



SuperStorage

Industry-Leading Enterprise Storage System and Expansion Solutions



Top-Loading Capacity Maximized



Simply Double Performance and Capacity Optimized



General-purpose Storage Versatile and Flexible

Advantages

- 205W TDP dual CPUs supported
- 24 DIMMs for up to 3TB ECC DDR4-2400MHz memory
- Up to 6 PCI-E 3.0 slots
- 100/40/25G Ethernet, and 100G Intel[®] Omni-Path onboard SIOM network options
- Mixed, hot-swappable NVMe, SAS3 and SATA3 drives supported
- SAS3 via Broadcom 3108 (HW RAID) or 3008 (IT Mode)
- All-Flash NVMe optimized models deliver up to 7M IOPS
- Scalable to over 1PB per 4U or 10PB in a 42U rack

May 2017



SUPERMICR

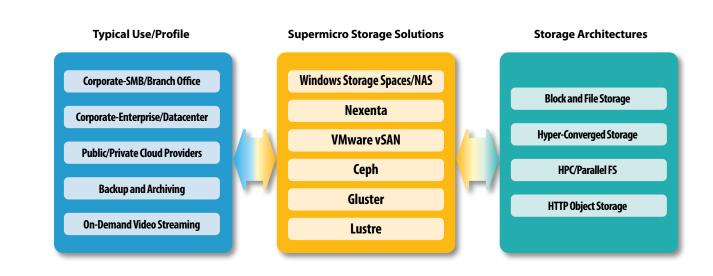
Application optimized high-performance, expandable storage solutions.



Complete Portfolio of open industry standard storage offerings optimized for Microsoft, VMWare, RedHat and Software Defined Storage solutions Maximum Performance - Full NVMe support, in hybrid expander and direct attach storage backplane with up to 20 GB/s throughput Maximum Efficiency - High capacity 2U, 3U and 4U form factors with industry leading density. Highest efficiency Titanium rated power supplies (95% power efficient)

Mission Critical Reliability - fully redundant, fault-tolerant architecture with hot swappable drive bays, power supplies and cooling fans. The HA capable JBOD hardware is perfect for mission critical applications

Supermicro Software-Defined Storage Solutions



Broad Coverage for Use Cases, Solutions, and Storage Architectures



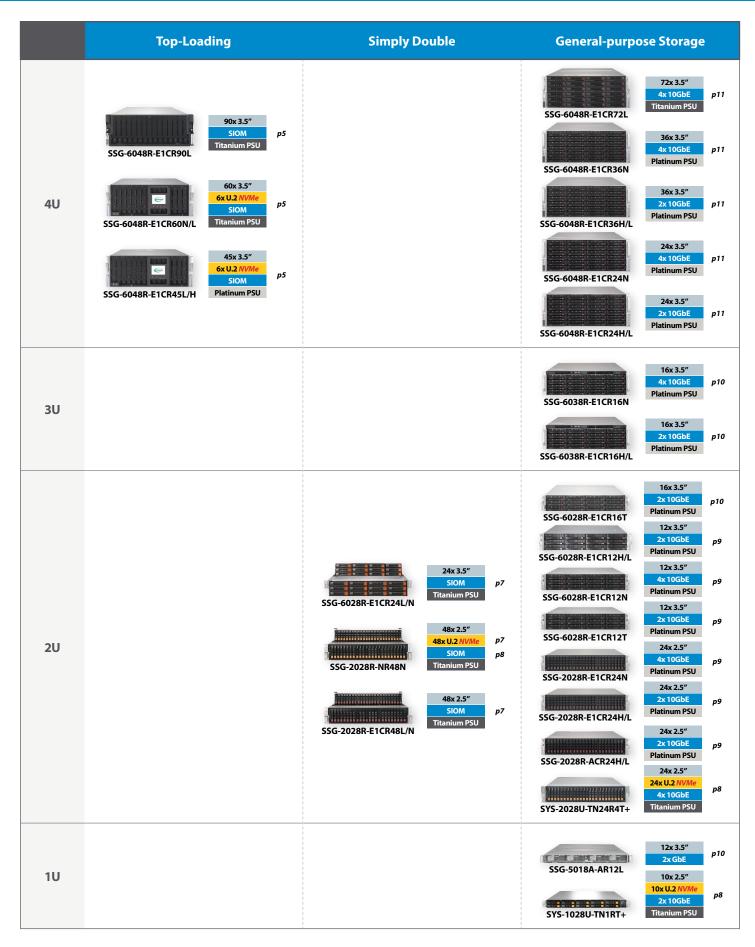






To learn more, please visit <u>www.supermicro.com/solutions/Software_Defined_Storage.cfm</u>

Enterprise Storage System and Expansion Solutions





Top-Loading

Capacity maximized 45/60/90-bay storage systems optimized for software-defined data centers.



Supermicro top-loading, capacity-maximized storage server family is ideal for use cases such as data replication, data backup, archive and cold storage, video streaming and surveillance, providing customers with more choices to deploy software-defined data centers.

The new 45-bay SuperStorage system comes with the industry's most flexible design and features tiered storage packing hot, warm and cold storage in one compact 4U box.

It's the only 45-bay storage server supporting hot-swap *NVMe* SSDs (6 x U.2) for I/O intensive workloads, highest performance CPUs, up to 3TB of DDR4 memory, and a wide range on-board networking options with SIOM cards

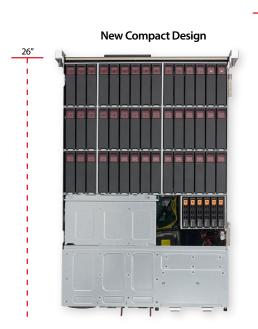
Right-sized for every data center deployment with short depth (less than 26"), easy-to-deploy 45-bay, mainstream 60-bay and extremely dense 90-bay storage servers.

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45-Bay + Optional 6 NVMe and 2 Rear 2.5"



90-Bay + Optional 2 Rear 2.5"





Technical Specifications

45/60/90-Bay Top-Loading Storage Server Systems



170.5 lbs (gross); 118 lbs (net)

Weight

120 lbs (gross); 85 lbs (net)

SUPERMICR[®] SuperStorage Server and JBOD Solutions - May 2017

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Simply Double

Doubling the number of hot-swap drive bays in a 2U space optimized for performance and capacity.



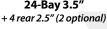
+ Optional 2 Rear 2.5"

The Simply Double 2U SuperStorage systems include twice the number of hot-swap drive bays as 2U industry standard systems, thus offering up to twice the storage capacity and IOPS in the same amount of space. The additional drive bays are arrayed in a patented Riser Bay that is located on the top of the Simply Double systems for easy access and servicing. With twice the storage density, customers can greatly improve the price/performance of their storage deployments to maximize ROI.

The Supermicro 2U Simply Double SuperStorage systems are available in server or JBOD models (see page 13) that offer either 2.5" or 3.5" drive bays, and that also support all-flash NVMe or SAS 3.0 SSD/HDDs. Additional value-added features include an additional two rear hot-swap drive bays, 3 PCI-E 3.0 slots, redundant Titanium Level (96%+) high-efficiency power supplies, and support for flexible on-board networking modules (see page 14 for available SIOM networking options).

This broad and feature rich product line allows customers to select and customize the perfect solution that is optimized for their specific requirements, from IOPS intensive applications to deployments that require the highest storage capacity.





Rear bay Redundant **Power Supplies** Hot-swap fans **Riser bay** Front bay

Enterprise Storage System and Expansion Solutions

Technical Specifications

Simply Double SuperStorage Server Systems

3	8.5″ SAS3/SATA3	All-Flash NVMe	2.5″ SAS3/SATA3
SSC	G-6028R-E1CR24L/N	SSG-2028R-NR48N	SSG-2028R-E1CR48L/N
	SSG-6028R-E1CR24L/N	SSG-2028R-NR48N	SSG-2028R-E1CR48L/N
Processor	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s, 145W TDP	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s, 145W TDP	Dual Intel [*] Xeon [*] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s, 145W TDP
Serverboard	SUPER [®] X10DSC+	SUPER [®] X10DSC+	SUPER• X10DSC+
Chipset	Intel [®] C612	Intel [®] C612	Intel [®] C612
Memory	Up to 3TB ECC registered DDR4-2400MHz in 24 DIMM slots	Up to 3TB ECC registered DDR4-2400MHz in 24 DIMM slots	Up to 3TB ECC registered DDR4-2400MHz in 24 DIMM slots
Expansion Slots	• 2 PCI-E 3.0 x16 (FH, 10.5"L) slots • 1 PCI-E 3.0 x8 (LP) slot	• 2 PCI-E 3.0 x16 (FH, 10.5"L) slots • 1 PCI-E 3.0 x8 (LP) slot	• 2 PCI-E 3.0 x16 (FH, 10.5"L) slots • 1 PCI-E 3.0 x8 (LP) slot
RAID Controller	 -L: Broadcom[*] SAS3008 (IT Mode) for SAS3 (12Gbps); RAID 0,1,1E and 10 -N: Broadcom[*] SAS3108 for SAS3 (12Gbps); RAID 0,1,1E,5,6,10 and 50 	N/A	 -L: Broadcom[*] SAS3008 (IT Mode) for SAS3 (12Gbps); RAID 0,1,1E and 10 -N: Broadcom[*] SAS3108 for SAS3 (12Gbps); RAID 0,1,1E,5,6,10 and 50
Backplane	"E1C"/ Single Expander	PCI-E switched topology	"E1C"/ Single Expander
Drive Bays	24 hot-swap 3.5" SAS3/SATA3 drive bays	48 hot-swap 2.5" U.2 NVMe drive bays	48 hot-swap 2.5" SAS3/SATA3 drive bays
Peripheral Storage	 2 hot-swap 2.5" SATA3 rear drive bays Optional 2 additional hot-swap 2.5" SATA3 rear drive bays 	 2 hot-swap 2.5" SATA3 rear drive bays Optional 2 additional hot-swap 2.5" SATA3 rear drive bays 	 2 hot-swap 2.5" SATA3 rear drive bays Optional 2 additional hot-swap 2.5" SATA3 rear drive bays
Networking	On-board SIOM flexible networking options	On-board SIOM flexible networking options	On-board SIOM flexible networking options
On-board Video	ASPEED AST2400 VGA	ASPEED AST2400 VGA	ASPEED AST2400 VGA

Management

Power Supply Cooling

Form Factor

Dimensions

2U rackmount

4 Redundant 1000W Titanium Level (96%+ efficiency)



General-purpose Storage

The foundation of a flexible and efficient storage deployment.

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Supermicro's high-performance storage servers include everything needed for a rock solid storage foundation. Individual models are designed to meet the demands of the toughest storage environments, from latency sensitive caching applications to the massive capacity needed for large files used in media libraries and Big Data.

SuperStorage supports both scale-up and scaleout deployment strategies allowing CPU and storage resources scale to meet diverse application requirements.

SuperStorage offers a no compromise storage platform with flexible market entry points from 2U, 3U and 4U form factors using 2.5" and 3.5" HDDs.

Supermicro All-Flash NVMe SuperServers and Storage Systems

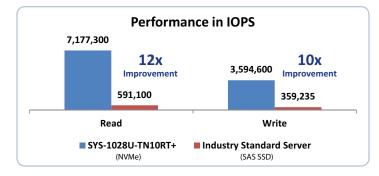
1U 10 NVMe Throughput/IOPS Optimized

2U 24 NVMe Balanced Throughput and Capacity

2U 48 NVMe Capacity Optimized



	SYS-1028U-TN10RT+	SYS-2028U-TN24R4T+	SSG-2028R-NR48N
Processor	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s
Chipset	Intel [®] C612	Intel [®] C612	Intel [®] C612
Memory	Up to 3TB ECC registered DDR4-2400MHz in 24 DIMM slots	Up to 3TB ECC registered DDR4-2400MHz in 24 DIMM slots	Up to 3TB ECC registered DDR4-2400MHz in 24 DIMM slots
PCI-E 3.0 Slots	• 2 PCI-E 3.0 x8 (FH, 10.5"L) slots • 1 PCI-E 3.0 x8 (LP) slot	• 2 PCI-E 3.0 x16 (FH, 10.5"L) slots • 1 PCI-E 3.0 x8 (LP) slot	• 2 PCI-E 3.0 x16 (FH, 10.5"L) slots • 1 PCI-E 3.0 x8 (LP) slot
Drive Bays	10 hot-swap 2.5" U.2 <i>NVMe</i> drive bays	24 hot-swap 2.5" U.2 <i>NVMe</i> drive bays	48 hot-swap 2.5" U.2 <i>NVMe</i> drive bays
Networking	2x 10GBase-T Ethernet ports	4x 10GBase-T Ethernet ports	On-board SIOM flexible networking options
Power Supply	Redundant 1000W Titanium Level (96%+ efficiency)	Redundant 1600W Titanium Level (96%+ efficiency)	Redundant 1600W Titanium Level (96%+ efficiency)
Form Factor	1U rackmount	2U rackmount	2U rackmount



The all-flash *NVMe* SuperServer and SuperStorage systems deliver a massive improvement in storage performance over systems based on traditional hard disk drives (HDD) and solid state drives (SSD) using legacy storage interfaces including SAS3 and SATA3. The *NVMe* optimized servers are also more power efficient than the traditional systems and have hot-plug capability for improved serviceability and availability.

To learn more please download the white paper: www.supermicro.com/white_paper/white_paper_NVMe2.pdf

2U SuperStorage Server Systems with 3.5" Drive Bays

Hardware RAID with JBOD Expansion Cost Optimized Hardware RAID

Flexible Scale-up & Scale-out









	SSG-6028R-E1CR12N	SSG-6028R-E1CR12T	SSG-6028R-E1CR12H/L
Processor	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s, 145W TDP	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s, 145W TDP	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s
Chipset	Intel [®] C612	Intel [®] C612	Intel [®] C612
Memory	Up to 3TB ECC registered DDR4-2400MHz in 24 DIMM slots	Up to 2TB ECC registered DDR4-2400MHz in 16 DIMM slots	Up to 2TB ECC registered DDR4-2400MHz in 16 DIMM slots
PCI-E 3.0 Slots	6 slots (slot 3 & 4 occupied by controller and expander ports)	7 slots	6 (slot 3 & 4 occupied by controller and expander ports)
RAID Controller	Broadcom [*] SAS3108 for SAS3 (12Gbps)	On-board Broadcom* SAS3108 for SAS3 (12Gbps)	 -L: Broadcom* SAS3008 (IT Mode) for SAS3 (12Gbps) -H: Broadcom* SAS3108 for SAS3 (12Gbps)
Backplane	"E1C"/ Single Expander	"E1C"/ Single Expander	"E1C"/ Single Expander
Drive Bays	12 hot-swap 3.5" SAS3/SATA3 drive bays	12 hot-swap 3.5" SAS3/SATA3 drive bays	12 hot-swap 3.5" SAS3/SATA3 drive bays
Peripheral Storage	 Optional internal drive bracket Dual JBOD expansion ports	Optional 2 hot-swap 2.5" SATA3 rear drive bays	 Optional 2 hot-swap 2.5" SATA3 rear drive bays Dual JBOD expansion ports
Networking	4x 10GBase-T Ethernet ports	2x 10GBase-T Ethernet ports	2x 10GBase-T Ethernet ports
Power Supply	Redundant 920W Platinum Level (94%+ efficiency)	Redundant 920W Platinum Level (94%+ efficiency)	4 Redundant 1000W Titanium Level (96%+ efficiency)
Form Factor	2U rackmount	2U rackmount	2U rackmount

2U SuperStorage Server Systems with 2.5" Drive Bays

Hardware RAID with JBOD Expansion

Flexible Scale-up & Scale-out

Low-latency with Triple Controllers











	SSG-2028R-E1CR24N	SSG-2028R-E1CR24H/L	SSG-2028R-ACR24H/L
Processor	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s, 145W TDP	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s, 145W TDP	Dual Intel $`Xeon^\circ$ processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s
Chipset	Intel [®] C612	Intel [®] C612	Intel [®] C612
Memory	Up to 3TB ECC registered DDR4-2400MHz in 24 DIMM slots	Up to 2TB ECC registered DDR4-2400MHz in 16 DIMM slots	Up to 2TB ECC registered DDR4-2400MHz in 16 DIMM slots
PCI-E 3.0 Slots	6 slots (slot 3 & 4 occupied by controller and expander ports)	7 slots (slot 1 & 2 occupied by controller and expander ports)	7 slots (slot 1,2 and 3 occupied by controllers)
RAID Controller	Broadcom [*] SAS3108 for SAS3 (12Gbps)	 -L: Broadcom[*] SAS3008 (IT Mode) for SAS3 (12Gbps) -H: Broadcom[*] SAS3108 for SAS3 (12Gbps) 	 -L: 3 Broadcom* SAS3008 (IT Mode) for SAS3 (12Gbps) -H: 3 Broadcom* SAS3108 for SAS3 (12Gbps)
Backplane	"E1C"/ Single Expander	"E1C"/ Single Expander	"A"/ Direct Connect
Drive Bays	24 hot-swap 2.5" SAS3/SATA3 drive bays	24 hot-swap 2.5" SAS3/SATA3 drive bays	24 hot-swap 2.5" SAS3/SATA3 drive bays
Peripheral Storage	 Optional internal drive bracket Dual JBOD expansion ports	 Optional 2 hot-swap 2.5" SATA3 rear drive bays Dual JBOD expansion ports 	Optional 2 hot-swap 2.5" SATA3 rear drive bays
Networking	4x 10GBase-T Ethernet ports	2x 10GBase-T Ethernet ports	2x 10GBase-T Ethernet ports
Power Supply	Redundant 920W Platinum Level (94%+ efficiency)	Redundant 920W Platinum Level (94%+ efficiency)	Redundant 920W Platinum Level (94%+ efficiency)
Form Factor	2U rackmount	2U rackmount	2U rackmount



2U/3U SuperStorage Server Systems with 3.5" Drive Bays

Low-latency with Triple HW RAID Hardware RAID with JBOD expansion Flexible Scale-up & Scale-out









	SSG-6028R-E1CR16T	SSG-6038R-E1CR16N	SSG-6038R-E1CR16H/L
Processor	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s, 145W TDP	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s, 145W TDP	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s
Chipset	Intel [®] C612	Intel [®] C612	Intel [®] C612
Memory	Up to 2TB ECC registered DDR4-2400MHz in 16 DIMM slots	Up to 3TB ECC registered DDR4-2400MHz in 24 DIMM slots	Up to 2TB ECC registered DDR4-2400MHz in 16 DIMM slots
PCI-E 3.0 Slots	7 slots	6 slots (slot 3 & 4 occupied by controller and expander ports)	7 slots (slot 1 & 2 occupied by controller and expander ports
RAID Controller	On-board Broadcom [®] SAS3108 for SAS3 (12Gbps)	Broadcom [®] SAS3108 for SAS3 (12Gbps)	 -L: Broadcom[*] SAS3008 (IT Mode) for SAS3 (12Gbps) -H: Broadcom[*] SAS3108 for SAS3 (12Gbps)
Backplane	"E1C"/ Single Expander	"E1C"/ Single Expander	"E1C"/ Single Expander
Drive Bays	16 hot-swap 3.5" SAS3/SATA3 drive bays	16 hot-swap 3.5" SAS3/SATA3 drive bays	16 hot-swap 3.5" SAS3/SATA3 drive bays
Peripheral Storage	2 hot-swap 2.5" SATA3 rear drive bays	Optional internal drive bracket Dual JBOD expansion ports	 Optional internal drive bracket Dual JBOD expansion ports
Networking	2x 10GBase-T Ethernet ports	4x 10GBase-T Ethernet ports	2x 10GBase-T Ethernet ports
Power Supply	Redundant 1000W <i>Titanium Level</i> (96%+ efficiency)	Redundant 920W Platinum Level (94%+ efficiency)	Redundant 920W Platinum Level (94%+ efficiency)
Form Factor	2U rackmount	3U rackmount	3U rackmount

1U Storage Systems with 3.5" Drive Bays

	SSG-5018A-AR12L
Processor	Intel [®] Atom [®] processor C2750
Chipset	System-on-chip
Memory	Up to 256GB ECC registered DDR4-2400MHz in 4 DIMM slots
PCI-E 3.0 Slots	1x PCI-E 2.0 x4 (in x8, LP, HL)
RAID Controller	System-on-chip
Backplane	"E1C"/ Single Expander
Drive Bays	12 hot-swap 3.5" SATA3 drive bays
Networking	2x Gigabit Ethernet ports
Power Supply	Redundant 400W high-efficiency
Form Factor	1U rackmount

Cost-optimized Cold Storage





4U SuperStorage Server Systems with 3.5" Drive Bays

Hardware RAID with JBOD Expansion



Flexible Scale-up & Scale-out



	SSG-6048R-E1CR24N	SSG-6048B-E1CR24H/L
	550-0046R-ETCR24N	550-0046K-EICK24H/L
Processor	Dual Intel $^{\circ}$ Xeon $^{\circ}$ processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s, 145W TDP	Dual Intel $^{\circ}$ Xeon $^{\circ}$ processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s, 145W TDP
Chipset	Intel [®] C612	Intel [®] C612
Memory	Up to 3TB ECC registered DDR4-2400MHz in 24 DIMM slots	Up to 2TB ECC registered DDR4-2400MHz in 16 DIMM slots
PCI-E 3.0 Slots	6 slots (slot 3 & 4 occupied by controller and expander ports)	7 slots (slot 1 & 2 occupied by controller and expander ports)
RAID Controller	Broadcom [*] SAS3108 for SAS3 (12Gbps)	 -L: Broadcom[*] SA53008 (IT Mode) for SA53 (12Gbps) -H: Broadcom[*] SA53108 for SA53 (12Gbps)
Backplane	"E1C"/ Single Expander	"E1C"/ Single Expander
Drive Bays	24 hot-swap 3.5" SAS3/SATA3 drive bays	24 hot-swap 3.5" SAS3/SATA3 drive bays
Peripheral Storage	Optional 2 hot-swap 2.5" SATA3 rear drive bays Dual JBOD expansion ports	Optional 2 hot-swap 2.5" SATA3 rear drive bays Dual JBOD expansion ports
Networking	4x 10GBase-T Ethernet ports	2x 10GBase-T Ethernet ports
Power Supply	Redundant 920W Platinum Level (94%+ efficiency)	Redundant 920W Platinum Level (94%+ efficiency)
Form Factor	4U rackmount	4U rackmount

4U Double-sided SuperStorage Server Systems with 3.5" Drive Bays

With Double-sided Storage^{*} architecture, drives can be stacked and packed in the front and rear of the server chassis for improved storage density.

Hardware RAID with JBOD Expansion



Flexible Scale-up & Scale-out



4U 72x 3.5"

	SSG-6048R-E1CR36N	SSG-6048R-E1CR36H/L	SSG-6048R-E1CR72L
Processor	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s, 145W TDP	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s, 145W TDP	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s
Chipset	Intel [®] C612	Intel [®] C612	Intel [®] C612
Memory	Up to 3TB ECC registered DDR4-2400MHz in 24 DIMM slots	Up to 2TB ECC registered DDR4-2400MHz in 16 DIMM slots	Up to 2TB ECC registered DDR4-2400MHz in 16 DIMM slots
PCI-E 3.0 Slots	6 slots (slot 3 & 4 occupied by controller and expander ports)	7 slots (slot 1 & 2 occupied by controller and expander ports)	7 slots (slot 1,2 and 3 occupied by controllers)
RAID Controller	Broadcom [*] SAS3108 for SAS3 (12Gbps)	 -L: Broadcom[*] SAS3008 (IT Mode) for SAS3 (12Gbps) -H: Broadcom[*] SAS3108 for SAS3 (12Gbps) 	3 Broadcom* SAS3008 (IT Mode) for SAS3 (12Gbps)
Backplane	"E1C"/ Single Expander	"E1C"/ Single Expander	"E1C"/ Single Expander
Drive Bays	36 hot-swap 3.5" SAS3/SATA3 drive bays	36 hot-swap 3.5" SAS3/SATA3 drive bays	72x 3.5" SAS3/SATA3 drives in 36 hot-swap drive bays
Peripheral Storage	 Optional 2 hot-swap 2.5" SATA3 rear drive bays Optional internal drive bracket Dual JBOD expansion ports 	 Optional 2 hot-swap 2.5" SATA3 rear drive bays Optional internal drive bracket Dual JBOD expansion ports 	 2 hot-swap 2.5" SATA3 rear drive bays Optional internal drive bracket
Networking	4x 10GBase-T Ethernet ports	2x 10GBase-T Ethernet ports	2x 10GBase-T Ethernet ports
Power Supply	Redundant 1280W Platinum Level (95%+ efficiency)	Redundant 1280W Platinum Level (95%+ efficiency)	Redundant 2000W Titanium Level (96%+ efficiency)
Form Factor	4U rackmount	4U rackmount	4U rackmount



A broad range of versatile JBOD solutions for rapid storage expansion and high availability.

Expanding storage capacity can be done easily and rapidly, and without any system downtime. Supermicro offers three classes of JBOD chassis for maximum flexibility:

SUPERMICR

- **Cost Optimized JBOD Chassis** Reliable high-bandwidth architecture supporting SAS3/SATA3 and featuring integrated single expander.
- High Availability JBOD Chassis
 Fully redundant power, fans and expander modules for SAS3/
 SATA3 drives provide data protection and minimize downtime.
- Super Storage Bridge Bay (SBB) JBOD Chassis
 Optimized for mission-critical, enterprise-level storage
 applications, Super SBB features a fully redundant, fault-tolerant
 "cluster-in-a-box" system.

Top-loading JBOD Expansion



Many SuperStorage models feature JBOD expansion ports out-of-box, making it ready to rapidly expand capacity without system interruption.



JBOD Chassis



4U 90-Bay JBOD



4U 60-Bay JBOD



	SC946ED-R2KJBOD	SC946SE1C/E2C-R1K66JBOD
Backplane	Hot-swap dual expander supporting SAS3/SATA3	F1C: Single expander supporting SAS3/SATA3 F2C: Dual expander supporting SAS3/SATA3
Drive Bays	90 hot-swap 3.5"/2.5" SAS3/SATA3 drive bays	60 hot-swap 3.5"/2.5" SAS3/SATA3 drive bays
Host Connectivity	8 Mini-SAS HD ports	 -E1C: 4 Mini-SAS HD ports -E2C: 8 Mini-SAS HD ports
Power Supply	Redundant 1000W Titanium Level (96%+ efficiency)	Redundant 1600W Platinum Level (94%+ efficiency)
Form Factor	4U rackmount	4U rackmount

Simply Double JBOD Expansion

	CSE-826SEIC-R1K02JBOD			
Backplane	Single expander supporting SAS3/SATA3			
Drive Bays	24 hot-swap 3.5"/2.5" SAS3/SATA3 drive bays			
Host Connectivity	4 Mini-SAS HD ports			
Power Supply	Redundant 1000W <i>Titanium Level</i> (96%+ effi	iciency)	2U Simply Double 2	24-Bay JBOD
Form Factor	2U rackmount			
	Standard JBOD	Chassis with Single o	or Dual Expander Back	<i>plane</i> 4U 24x 3.5″
	CSE-216BE1C/E2C-R741JBOD	CSE-826BE1C/E2C-R741JBOD	CSE-836BE1C/E2C-R1K03JBOD	CSE-846BE1C/E2C-R1K03JBOD
Backplane	•- <i>E</i> 1C: Single expander supporting SAS3/ SATA3 • <i>E</i> 2C: Dual expander supporting SAS3/ SATA3	 -<i>E</i>1C: Single expander supporting SAS3/ SATA3 -<i>E</i>2C: Dual expander supporting SAS3/ SATA3 	•- <i>E</i> 1C: Single expander supporting SAS3/ SATA3 • <i>-E</i> 2C: Dual expander supporting SAS3/ SATA3	• -E1C: Single expander supporting SAS3/ SATA3 •-E2C: Dual expander supporting SAS3/ SATA3
Drive Bays	24 hot-swap 2.5" SAS3/SATA3 drive bays	12 hot-swap 3.5" SAS3/SATA3 drive bays	16 hot-swap 3.5" SAS3/SATA3 drive bays	24 hot-swap 3.5" SAS3/SATA3 drive bays
Host Connectivity	• -E1C: 4 Mini-SAS HD ports • -E2C: 8 Mini-SAS HD ports	• - E1C : 4 Mini-SAS HD ports • - E2C : 8 Mini-SAS HD ports	 -E1C: 4 Mini-SAS HD ports -E2C: 8 Mini-SAS HD ports 	• - E1C : 4 Mini-SAS HD ports • - E2C : 8 Mini-SAS HD ports
Power Supply	Redundant 740 <i>Platinum Level</i> (94%+ efficiency)	Redundant 740 <i>Platinum Level</i> (94%+ efficiency)	Redundant 1000W <i>Titanium Level</i> (97%+ efficiency)	Redundant 1000W <i>Titanium Level</i> (96%+ efficiency)
Form Factor	2U rackmount	2U rackmount	3U rackmount	4U rackmount

Double-sided JBOD Expansion with Single or Dual Expander Backplane

	4U 72x 2.5″	4U 44x 3.5″	4U 90x 3.5″
	CSE-417BE1C/E2C-R1K23JBOD	CSE-847E1C/E2C-R1K28JBOD	CSE-847DE1C/E2C-R2K04JBOD
Backplane	 -E1C: Single expander supporting SAS3/SATA3 -E2C: Dual expander supporting SAS3/SATA3 	 -E1C: Single expander supporting SAS3/SATA3 -E2C: Dual expander supporting SAS3/SATA3 	 -E1C: Single expander supporting SAS3/SATA3 -E2C: Dual expander supporting SAS3/SATA3
Drive Bays	72 hot-swap 2.5" SAS3/SATA3 drive bays	44 hot-swap 3.5" SAS3/SATA3 drive bays	90x 3.5" SAS3/SATA3 drives in 45 hot-swap drive bays
Host Connectivity	E1C: 4 Mini-SAS HD ports E2C: 8 Mini-SAS HD ports	E1C: 4 Mini-SAS HD ports E2C: 8 Mini-SAS HD ports	 -E1C: 4 Mini-SAS HD ports -E2C: 8 Mini-SAS HD ports
Power Supply	Redundant 1200W Titanium Level (96%+ efficiency)	Redundant 1280W Platinum Level (94%+ efficiency)	Redundant 2000W <i>Titanium Level</i> (96%+ efficiency)
Form Factor	4U rackmount	4U rackmount	4U rackmount



Storage Bridge Bay (SBB)

A broad range of high availability hardware for next generation storage operating systems.

Optimized for mission-critical enterprise-level storage applications, Supermicro's innovative Super SBB family offers a fully redundant faulttolerant architecture with JBOD expansion. Hot-swappable canisters for all active components, redundant high efficiency power supplies, and hot pluggable cooling fans, truly enable non-disruptive operations. Dual processor server modules feature advanced node-to-node connectivity, enabling low-latency fail-over cluster performance. The Dual-ported *NVMe* models take IOPs performance to unprecedented levels, while the robust SAS3 (12GB/s) models support cascaded configurations with both high bandwidth (x8 SAS) connectivity, and high resiliency with fully isolated SAS domains, required for mission-critical deployments. The Super SBB family products are highly available, highly reliable storage systems perfect for the next generation storage platforms in development by OEMs and startups.



48 hot-swap 2.5" All-Flash Dual-Port NVMe

2U 24x 2.5"







24 hot-swap2.5" All-Flash Dual-Port NVMe

3U 16x 3.5"

4U 24x 3.5"





Systems	SSG-2028R-DE2CR24L	SSG-6038R-DE2CR16L	SSG-6048R-DE2CR24L
Processor	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s per node, 145W TDP	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s per node, 145W TDP	Dual Intel [®] Xeon [®] processor E5-2600 v4/v3 product families with QPI up to 9.6GT/s per node, 145W TDP
Memory	Up to 1TB ECC registered DDR4-2400MHz in 8 DIMM slots per node	Up to 1TB ECC registered DDR4-2400MHz in 8 DIMM slots per node	Up to 1TB ECC registered DDR4-2400MHz in 8 DIMM slots per node
PCI-E 3.0 Slots	3 PCI-E 3.0 x8 (LP) slots per node	3 PCI-E 3.0 x8 (LP) slots per node	3 PCI-E 3.0 x8 (LP) slots per node
Networking	 2x 10GBase-T Ethernet ports per node 100Mbps private Ethernet LAN between redundant nodes 	 2x 10GBase-T Ethernet ports per node 100Mbps private Ethernet LAN between redundant nodes 	 2x 10GBase-T Ethernet ports per node 100Mbps private Ethernet LAN between redundant nodes
Drive Bays	Shared 24 hot-swap 2.5" SAS3/SATA3 drive bays between redundant nodes	Shared 16 hot-swap 3.5" SAS3/SATA3 drive bays between redundant nodes	Shared 24 hot-swap 3.5" SAS3/SATA3 drive bays between redundant nodes
Host Connectivity	2 Mini-SAS HD ports per node	2 Mini-SAS HD ports per node	2 Mini-SAS HD ports per node
Power Supply	Redundant 1200W Titanium Level (96%+ efficiency)	Redundant 1200W Titanium Level (96%+ efficiency)	Redundant 1600W Titanium Level (96%+ efficiency)
Form Factor	2U rackmount	3U rackmount	4U rackmount
JBODs	SSG-927R-E2CJB	SSG-937R-E2CJB	SSG-947R-E2CJB
Drive Bays	Shared 24 hot-swap 2.5" SAS3/SATA3 drive bays between redundant nodes	Shared 16 hot-swap 3.5" SAS3/SATA3 drive bays between redundant nodes	Shared 24 hot-swap 3.5" SAS3/SATA3 drive bays between redundant nodes

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SuperStorage Accessories

On-board SIOM Networking Options

	Dual-port GbE	Quad-port GbE	Dual-port 10GbE	Quad-port 10GbE	Dual-port 10GbE
	AOC-MGP-i2	AOC-MGP-i4	AOC-MTGN-i2S	AOC-MTG-i4S	AOC-MTG-i2T
Port	2 RJ45 ports	4 RJ45 ports	2 SFP+ ports	4 SFP+ ports	2 RJ45 ports
Speed	1Gbps Ethernet	1Gbps Ethernet	10Gb Ethernet	10Gbps Ethernet	10Gbps Ethernet
	Quad-port 10GbE	Dual-port 25GbE & Dual-port 10GbE	Dual-port IB FDR & Dual-port GbE	Single-port IB FDR & Dual-port GbE	Single-port Intel OPA
	AOC-MTG-i4T	AOC-MH25G-m2S2T	AOC-MHIBF-m2Q2G	AOC-MHIBF-m1Q2G	AOC-MHFI-i1C
Port	4 RJ45 ports	2 SFP28 & 2 RJ45 ports	2 QSFP & 2 RJ45 ports	1 QSFP & 2 RJ45 ports	1 QSFP28 port
Speed	10Gbps Ethernet	25Gbps Ethernet 10Gbps Ethernet	56Gbps InfiniBand FDR 1Gbps Ethernet	56Gbps InfiniBand FDR 1Gbps Ethernet	100Gbps Intel [®] Omni-Path

For a complete list please visit <u>www.supermicro.com/products/accessories/index.cfm?Type=20</u>

Rear/Internal Drive Kits

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MCP-220-82616-0N	MCP-220-83608-0N	MCP-220-84610-0N	MCP-220-82611-0N	MCP-220-84701-0N	AOC-SLG3-2M2
2.5" Rear HDD Kit (2U) includes : • 2x SATA Cables • Mounting Hardware	2.5" Rear HDD Kit (3U) includes : • 2x SATA Cables • Power Extension Cable • Mounting Hardware	2.5" Rear HDD Kit (4U) includes : • 2x SATA Cables • Mounting Hardware	2.5" Internal Drive Bracket Required Additional Parts : • 2x SATA Cables (CBL-0179L) • SATA Power (CBL-0289L)	2.5" or 3.5" Internal drive bracket Required Additional Parts : • 2x SATA Cables (CBL-0179L) • SATA Power (CBL-0082L)	Includes two internal slots for M.2 NVMe SSDs (22x110mm, 22x80mm, 22x60mm) allowing any system to yield high- performance and low power storage expandability.
-Supported systems: • SSG-6027R-E1R12L • SSG-6027R-E1R12T • SSG-2028R-AR24 • SSG-2028R-AR24 • SSG-6028R-E1CR12H/L	-Supported systems: • SSG-6037R-E1R16N • SSG-6037R-E1R16L • SSG-6038R-E1CR16N/H/L	-Supported systems: • SSG-6047R-E1R24N • SSG-6047R-E1R24L • SSG-6048R-E1CR24N/H/L	-Supported systems: • SSG-6027R-E1R12N • SSG-6028R-E1R24N • SSG-6037R-E1R16N • SSG-6047R-E1R24N • SSG-6047R-E1R36N	-Supported systems: • SSG-6047R-E1R36N • SSG-6047R-E1R36L • SSG-6048R-E1CR36N/H/L	- Supported systems : Any system with a free PCI-E 3.0 x8 low-profile slot

Caching and Backup Battery Options for SAS Controllers

SuperStorage Hardware RAID controllers support options for cache backup using super capacitors for reliable data protection even through power outages. Broadcom[®] CacheCade[™] offers a performance boost to optimize hot-file storage applications using a small number of SSDs.

- CacheVault[™] for Broadcom[®] 3108 AOC Flash Backed Cache BTR-TFM8G-AvagoCVM02
 - BRACKET-05
- 2.5" drive bay Mount For CacheVault[™] MCP-240-00127-0N
- Broadcom[®] CacheCade[™] AOC-CHCD-PRO2-KEY

PCI Slot Mount For CacheVault[™] - BKT-BBU-



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