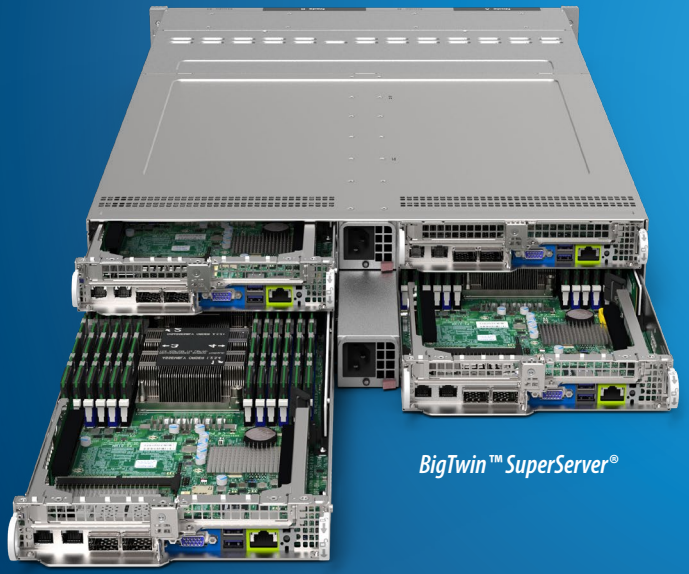
Supermicro Twin Family
Leading Multi-node Architectures

Transform Your Data Center TCO
with Supermicro servers based on
the 2nd generation Intel® Xeon® Scalable processors

Twin Multi-node Architecture

Introduced by Supermicro, the innovative modular computing Twin Architecture made its debut in 2006 with 2 independent system nodes enclosed in a 1U chassis with shared infrastructure components. Also known as the 1U Twin™ system, each node featured dual CPU sockets for up to 16 cores and 32GB of DDR2 memory, dual onboard Gigabit Ethernet ports and a shared 91% efficiency power supply for increased power efficiency and space savings.

Fast forward to 2016, Supermicro unveiled a new product line based on its 5th generation Twin Architecture: the BigTwin™ SuperServer®. Featuring the industry's first full 24 DIMM slots per node for up to 6TB of DDR4 memory in 2U space, complemented by bleeding edge all NVMe storage capabilities and flexible SIOM onboard networking. By overcoming the traditional design compromises and obstacles, the BigTwin is one of the most forward-thinking and innovative server designs that reshaped our impressions about modular computing solutions.



BigTwin™ SuperServer®

INNOVATIVE MULTI-NODE ARCHITECTURES WITH REDUCED TCO AND TCE

Today the Twin family consists of four product lines

- The cost-effective 2U Twin™ family that started the Twin Architecture by saving power and rack space by sharing the same chassis and power supplies
- The more powerful, efficient and flexible 1U and 2U TwinPro™ family with more I/O expansion options and doubles the memory footprint of Twin
- The 2U BigTwin™, a breakthrough multi-node server system with a multitude of innovations and industry firsts, designed to support highest performance CPUs, maximum memory capacity, flexible networking, and all-flash NVMe support
- Optimized for answering challenging business, finance or scientific research requirements, the 4U FatTwin™ that is configurable for up to 8 nodes is built for advanced deployment scenarios with a variety of memory capacities, storage technologies, PCI alternatives, networking capabilities, and GPU support options

BigTwin™

FLAGSHIP PERFORMANCE FOR MOST DEMANDING HCI AND STORAGE APPLICATIONS

Two or four nodes in 2U
24 DDR4 DIMM slots per node
2.5" or 3.5" All-NVMe/Hybrid SAS3 storage
Onboard flexible networking up to 100G

Learn more on page 6 or scan the QR code

FatTwin™

ADVANCED I/O FOR BIG DATA AND HPC APPLICATIONS

Four or eight nodes in 4U
16 DDR4 DIMM slots per node
Rich I/O and high capacity storage
Onboard flexible networking up to 100G

Learn more on page 8 or scan the QR code

TwinPro™

LEADING CAPABILITIES FOR CLOUD, ENTERPRISE AND DATA CENTER

Two or four nodes in 1U or 2U
16 DDR4 DIMM slots per node
2.5" or 3.5" SAS3/SATA3 storage
Onboard flexible networking up to 100G

Learn more on page 10 or scan the QR code

Twin

INDUSTRY PROVEN DESIGN OF MULTI-NODE COMPUTING

Two or four nodes in 2U
8 DDR4 DIMM slots per node
3.5" SATA3 storage
Onboard Gigabit Ethernet

Learn more on page 12 or scan the QR code

BigTwin™

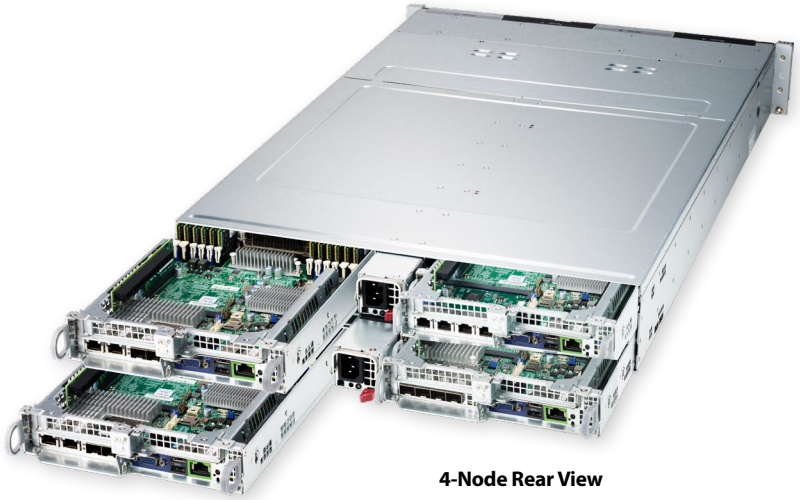
FLAGSHIP PERFORMANCE FOR MOST DEMANDING HCI AND STORAGE APPLICATIONS

Flagship Performance and Flexibility

BigTwin is the 5th generation in the Supermicro Twin Family with a multitude of innovations and engineering breakthroughs.

Historically multi-node systems traded off features and capacity for higher density. They were deployed for workloads that did not require the highest performance or the highest memory density on a single node.

The 2U BigTwin design can accommodate the highest TDP CPUs, 24 DIMMs of DDR4 memory and up to six high speed NVMe drives per node, with additional options for SAS3 storage, M.2 SATA RAID and PCI-E expansions.



4-Node Rear View

2U systems supporting two or four nodes with 24 DIMM slots
Flexible storage options including all NVMe and hybrid NVMe/SAS3/SATA3
SIOM networking options including 10GbE, 25GbE, 100GbE and IB

4-Node All NVMe with U.2 Drives

Hybrid NVMe and SAS3 with 3.5" Drives

2-Node Rear View

FORM-FACTOR

Two or Four Nodes

Two sets of 12 or four sets of 6x 2.5" drives; or two sets of 6 or four sets of 3x 3.5" drives

CPU

2-Socket

Up to 2nd gen Intel® Xeon® Scalable processors; up to 205W TDP

MEMORY

24 DIMM Slots

Up to 6TB DDR4-2933MHz ECC memory per node; Intel® Optane™ DCPMM support available

STORAGE

NVMe/SAS3/SATA3

All NVMe or SATA3 or hybrid NVMe/SAS3; 2 M.2 SATA3 RAID or 2 NVMe/SATA3 M.2 slots

I/O

Input/Output

Super I/O Module (SIOM) networking* with dedicated IPMI LAN port per node; Additional 2 PCI-E 3.0 x16 LP slots

POWER SUPPLY

Titanium Level

Up to redundant 2600W high-efficiency digital power supplies

** For more details, please refer to page 14*

FatTwin™

ADVANCED I/O FOR BIG DATA AND HPC APPLICATIONS

High Density and High Performance Computing

The Supermicro FatTwin is optimized for critical applications including Big Data and High-Performance Computing requiring advanced I/O capacity and flexibilities, while reducing Data Center TCO in order to help preserve the environment.

Available in four or eight node in 4U, with front or rear I/O configurations, its advanced flexibilities allow the FatTwin to be optimized for many different environments including Enterprise, Data Center, Cloud Computing, HPC, Finance, Science and Engineering.

4U 8-Node Front I/O

4U systems supporting four or eight nodes with up to 16 DIMM slots
Versatile storage options with up to 8 hot-swap 3.5" drives per node
Modular hot-swap architecture enabling high I/O flexibility and serviceability

4U 4-Node Rear I/O

4U 4-Node Rear I/O

4U
FORM-FACTOR

Four or Eight Nodes
Available in front or rear I/O models

CPU

2-Socket
Up to 2nd gen Intel® Xeon® Scalable processors; up to 165W TDP

MEMORY

12 DIMM Slots
Up to 3TB DDR4-2933MHz ECC memory per node; Intel® Optane™ DCPMM support available

STORAGE

NVMe/SAS3/SATA3
Up to 8 hot-swap 3.5" or 12 fixed 2.5" drives; PCI-E M.2 support available

I/O

Input/Output
Rich PCI-E expansion options including GPU support; Super I/O Module (SIOM) networking* with dedicated IPMI LAN port per node

POWER SUPPLY

Titanium Level
Up to redundant 2200W high-efficiency digital power supplies

** For more details, please refer to page 14*

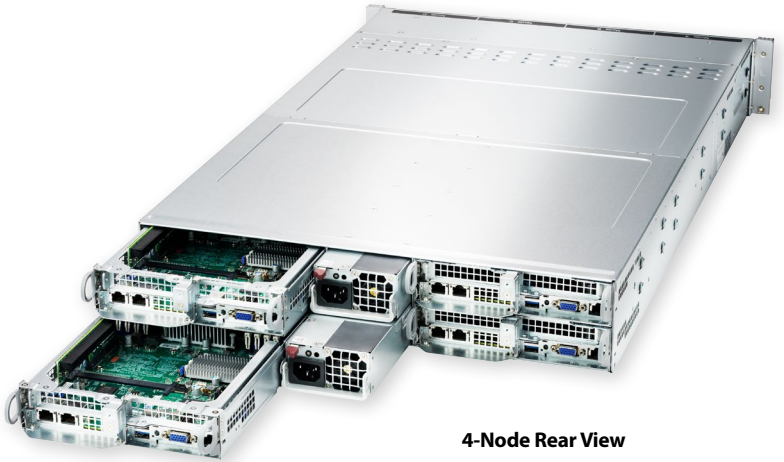
TwinPro™

LEADING CAPABILITIES FOR CLOUD, ENTERPRISE AND DATA CENTER

Industry Proven Efficiency and Flexibility

The Supermicro TwinPro architecture is based on the Supermicro proven Twin technology to provide exceptional throughput, storage, networking, I/O, memory and processing capabilities in 1U and 2U form factors.

TwinPro systems are designed for simplified deployment and maintenance, and assembled with the highest quality to ensure continuous operation even at maximum capacity. Customers in high-end enterprise, data center, HPC and Cloud Computing environments receive the greatest competitive advantage from data center resources with the Supermicro TwinPro.



4-Node Rear View

1U and 2U systems supporting two or four nodes with 16 DIMM slots

Hot-swappable 3.5" or 2.5" SAS3/SATA3 storage options

SIOM networking options including 10GbE, 25GbE, 100GbE and IB

1U 2-Node Front View

2U 4-Node 3.5" Front View

2U 4-Node 2.5" Front View

1U/2U

FORM-FACTOR

Two or Four Nodes

Two sets of 6 or four sets of 4x 2.5" drives; or four sets of 3x 3.5" drives

CPU

2-Socket

Up to 2nd gen Intel® Xeon® Scalable processors; up to 165W TDP

MEMORY

16 DIMM Slots

Up to 4TB DDR4-2933MHz ECC memory per node; Intel® Optane™ DCPMM support available

STORAGE

SAS3/SATA3

Hardware RAID SAS3 supported; NVMe/SATA3 M.2 storage support available

I/O

Input/Output

Super I/O Module (SIOM) networking* with dedicated IPMI LAN port per node; Up to 2 PCI-E 3.0 x16 LP slots

POWER SUPPLY

Titanium Level

Up to redundant 2200W high-efficiency digital power supplies

** For more details, please refer to page 14*

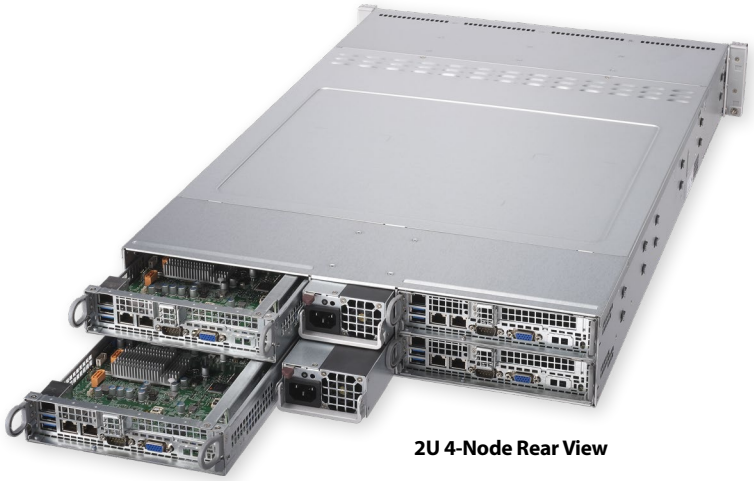
Twin

INDUSTRY PROVEN DESIGN OF MULTI-NODE COMPUTING

Energy Efficiency and Reliability

First introduced in 2006, Supermicro's patented Twin Architecture is the foundation of the most energy efficient and advanced server platforms in HPC, Data Center, Cloud Computing and Enterprise IT applications.

These high performance, high density systems feature optimum airflow for energy efficient cooling, easy maintenance and high availability with hot-swappable nodes and redundant power supply modules.



2U 4-Node Rear View

2U systems supporting two or four nodes with 8 DIMM slots

Hot-swappable 3.5" SATA3 storage options

Onboard Gigabit Ethernet for optimized cost effectiveness

2U 2 or 4-Node Front View

2U 2-Node Rear View

2U

FORM-FACTOR

Two or Four Nodes

Two sets of 6 or four sets of 3x 3.5" drives

CPU

2-Socket

Up to 2nd gen Intel® Xeon® Scalable processors; up to 145W TDP

MEMORY

8 DIMM Slots

Up to 2TB DDR4-2933MHz ECC memory per node

STORAGE

SATA3

Up to 12 hot-swap 3.5" drive bays in 2U; PCI-E M.2 support available

I/O

Input/Output

Dual onboard Gigabit Ethernet with dedicated IPMI LAN port; Up to 2 PCI-E 3.0 x8 or 1 PCI-E 3.0 x16 slot

POWER SUPPLY

Titanium Level

Up to redundant 1600W high-efficiency digital power supplies

Supermicro SIOM

CHOOSE YOUR ONBOARD I/O

The Supermicro® Super I/O Module (SIOM) delivers up to 50% of I/O cost savings and freedom to select networking options from 1Gb/s to 100Gb/s through a Supermicro optimized form factor that is easy to scale, service and manage across a broad range of Supermicro server and storage systems. The SIOM also enables a higher degree of system integration and increased capacity by saving PCI-E slots that are traditionally reserved for add on cards.

For more product information and technical specifications, please visit supermicro.com

2x GbE RJ45

AOC-MGP-i2M

4x GbE RJ45

AOC-MGP-i4M

2x 10GbE SFP+

AOC-MTGN-i2SM

4x 10GbE SFP+

AOC-MTG-i4SM

2x 10GbE RJ45

AOC-MTG-i2TM

4x 10GbE RJ45

AOC-MTG-i4TM

2x 25GbE SFP28 & 2x GbE RJ45

AOC-MH25G-b2S2GM

2x 25GbE SFP28 & 2x 10GbE RJ45

AOC-MH25G-m2S2TM

2x FDR IB QSFP & 2x GbE RJ45

AOC-MHIBF-m2Q2GM

1x FDR IB QSFP & 2x GbE RJ45

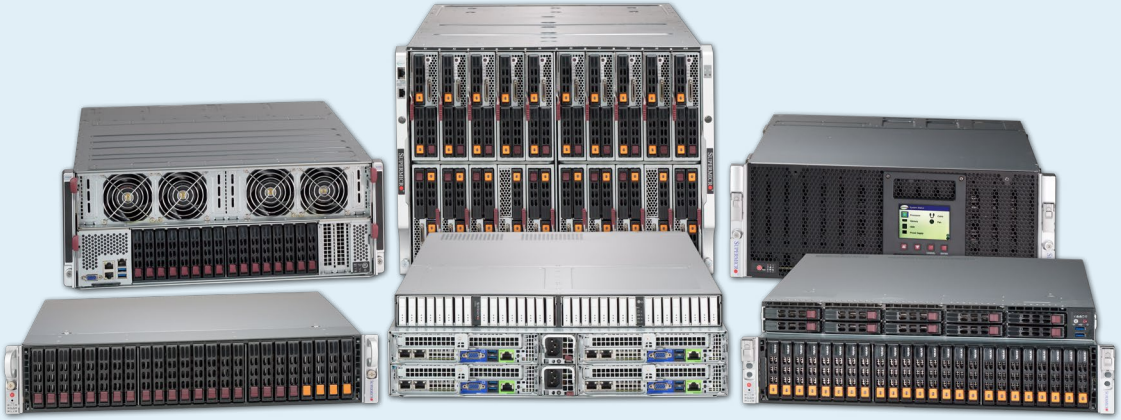
AOC-MHIBF-m1Q2GM

1x EDR IB/100GbE QSFP28 & 1x GbE RJ45

AOC-MHIBE-m1CGM

Better. Faster. Greener.

Expect Better Data Center Performance, TCO & Impact on the Environment



Systems featuring 2nd generation Intel® Xeon® Scalable processors

Supermicro offers the broadest and deepest portfolio of advanced technology server and storage systems in the IT industry. This offers several advantages to our customers. First, customers can readily select the most optimized solutions to satisfy their business requirements, helping them to reduce their costs and improve the quality and time-to-market (TTM) of their offerings. Additionally, the breadth and depth of Supermicro's product line provides the efficiency, cost, and reduced complexity advantages of one-stop shopping.

Supermicro®, the leading innovator in high-performance, high-efficiency server technology is a premier provider of advanced server Building Block Solutions® for Data Center, Cloud Computing, Enterprise IT, Hadoop/Big Data, HPC and Embedded Systems worldwide. Supermicro is committed to protecting the environment through its "We Keep IT Green®" initiative and provides customers with the most energy-efficient, environmentally-friendly solutions available on the market.

Learn more at www.supermicro.com

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