBase-T 8 PCI-E Slots,  
1600W Redundant Power

2U BigTwin 2-Node, 24 NVMe



**SYS-220BT-DNC8R**

4 Hot-pluggable Nodes  
2 CPUs and 24x DIMMs per Node,  
SIOM Flexible Networking  
2 PCI-E Slots, 2600W Redundant Power

2U BigTwin 4-Node, 24 NVMe



**SYS-220BT-HNTR**

4 Hot-pluggable Nodes  
2 CPUs and 16 DIMMs slots,  
SIOM Flexible Networking  
2 PCI-E Slots, 2600W Redundant Power

## Accelerate Workloads with Ultra-High-Throughput HCI Platforms

Supermicro Storage Servers share one thing in common: they offer the most powerful compute platforms available in the storage industry. Whether serving high-performance scale-out storage environments or high density VM populations, Supermicro systems offer the capability for flexible software-defined deployment and flexible re-assignment to meet changing business requirements.

Lower CPU-to-drive ratios are favorable where mission-critical workloads demand high-performance NVMe SSDs to perform at the lowest latencies possible. Engineered to host the most computationally-demanding storage applications, Supermicro's flagship Ultra SuperServers and BigTwin® multi-node systems enable a wide range of CPU-to-drive ratios to achieve the most optimized balance between performance, storage capacity, bandwidth, and cost-effectiveness.

### Optimized for:

- Object Storage
- Data Intensive HPC/AI
- Private & Hybrid Cloud
- Backup & Active Archive

# ENTERPRISE-OPTIMIZED STORAGE

## Application-Optimized Solutions for Best TCO

**Industry Leading  
Server Building Block Solutions®**

Designed to meet the demands of the toughest storage environments

SuperStorage supports both scale-up and scale-out deployment strategies

Flexible form factors with 1U, 2U, and 4U using 2.5" or 3.5" front and rear loading drives



10x NVMe



**SSG-110P-NTR10**

Single Socket 3rd Gen Intel® Xeon® Scalable processors. Up to 270W CPU TDP, 8 DIMMs; Supports 3DS DDR4-3200, 1 PCI-E 4.0x16 (FHHL) slot, Redundant 860W Platinum Power

24x 2.5" NVMe SBB Storage



**SSG-2029P-DN2R24L**

Redundant DP SBB supporting 24x U.2 Dual-Port NVMe, 12 DIMMs DDR4-2933 Onboard Dual 10GBase-T, Redundant 2000W Titanium Level

12x 3.5" SAS3/SATA



**SSG-6029P-E1CR12H/L**

2 CPUs (up to 205W TDP) 16 DIMMs DDR4-2933 Onboard Dual 10GBase-T, 7 PCI-E Slots (2 occupied) SAS3108 (HW RAID) + JBOD Port Redundant 1200W Titanium Level

Double-sided 36x 3.5" SAS3/SATA3



**SSG-6049P-E1CR36H/L**

2 CPUs (up to 205W TDP) 16 DIMMs DDR4-2933 Onboard Dual 10GBase-T 7 PCI-E Slots (2 occupied) SAS3108 (HW RAID) + JBOD Port Redundant 1200W (Titanium Level)

## Application-Optimized Solutions with Uncompromising Affordability and Performance

Leverage the industry's broadest Server Building Block Solutions® to design and build your application-optimized configurations, for both scale-up and scale-out deployment strategies without compromising affordability or performance.

Enterprise-Optimized Storage Systems are our most popular configurations that serve as a solid foundation to meet diverse application requirements with 2U, 3U and 4U form factors with 2.5" or 3.5" drive bays.

### Optimized for:

- Hosting & Content Delivery
- Enterprise Applications
- Data Warehousing
- General Purpose Computing
- High Availability Storage

# PETASCALE SOLID-STATE STORAGE

## All-NVMe at Petascale in 1U

### Ultra High Capacity All-NVMe Storage Systems and JBOFs

Highest storage throughput performance and application responsiveness

Broad support of advanced form factors including EDSFF and U.2

Petabyte-scale all-flash NVMe storage in 1U for extreme density and capacity

JBOFs are perfect for allocating storage to multiple servers through high-speed cables or through fabric (NVMe-oF), enabling flexibility and lowering TCO



1U 32x NVMe U.2



**SYS-1029P-N32R**  
2 CPUs (up to 140W CPU TDP),  
24 DIMMs DDR4-2933,  
Onboard Dual 10GBase-T,  
2 PCI-E x16 Slots,  
1600W Redundant Power

1U 32x NVMe E1.L



**SSG-1029P-NEL32R**  
2 CPUs (up to 165W CPU TDP),  
24 DIMMs DDR4-2933,  
Onboard Dual 10GBase-T,  
2 PCI-E x16 Slots  
1600W Redundant Power

1U 32x NVMe E1.S



**SSG-1029P-NES32R**  
2 CPUs (up to 205W CPU TDP),  
24 DIMMs DDR4-2933,  
Onboard Dual 10GBase-T,  
2 PCI-E x16 Slots,  
1600W Redundant Power

## Industry-leading Petascale Capacity and Density for All-Flash NVMe in 1U

Supermicro 1U Petascale SuperStorage platforms provide industry-leading density in a 1U profile across a wide choice of NVMe form factors. By offering 32 hot-swappable drives, Petabyte-scale capacity can be achieved in a minimal rack footprint. This next generation storage offers unprecedented storage performance, flash density, and energy efficiency through advancements in thermal design. The EDSFF short solution delivers the best IOPS per Watt performance while the EDSFF long form factor is well positioned to provide the best cost per TB by utilizing QLC and other cost-efficient flash technologies.

The latest Petascale systems offer choice in SSD form-factor with one system supporting 32 E1.L drives with the largest capacity options in front loading storage. The E1.S system offers 32 drives with the thermal efficiency to support the highest TDP Intel® Xeon® Scalable processors. The U.2 based system uniquely enables 32 industry-standard hot-pluggable NVMe drives made accessible through front-mounted dual-drive trays.

### Optimized for:

- Enterprise Applications
- Data Center
- Hyperscale / Hyperconverged
- Software-defined Storage
- Data Warehousing

# JBOD STORAGE

## Full Range of Affordable Expansion Storage

**New!** Cloud-grade design for best serviceability and massive drive density

Designed right with balanced performance and lower cost per capacity

Easy to use storage management via IPMI and interfaces consistent with server practices

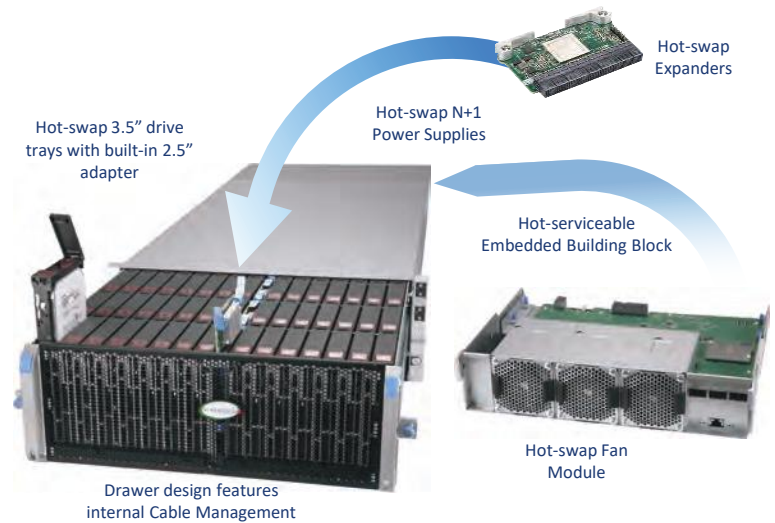
Best-in-class quality with tool-less tray for quick replacement of hot-swap drives

Investment protection with SSD (beyond HDD) support, zero-touch zoning and cascading

Supports up to 12Gbps SAS3 in 2U, 3U or 4U rack sizes for 12- to 90-drive-bay modularity

Market-leading design for Ceph and other popular software

### Top-Loading JBOD Storage Solution



#### Cost Effective Proven Solutions



#### Full-range JBOD Series

- 2U~4U form factor available
- 12/16/24/44/72 Hot-Swap 2.5" or 3.5" SAS3/SATA3 drive bays
- Front and Rear access, Front Only access
- IPMI port and system monitoring

#### High Density Enterprise Optimized



#### Top Loading 45/60/90

- 45/60/90 Hot-Swap 3.5" SAS3/SATA3 bays
- Top Loading drive bay access
- Flexible HDD Zoning
- Individual HDD power cycling
- 25.9"/ 30.2"/ 35.7" Depth

**NEW!**

#### High Density Full Serviceability



#### Top Loading 60/90

- 60/90 Hot-Swap 3.5" SAS3/SATA3 bays
- Top Loading "Drawer" pull-out design
- Passive BPN design, eliminate single point of failure
- No cable-management required
- Complete Field-Replaceable Units available

## Full Range of JBODs for External Storage

Supermicro External Storage systems are designed for deployments where space and access are at a premium, and enable a host of benefits while making data centers software-defined. Distributed expander architecture was developed to unleash the best possible throughput and provide parallel access to dense drive bays without sacrificing thermal dissipation, energy efficiency, or cabling simplicity. This represents a revolution in Direct Attached Storage designed to easily store customers' growing data volumes and to reduce overall storage TCO. Due to shared components with Supermicro servers, JBOD Expansion improves ease-of-use, lowers the TCO and excels at balancing performance and capacity.

Supermicro brings affordability, reliability and serviceability to Data Center storage by integrating drive enclosures into a single intelligent storage solution. External Storage extends the broad portfolio of multi-generation Supermicro servers and third-party systems while allowing a consistent user experience across servers and storage from a single console.

### Key Applications:

- Data-intensive enterprise apps
- Hyper-converged storage nodes
- Kubernetes/Container/Virtualization back-end
- CDN, SaaS infrastructure
- Business Intelligence and Analytics
- Backup and Recovery
- Scale-out and Object Storage
- AI Training and Data Governance
- HPC and Scientific Research
- Healthcare Imaging and Electronic Records
- Video surveillance and Security incident store
- Telco machine data, OSS/BSS data integration
- Media workflow and 4K video repositories

# SUPERCLOUD COMPOSER

Your Gateway to Compose Disaggregated Infrastructure Quickly and Effortlessly

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

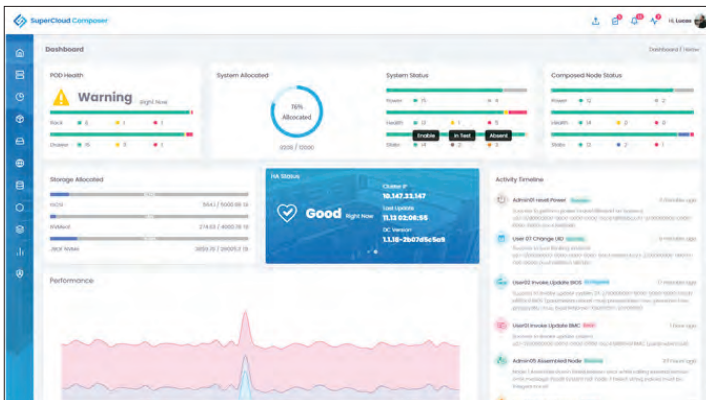
Supermicro's cloud infrastructure management software brings speed, agility, and simplicity to IT administration by integrating data center tasks into a single intelligent management solution.

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

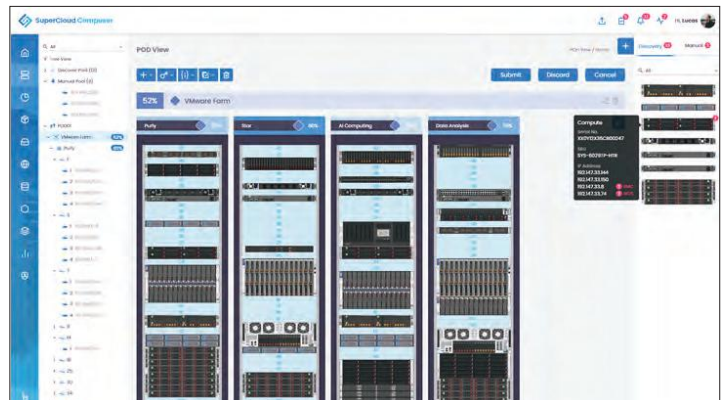
SuperCloud Composer monitors and manages the broad portfolio of multi-generation Supermicro servers and third-party systems through its data center lifecycle management feature set from a single unified console.



Benefits	Features
Cost Savings - Capital Expenditure (CapEx), Operating Expense (OPEX)	<ul style="list-style-type: none"> <li>Expands on optimized Supermicro building block solutions</li> <li>Third Party Vendor Support</li> </ul>
Intelligent Data Center Management	<ul style="list-style-type: none"> <li>Call Home Management</li> <li>POD &amp; Rack-level Management (including ToR switch)</li> <li>Asset Management (Monitoring, Updates)</li> </ul>
Frictionless Deployments	<ul style="list-style-type: none"> <li>Zero Touch Provisioning for Network Configuration</li> <li>Hardware Life Cycle Management for Software Define Data Center</li> <li>Northbound Redfish APIs provides seamless Integration</li> </ul>
Dynamically Configured Servers	<ul style="list-style-type: none"> <li>Zero Touch OS Deployment in Seconds</li> </ul>
Device Scaling of Resources	<ul style="list-style-type: none"> <li>Monitor/Manage Resource Pools in a Composable Disaggregated Infrastructure</li> <li>Software Defined Node Composer</li> <li>Expands storage and accelerators capacities to existing compute nodes</li> <li>Support for 3rd party devices expands available resource selection</li> </ul>
Unified End User Experience Data Driven Decisions	<ul style="list-style-type: none"> <li>Single Pane of Glass for Data Center Deployment</li> <li>Rich Analytics &amp; Telemetry</li> </ul>
Compliance & Governance	<ul style="list-style-type: none"> <li>(SoT) Manage Silicon Root of Trust</li> <li>SSL Security Compliance</li> <li>User Define Role Based Access Control</li> </ul>



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.



The POD 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 is miles away.

# 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



Model	AOC-AG-i4SM	AOC-AG-i2M	AOC-AG-i4M	AOC-ATG-i2TM	AOC-ATG-i2SM	AOC-ATG-i4SM
Description	Quad-Port GbE	Dual-Port GbE	Quad-Port GbE	Dual-Port 10GbE	Dual-Port 10GbE	Quad-Port 10GbE
Port	4x SFP	2x RJ45	4x RJ45	2x RJ45	2x SFP+	4x SFP+
Speed	1Gbps	1Gbps	1Gbps	10Gbps	10Gbps	10Gbps
Controller	Intel® i350-AM4	Intel® i350-AM2	Intel® i350-AM4	Intel® X550-AT2	Intel® X710-BM2	Intel® XL710-BM1
PCI-E	PCI-E 2.1 x4	PCI-E 2.1 x4	PCI-E 2.1 x4	PCI-E 3.0 x4	PCI-E 3.0 x8	PCI-E 3.0 x8
Power	4.4W	3.7W	4.4W	13W	6.2W	7W



Model	AOC-ATG-i2T2SM	AOC-ATGC-i2TM	AOC-A25G-b2SM	AOC-AH25G-m2S2TM	AOC-A25G-m2SM	AOC-A100G-b2CM	AOC-A100G-m2CM
Description	Quad-Port 10GbE	Dual-Port 10GbE	Dual-Port 25GbE	2-Port 25GbE & 2-Port 10GbE	Dual-Port 25GbE	Dual-Port 100GbE	Dual-Port 100GbE
Port	2x RJ45 2x SFP+	2x RJ45	2x SFP28	2x SFP28 2x RJ45	2x SFP28	2x QSFP28	2x QSFP28
Speed	10Gbps	10Gbps	25Gbps	25Gbps / 10Gbps	25Gbps	100Gbps	100Gbps
Controller	Intel® X710-TM4	Intel® X710-AT2	BCM57414	ConnectX-4 Lx EN Intel® X550-AT2	ConnectX6 LX	BCM57508	ConnectX-6 DX
PCI-E	PCI-E 3.0 x8	PCI-E 3.0 x8	PCI-E 3.0 x8	PCI-E 3.0 x8 PCI-E 3.0 x4	PCI-E 4.0/3.0 x8	PCI-E 4.0 x16	PCI-E 4.0 x16
Power	10W	10W	7.7W	25W	15W	20W	TBD

# SUPERSTORAGE SOFTWARE PARTNERS AND SOLUTIONS



## Supermicro Software-Defined Storage Solutions

The storage landscape is evolving from premium priced proprietary hardware and software solutions to open industry standard hardware and the benefits are significant: reduced vendor lock-in, significantly open innovation with new technologies like all NVMe solutions. Supermicro storage systems are the platform of choice for leading storage vendors and major hyperscale datacenters.

Supermicro delivers significant benefits to Software-Defined Storage Solutions:

- **Maximum Efficiency** – High capacity 1U-4U form factors leading the industry with up 95% efficient Platinum level power supplies
- **Maximum Performance and Expandability** – All NVMe support with hybrid expanders delivering up to 20 GB/s throughput
- **Mission Critical Reliability** – Capable of fully redundant and fault-tolerant operation with redundant power supplies, fans, and serverboards with remote management
- **Proven Compatibility** – Deploy validated reference architectures for optimal application performance

# X12 STORAGE

(For Complete System Only)



2U Simply Double, 24x Drives



4U 24x Drives



4U 36x Drives



MODEL	SSG-620P-E1CR24H SSG-620P-E1CR24L	SSG-640P-E1CR24H SSG-640P-E1CR24L	SSG-640P-E1CR36H SSG-640P-E1CR36L
Processor Support	3rd Gen Intel® Xeon® Scalable processors Dual Socket LG-4189 (Socket P+) supported TDP up to 205W CPU; up to 11.2GT/s		
Key Applications	<ul style="list-style-type: none"> <li>Appliance Optimized Storage Building Blocks</li> <li>Corporate Database</li> <li>Database Processing &amp; Storage</li> <li>HPC, Data Center</li> <li>iSCSI SAN</li> <li>Enterprise Server</li> </ul>		
Outstanding Features	<ul style="list-style-type: none"> <li>Support dual Intel® Xeon Scalable CPUs</li> <li>Server remote management: IPMI 2.0/KVM over LAN/Media over LAN</li> <li>High Density platform in 2U rack size</li> <li>Flexible storage media and controller configurations, and support tiering storage (HDD/SSD)</li> <li>Enterprise serviceability with hot-swappable drives and power supplies</li> <li>24 Hot-swap 3.5" SAS3/SATA3 drive bays + 4 NVMe/SATA3 Rear Drive Bays</li> </ul>		
Serverboard	SUPER● X12DSC+	SUPER● X12DPI-NT6	SUPER● X12DPI-NT6
Chipset	Intel® C621A	Intel® C621A	Intel® C621A
System Memory (Max.)	16 DIMM slots Up to 4TB ECC RDIMM/LRDIMM, DDR4-3200MHz	16 DIMM slots Up to 18TB Intel® DCPMM, DDR4-2666MHz Up to 4TB ECC RDIMM/LRDIMM, DDR4-3200MHz	16 DIMM slots Up to 18TB Intel® DCPMM, DDR4-2666MHz Up to 4TB ECC RDIMM/LRDIMM, DDR4-3200MHz
Expansion Slots	PCI-E 4.0 x16 AIOM slot(s) 3 PCI-E 4.0 x16 LP slot(s)	2 PCI-E 4.0 x8 LP slot(s) 4 PCI-E 4.0 x16 LP slot(s)	2 PCI-E 4.0 x8 LP slot(s) 4 PCI-E 4.0 x16 LP slot(s)
Onboard Storage Controller	-E1CR24HL: Intel® SATA Broadcom® 3916 -E1CR24L: Intel® SATA Broadcom® 3816	-E1CR24H: Intel® SATA Broadcom® AOC-S3908L-H8IR -E1CR24L: Intel® SATA Broadcom® AOC-S3808L-L8IT	-E1CR36H: Intel® SATA Broadcom® AOC-S3908L-H8IR -E1CR36L: Intel® SATA Broadcom® AOC-S3808L-L8IT
Connectivity	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550
VGA/Audio	1 VGA port	1 VGA port	1 VGA port
Management	SuperDoctor® 5; Watch Dog; NMI; IPMI 2.0; SUM	IPMI 2.0; NMI; SUM; SuperDoctor® 5; Watch Dog	IPMI 2.0; NMI; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	24x 3.5" hot-swap Simply Double drive bays; Optional RAID support via RAID/HBA Controller AOC	24x 3.5" hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID/HBA controller AOC	36x 3.5" hot-swap NVMe/SATA/SAS drive bays; 4x 3.5" NVMe hybrid; Optional RAID support via RAID/HBA controller AOC
Peripheral Bays	None	None	None
Power Supply	Redundant 1600W Titanium level (96%)	Redundant 1200W Titanium level (96%)	1600W Redundant Power Supplies with PMBus
Cooling System	5x 8cm heavy duty fan(s)	5x 8cm heavy duty fan(s)	7x 8cm heavy duty fan(s)
Form Factor	2U Rackmount Enclosure: 437 x 89 x 866.14mm (17.2" x 3.5" x 34")	4U Rackmount Enclosure: (17.2" x 7" x 26.5") Package: (27" x 15" x 39")	4U Rackmount Enclosure: (17.2" x 7" x 27.5") Package: (27" x 15" x 39")

# X12 STORAGE

(For Complete System Only)

4U 60x Top-loading



4U 90x Top-loading



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



MODEL	SSG-640SP-E1CR60	SSG-640SP-E1CR90
Processor Support	3rd Gen Intel® Xeon® Scalable processors Dual Socket LG-4189 (Socket P+) supported TDP up to 205W CPU; up to 11.2GT/s	3rd Gen Intel® Xeon® Scalable processors Dual Socket LG-4189 (Socket P+) supported TDP up to 205W CPU; up to 11.2GT/s
Key Applications	<ul style="list-style-type: none"> <li>Government Data Protection</li> <li>Content Repositories</li> <li>Financial Services &amp; Healthcare Image Archives</li> <li>Telco &amp; Cloud Service Providers</li> <li>HPC and AI/ML Workloads</li> <li>Big Data &amp; Analytics, Data Lake</li> </ul>	<ul style="list-style-type: none"> <li>Government Data Protection</li> <li>Content Repositories</li> <li>Financial Services &amp; Healthcare Image Archives</li> <li>Telco &amp; Cloud Service Providers</li> <li>HPC and AI/ML Workloads</li> <li>Big Data &amp; Analytics, Data Lake</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Single Node with High Density in 4U rack space</li> <li>Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN</li> <li>Optional 4 NVMe SSD drives for caching</li> <li>Excellent Serviceability with Modular Design</li> <li>Drive Controller support via Broadcom® 3916 HW RAID or 3616 IT Mode</li> </ul>	<ul style="list-style-type: none"> <li>Single Node with High Density in 4U rack space</li> <li>Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN</li> <li>Optional 4 NVMe SSD drives for caching</li> <li>Excellent Serviceability with Modular Design</li> <li>Drive Controller support via Broadcom® 3916 HW RAID or 3616 IT Mode</li> </ul>
Serverboard	SUPERMICRO® X12DSC-6	SUPERMICRO® 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® AOM-S3616-S-O	Intel® SATA Broadcom® AOM-S3616-S-O
Connectivity	2x 10GbE RJ45 port(s) with X550	2x 10GbE RJ45 port(s) with X550
VGA/Audio	1 VGA port	1 VGA port
Management	IPMI 2.0; NMI; SUM; SuperDoctor® 5; Watch Dog	IPMI 2.0; NMI; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	60x 3.5" hot-swap SATA3/SAS3 drive bays; 4x 2.5" NVMe dedicated; Optional RAID support via RAID/HBA controller AOC 2x 2.5" 7mm drive bays	90x 3.5" hot-swap SATA3/SAS3 drive bays; 4x 2.5" NVMe dedicated; Optional RAID support via RAID/HBA controller AOC 2x 2.5" 7mm drive bays
Peripheral Bays	None	None
Power Supply	2000W Redundant Power Supplies with PMBus	2600W Redundant Power Supplies with PMBus
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)

4U 60x Top-loading



4U 90x Top-loading



**NEW!**

3rd Gen  
Intel® Xeon®  
Scalable  
processors  
Supported



MODEL	SSG-640SP-DE1CR60	SSG-640SP-DE1CR90
Processor Support	3rd Gen Intel® Xeon® Scalable processors Dual Socket LG-4189 (Socket P+) supported TDP up to 205W CPU; up to 11.2GT/s	3rd Gen Intel® Xeon® Scalable processors Dual Socket LG-4189 (Socket P+) supported TDP up to 205W CPU; up to 11.2GT/s
Key Applications	<ul style="list-style-type: none"> <li>Government Data Protection</li> <li>Content Repositories</li> <li>Financial Services &amp; Healthcare Image Archives</li> <li>Telco &amp; Cloud Service Providers</li> <li>HPC and AI/ML Workloads</li> <li>Big Data &amp; Analytics, Data Lake</li> </ul>	<ul style="list-style-type: none"> <li>Government Data Protection</li> <li>Content Repositories</li> <li>Financial Services &amp; Healthcare Image Archives</li> <li>Telco &amp; Cloud Service Providers</li> <li>HPC and AI/ML Workloads</li> <li>Big Data &amp; Analytics, Data Lake</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN</li> <li>Excellent Serviceability with Modular Node Design</li> <li>Dual Node Twin Architecture, 2x the Compute (Each node controls 30 drives)</li> <li>Drive Controller support via Broadcom® 3916 HW RAID or 3616 IT Mode</li> </ul>	<ul style="list-style-type: none"> <li>Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN</li> <li>Excellent Serviceability with Modular Node Design</li> <li>Dual Node Twin Architecture, 2x the Compute (Each node controls 45 drives)</li> <li>Drive Controller support via Broadcom® 3916 HW RAID or 3616 IT Mode</li> </ul>
Serverboard	SUPERMICRO® X12DSC-6	SUPERMICRO® 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® AOM-S3616-S-O	Intel® SATA Broadcom® AOM-S3616-S-O
Connectivity	2x 10GbE RJ45 port(s) with X550	2x 10GbE RJ45 port(s) with X550
VGA/Audio	1 VGA port	1 VGA port
Management	IPMI 2.0; NMI; SUM; SuperDoctor® 5; Watch Dog	IPMI 2.0; NMI; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	60x 3.5" hot-swap SATA3/SAS3 drive bays; Optional RAID support via RAID/HBA controller AOC 4x 2.5" 7mm drive bays	90x 3.5" hot-swap SATA3/SAS3 drive bays; Optional RAID support via RAID/HBA controller AOC 4x 2.5" 7mm drive bays
Peripheral Bays	None	None
Power Supply	2600W Redundant Power Supplies with PMBus	2600W Redundant Power Supplies with PMBus
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)

4U 60x Top-loading

4U 90x Top-loading



MODEL	SSG-640SP-DE2CR60	SSG-640SP-DE2CR90
Processor Support	3rd Gen Intel® Xeon® Scalable processors Dual Socket LG-4189 (Socket P+) supported TDP up to 205W CPU; up to 11.2GT/s	3rd Gen Intel® Xeon® Scalable processors Dual Socket LG-4189 (Socket P+) supported TDP up to 205W CPU; up to 11.2GT/s
Key Applications	<ul style="list-style-type: none"> <li>Government Data Protection</li> <li>Content Repositories</li> <li>Financial Services &amp; Healthcare Image Archives</li> <li>Telco &amp; Cloud Service Providers</li> <li>HPC and AI/ML Workloads</li> <li>Big Data &amp; Analytics, Data Lake</li> </ul>	<ul style="list-style-type: none"> <li>Government Data Protection</li> <li>Content Repositories</li> <li>Financial Services &amp; Healthcare Image Archives</li> <li>Telco &amp; Cloud Service Providers</li> <li>HPC and AI/ML Workloads</li> <li>Big Data &amp; Analytics, Data Lake</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN</li> <li>Excellent Serviceability with Modular Node Design</li> <li>Dual Node (HA), Enterprise High Availability (SBB) Architecture (shared storage); 2 Hot Pluggable Nodes</li> <li>Drive Controller support via Broadcom® 3616 IT Mode</li> </ul>	<ul style="list-style-type: none"> <li>Server remote management: IPMI 2.0 / KVM over LAN / Media over LAN</li> <li>Excellent Serviceability with Modular Node Design</li> <li>Dual Node (HA), Enterprise High Availability (SBB) Architecture (shared storage); 2 Hot Pluggable Nodes</li> <li>Drive Controller support via Broadcom® 3616 IT Mode</li> </ul>
Serverboard	SUPERMIC® X12DSC-6	SUPERMIC® 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® AOM-S3616-S-O	Intel® SATA Broadcom® AOM-S3616-S-O
Connectivity		
VGA/Audio	1 VGA port	1 VGA port
Management	IPMI 2.0; NMI; SUM; SuperDoctor® 5; Watch Dog	IPMI 2.0; NMI; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	60x 3.5" hot-swap SATA3/SAS3 drive bays; Optional RAID support via HBA controller AOC 4x 2.5" 7mm drive bays	90x 3.5" hot-swap SATA3/SAS3 drive bays; Optional RAID support via HBA controller AOC 4x 2.5" 7mm drive bays
Peripheral Bays	None	None
Power Supply	2600W Redundant Power Supplies with PMBus	2600W Redundant Power Supplies with PMBus
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")

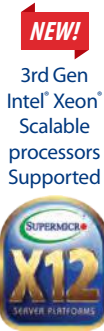
# X12 BIGTWIN®

(For Complete System Only)

6x 2.5" drives/node x 4 Nodes

6x 2.5" drives/node x 4 Nodes

6x 2.5" drives/node x 4 Nodes



MODEL	SYS-220BT-HNC8R	SYS-220BT-HNC9R	SYS-220BT-HNTR
Processor Support	3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA 4189 (Socket P+) supported TDP up to 205W;	3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA 4189 (Socket P+) supported TDP up to 205W;	3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA 4189 (Socket P+) supported TDP up to 205W;
Key Applications	<ul style="list-style-type: none"> <li>All-Flash Hyperconverged Infrastructure</li> <li>Diskless HPC Clusters</li> <li>Container-as-a-Service; Application Accelerator</li> </ul>	<ul style="list-style-type: none"> <li>High-Density Storage RAID Array</li> <li>Virtualized Big Data Analytics</li> <li>Mission Critical HPC</li> </ul>	<ul style="list-style-type: none"> <li>Diskless HPC Clusters</li> <li>High-Performance File System</li> <li>Container-as-a-Service; Application Accelerator</li> <li>All-Flash NVMe Hyperconverged Infrastructure</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Up to 2 Nvidia T4 GPU support, with limited CPU selection</li> <li>Tool-less support for swapping AOC cards</li> <li>Supports NVMe/SATA/SAS storage devices</li> <li>Liquid Cooling Support</li> <li>HW Boot Controller for NVMe M.2 drives</li> <li>4 Hot-Swap Nodes in 2U, Shared Power and Cooling Design</li> <li>20 Memory slots (16 DIMM + 4 Intel® Optane® Persistent Memory)</li> <li>1 AIOM card support (PCI-E 4.0)</li> </ul>	<ul style="list-style-type: none"> <li>Tool-less support for swapping AOC cards</li> <li>Supports NVMe/SATA/SAS storage devices</li> <li>Liquid Cooling Support</li> <li>HW RAID Support for Hot-Swappable SAS/ SATA Drives</li> <li>HW Boot Controller for NVMe M.2 drives</li> <li>4 Hot-Swap Nodes in 2U, Shared Power and Cooling Design</li> <li>20 Memory slots (16 DIMM + 4 Intel® Optane® Persistent Memory)</li> <li>1 AIOM card support (PCI-E 4.0)</li> </ul>	<ul style="list-style-type: none"> <li>Up to 2 Nvidia T4 GPU support, with limited CPU selection</li> <li>Tool-less support for swapping AOC cards</li> <li>Liquid Cooling Support</li> <li>HW Boot Controller for NVMe M.2 drives</li> <li>4 Hot-Swap Nodes in 2U, Shared Power and Cooling Design</li> <li>20 Memory slots (16 DIMM + 4 Intel® Optane® Persistent Memory)</li> <li>1 AIOM card support (PCI-E 4.0)</li> </ul>
Serverboard	SUPERMIC® X12DPT-B6	SUPERMIC® X12DPT-B6	SUPERMIC® X12DPT-B6
Chipset	Intel® C621A	Intel® C621A	Intel® C621A
System Memory (Max.)	16 DIMM slots (16 DRAM + 4 PMem) UP to 4TB: 16x 256GB DRAM UP to 6TB: 8x 256GB DRAM and 8x 512GB Intel® Optane® Persistent Memory	16 DIMM slots (16 DRAM + 4 PMem) UP to 4TB: 16x 256GB DRAM UP to 6TB: 8x 256GB DRAM and 8x 512GB Intel® Optane® Persistent Memory	16 DIMM slots (16 DRAM + 4 PMem) UP to 4TB: 16x 256GB DRAM UP to 6TB: 8x 256GB DRAM and 8x 512GB Intel® Optane® Persistent Memory
Expansion Slots	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)	M.2 slot(s) 2 PCI-E 4.0 x16 LP slot(s)
Onboard Storage Controller	Intel® SATA Broadcom® 3808	Intel® SATA Broadcom® 3908	Intel® SATA
Connectivity	via AIOM	via AIOM	via AIOM
VGA/Audio	1 onboard VGA port	1 onboard VGA port	1 onboard VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog
Drive Bays	6x 2.5" hot-swap NVMe/SATA/SAS drive bays; 6x 2.5" NVMe hybrid; Optional HBA support via SAS3808 Adapter	6x 2.5" hot-swap NVMe/SATA/SAS drive bays; 6x 2.5" NVMe hybrid; Optional RAID support via Broadcom® 3908 AOC	6x 2.5" hot-swap NVMe/SATA drive bays; 6x 2.5" NVMe hybrid; Optional RAID support via Intel® PCH
Peripheral Bays	None	None	None
Power Supply	Redundant 2600W Titanium level (96%)	Redundant 2600W Titanium level (96%)	Redundant 2600W Titanium level (96%)
Cooling System	4x 16.5K RPM Heavy Duty 8cm Fan(s)	4x 16.5K RPM Heavy Duty 8cm Fan(s)	4x 16.5K RPM Heavy Duty 8cm Fan(s)
Form Factor	2U Rackmount Enclosure: 449 x 88 x 730mm (17.68" x 3.47" x 28.75") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")	2U Rackmount Enclosure: 449 x 88 x 730mm (17.68" x 3.47" x 28.75") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")	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")

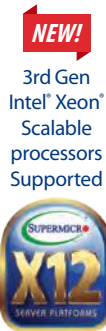
# X12 BIGTWIN®

(For Complete System Only)

3x 3.5" drives/node x 4 Nodes

3x 3.5" drives/node x 4 Nodes

12x 2.5" drives/node x 2 Nodes



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	<ul style="list-style-type: none"> <li>• Container Storage</li> <li>• Scale-Out File Storage</li> <li>• Hyperconverged Infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Scale-Out File Server</li> <li>• Container Storage</li> <li>• Hyperconverged Infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• All-Flash Object Storage</li> <li>• All-Flash Storage Area Network</li> <li>• All-Flash Hyperconverged Infrastructure</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Tool-less support for swapping AOC cards</li> <li>• Supports NVMe/SATA/SAS storage devices</li> <li>• Liquid Cooling Support</li> <li>• HW Boot Controller for NVMe M.2 drives</li> <li>• 4 Hot-Swap Nodes in 2U, Shared Power and Cooling Design</li> <li>• 20 Memory slots (16 DIMM + 4 Intel® Optane® Persistent Memory)</li> <li>• 1 AIOM card support (PCI-E 4.0)</li> </ul>	<ul style="list-style-type: none"> <li>• Tool-less support for swapping AOC cards</li> <li>• Liquid Cooling Support</li> <li>• HW Boot Controller for NVMe M.2 drives</li> <li>• 4 Hot-Swap Nodes in 2U, Shared Power and Cooling Design</li> <li>• 20 Memory slots (16 DIMM + 4 Intel® Optane® Persistent Memory)</li> <li>• 1 AIOM card support (PCI-E 4.0)</li> </ul>	<ul style="list-style-type: none"> <li>• Tool-less support for swapping AOC cards</li> <li>• Supports NVMe/SATA/SAS storage devices</li> <li>• Liquid Cooling Support</li> <li>• HW Boot Controller for NVMe M.2 drives</li> <li>• Balanced IO performance for up to 12 NVMe Gen4 drives</li> <li>• 20 Memory slots (16 DIMM + 4 Intel® Optane® Persistent Memory)</li> <li>• 2 Hot-Swap Nodes in 2U, Shared Power and Dedicated Cooling Per Node</li> <li>• 1 AIOM card support (PCI-E 4.0)</li> </ul>
Serverboard	SUPERMIC® X12DPT-B6	SUPERMIC® X12DPT-B6	SUPERMIC® X12DPT-B6
Chipset	Intel® C621A	Intel® C621A	Intel® C621A
System Memory (Max.)	16 DIMM slots (16 DRAM + 4 PMem) UP to 4TB: 16x 256GB DRAM UP to 6TB: 8x 256GB DRAM and 8x 512GB Intel® Optane® Persistent Memory	16 DIMM slots (16 DRAM + 4 PMem) UP to 4TB: 16x 256GB DRAM UP to 6TB: 8x 256GB DRAM and 8x 512GB Intel® Optane® Persistent Memory	16 DIMM slots (16 DRAM + 4 PMem) UP to 4TB: 16x 256GB DRAM UP to 6TB: 8x 256GB DRAM and 8x 512GB Intel® Optane® Persistent Memory
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	Intel® SATA Broadcom® 3808	Intel® SATA	Intel® SATA Broadcom® 3816
Connectivity	via AIOM	via AIOM	via AIOM
VGA/Audio	1 onboard VGA port	1 onboard VGA port	1 onboard VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; Supemicro Out of Band (OOB) License; SuperCloud Composer; SuperDoctor® 5; Watch Dog
Drive Bays	3x 3.5" hot-swap NVMe/SATA/SAS drive bays; 3x 3.5" NVMe hybrid; 3x 2.5" NVMe hybrid; Optional HBA support via SAS3808 Adapter	3x 3.5" hot-swap NVMe/SATA drive bays; 3x 3.5" NVMe hybrid; 3x 2.5" 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	4x 14.9K RPM Heavy Duty 8cm Fan(s)	4x 14.9K RPM Heavy Duty 8cm Fan(s)	4x 16.5K RPM Heavy Duty 8cm Fan(s)
Form Factor	2U Rackmount Enclosure: 449 x 88 x 774mm (17.68" x 3.47" x 30.5") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")	2U Rackmount Enclosure: 449 x 88 x 774mm (17.68" x 3.47" x 30.5") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")	2U 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 ULTRA

(For Complete System Only)

12x 2.5" Drives

24x 2.5" Drives



MODEL	SYS-120U-TNR	SYS-220U-TNR
Processor Support	3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 270W; 3 UPI	3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 270W; 3 UPI
Key Applications	<ul style="list-style-type: none"> <li>• HPC</li> <li>• Virtualization</li> <li>• 5G/Telco</li> <li>• Application Tier Service Provider</li> <li>• Software Defined Storage</li> <li>• High End Enterprise Server</li> <li>• Cloud Computing</li> </ul>	<ul style="list-style-type: none"> <li>• HPC</li> <li>• Virtualization</li> <li>• 5G/Telco</li> <li>• Application Tier Service Provider</li> <li>• Software Defined Storage</li> <li>• High End Enterprise Server</li> <li>• Cloud Computing</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Up to 8TB Intel® Optane® Persistent Memory (up to 12TB with DRAM)</li> <li>• Optimized cooling with support up to 270W TDP processors</li> <li>• Modular Components for Building Application-Optimized Solutions</li> <li>• Hot-swappable hybrid drive bays supporting NVMe, SATA or SAS</li> <li>• Flexible onboard networking options</li> <li>• Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors</li> <li>• Configurable number of PCI-E 4.0 expansion slots with support for double-width GPUs and FPGAs.</li> </ul>	<ul style="list-style-type: none"> <li>• Up to 8TB Intel® Optane® Persistent Memory (up to 12TB with DRAM)</li> <li>• Optimized cooling with support up to 270W TDP processors</li> <li>• Modular Components for Building Application-Optimized Solutions</li> <li>• Hot-swappable hybrid drive bays supporting NVMe, SATA or SAS</li> <li>• Flexible onboard networking options</li> <li>• Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors</li> <li>• Configurable number of PCI-E 4.0 expansion slots with support for double-width GPUs and FPGAs.</li> </ul>
Serverboard	SUPER● X12DPU-6	SUPER● X12DPU-6
Chipset	Intel® C621A	Intel® C621A
System Memory (Max.)		
Expansion Slots	2 PCI-E 4.0 x16 FH, 10.5" L slots 1 PCI-E 4.0 x16 LP slot 1 PCI-E 4.0 x16 Internal LP slot	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
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	2x 10GbE RJ45 and 2x 10GbE SFP+ with Intel® X710-TM4 (optional) 2x 10GbE RJ45 with Intel® X710-AT2 (optional)	2x 10GbE RJ45 and 2x 10GbE SFP+ with Intel® X710-TM4 (optional) 2x 10GbE RJ45 with Intel® X710-AT2 (optional)
VGA/Audio	1 VGA port	1 VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SUM; SuperDoctor® 5; Supermicro Out of Band (OOB) License; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SUM; SuperDoctor® 5; Supermicro Out of Band (OOB) License; Watch Dog
Drive Bays	12x 2.5" hot-swap NVMe/SATA/SAS drive bays; 12x 2.5" NVMe hybrid; Optional RAID support via RAID controller AOC	24x 2.5" hot-swap NVMe/SATA/SAS drive bays; 22x 2.5" NVMe hybrid; Optional RAID support via RAID controller AOC
Peripheral Bays	None	None
Power Supply	Redundant 1200W Titanium level (96%)	Redundant 1600W Titanium level (96%)
Cooling System	8x 4cm heavy duty fan(s)	4x 8cm heavy duty fan(s)
Form Factor	1U Rackmount Enclosure: 437 x 43 x 739mm (17.2" x 1.7" x 29.1") Package: 605 x 203 x 950mm (23.81" x 7.99" x 37.4")	2U Rackmount Enclosure: 437 x 89 x 705.3mm (17.2" x 3.5" x 27.76") Package: 625 x 253 x 1154mm (24.6" x 9.96" x 45.43")

# X12 UP STORAGE

**NEW!**

3rd Gen Intel® Xeon® Scalable processors Supported



4U UP 36x Drives



4U UP 45x Drives  
(For Complete System Only)



MODEL	SSG-540P-E1CTR36H SSG-540P-E1CTR36L	SSG-540P-E1CTR45H SSG-540P-E1CTR45L
Processor Support	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported TDP up to 270W;	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported TDP up to 270W;
Key Applications	<ul style="list-style-type: none"> <li>• Appliance Optimized Storage</li> <li>• Database Processing &amp; Storage</li> <li>• Enterprise Server</li> </ul>	<ul style="list-style-type: none"> <li>• Database Applications</li> <li>• Data Warehousing, Archiving</li> <li>• Backup Storage, Cold Storage</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Expander chip and JBOD support, up to 36x SATA/SAS drives with PCI-E 4.0 SAS Controller</li> <li>• 4U 36 Bay High Density Storage</li> <li>• 2x optional Gen 4 NVMe drives; onboard 1x M.2 NVMe/SATA</li> </ul>	<ul style="list-style-type: none"> <li>• Top Loading with expander chip, up to 45x SATA/SAS drives with PCI-E 4.0 SAS Controller</li> <li>• 5 Hot-Swap 8cm redundant PWM fans</li> <li>• 2x optional Gen 4 NVMe drives + 2 rear Hot-swap 2.5" SATA drive bays; onboard 1x M.2 NVMe/SATA</li> </ul>
Serverboard	SUPERMICRO® X12SPI-TF	SUPERMICRO® X12SPI-TF
Chipset	Intel® C621A	Intel® C621A
System Memory (Max.)	8 DIMM slots Intel® DCPMM, DDR4-3200MHz ECC LRDIMM, DDR4-3200MHz ECC RDIMM, DDR4-3200MHz	8 DIMM slots Intel® DCPMM, DDR4-3200MHz ECC LRDIMM, DDR4-3200MHz ECC RDIMM, DDR4-3200MHz
Expansion Slots	2 PCI-E 4.0 x16 LP slot(s) 2 PCI-E 4.0 x8 LP slot(s)	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	-E1CTR45H: Broadcom® 3908 -E1CTR45L: Broadcom® 3808
Connectivity	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550
VGA/Audio	1 onboard VGA port	1 onboard VGA port
Management	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM
Drive Bays	36x 3.5" hot-swap SATA/SAS drive bays;	45x 3.5" hot-swap SATA/SAS drive bays
Peripheral Bays	2x 2.5" SATA or NVMe (optional)	2x 2.5" SATA native; additional 2x 2.5" SATA or NVMe (optional)
Power Supply	Redundant 1200W Titanium level (96%)	Redundant 1600W Platinum level (94%)
Cooling System	7x (8cm x 8cm x 3.8cm) heavy duty fan(s)	5x (8cm x 8cm x 3.8cm) heavy duty fan(s)
Form Factor	4U Rackmount Enclosure: 437 x 178 x 699mm (17.2" x 7" x 27.5") Package: 656 x 445 x 1003mm (27" x 17.5" x 39.5")	4U Rackmount Enclosure: 437 x 178 x 660mm (17.2" x 7" x 26") Package: 711 x 559 x 1067mm (28" x 22" x 42")

# X12 UP STORAGE

**NEW!**

3rd Gen Intel® Xeon® Scalable processors Supported



10x 2.5" NVMe  
(For Complete System Only)



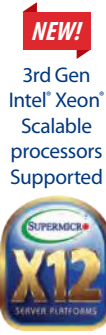
2U UP 12x Drives



MODEL	SSG-110P-NTR10	SSG-520P-ACR12H SSG-520P-ACR12L
Processor Support	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported TDP up to 270W;	3rd Gen Intel® Xeon® Scalable processors Single Socket LGA-4189 (Socket P+) supported TDP up to 270W;
Key Applications	<ul style="list-style-type: none"> <li>Virtualization</li> <li>CDN Optimized</li> <li>All Flash Storage</li> <li>Cloud Computing</li> </ul>	<ul style="list-style-type: none"> <li>Appliance Optimized Storage</li> <li>Database Processing &amp; Storage</li> <li>Enterprise Server</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Optimized Cooling with support up to 270W TDP processor</li> <li>2x NVMe/SATA M.2 supported</li> <li>10x NVMe tool-less drive bays</li> </ul>	<ul style="list-style-type: none"> <li>Server remote management: IPMI 2.0/KVM over LAN/Media over LAN</li> <li>Direct-attached 12x 3.5" hot-swap SATA/SAS drive bays with PCI-E 4.0 SAS Controller</li> <li>Cost-effective 2U rackmount storage</li> <li>2x optional Gen 4 NVMe drives; onboard 1x M.2 NVMe/SATA</li> </ul>
Serverboard	SUPER● X12SPO-NTF	SUPER● X12SPI-TF
Chipset	Intel® C621A	Intel® C621A
System Memory (Max.)	8 DIMM slots Intel® DCPMM, DDR4-3200MHz ECC LRDIMM, DDR4-3200MHz ECC RDIMM, DDR4-3200MHz	8 DIMM slots Intel® DCPMM, DDR4-3200MHz ECC LRDIMM, DDR4-3200MHz ECC RDIMM, DDR4-3200MHz
Expansion Slots	1 PCI-E 4.0 x16 FHHL slot(s)	2 PCI-E 4.0 x16 LP slot(s) 2 PCI-E 4.0 x8 LP slot(s)
Onboard Storage Controller	NVMe	-ACTR12H: Broadcom® 3916 -ACTR12L: Broadcom® 3816
Connectivity	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X550
VGA/Audio	1 onboard VGA port	1 onboard VGA port
Management	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM
Drive Bays	10x 2.5" hot-swap NVMe drive bays;	12x 3.5" hot-swap SATA/SAS drive bays;
Peripheral Bays	None	2x 2.5" SATA or NVMe (optional)
Power Supply	Redundant 860W Platinum level (94%)	Redundant 800W Titanium level (96%)
Cooling System	6x (4cm x 4cm x 5.6cm) heavy duty fan(s)	3x (8cm x 8cm x 3.8cm) heavy duty fan(s)
Form Factor	1U Rackmount Enclosure: 437 x 43 x 597mm (17.2" x 1.7" x 23.5") Package: 610 x 203 x 813mm (24" x 8" x 32")	2U Rackmount Enclosure: 437 x 89 x 650mm (17.2" x 3.5" x 25.6") Package: 673 x 292 x 864mm (26.5" x 11.5" x 34")

# X12 ULTRA

(For Complete System Only)



12x 2.5" Drives



24x 2.5" Drives



MODEL	SYS-120U-TNR	SYS-220U-TNR
Processor Support	3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 270W; 3 UPI	3rd Gen Intel® Xeon® Scalable processors Dual Socket LGA-4189 (Socket P+) supported TDP up to 270W; 3 UPI
Key Applications	<ul style="list-style-type: none"> <li>• HPC</li> <li>• Virtualization</li> <li>• 5G/Telco</li> <li>• Application Tier Service Provider</li> <li>• Software Defined Storage</li> <li>• High End Enterprise Server</li> <li>• Cloud Computing</li> <li>• Up to 8TB Intel® Optane® Persistent Memory (up to 12TB with DRAM)</li> <li>• Optimized cooling with support up to 270W TDP processors</li> <li>• Modular Components for Building Application-Optimized Solutions</li> </ul>	<ul style="list-style-type: none"> <li>• HPC</li> <li>• Virtualization</li> <li>• 5G/Telco</li> <li>• Application Tier Service Provider</li> <li>• Software Defined Storage</li> <li>• High End Enterprise Server</li> <li>• Cloud Computing</li> <li>• Up to 8TB Intel® Optane® Persistent Memory (up to 12TB with DRAM)</li> <li>• Optimized cooling with support up to 270W TDP processors</li> <li>• Modular Components for Building Application-Optimized Solutions</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>• Hot-swappable hybrid drive bays supporting NVMe, SATA or SAS</li> <li>• Flexible onboard networking options</li> <li>• Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors</li> <li>• Configurable number of PCI-E 4.0 expansion slots with support for double-width GPUs and FPGAs.</li> </ul>	<ul style="list-style-type: none"> <li>• Hot-swappable hybrid drive bays supporting NVMe, SATA or SAS</li> <li>• Flexible onboard networking options</li> <li>• Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable Processors</li> <li>• Configurable number of PCI-E 4.0 expansion slots with support for double-width GPUs and FPGAs.</li> </ul>
Serverboard	SUPER <sup>®</sup> X12DPU-6	SUPER <sup>®</sup> X12DPU-6
Chipset	Intel® C621A	Intel® C621A
System Memory (Max.)		
Expansion Slots	2 PCI-E 4.0 x16 FH, 10.5"L slots 1 PCI-E 4.0 x16 LP slot 1 PCI-E 4.0 x16 Internal LP slot	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
Onboard Storage Controller	Intel® SATA	Intel® SATA
Connectivity	2x 10GbE RJ45 and 2x 10GbE SFP+ with Intel® X710-TM4 (optional) 2x 10GbE RJ45 with Intel® X710-AT2 (optional)	2x 10GbE RJ45 and 2x 10GbE SFP+ with Intel® X710-TM4 (optional) 2x 10GbE RJ45 with Intel® X710-AT2 (optional)
VGA/Audio	1 VGA port	1 VGA port
Management	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SUM; SuperDoctor® 5; Supermicro Out of Band (OOB) License; Watch Dog	Intel® Node Manager; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SUM; SuperDoctor® 5; Supermicro Out of Band (OOB) License; Watch Dog
Drive Bays	12x 2.5" hot-swap NVMe/SATA/SAS drive bays; 12x 2.5" NVMe hybrid; Optional RAID support via RAID controller AOC	24x 2.5" hot-swap NVMe/SATA/SAS drive bays; 22x 2.5" NVMe hybrid; Optional RAID support via RAID controller AOC
Peripheral Bays	None	None
Power Supply	Redundant 1200W Titanium level (96%)	Redundant 1600W Titanium level (96%)
Cooling System	8x 4cm heavy duty fan(s)	4x 8cm heavy duty fan(s)
Form Factor	1U Rackmount Enclosure: 437 x 43 x 739mm (17.2" x 1.7" x 29.1") Package: 605 x 203 x 950mm (23.81" x 7.99" x 37.4")	2U Rackmount Enclosure: 437 x 89 x 705.3mm (17.2" x 3.5" x 27.76") Package: 625 x 253 x 1154mm (24.6" x 9.96" x 45.43")

# X11 ULTRA

(For Complete System Only)

1U Ultra  
Low Latency

1U Ultra  
Low Latency

1U Ultra  
10x 2.5" NVMe Drive Bays



MODEL	SYS-1029UX-LL1-C16 SYS-1029UX-LL2-C16 SYS-1029UX-LL3-C16	SYS-1029UX-LL1-S16 SYS-1029UX-LL2-S16 SYS-1029UX-LL3-S16	SYS-1029U-TN10RT
Processor Support	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. <b>LL1:</b> Dual Socket P (LGA 3647), Intel Xeon Gold 6244 included <b>LL2:</b> Dual Socket P (LGA 3647), Intel Xeon® Gold 6246 included <b>LL3:</b> Dual Socket P (LGA 3647), Intel Xeon® Gold 6254 included <i>Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</i>	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors. <b>LL1:</b> Dual Socket P (LGA 3647), Intel Xeon Gold 6144 included <b>LL2:</b> Dual Socket P (LGA 3647), Intel Xeon Gold 6146 included <b>LL3:</b> Dual Socket P (LGA 3647), Intel Xeon Gold 6154 included <i>Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</i>	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. <i>Note: BIOS version 3.2 or above is required to support 2nd Gen Intel® Xeon® Scalable processors (codenamed Cascade Lake Refresh).</i>
Key Applications	<ul style="list-style-type: none"> <li>Financial Analysis</li> <li>Business Critical Applications</li> <li>Enterprise Server</li> <li>Hyper-Speed Hardware Acceleration</li> <li>Low Latency &amp; Jitter Optimized</li> <li>8x 2.5" SAS/SATA drive bays</li> <li>2x 2.5" NVMe drive bay support</li> <li>Optimized cooling</li> <li>Platinum Level redundant power supply</li> </ul>	<ul style="list-style-type: none"> <li>Financial Analysis</li> <li>Business Critical Applications</li> <li>Enterprise Server</li> <li>Hyper-Speed Hardware Acceleration</li> <li>Low Latency &amp; Jitter Optimized</li> <li>8x 2.5" SAS/SATA drive bays</li> <li>2x 2.5" NVMe drive bay support</li> <li>Optimized cooling</li> <li>Platinum Level redundant power supply</li> </ul>	<ul style="list-style-type: none"> <li>Virtualization</li> <li>Cloud Computing</li> <li>High End Enterprise Server</li> <li>10 NVMe SSDs Support</li> <li>24 DIMM sockets</li> <li>2 PCI-E 3.0 (x16)</li> <li>Dual 10G BaseT</li> <li>1000W Titanium Level Power Supply</li> <li>2 SATA DOMs Support with Embedded Power</li> </ul>
Outstanding Features			
Serverboard	SUPER● X11DPU-XLL	SUPER● X11DPU-XLL	SUPER● X11DPU
Chipset	Intel C621 Chipset	Intel C621 Chipset	Intel® C621 Chipset
System Memory (Max.)*	16 DIMM slots; Up to 4TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB); 12x 16GB DDR4-2933 MHz included	16 DIMM slots; Up to 4TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)
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)	<b>LL1/LL2:</b> 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) <b>LL3:</b> 2 PCI-E 3.0 x16 (Full Height, 10.5" 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"L)
Onboard Storage Controller	3108 controller for 8 SAS3 ports	3108 controller for 8 SAS3 ports	Intel® C621 SATA3 (6 Gbps) controller
Connectivity	4x Gigabit Ethernet ports via AOC-UR-I4G	4x Gigabit Ethernet ports via AOC-UR-I4G	2 10GbE-T Ethernet via Intel® X540 Ethernet Controller 5 USB 3.0 ports (2 Rear, 2 Front, 1 Type A) 1 Serial Port
VGA/Audio	1 VGA, 1 Aspeed AST2500 BMC	1 VGA, 1 Aspeed AST2500 BMC	2 VGA ports (1 rear, 1 onboard) 1 Aspeed AST2500 BMC
Management	IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSM; 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	10 Hot-Swappable 2.5" drive bays: 6 NVMe ports (NVMe from CPU1) 4 NVMe/SAS3 hybrid ports for optional SAS3/SATA3 (NVMe from CPU 2)
Peripheral Bays	N/A	N/A	N/A
Power Supply	750W High-efficiency (Platinum level) digital power supply	750W High-efficiency (Platinum level) digital 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 , 1 Air Shroud
Form Factor	1U Rackmount; Enclosure: 437 x 43 x 724mm (17.2" x 1.7" x 28.5") Gross Weight: 41lbs (18.6kg) Net Weight: 26lbs (11.79kg)	1U Rackmount; Enclosure: 437 x 43 x 724mm (17.2" x 1.7" x 28.5") Gross Weight: 41lbs (18.6kg) Net Weight: 26lbs (11.79kg)	432 x 43 x 706mm (17.2" x 1.7" x 27.8")

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

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



# X11 ULTRA

(For Complete System Only)

20x 2.5" NVMe Drive Bays

24x 2.5" NVMe Drive Bays

12x 3.5" NVMe Drive Bays

24x 2.5" NVMe Drive Bays



MODEL	SYS-1029UZ-TN20R25M	SYS-2029UZ-TR4+	SYS-6029UZ-TR4+	SYS-2029U-TN24R4T
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 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 Generation Intel® Xeon® Scalable Processors (Cascade Lake-SP), 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 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	<ul style="list-style-type: none"> <li>Virtualization</li> <li>Cloud Computing</li> <li>High Density Enterprise Server</li> <li>Software Defined Storage</li> </ul>	<ul style="list-style-type: none"> <li>Virtualization</li> <li>Hyperconverge Storage</li> <li>Cloud Computing</li> <li>High End Enterprise Server</li> </ul>	<ul style="list-style-type: none"> <li>Virtualization</li> <li>Hyperconverge Storage</li> <li>Cloud Computing</li> <li>High End Enterprise Server</li> </ul>	<ul style="list-style-type: none"> <li>Virtualization</li> <li>Hyperconverge Storage</li> <li>Cloud Computing</li> <li>High End Enterprise Server</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>20 7mm 2.5" tool-less Hot-swap drive bays</li> <li>165W CPU support</li> <li>24 DIMM sockets</li> <li>Up to 2 PCI-E Add-on cards</li> <li>Dual 25G SFP28</li> <li>1600W Titanium Level Power Supply</li> <li>2 SATA DOMs Support with Embedded Power</li> </ul>	<ul style="list-style-type: none"> <li>Flexible LAN Options</li> <li>24x 2.5" hot-swap drive bays</li> <li>Optional SAS3 and NVMe support</li> <li>24 DIMM support</li> <li>8 PCI-E Add-on cards</li> <li>1600W Titanium Level Power Supply</li> <li>Quad Gigabit Ethernet LAN</li> </ul>	<ul style="list-style-type: none"> <li>Flexible LAN Options</li> <li>12x 3.5" hot-swap drive bays</li> <li>Optional SAS3 and NVMe support</li> <li>24 DIMM support</li> <li>8 PCI-E Add-on cards</li> <li>1600W Titanium Level Power Supply</li> <li>Quad Gigabit Ethernet LAN</li> </ul>	<ul style="list-style-type: none"> <li>24x 2.5" hot-swap NVMe drive bays</li> <li>3 PCI-E Add-on cards</li> <li>24x 2.5" hot-swap NVMe drive bays</li> <li>24 DIMM support</li> <li>Redundant 1600W Titanium Level high-efficiency power supplies</li> <li>4 x 10GBase-T Ports</li> </ul>
Serverboard	SUPER● X11DPU-Z+	SUPER● X11DPU-Z+	SUPER● X11DPU-Z+	SUPER● X11DPU
Chipset	Intel® C621 chipset	Intel® C621 chipset	Intel® C621 chipset	Intel® C621 chipset
System Memory (Max.)*	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane DCPMM <sup>††</sup> (128/256/512GB)	Up to Up to 6TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 6TB 3DS ECC LRDIMM, DDR4-2933MHz, in 24 DIMM slots; Up to 6TB Intel® Optane® DC Persistent Memory in memory mode (Cascade Lake only).	Up to Up to 6TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 6TB 3DS ECC LRDIMM, DDR4-2933MHz, in 24 DIMM slots; Up to 6TB Intel® Optane® DC Persistent Memory in memory mode (Cascade Lake only).	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane DCPMM <sup>††</sup> (128/256/512GB)
Expansion Slots	Up to 2 PCI-E 3.0 x8 (FH, FL); For 20 NVMe configuration, only 1 PCI-E 3.0 x8 is available For 18 NVMe configuration, 2 PCI-E 3.0 x8 will be available	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)	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); 1 PCI-E 3.0 x8 (LP)
Onboard Storage Controller	Intel® C621 SATA3 (6Gb/s) controller	Intel® C621 SATA3 (6Gb/s) controller	Intel® C621 SATA3 (6Gb/s) controller	Intel® C621 SATA3 (6Gb/s) controller
Connectivity	2 25G SFP28 Ethernet, 3 USB 3.0 ports (2 Rear, 1 Type A), 2 USB 2.0 ports (Front), 1 Serial Port	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	4 10GBase-T ports with Intel® X550 Ethernet Controller; 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port
VGA/Audio	1 VGA, 1 Aspeed AST2500 BMC;	AST2500 VGA	AST2500 VGA	Aspeed AST2500 BMC
Management	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSM; SUM; SuperDoctor® 5; Watchdog;	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;	Intel® Node Manager; Redfish API; IPMI2.0; KVM with dedicated LAN; NMI; SPM; SSM; SUM; SuperDoctor® 5;
Drive Bays	20 Hot-Swappable 2.5" 7mm drive bays: 8 NVMe ports and 2 SAS/SATA3/NVMe Hybrid Ports from CPU1 and 10 NVMe ports from CPU2	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	12 Hot-swap 3.5" Drive Bays; 10 SATA3 ports by default; Optional drive support: 8 SAS3 + 4 SAS3/NVMe; Optional 2 Rear Hot-swap 2.5" Drive Bays	24 Hot-swap 2.5" NVMe Drive Bays; Optional 20 NVMe + 4 NVMe/SAS3; 2x 2.5" 2 Rear Hot-swap 2.5" Drive Bays (2x SATA3 ports default)
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	1600W Titanium Level Power Supply	1600W Redundant Power Supplies with PMBus	1600W Redundant Power Supplies with PMBus	1600W Redundant Power Supplies with PMBus
Cooling System	8 Heavy Duty fans w/ Optimal Fan Speed Control, 2 Air Shroud	4 Heavy duty 8cm PWM fans	4 Heavy duty 8cm PWM fans	4 Heavy duty 8cm PWM fans
Form Factor	1U Chassis; Enclosure: 437 x 43 x 706mm (17.2" x 1.7" x 27.8") Gross Weight: 86.5lbs (21.77kg) Net Weight: 36.5lbs (16.56kg)	2U Rackmount; Enclosure: 437 x 89 x 705mm (17.2" x 3.5" x 27.76") Gross Weight: 86.5lbs (39.24kg) Net Weight: 51lbs (23.13kg)	2U Rackmount; Enclosure: 437 x 89 x 723mm (17.2" x 3.5" x 28.46") Gross Weight: 91lbs (41.28kg) Net Weight: 55lbs (24.95kg)	2U Rackmount; Enclosure: 437 x 89 x 705mm (17.2" x 3.5" x 27.76") Gross Weight: 86.5lbs (39.24kg) Net Weight: 51lbs (23.13kg)

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

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

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

# X11 ULTRA

(For Complete System Only)



12x 2.5" NVMe Drive Bays

4x 3.5" NVMe Drive Bays

4x 3.5" Drive Bays



MODEL	SYS-1029U-TN12RV	SYS-6019U-TN4RT SYS-6019U-TN4R4T	SYS-6019U-TR4 SYS-6019U-TR4T SYS-6019U-TRT	SYS-6019U-TRTP SYS-6019U-TRTP2 SYS-6019U-TR25M
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).	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).	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).	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	<ul style="list-style-type: none"> <li>Virtualization</li> <li>Cloud Computing</li> <li>High End Enterprise Server</li> </ul>	<ul style="list-style-type: none"> <li>Virtualization</li> <li>Cloud Computing</li> <li>High End Enterprise Server</li> </ul>	<ul style="list-style-type: none"> <li>Virtualization</li> <li>Cloud Computing</li> <li>High End Enterprise Server</li> </ul>	<ul style="list-style-type: none"> <li>Virtualization</li> <li>Cloud Computing</li> <li>High End Enterprise Server</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>12 Hot-Swap NVMe/SATA Drive Bays</li> <li>24 DIMM sockets</li> <li>3 PCI-E Expansion Slots</li> <li>Flexible Networking Options with Ultra Riser Card</li> <li>1200W Redundant Power, Titanium Level (96% typical efficiency)</li> </ul>	<ul style="list-style-type: none"> <li>4 Hot-Swap NVMe Support</li> <li>4 3.5" drive bays</li> <li>24 DIMM sockets</li> <li>4 PCI-E Add-on cards</li> <li>205W CPU support</li> <li>Platinum Level Power Supply</li> <li>2 SATA DOM support with embedded power</li> </ul>	<ul style="list-style-type: none"> <li>24 DIMM sockets</li> <li>4 PCI-E Add-on cards</li> <li>4 3.5" drive bays</li> <li>205W CPU support</li> <li>Platinum Level Power Supply</li> <li>2 SATA DOM support with embedded power</li> </ul>	<ul style="list-style-type: none"> <li>24 DIMM sockets</li> <li>4 PCI-E Add-on cards</li> <li>4 3.5" drive bays</li> <li>205W CPU support</li> <li>Platinum Level Power Supply</li> <li>2 SATA DOM support with embedded power</li> </ul>
Serverboard Chipset	SUPER X11DPU-V Intel® C621 Chipset	SUPER X11DPU Intel® C621 chipset	SUPER X11DPU Intel® C621 chipset	SUPER X11DPU Intel® C621 chipset
System Memory (Max.)*	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)
Expansion Slots	1 PCI-E 3.0 x16 (FH, 10.5"L), 1 PCI-E 3.0 x8 (LP), 1 Internal PCI-E 3.0 x16 (For SMC Storage Controllers)	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	Intel® C621 SATA3 (6 Gbps) controller	Intel® C621 SATA3 (6Gb/s) controller	Intel® C621 SATA3 (6Gb/s) controller	Intel® C621 SATA3 (6Gb/s) controller
Connectivity	Optional 2x25GbE (SFP28) or 2x10GbE (RJ45) via Ultra Riser Card; 4 USB 3.0 ports (2 Rear, 1 Front, 1 Type A); 1 Serial Port	<p>-TN4RT: 2 10GbE-T Ethernet ports; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p> <p>-TN4R4T: 4x 10GbE-T Ethernet ports via AOC-UR-i4XTF; Intel® X710 + X557 10GbE-T; 1x Realtek RTL8211E PHY (dedicated IPMI); 2 VGA ports (1 rear, 1 onboard); 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p>	<p>-TR4: 4 Gigabit Ethernet; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p> <p>-TR4T: 4 10GbE-T Ethernet ports; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p> <p>-TRT: 2 10GbE-T Ethernet ports; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p> <p>-TRTP: 2 10G SFP+ Ethernet ports; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p> <p>-TRTP2: 2 Gigabit Ethernet ports; 2 10G SFP+ Ethernet ports; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p> <p>-TR25M: 2 25G SFP28 Ethernet Ports; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p>	<p>-TR4: 4 Gigabit Ethernet; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p> <p>-TR4T: 4 10GbE-T Ethernet ports; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p> <p>-TRT: 2 10GbE-T Ethernet ports; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p> <p>-TRTP: 2 10G SFP+ Ethernet ports; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p> <p>-TRTP2: 2 Gigabit Ethernet ports; 2 10G SFP+ Ethernet ports; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p> <p>-TR25M: 2 25G SFP28 Ethernet Ports; 2 VGA ports (1 rear, 1 onboard) 3 USB 3.0 ports (2 rear, 1 Type A); 1 Serial Port</p>
VGA/Audio	1 VGA, Aspeed AST2500	Aspeed AST2500 BMC	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;	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-Swappable 2.5" drive bays, 6 NVMe/SATA ports (NVMe from CPU1) and 6 NVMe/SATA ports (NVMe from CPU 2); Optional SAS support via SAS storage controller	4 hot-swap 3.5" drive support; 4 NVMe/SATA3 ports	4 hot-swap 3.5" drive support	4 hot-swap 3.5" drive support
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	Redundant 1200W Titanium Level Power Supply	Redundant 750W Platinum Level Power Supply	Redundant 750W Platinum Level Power Supply	Redundant 750W Platinum Level Power Supply
Cooling System	8 Heavy Duty fans w/ Optimal Fan Speed Control, 1 Air Shroud	8 heavy duty fans w/ Optimal Fan Speed Control, 1 Air Shroud	8 heavy duty fans w/ Optimal Fan Speed Control, 1 Air Shroud	8 heavy duty fans w/ Optimal Fan Speed Control, 1 Air Shroud
Form Factor	1U Chassis; Enclosure: 432 x 43 x 739mm (17.2" x 1.7" x 29.1")	1U Chassis; Enclosure: 437 x 43 x 737mm (17.2" x 1.7" x 29") Gross Weight: 48lbs (21.77kg) Net Weight: 36.5lbs (16.56kg)	1U Chassis; Enclosure: 437 x 43 x 737mm (17.2" x 1.7" x 29") Gross Weight: 48lbs (21.77kg) Net Weight: 36.5lbs (16.56kg)	1U Chassis; Enclosure: 437 x 43 x 737mm (17.2" x 1.7" x 29") 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

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

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

# X11 BIGTWIN®

(For Complete System Only)

EDSFF  
Dual DP Nodes, 40 EDSFF Drive Bays

Dual DP Nodes,  
24 Hybrid SAS3/NVMe Drive Bays

Dual DP Nodes,  
24 Hybrid NVMe/SAS3 Drive Bays



MODEL	SYS-2029BT-HER	SYS-2029BT-DNC0R	SYS-2029BT-DNR
Processor Support	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).	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).	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).
Key Applications	<ul style="list-style-type: none"> <li>Hyperscale and Hyperconverged Solutions</li> <li>Compute Intensive Application</li> <li>Enterprise Server</li> <li>High Density Hot Storage</li> </ul>	<ul style="list-style-type: none"> <li>Hyperscale and Hyperconverged Solutions</li> <li>Compute Intensive Application</li> <li>Enterprise Server</li> <li>Data Center</li> <li>HPC</li> </ul>	<ul style="list-style-type: none"> <li>Hyperscale and Hyperconverged Solutions</li> <li>Compute Intensive Application</li> <li>Enterprise Server</li> <li>Data Center</li> <li>HPC</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Support 40 Intel EDSFF (E1.S) Devices in 2U form factor system</li> <li>Easy-access SATA M.2 device support</li> <li>24 DIMMs per node</li> <li>2600W Redundant Power Supply</li> <li>1 SIOM card support</li> </ul>	<ul style="list-style-type: none"> <li>2 Nodes in 2U</li> <li>24 DIMMs per node</li> <li>NVMe Support</li> <li>2 M.2 SATA3 or NVMe support</li> <li>3 PCI-E Add-on cards</li> <li>1 SIOM card support</li> </ul>	<ul style="list-style-type: none"> <li>2 Nodes in 2U</li> <li>24 DIMMs per node</li> <li>NVMe Support</li> <li>2 M.2 SATA3 or NVMe support</li> <li>3 PCI-E Add-on cards</li> <li>1 SIOM card support</li> </ul>
Serverboard	SUPER● X11DPT-BR	SUPER● X11DPT-B	SUPER● X11DPT-B
Chipset	Intel® C621 chipset	Intel® C621 chipset	Intel® C621 chipset
System Memory (Max.)*	Up to 6TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 6TB 3DS ECC LRDIMM, DDR4-2933MHz, in 24 DIMM slots; Up to 6TB Intel® Optane® DC Persistent Memory in memory mode (Cascade Lake only)	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)
Expansion Slots	2 PCI-E 3.0 (x16) Low-profile slots; 1 SIOM card support Note: Must bundle with Network Card	2 PCI-E 3.0 x8; 1 PCI-E 3.0 x16; 1 SIOM card support Note: Must bundle with Network Card	2 PCI-E 3.0 x8; 1 PCI-E 3.0 x16; 1 SIOM card support Note: Must bundle with Network Card
Onboard Storage Controller	Intel® C621 controller	3216 SAS3 (12 Gbps) controller; IT mode	NVMe
Connectivity	SIOM Networking Card For Flexible Networking Options	SIOM Networking Card For Flexible Networking Options	SIOM Networking Card For Flexible Networking Options
VGA/Audio	Aspeed AST2500 BMC	Aspeed AST2500 BMC	Aspeed AST2500 BMC
Management	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watchdog	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watchdog	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watchdog
Drive Bays	Support up to 40* Intel EDSFF (E1.S) Devices per system	4 Hot-swap 2.5" NVMe/SAS drive bays + 8 Hot-swap 2.5" SAS drive bays per node	12 Hot-swap 2.5" NVMe drive bays per node
Peripheral Bays	N/A	N/A	N/A
Power Supply	Redundant 2600W Titanium Level high-efficiency power supplies	Redundant 2200W Titanium Level high-efficiency power supplies with I <sup>2</sup> C&PMbus	Redundant 2200W Titanium Level high-efficiency power supplies with I <sup>2</sup> C&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	447 x 88 x 730mm (17.6" x 3.47" x 28.75")	2U (2-node) Rackmount; Enclosure: 432 x 88 x 711mm (17.6" x 3.47" x 28.75") Package: NaN x NaN x NaNmm (NaNkg) (NaNkg)	2U (2-node) Rackmount; Enclosure: 447 x 76 x 730mm (17.6" x 3.47" x 28.75") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28") Gross Weight: 85lbs (38.56kg) Net Weight: 54.5lbs

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

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

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

# X11 BIGTWIN®

(For Complete System Only)

Quad DP Nodes,  
24 Hybrid NVMe/SAS3 Drive Bays

Quad DP Nodes,  
24 Hybrid NVMe/SAS3 HW RAID Drive Bays

Quad DP Nodes,  
24 NVMe Drive Bays



MODEL	SYS-2029BT-HNC0R	SYS-2029BT-HNC1R	SYS-2029BT-HNR
Processor Support	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).	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).	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).
Key Applications	<ul style="list-style-type: none"> <li>Hyperscale and Hyperconverged Solutions</li> <li>Compute Intensive Application</li> <li>Enterprise Server</li> <li>Data Center</li> <li>HPC</li> </ul>	<ul style="list-style-type: none"> <li>Hyperscale and Hyperconverged Solutions</li> <li>Compute Intensive Application</li> <li>Enterprise Server</li> <li>Data Center</li> <li>HPC</li> </ul>	<ul style="list-style-type: none"> <li>Hyperscale and Hyperconverged Solutions</li> <li>Compute Intensive Application</li> <li>Enterprise Server</li> <li>Data Center</li> <li>HPC</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>4 Nodes in 2U</li> <li>24 DIMMs per node</li> <li>NVMe Support</li> <li>2 M.2 SATA3 or NVMe support</li> <li>2 Low -profile PCI-E X16 slot</li> <li>1 SIOM card support</li> </ul>	<ul style="list-style-type: none"> <li>4 Nodes in 2U</li> <li>24 DIMMs per node</li> <li>12Gb/s SAS HW RAID &amp; NVMe</li> <li>2 M.2 SATA3 or NVMe support</li> <li>1 Low Profile PCI-E x16 slot</li> <li>1 SIOM card support</li> </ul>	<ul style="list-style-type: none"> <li>4 Nodes in 2U</li> <li>24 DIMMs per node</li> <li>NVMe Support</li> <li>2 M.2 SATA3 or NVMe support</li> <li>2 Low -profile PCI-E X16 slot</li> <li>1 SIOM card support</li> </ul>
Serverboard	SUPER● X11DPT-B	SUPER● X11DPT-B	SUPER● X11DPT-B
Chipset	Intel® C621 chipset	Intel® C621 chipset	Intel® C621 chipset
System Memory (Max.)*	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)
Expansion Slots	2 PCI-E 3.0 X16(LP), 1 SIOM card support Note: Must bundle with Network Card	1 PCI-E 3.0 X16(LP), 1 SIOM card support Note: Must bundle with Network Card	2 PCI-E 3.0 X16(LP), 1 SIOM card support Note: Must bundle with Network Card
Onboard Storage Controller	3008 SAS3 (12Gbps) controller; IT mode	3108 SAS3 (12Gbps) RAID controller; RAID 0, 1, 5, 6, 10, 50, 60	NVMe
Connectivity	SIOM Networking Card For Flexible Networking Options	SIOM Networking Card For Flexible Networking Options	SIOM Networking Card For Flexible Networking Options
VGA/Audio	Aspeed AST2500 BMC	Aspeed AST2500 BMC	Aspeed AST2500 BMC
Management	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watchdog	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watchdog	Intel® Node Manager; IPMI2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watchdog
Drive Bays	4 Hot-swap 2.5" NVMe/SAS drive bays + 2 Hot-swap 2.5" SAS drive bays per node	4 Hot-swap 2.5" NVMe/SAS drive bays + 2 Hot-swap 2.5" SAS drive bays per node	6 Hot-swap 2.5" NVMe drive bays per node
Peripheral Bays	N/A	N/A	N/A
Power Supply	Redundant 2200W Titanium Level high-efficiency power supplies with I <sup>2</sup> C&PMBus	Redundant 2200W Titanium Level high-efficiency power supplies with I <sup>2</sup> C&PMBus	Redundant 2200W Titanium Level high-efficiency power supplies with I <sup>2</sup> C&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	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)	2U (4-node) Rackmount; Enclosure: 447 x 88 x 730mm (17.6" x 3.47" x 28.75") Package: NaN x NaN x NaNmm (NaNkg) Gross Weight: 85lbs (NaNkg)	2U (4-node) Rackmount; Enclosure: 447 x 88 x 730mm (17.6" x 3.47" x 28.75") Package: NaN x NaN x NaNmm (NaNkg) (NaNkg)

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

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

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

# X11 STORAGE

1U 32 EDSFF E1.L (Long 9.5mm)  
Extremely High-Density All-Flash Servers,  
Supports E1.L form factor

1U 32 EDSFF E1.S (Short)  
Extremely High-Performance All-Flash Servers,  
Supports E1.S form factor



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 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	<ul style="list-style-type: none"> <li>High Throughput Ingest</li> <li>High Density Hot Storage</li> <li>HPC / Data Analytics</li> <li>Media/Video Streaming</li> <li>Content Delivery Network (CDN)</li> <li>Big Data Top of Rack Storage</li> </ul>	<ul style="list-style-type: none"> <li>IOPS Intensive application</li> <li>Database</li> <li>HCI</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Front access to a total of 32 NVMe hot swap 9.5mm EDSFF Long SSDs</li> <li>2x PCI-E 3.0 x16 slots</li> <li>1600W <b>Platinum Level</b> high-efficiency power supply</li> <li>IPMI management with dedicated LAN</li> <li>Intel® C627 chipset support</li> <li>QAT</li> </ul>	<ul style="list-style-type: none"> <li>Front access to a total of 32 NVMe hot swap 5.9mm/9.5mm/15mm EDSFF Short SSD</li> <li>2x PCI-E 3.0 x16 slots</li> <li>1600W <b>Platinum Level</b> high-efficiency power supply</li> <li>IPMI management with dedicated LAN</li> <li>Intel® C627 chipset support</li> <li>QAT</li> </ul>
Serverboard	SUPER <sup>®</sup> X11DPS-RE	SUPER <sup>®</sup> X11DSF-E
Chipset	Intel® C627 chipset	Intel® C627 chipset
System Memory (Max.)*	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, 3DS RDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (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	PCI-E fan out switching supporting 32x E1.L	PCI-E 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	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 Hot-swap E1.L Drive slots	32 Hot-swap E1.S Drive slots
Peripheral Bays	2x on-board SATA/NVMe M.2	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 counter-rotation PWM fan	8x 40x56mm counter-rotation 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 (24.95kg)	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

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

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

# X11 STORAGE

1U SuperStorage  
1U 32 U.2 NVMe

1U SuperStorage  
Expandable Storage, 32x U.2 NVMe JBOD

1U SuperStorage  
Expandable Storage, 32x E1.L NVMe JBOD



MODEL	SYS-1029P-N32R	SSG-136R-N32JBF	SYS-136R-NEL32JBF
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).	N/A	N/A
Key Applications	<ul style="list-style-type: none"> <li>High Throughput Ingest</li> <li>High Density Hot Storage</li> <li>HPC / Data Analytics</li> <li>Media/Video Streaming</li> <li>Content Delivery Network (CDN)</li> <li>Big Data Top of Rack Storage</li> </ul>	<ul style="list-style-type: none"> <li>High Throughput Ingest</li> <li>High Density Hot Storage</li> <li>HPC / Data Analytics</li> <li>Media/Video Streaming</li> <li>Content Delivery Network (CDN)</li> <li>Big Data Top of Rack Storage</li> </ul>	<ul style="list-style-type: none"> <li>High Throughput Ingest</li> <li>High Density Hot Storage</li> <li>HPC / Data Analytics</li> <li>Media/Video Streaming</li> <li>Content Delivery Network (CDN)</li> <li>Big Data Top of Rack Storage</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Dual Drawer/Tray with a total of 32 NVMe 2.5" SSDs</li> <li>2x PCI-E 3.0 x16 slots</li> <li>1600W Platinum Level high-efficiency power supply</li> <li>IPMI management with dedicated LAN</li> <li>Intel® C627 chipset support</li> <li>QAT</li> </ul>	<ul style="list-style-type: none"> <li>Dual Drawer/Tray with a total of 32 NVMe 2.5" SSDs</li> <li>4x PCI-E 3.0 x16 IO ports, 2x X16 PCI-E 3.0 x16 slots</li> <li>1000W Titanium Level high-efficiency power supply</li> <li>IPMI management with dedicated LAN</li> </ul>	<ul style="list-style-type: none"> <li>Front access to a total of 32 NVMe hot swap 9.5mm EDSFF Long SSDs</li> <li>4x PCI-E 3.0 x16 IO ports, 2x PCI-E 3.0 x16 slots</li> <li>1000W Titanium Level high-efficiency power supply</li> <li>IPMI management with dedicated LAN</li> </ul>
Serverboard	SUPER● X11DPS-RE	N/A	N/A
Chipset	Intel® C627 chipset	N/A	N/A
System Memory (Max.)*	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, 3DS RDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	N/A	N/A
Expansion Slots	2 PCI-E 3.0 x16 slots (Low Profile)	2x X16 PCI-E Slots	2x X16 PCI-E Slots
Onboard Storage Controller	N/A	N/A	N/A
Connectivity	Intel® X550 Dual Port 10GBase-T	4x X16 PCI-E IO ports	4x X16 PCI-E IO ports
VGA/Audio	Aspeed AST2500 BMC	N/A	N/A
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	IPMI 2.0 with Dedicated LAN	IPMI 2.0 with Dedicated LAN
Drive Bays	32x 2.5" U.2 Drive slots	32x 2.5" Drive slots	32x 9.5mm EDSFF Long Drive slots
Peripheral Bays	2x on-board SATA/NVMe M.2	N/A	N/A
Power Supply	Redundant(1+1) 1600W Platinum level high efficiency power supplies	Redundant(1+1) 1000W Titanium level high efficiency power supplies	Redundant(1+1) 1000W Titanium level high efficiency power supplies
Cooling System	8x 40x56mm counter-rotation PWM fan	8x 40mm Fans, N/A	8x 40mm Fans, N/A
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 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

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

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

# X11 STORAGE

2U SuperStorage

2U SuperStorage



MODEL	SSG-2029P-ACR24H SSG-2029P-ACR24L	SSG-2029P-E1CR24H SSG-2029P-E1CR24L
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 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	<ul style="list-style-type: none"> <li>Corporate Database</li> <li>Database Processing &amp; Storage</li> <li>HPC</li> <li>Large Database</li> <li>Web Cache</li> </ul>	<ul style="list-style-type: none"> <li>Corporate Database</li> <li>Database Processing &amp; Storage</li> <li>Enterprise Server</li> <li>HPC</li> <li>Data Center</li> <li>iSCSI SAN</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>2 Optional Onboard NVMe M.2</li> <li>24x 2.5" Hot-swap SAS3/SATA3 drive bays</li> <li>Up to 205W CPU support</li> <li>16 DIMM support</li> <li>Dual 10G BaseT</li> <li>3 3108 HW SAS controllers</li> <li>1200W Titanium Level high-efficiency power supply</li> </ul>	<ul style="list-style-type: none"> <li>3108 SAS3 HW RAID controller</li> <li>2 Optional Onboard NVMe M.2</li> <li>24x 2.5" Hot-swap SAS3/SATA3 drive bays</li> <li>Up to 205W CPU support</li> <li>16 DIMM support</li> <li>Dual 10G BaseT</li> <li>Dual JBOD Expansion Ports</li> <li>1200W Titanium Level high-efficiency power supply</li> </ul>
Serverboard	SUPER● X11DPH-T	SUPER● X11DPH-T
Chipset	Intel® C622 chipset	Intel® C622 chipset
System Memory (Max.)*	16 DIMM slots; Up to 4TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	16 DIMM slots; Up to 4TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)
Expansion Slots	3 PCI-E 3.0 x16, 4 PCI-E 3.0 x8.	3 PCI-E 3.0 x16, 4 PCI-E 3.0 x8. Slot 2 & 3 occupied by controller and JBOD Expansion Port
Storage Controller	-ACR24H: 3 3108 SAS3 add-on controller cards -ACR24L: 3 3008 SAS3 add-on controller cards	-E1CR24H: 3108 SAS3 add-on controller card -E1CR24L: 3008 SAS3 add-on controller card
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	24x 2.5" hot-swap SAS3/SATA3 drive bays	24x 2.5" hot-swap SAS3/SATA3 drive bays
Peripheral Bays	2x 2.5" rear hot-swap SATA3 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.	3x 8cm hot-swap redundant PWM cooling fans.
Form Factor	2U 17.2" (437mm) x 3.5" (89mm) x 24.8" (630mm)	2U 17.2" (437mm) x 3.5" (89mm) x 24.8" (630mm)

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

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

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

# X11 STORAGE

SuperStorage, Super SBB

2U SuperStorage

2U SuperStorage



MODEL	SSG-2029P-DN2R24L	SSG-6029P-E1CR12H SSG-6029P-E1CR12L	SSG-6029P-E1CR12T
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 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 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	<ul style="list-style-type: none"> <li>High Availability Hardware Platform</li> <li>Enterprise File/Block Storage Server</li> <li>Failover Cluster</li> <li>Corporate Database</li> <li>HPC</li> <li>Virtualization</li> </ul>	<ul style="list-style-type: none"> <li>Corporate Database</li> <li>Database Processing &amp; Storage</li> <li>Enterprise Server</li> <li>HPC</li> <li>Data Center</li> <li>iSCSI SAN</li> </ul>	<ul style="list-style-type: none"> <li>Corporate Database</li> <li>Database Processing &amp; Storage</li> <li>Enterprise Server</li> <li>HPC</li> <li>Data Center</li> <li>iSCSI SAN</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Redundant DP SBB supporting 24x U.2 Dual-Port NVMe</li> <li>IPMI management with dedicated LAN</li> <li>2000W High Efficiency (96%) Titanium Level</li> <li>Redundant Power Supplies</li> <li>NV-DIMM support</li> <li>Shared storage between redundant controllers</li> <li>Node to node heartbeat/ NTB connectivity</li> </ul>	<ul style="list-style-type: none"> <li>3008 SAS3 IT Mode controller</li> <li>2 Optional Onboard NVMe M.2</li> <li>12x 3.5" hot-swap SAS3/SATA3 drive bays</li> <li>Up to 205W CPU support</li> <li>16 DIMM support</li> <li>Dual 10G BaseT</li> <li>Dual JBOD Expansion Ports</li> <li>1200W Titanium Level high-efficiency power supply</li> </ul>	<ul style="list-style-type: none"> <li>3108 SAS3 HW RAID controller</li> <li>2 Optional Onboard NVMe M.2</li> <li>12x 3.5" hot-swap SAS3/SATA3 drive bays</li> <li>Up to 205W CPU support</li> <li>16 DIMM support</li> <li>Dual 10G BaseT</li> <li>1200W Titanium Level high-efficiency power supply</li> </ul>
Serverboard Chipset	SUPER● X11DSN-TS Intel® C624 chipset	SUPER● X11DPH-T Intel® C622 chipset	SUPER● X11DPH-T Intel® C622 chipset
System Memory (Max.)*	12 DIMM slots; Up to 3TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	Up to Up to 4TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 4TB 3DS ECC LRDIMM, DDR4-2933MHz, in 16 DIMM slots; Up to 2TB Intel® Optane® DC Persistent Memory in memory mode (Cascade Lake only);	16 DIMM slots; Up to 4TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)
Expansion Slots	2 PCI-E 3.0 x16(LP,HL); 1 PCI-E 3.0 x16 SIOM	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 3 occupied by controller
Onboard Storage Controller	N/A	-E1CR12H: 3108 SAS3 add-on controller card -E1CR12L: 3008 SAS3 add-on controller card	3108 SAS3 add-on HW RAID controller
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® X557	Dual LAN with 10GBase-T with Intel® X557
VGA/Audio	1 VGA D-Sub Connector, 1 Aspeed AST2500 BMC	Aspeed AST2500 BMC	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, IPMI2.0, NMI, SPM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SUM, SuperDoctor® 5, Watchdog
Drive Bays	24x U.2 hot-swap Dual-Port NVMe drive bays	12x 3.5" hot-swap SAS3/SATA3 drive bays	12x 3.5" hot-swap SAS3/SATA3 drive bays
Peripheral Bays	2 SATA DOM per node; 1 Optional onboard NVMe M.2 (up to 80mm) per node	2x 2.5" rear hot-swap SATA3 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	2000W Redundant Titanium Level high-efficiency power supplies	1200W Titanium Level high-efficiency power supply	1200W Titanium Level high-efficiency power supply
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 25.6" (650mm)	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

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

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

# X11 STORAGE

2U SuperStorage



Simply Double Storage



MODEL	SSG-6029P-E1CR16T	SSG-6029P-E1CR24H SSG-6029P-E1CR24L
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 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	<ul style="list-style-type: none"> <li>Corporate Database</li> <li>Database Processing &amp; Storage</li> <li>Enterprise Server</li> <li>HPC</li> <li>Data Center</li> <li>iSCSI SAN</li> </ul>	<ul style="list-style-type: none"> <li>Corporate Database</li> <li>Data Center</li> <li>Database Processing &amp; Storage</li> <li>Enterprise Server</li> <li>HPC</li> <li>iSCSI SAN</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>3108 SAS3 HW RAID controller</li> <li>2 Optional Onboard NVMe M.2</li> <li>16x 3.5" Hot-swap SAS3/SATA3 drive bays</li> <li>Up to 205W CPU support</li> <li>16 DIMM support</li> <li>Dual 10G BaseT</li> <li>Redundant 1600W Titanium Level high-efficiency power supplies</li> </ul>	<ul style="list-style-type: none"> <li>24x 3.5" Drives in 2U Form Factor</li> <li>Supports Dual 205W Skylake CPU</li> <li>24 DIMM sockets</li> <li>Support SIOM Card for Multiple IO Option</li> </ul>
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 <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (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	3108 SAS3 add-on controller card	-E1CR24H: 3108 SAS3 HW RAID controller -E1CR24L: 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, SSM, 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) Gross Weight: 61lbs (27.67kg) Net Weight: 34lbs (15.42kg)	2U 17.2" (437mm) x 3.5" (89mm) x 34" (863.6mm) Gross Weight: 74.5lbs (33.79kg) Net Weight: 52lbs (23.59kg)

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

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

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

# X11 STORAGE

3U SuperStorage



4U SuperStorage



MODEL	SSG-6039P-E1CR16H SSG-6039P-E1CR16L	SSG-6049P-E1CR24H SSG-6049P-E1CR24L
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 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	<ul style="list-style-type: none"> <li>Corporate Database</li> <li>Data Center</li> <li>Database Processing &amp; Storage</li> <li>Enterprise Server</li> <li>HPC</li> <li>iSCSI SAN</li> </ul>	<ul style="list-style-type: none"> <li>Corporate Database</li> <li>Data Center</li> <li>Database Processing &amp; Storage</li> <li>Enterprise Server</li> <li>HPC</li> <li>iSCSI SAN</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Optional Slim DVD support</li> <li>2 Optional Onboard NVMe M.2</li> <li>16x 3.5" Hot-swap SAS3/SATA3 drive bays</li> <li>Up to 205W CPU support</li> <li>16 DIMM support</li> <li>Dual 10G BaseT</li> <li>Dual JBOD Expansion Ports</li> <li>1200W Titanium Level high-efficiency power supply</li> </ul>	<ul style="list-style-type: none"> <li>3008 SAS3 IT Mode Controller</li> <li>2 Optional Onboard NVMe M.2</li> <li>24x 3.5" Hot-swap SAS3/SATA3 drive bays</li> <li>Up to 205W CPU support</li> <li>16 DIMM support</li> <li>Dual 10G BaseT</li> <li>Dual JBOD Expansion Ports</li> <li>1200W Titanium Level high-efficiency power supply</li> </ul>
Serverboard	SUPER● X11DPH-T	SUPER● X11DPH-T
Chipset	Intel® C622 chipset	Intel® C622 chipset
System Memory (Max.)*	16 DIMM slots; Up to 4TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	16 DIMM slots; Up to 4TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (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: 3108 SAS3 add-on controller card -E1CR116L: 3008 SAS3 add-on controller card	-E1CR24H: 3108 SAS3 add-on controller card -E1CR24L: 3008 SAS3 add-on controller card
Connectivity	Dual LAN with 10GBase-T with Intel® X557	Dual LAN with 10GBase-T with Intel® X557
VGA/Audio	Aspeed AST2500 BMC	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	24x 3.5" hot-swap SAS3/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)

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

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

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

# X11 STORAGE

4U SuperStorage  
36x 3.5" HDDs



4U Top-Loading Storage  
45x 3.5" HDDs, 26" Short-Depth



4U Top-Loading Storage  
60x 3.5" HDDs



MODEL	SSG-6049P-E1CR36H SSG-6049P-E1CR36L	SSG-6049P-E1CR45H SSG-6049P-E1CR45L SSG-6049P-E1CR45L+	SSG-6049P-E1CR60H SSG-6049P-E1CR60L SSG-6049P-E1CR60L+
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	<ul style="list-style-type: none"> <li>Corporate Database</li> <li>Data Center</li> <li>Database Processing &amp; Storage</li> <li>Enterprise Server</li> <li>HPC</li> <li>iSCSI SAN</li> </ul>		
Outstanding Features	<ul style="list-style-type: none"> <li>3108 SAS3 HW RAID controller</li> <li>2x Optional Onboard NVMe M.</li> <li>36x 3.5" Hot-swap SAS3/SATA3 drive bays</li> <li>Up to 205W CPU support</li> <li>16 DIMM support</li> <li>Dual 10G BaseT</li> <li>Dual JBOD Expansion Ports</li> <li>1200W Titanium Level high-efficiency power supply</li> </ul>	<ul style="list-style-type: none"> <li>45x 3.5" Drive in 4U Form Factor</li> <li>Supports Dual 205W Skylake CPU</li> <li>24 DIMM sockets</li> <li>Support SIO M Card for Multiple IO Options</li> </ul>	<ul style="list-style-type: none"> <li>60x 3.5" Drive in 4U Form Factor</li> <li>Supports Dual 205W Skylake CPU</li> <li>24 DIMM sockets</li> <li>Support SIO M Card for Multiple IO Options</li> </ul>
Serverboard Chipset	SUPER● X11DPH-T Intel® C622 chipset	SUPER● X11DSC+ Intel® C621 chipset	SUPER● X11DSC+ Intel® C621 chipset
System Memory (Max.)*	16 DIMM slots; Up to 4TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (128/256/512GB)	24 DIMM slots; Up to 6TB DDR4-2933 MHz <sup>†</sup> with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane® DCPMM <sup>††</sup> (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	2 PCI-E 3.0 x16, 1 PCI-E 3.0 x8	2 PCI-E 3.0 x16, 1 PCI-E 3.0 x8
Storage Controller	-E1CR36H: 3108 SAS3 add-on controller card -E1CR36L: 3008 SAS3 add-on controller card	-E1CR45H: 3108 SAS3 HW RAID controller -E1CR45L: 3008 IT Mode SAS Controller -E1CR45L+: 3616 IT Mode x16 SAS Controller	-E1CR60H: 3108 SAS3 HW RAID controller -E1CR60L: 3008 IT Mode SAS controller -E1CR60L+: 3616 IT Mode SAS controller
Connectivity	Dual LAN with 10GBase-T with Intel® X557	SIO M Networking Card For Flexible Networking Options	SIO M Networking Card For Flexible Networking Options
VGA/Audio	Aspeed AST2500 BMC	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, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, 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" hot-swap SAS3/SATA3 drive bays	45x 3.5" hot-swap SAS/SATA drive bay with SES3	60x 3.5"/2.5" hot-swap SAS3/SATA3 drive bays
Peripheral Bays	2x 2.5" rear hot-swap SATA3 drive bays; 2 Optional onboard NVMe M.2 (up to 110m)	2x 2.5" hot-swap drive bay	2x 2.5" hot-swap SATA3 drive bays
Power Supply	1200W Titanium Level high-efficiency power supply	1600W Redundant Platinum Level High-Efficiency Power Supplies	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;	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)	4U Rackmount 17.2" (437mm) x 7" (178mm) x 30.2" (767.08mm) Gross Weight: 170.5lbs (77.34kg) Net Weight: 118lbs (53.52kg)

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

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

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

# X11 STORAGE

(For Complete System Only)

1U Storage  
12x 3.5 Data Drives in 1U



1U 12-bay SoC Storage  
CDN, Warm Storage, Web/Database Server



1U Cold Storage  
12x 3.5 Data Drives



MODEL	SYS-6019P-ACR12L+	SYS-5019D8-TR12P	SSG-5018A-AR12L
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).	Intel® Xeon® D-2146NT SoC Processor 8-Core, 16 Threads 2.3 GHz, 80W	Intel® Atom® Processor C2750.  Socket FCBGA1283 supported, CPU TDP support 20W
Key Applications	<ul style="list-style-type: none"> <li>Object Storage</li> <li>Data Center</li> <li>Database Processing &amp; Storage</li> <li>Enterprise Server</li> <li>Big Data Analytics</li> <li>Hadoop &amp; Ceph storage solutions</li> </ul>	<ul style="list-style-type: none"> <li>Warm Storage</li> <li>Content Delivery Networks (CDNs)</li> <li>MEC (Multi-access Edge Computing)</li> <li>VM and SMB Servers</li> </ul>	<ul style="list-style-type: none"> <li>Storage Nodes</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>3216 SAS3 IT mode controller</li> <li>12x 3.5" hot-swap SAS3/SATA3 drive bays</li> <li>4x 2.5" 7mm hot-swap NVMe/SATA drive bays</li> <li>1x M.2 NVMe up to 110mm</li> <li>Front Panel HDD Locate LED</li> <li>Internal Cable Arm</li> </ul>	<ul style="list-style-type: none"> <li>2-Port 1Gig Base-T, 2-Port 10Gig Base-T and 2-port 10G SFP+ Network Port</li> <li>IPMI 2.0 (dedicated LAN) with Virtual Media/ KVM over LAN</li> <li>With cost-effective AOC support 12x 3.5" SAS3, 2x fixed 2.5 SAS3/SATA3</li> <li>Built in Intel QAT up to 40Gbps Crypto/ Compression</li> <li>Redundant or Single PWS Option</li> </ul>	<ul style="list-style-type: none"> <li>Hardware Drive Power Control</li> <li>1 PCI-E 2.0 x4 (in x8 slot)</li> <li>12x 3.5" data drives in 1U</li> <li>Cost optimized RAID: IT Mode only</li> </ul>
Serverboard	SUPER● X11DDW-NT	SUPER● X11SDV-8C-TP8F	SUPER● A1SA7-2750F
Chipset	Intel® C622 chipset	Intel® Xeon® D-2146NT SoC Processor	System on Chip chipset
System Memory (Max.)*	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).	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; Up to 512GB LRDIMM LRDIMM, in 4 DIMM slots	64GB Unbuffered ECC/non-ECC UDIMM, DDR3-1600MHz, in 4 DIMM slots; x8 data width
Expansion Slots	3 PCI-E 3.0 x16, 1 PCI-E 3.0 x16 for Add-On-Module (AOM)	1 PCI-E 3.0 x8	1 PCI-E 2.0 x4 (LP, HL, in x8 slot)
Onboard Storage Controller	Intel® C622 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
VGA/Audio	Aspeed AST2500 BMC	Built-in VGA from BMC	Aspeed AST2400 BMC
Management	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	IPMI 2.0 w/ dedicated LAN port & KVM; 4 Pin PWM Fan Speed control; Thermal and voltage monitoring	IPMI2.0, NMI, SuperDoctor® 5, Watchdog
Drive Bays	12x 3.5" hot-swap SAS3/SATA3 drive bays 4x 2.5" 7mm hot-swap NVMe/SATA 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	N/A	SATADOM for OS drive
Power Supply	800W 1U Platinum redundant power supply	400W Redundant Power (PWS-407P-1R), 80PLUS Platinum	PWS-406P-1R
Cooling System	6x 40x40x56mm 20.5K-17.6K RPM Counter-rotating Fan;	6x 4cm 4-pin PWM fans	6x 40x28mm PWM fan;
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)

\* 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 STORAGE

Applications storage, Archive and cold storage

Applications storage, Archive and cold storage  
(For Complete System Only)



MODEL	SSG-5029P-E1CTR12L	SSG-5049P-E1CTR36L	SSG-5049P-E1CR45H SSG-5049P-E1CR45L
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. 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).
Key Applications	<ul style="list-style-type: none"> <li>Connectivity/Storage Computer Nodes</li> <li>Application and data serving</li> <li>High Availability Storage Appliance Platform</li> </ul>	<ul style="list-style-type: none"> <li>Connectivity/Storage Computer Nodes</li> <li>Database Processing &amp; Storage</li> </ul>	<ul style="list-style-type: none"> <li>Backup storage</li> <li>Database Applications</li> <li>Data Warehousing, Archiving</li> <li>Cold Storage</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>Optional 2x 2.5" NVMe/SATA rear drive kit</li> <li>Remote management via dedicated IPMI BMC</li> <li>12x 3.5" hot-swap SAS3 drive bays</li> <li>3008 SW controller</li> </ul>	<ul style="list-style-type: none"> <li>2x 10GBase-T Ports</li> <li>Remote management via dedicated IPMI BMC</li> <li>36x 3.5" Hot-swap SAS3 bays</li> </ul>	<ul style="list-style-type: none"> <li>45x 3.5" Drive in 4U Form Factor</li> </ul>
Serverboard	SUPER● X11SPH-nCTF	SUPER● X11SPH-nCTF	SUPER● X11SPL-F
Chipset	Intel® C622 chipset	Intel® C622 chipset	Intel® C621 chipset
System Memory (Max.)*	Up to Up to 2TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots	Up to Up to 512GB Registered ECC RDIMM, DDR4-2933MHz; Up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots	Up to Up to 2TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots; Up to 1TB Intel Optane DC Persistent Memory in memory mode (Cascade Lake Only)
Expansion Slots	1 PCI-E 3.0 x16 (x16 or x8), 1 PCI-E 3.0 x8 (x0 or x8), 1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot)	1 PCI-E 3.0 x16 (x16 or x8), 1 PCI-E 3.0 x8 (x0 or x8), 1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot)	2 PCI-E 3.0 x8 (in x16 slot), 4 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot)
Storage Controller	Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10; 3008 SW controller for 8 SAS3 (12Gbps) ports; RAID 0,1,10;	3008 SW controller with expander to support total 14x SATA/SAS3 (12Gbps) IR mode RAID 0,1,10; or 36x SATA/SAS3 (12Gbps) IT mode	-E1CR45H: AOC-S3108L-H8IR-P -E1CR45L: AOC-S3008L-L8E
Connectivity	Dual LAN with 10GBase-T	2x 10GBase-T Ports	Dual LAN with 1GbE with Intel® I210
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	12x 3.5" hot-swap SAS/SATA drive bay with Optional 2x 2.5" NVMe/SATA rear drive kit	Optional 2x 2.5" NVMe/SATA rear drive kit" to Peripheral Bays	45x 3.5" SATA or SAS)+ 2x 2.5" SATA (Rear)
Peripheral Bays	N/A	2x 3.5" internal fixed drive bay or 4x 2.5" internal fixed drive bay, 2x M.2 Internal bays	2x 2.5"(SATA or NVMe w/AOC) option
Power Supply	PWS-802A-1R	Redundant 1200W Platinum Level high-efficiency Power Supply	PWS-1K66P-1R
Cooling System	3x 8cm high-performance PWM fans;	7x 80mm high-performance fan;	5x 80mm rear hot-swap exhaust PWM fan;
Form Factor	432 x 76 x 635mm (17.2" x 3.5" x 25.6")	4U 17.2" (437mm) x 7" (178mm) x 27.5" (699mm); Enclosure: 437 x 178 x 699mm (17.2" x 7" x 27.5") Package: 445 x 686 x 1003mm (17.5" x 27" x 39.5") Gross Weight: 102.5lbs (46.49kg) Net Weight: 65.5lbs (29.71kg)	4U Rackmount 437 x 178 x 660mm (17.2" x 7" x 26"); Enclosure: 437 x 178 x 660mm (17.2" x 7" x 26") Package: 711 x 584 x 1080mm (28" x 23" x 42.5") Gross Weight: 120lbs (54.43kg) Net Weight: 85lbs (38.56kg)

\* 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.

2U UP W/O



High Capacity Storage



MODEL	AS -2114S-WN24RT	ASG-1014S-ACR12N4H
Processor Support	Single AMD EPYC 7003 or 7002 Series Processor*; TDP up to 280W	Single AMD EPYC 7003 or 7002 Series Processor*
Key Applications	<ul style="list-style-type: none"> <li>Virtualization</li> <li>Hyperconverge Storage</li> <li>Cloud Computing</li> <li>All Flash Storage</li> </ul>	<ul style="list-style-type: none"> <li>Object Storage</li> <li>Scale-Out Density</li> <li>Database Applications</li> <li>Hadoop &amp; Ceph storage solutions</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>24-Port NVMe SSD Support</li> <li>Up to 4TB DDR4 ECC RDIMM</li> <li>Dual 10GBaseT LAN Ports</li> <li>2x M.2 Support by default</li> <li>2 SATA DOMs Support with Embedded Power</li> </ul>	<ul style="list-style-type: none"> <li>12x 3.5" hot-swap SAS3/SATA3 drive bays with Broadcom 3916 SAS3 IR mode controller</li> <li>16x 4TB Registered ECC DDR4 3200MHz SDRAM</li> <li>4x 2.5" 7mm hot-swap NVMe/SATA drive bays</li> <li>3 PCI-E 4.0 x16 slots</li> <li>2x 10GBase-T LAN Ports via Broadcom BCM57416 and 2x M.2 NVMe up to 110mm</li> <li>Internal Cable Arm</li> </ul>
Serverboard	SUPER <sup>®</sup> H12SSW-NTR	SUPER <sup>®</sup> H12SSW-NTR
System Memory (Max.)	Up to 4TB 3DS ECC RDIMM/LRDIMM; DDR4 up to 3200MHz, in 16 DIMM slots	Up to 4TB 3DS ECC RDIMM/LRDIMM; DDR4 up to 3200MHz, in 16 DIMMs
Expansion Slots	1 PCI-E 4.0 x16 (FH/HL)	2 PCI-E 4.0 x16 (FHHL); 1 PCI-E 4.0 x8 (LP)
Onboard Storage Controller	24 Hot-Swappable U.2 NVMe drive support	NVMe/SATA drive bays via CPU
Connectivity	2 10GBase-T Ethernet via Broadcom BCM57416 Controller; 5 USB 3.0 ports (4 rear, 1 Type A)	2 10GBase-T Ethernet via Broadcom BCM57416 Controller; 5 USB 3.0 ports (4 rear, 1 Type A)
VGA/Audio	1 VGA 1 Aspeed AST2500 BMC	1 VGA; 1 ASPEED AST2600 BMC
Management	Built-in Server management tool (IPMI 2.0, KVM/media over LAN) with dedicated LAN port	Built-in Server management tool (IPMI 2.0, KVM/media over LAN) with dedicated LAN port
Drive Bays	24 Hot-Swappable U.2 NVMe drive support	12x 3.5" SAS/SATA drive bays; 4x 7mm 2.5" NVMe/SATA drive bays
Peripheral Bays	N/A	N/A
Power Supply	1200W Redundant Power Supplies Titanium Level (96%) (Full redundancy based on configuration and application load)	800W redundant Platinum Level high-efficiency power supplies
Cooling System	3 heavy duty fans w/ Optimal Fan Speed Control	6x 40x40x56mm counter-rotation PWM fans
Form Factor	2U Rackmount 437 x 89 x 630mm (17.2" x 3.5" x 24.8")	1U Rackmount 447 x 43 x 940mm (17.6" x 1.7" x 37")

\* AMD EPYC 7003 series processor support requires BIOS version 2.0 or newer

# JBOD STORAGE

**NEW!** 4U Top Loading Storage  
60x Hot-Swap 2.5"/3.5" bays



**NEW!** 4U Top Loading Storage  
90x Hot-Swap 2.5"/3.5" bays



MODEL	CSE-947SE1C-R1K66JBOD CSE-947SE2C-R2K66JBOD	CSE-947HE1C-R2K05JBOD CSE-947HE2C-R2K05JBOD
Key Applications	<ul style="list-style-type: none"> <li>Large File Systems, Object Storage, Archives, Backup Images, and Multimedia Repositories</li> </ul>	<ul style="list-style-type: none"> <li>Large File Systems, Object Storage, Archives, Backup Images, and Multimedia Repositories</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>4U JBOD with 60 bays</li> <li>High Density and High Capacity Single/Dual-path Storage Enclosure</li> <li>Top Loading drive access</li> <li>12Gb/s SAS3 performance</li> <li>SCSI Enclosure Services (SES 4.0) compliant</li> <li>Hot-swappable Expanders and Hot-swappable Tool-less Modular Design</li> <li>Cable Management Arm not needed</li> <li>Tool-less drive tray with drive LED indicator</li> <li>Qualified with HBA and RAID Controllers AOC-SAS3-9300-8E, AOC-SAS3-9380-8E, AOC-SAS3-9405W-16E</li> </ul>	<ul style="list-style-type: none"> <li>4U JBOD with 90 bays</li> <li>High Density and High Capacity Single/Dual-path Storage Enclosure</li> <li>Top Loading drive access</li> <li>12Gb/s SAS3 performance</li> <li>SCSI Enclosure Services (SES 4.0) compliant</li> <li>Hot-swappable Expanders and Hot-swappable Tool-less Modular Design</li> <li>Cable Management Arm not needed</li> <li>Tool-less drive tray with drive LED indicator</li> <li>Qualified with HBA and RAID Controllers AOC-SAS3-9300-8E, AOC-SAS3-9380-8E, AOC-SAS3-9405W-16E</li> </ul>
Onboard Storage Controller	Single or Dual 30-port Expander Backplane Boards support SAS3/2 HDDs with 12Gb/s throughput	Single or Dual 30-port Expander Backplane Boards support SAS3/2 HDDs with 12Gb/s throughput
Connectivity	6 or 12 x Mini-SAS HD ports for Internal / External Cascading Expander Combination for high performance, high availability or high redundancy requirements	6 or 12 x Mini-SAS HD ports for Internal / External Cascading Expander Combination for high performance, high availability or high redundancy requirements
Management	Dedicated IPMI RJ45 management port Redfish OOB management protocol support	Dedicated IPMI RJ45 management port Redfish OOB management protocol support
Drive Bays	60 x 3.5" hot-swap drive bays (2.5" drive carriers supported)	90 x 3.5" hot-swap drive bays (2.5" drive carriers supported)
Power Supply	1600W (1+1) Redundant Power Supplies Titanium Certified	2000W (1+1) Redundant Power Supplies Platinum Certified
Cooling System	6x 8080mm rear hot-swap fans	6x 8080mm rear hot-swap fans
Form Factor	4U rack size, 32" depth	4U rack size, 43.3" depth

# JBOD STORAGE

4U Top Loading 45x 3.5" drives



4U Top Loading 60x 3.5" drives



4U Top Loading 90x 3.5" drives



MODEL	CSE-946LE1C-R1K66JBOD	CSE-946SE1C-R1K66JBOD CSE-946SE2C-R1K66JBOD	CSE-946ED-R2KJBOD
Key Applications	<ul style="list-style-type: none"> <li>Large File Systems, Object Storage, Archives, Backup Images, and Multimedia Repositories</li> </ul>		
Outstanding Features	<ul style="list-style-type: none"> <li>4U JBOD with 45 bays</li> <li>Top Loading drive access</li> <li>12Gb/s SAS3 performance</li> <li>Slide Rails and Cable Management Arm included</li> <li>Support NTP for time synchronization &amp; RTC battery backup</li> <li>Support front LCD panel for system status &amp; error info (Option)</li> <li>Tool-less drive tray with HDD LED indicator</li> <li>Qualified with 2-port HBA and RAID Controller</li> </ul>	<ul style="list-style-type: none"> <li>4U JBOD with 60 bays</li> <li>High Density and High Capacity Single/Dual-path Storage Enclosure</li> <li>Top Loading drive access</li> <li>12Gb/s SAS3 performance</li> <li>SCSI Enclosure Services (SES 3.0) compliant</li> <li>Slide Rails and Cable Management Arm included</li> <li>Support NTP for time synchronization &amp; RTC battery backup</li> <li>Support front LCD panel for system status &amp; error info (Option)</li> <li>Tool-less drive tray with drive LED indicator</li> <li>Qualified with 2-port HBA and RAID Controller</li> </ul>	<ul style="list-style-type: none"> <li>4U JBOD with 90 bays</li> <li>High Density and High Capacity Dual-path Storage Enclosure</li> <li>High Performance up to 20+ GB/s data transfer rate</li> <li>Top Loading drive access</li> <li>12Gb/s SAS3 performance</li> <li>SCSI Enclosure Services (SES 3.0) compliant</li> <li>Flexible to configure up to 4 Hosts HDD Zoning and individual HDD power cycling</li> <li>Hot-swappable Expanders and Hot-swappable Tool-less Modular Design</li> <li>Slide Rails and Cable Management Arm included</li> <li>Tool-less drive tray with drive LED indicator</li> <li>Qualified with 2-port HBA and RAID Controller</li> </ul>
Onboard Storage Controller	Single 45-port Expander Backplane Boards support SAS3/2 HDDs with 12Gb/s throughput	Single or Dual 30-port Expander Backplane Boards support SAS3/2 HDDs with 12Gb/s throughput	Dual 30-port Expander Backplane Boards support SAS3/2 HDDs with 12Gb/s throughput
Connectivity	4 x Mini-SAS HD ports for Internal / External Cascading Expander Combination for high performance, high availability or high redundancy requirements	4 or 8 x Mini-SAS HD ports for Internal / External Cascading Expander	8 x Mini-SAS HD ports for Internal / External Cascading Expander Combination for high performance, high availability or high redundancy requirements
VGA/Audio	N/A	N/A	N/A
Management	1x IPMI port for Remote System Power on/off and system monitoring	1x IPMI port for Remote System Power on/off and system monitoring	1x IPMI port for Remote System Power on/off and system monitoring
Drive Bays	45 x 3.5" hot-swap drive bays (2.5" drive carriers supported)	60 x 3.5" hot-swap drive bays (2.5" drive carriers supported)	90 x 3.5" hot-swap drive bays (2.5" drive carriers supported)
Power Supply	1600W (1+1) Redundant Power Supplies Platinum Certified	1600W (1+1) Redundant Power Supplies Platinum Certified	1000W (2+2) Redundant Power Supplies Titanium Certified
Cooling System	5x 80x38mm rear hot-swap fans	5x 80x38mm rear hot-swap fans	5 x 8080mm heavy duty fan(s) with PWM fan(s) speed control
Form Factor	4U rack size, 26" or 32.5" depth	4U rack size, 30.2" or 35.2" depth	4U rack size, 35.66" or 41" depth

# JBOD STORAGE

4U Front & Rear Access



Front - 24x 3.5" bays

Rear - 20x 3.5" bays

4U Front & Rear Access



Front - 48x 2.5" bays

Rear - 24x 2.5" bays

MODEL	CSE-847E1C-R1K23JBOD CSE-847E2C-R1K23JBOD	CSE-417BE1C-R1K23JBOD CSE-417BE2C-R1K23JBOD
Key Applications	<ul style="list-style-type: none"> <li>Unstructured data and Growing File Systems</li> </ul>	<ul style="list-style-type: none"> <li>Unstructured data and Growing File Systems</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>4U JBOD with 44 bays</li> <li>Front and Rear access to drive bays</li> <li>12Gb/s SAS3 performance</li> <li>Support NTP for time synchronization &amp; RTC battery backup</li> <li>Qualified with 2-port HBA and RAID Controller</li> </ul>	<ul style="list-style-type: none"> <li>4U JBOD with 72 bays</li> <li>Front and Rear access to drive bays</li> <li>12Gb/s SAS3 performance</li> <li>Support NTP for time synchronization &amp; RTC battery backup</li> <li>Qualified with 2-port HBA and RAID Controller</li> </ul>
Onboard Storage Controller	SAS3 (12Gbps) backplane with dual expanders supports SAS3 drives for load balancing and redundancy	SAS3 (12Gbps) single or dual expander backplane
Connectivity	8x Mini-SAS HD ports for Internal / External Cascading Expander Combination for high performance, high availability or high redundancy requirements	8x Mini-SAS HD ports for Internal / External Cascading Expander Combination for high performance, high availability or high redundancy requirements
Management	1x IPMI port for Remote System Power on/off and system monitoring	1x IPMI port for Remote System Power on/off and system monitoring
Drive Bays	44 (24 front + 20 rear) hot-swap drive bays (2.5" drive carriers supported)	72x (48 front + 24 rear) 2.5" hot-swap drive bays
Power Supply	1280W (1+1) Redundant Power Supplies Titanium Certified	1200W (1+1) Redundant Power Supplies Titanium Certified
Cooling System	7x 80mm rear hot-swap fans	7x 80mm rear hot-swap fans
Form Factor	4U rack size, 27.5" depth	4U rack size, 27.5" depth

# JBOD STORAGE

4U Storage Expansion



4U Storage Expansion



MODEL	CSE-846BE1C-R609JBOD CSE-846BE2C-R609JBOD	CSE-846BE1C-R1K03JBOD CSE-846BE2C-R1K03JBOD
Key Applications	<ul style="list-style-type: none"> <li>Unstructured data and Growing File Systems</li> </ul>	<ul style="list-style-type: none"> <li>Unstructured data and Growing File Systems</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>4U JBOD with 24 bays</li> <li>Front and Rear access to drive bays</li> <li>12Gb/s SAS3 performance</li> <li>Support NTP for time synchronization &amp; RTC battery backup</li> <li>Qualified with 2-port HBA and RAID Controller</li> </ul>	<ul style="list-style-type: none"> <li>4U JBOD with 24 bays</li> <li>Front access to drive bays</li> <li>12Gb/s SAS3 performance</li> <li>Support NTP for time synchronization &amp; RTC battery backup</li> <li>Qualified with 2-port HBA and RAID Controller</li> </ul>
Onboard Storage Controller	Single or Dual Expander Backplane Boards support SAS3/2 HDDs with 12Gb/s throughput	Single Expander Backplane Board supports SAS3/2 HDDs with 12Gb/s throughput
Connectivity	4 or 8x Mini-SAS HD ports for Internal / External Cascading Expander Combination for high performance, high availability or high redundancy requirements	4x Mini-SAS HD ports for Internal / External Cascading Expander Combination for high performance, high availability or high redundancy requirements
Management	1x IPMI port for Remote System Power on/off and system monitoring	1x IPMI port for Remote System Power on/off and system monitoring
Drive Bays	24 x 3.5" hot-swap drive bays (2.5" drive carriers supported)	24 x 3.5" hot-swap drive bays (2.5" drive carriers supported)
Power Supply	600W (1+1) Redundant Power Supplies Platinum certified	1000W (1+1) Redundant Power Supplies Titanium certified
Cooling System	5 hot-swap fans (3 cooling fans, 2 exhaust fans)	5 hot-swap fans (3 cooling fans, 2 exhaust fans)
Form Factor	4U rack size, 26" depth	4U rack size, 26" depth

# JBOD STORAGE

3U Storage Expansion



3U Storage Expansion



MODEL	CSE-836BE1C-R609JBOD CSE-836BE2C-R609JBOD	CSE-836BE1C-R1K03JBOD CSE-836BE2C-R1K03JBOD
Key Applications	<ul style="list-style-type: none"> <li>Database and Collaboration Stores</li> </ul>	<ul style="list-style-type: none"> <li>Database and Collaboration Stores</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>3U JBOD with 16 bays</li> <li>Front access to drive bays</li> <li>12Gb/s SAS3 performance</li> <li>Support NTP for time synchronization &amp; RTC battery backup</li> <li>Qualified with 2-port HBA and RAID Controller</li> </ul>	<ul style="list-style-type: none"> <li>3U JBOD with 16 bays</li> <li>Front access to drive bays</li> <li>12Gb/s SAS3 performance</li> <li>Support NTP for time synchronization &amp; RTC battery backup</li> <li>Qualified with 2-port HBA and RAID Controller</li> </ul>
Onboard Storage Controller	Single or Dual Expander Backplane Boards support SAS3/2 HDDs with 12Gb/s throughput	Single or Dual Expander Backplane Boards support SAS3/2 HDDs with 12Gb/s throughput
Connectivity	4 or 8 x Mini-SAS HD ports for Internal / External Cascading Expander Combination for high performance, high availability or high redundancy requirements	4 or 8 x Mini-SAS HD ports for Internal / External Cascading Expander Combination for high performance, high availability or high redundancy requirements
Management	1x IPMI port for Remote System Power on/off and system monitoring	1x IPMI port for Remote System Power on/off and system monitoring
Drive Bays	16 x 3.5" hot-swap drive bays (2.5" drive carriers supported)	16 x 3.5" hot-swap drive bays (2.5" drive carriers supported)
Power Supply	600W (1+1) Redundant Power Supplies Platinum certified	1000W (1+1) Redundant Power Supplies Titanium certified
Cooling System	5 hot-swap fans (3 cooling fans, 2 exhaust fans)	5 hot-swap fans (3 cooling fans, 2 exhaust fans)
Form Factor	3U rack size, 25.5" depth	3U rack size, 25.5" depth

# JBOD STORAGE

2U Storage Expansion



2U Storage Expansion



2U Storage Expansion



MODEL	CSE-216BE1C-R609JBOD CSE-216BE2C-R609JBOD	CSE-826BE1C-R609JBOD CSE-826BE2C-R609JBOD	CSE-826SE1C-R1K02JBOD
Key Applications	<ul style="list-style-type: none"> <li>Microsoft Apps and Virtualization data backend</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Apps and Virtualization data backend</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Apps and Virtualization data backend</li> </ul>
Outstanding Features	<ul style="list-style-type: none"> <li>2U JBOD with 24 bays</li> <li>Front access to drive bays</li> <li>12Gb/s SAS3 performance</li> <li>Support NTP for time synchronization &amp; RTC battery backup</li> <li>Qualified with 2-port HBA and RAID Controller</li> </ul>	<ul style="list-style-type: none"> <li>2U JBOD with 12 bays</li> <li>Front access to drive bays</li> <li>12Gb/s SAS3 performance</li> <li>Support NTP for time synchronization &amp; RTC battery backup</li> <li>Qualified with 2-port HBA and RAID Controller</li> </ul>	<ul style="list-style-type: none"> <li>2U JBOD with 24 bays</li> <li>Front and top access to drive bays</li> <li>12Gb/s SAS3 performance</li> <li>Support NTP for time synchronization &amp; RTC battery backup</li> <li>Qualified with 2-port HBA and RAID Controller</li> </ul>
Onboard Storage Controller	Single or Dual Expander Backplane Boards support SAS3/2 HDDs with 12Gb/s throughput	Single or Dual Expander Backplane Boards support SAS3/2 HDDs with 12Gb/s throughput	Single Expander Backplane Boards support SAS3/2 HDDs with 12Gb/s throughput
Connectivity	4 or 8 x Mini-SAS HD ports for Internal / External Cascading Expander Combination for high performance, high availability or high redundancy requirements	4 or 8 x Mini-SAS HD ports for Internal / External Cascading Expander Combination for high performance, high availability or high redundancy requirements	4 x Mini-SAS HD ports for Internal / External Cascading Expander Combination for high performance, high availability or high redundancy requirements
Management	1x IPMI port for Remote System Power on/off and system monitoring	1x IPMI port for Remote System Power on/off and system monitoring	1x IPMI port for Remote System Power on/off and system monitoring
Drive Bays	24 x 3.5" hot-swap drive bays (2.5" drive carriers supported)	12 x 3.5" hot-swap drive bays (2.5" drive carriers supported)	24 (12 front + 12 middle) hot-swap drive bays (2.5" drive carriers supported)
Power Supply	600W (1+1) Redundant Power Supplies Platinum certified	600W (1+1) Redundant Power Supplies Platinum certified	1000W (1+1) Redundant Power Supplies Titanium certified
Cooling System	3 hot-swap fans	3 hot-swap fans	5 hot-swap fans
Form Factor	2U rack size, 24.8" depth	2U rack size, 25.5" depth	2U rack size, 34" or 41" depth



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