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 8TB DDR4 memory in ½U space, complemented by bleeding edge all NVMe storage capabilities and flexible 10G Ethernet 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.

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™ 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
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

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

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

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

More models and specs available on the web.
BigTwin™

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 PCIe expansions.

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

Two or Four Nodes

- Two sets of 12 or four sets of 2.5" drives, or two sets of 6 or four sets of 3.5" drives
- Up to 2600W high efficiency digital power supplies

Hybrid NVMe and SAS3 with 3.5" Drives

- Up to 2nd gen Intel® Xeon® Scalable processors; up to 205W TDP
- Up to 24 DIMMs of DDR4 memory
- Intel® Optane™ DCPMM support available

4-Node Rear View

4-Node All NVMe with U.2 Drives

2021 FORM-FACTOR

NVMe/SAS3/SATA3

- All NVMe or SAS3 or Hybrid NVMe/SAS3, 24 DIMMs (U.2 NVMe slot) or 2 NVMe/SAS3 M.2 slots

Input/Output

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

24 DIMM Slots

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

Two or Four Nodes

- Two sets of 12 or four sets of 2.5" drives, or two sets of 6 or four sets of 3.5" drives
- Up to 2600W high efficiency digital power supplies

4-Node Rear View

4-Node All NVMe with U.2 Drives

2021 FORM-FACTOR

NVMe/SAS3/SATA3

- All NVMe or SAS3 or Hybrid NVMe/SAS3, 24 DIMMs (U.2 NVMe slot) or 2 NVMe/SAS3 M.2 slots

Input/Output

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

24 DIMM Slots

- Up to 2600W high efficiency digital power supplies

* For more details, please refer to page 14
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.

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

Industry Proven Efficiency and Flexibility

Two or Four Nodes
- 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

TwinPro™ LEADING CAPABILITIES FOR CLOUD, ENTERPRISE AND DATA CENTER
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.

**Energy Efficiency and Reliability**

- Twin Architecture
- Optimum airflow for energy efficient cooling
- Easy maintenance
- High availability with hot-swappable nodes and redundant power supply modules

**First introduced in 2006**

**Supermicro**

**Twin Architecture**

- Foundation of most energy efficient and advanced server platforms
- High performance, high density systems
- Optimum airflow for energy efficient cooling
- Easy maintenance
- High availability with hot-swappable nodes and redundant power supply modules

**Two or Four Nodes**

- 2U 2 or 4-Node Rear View
- 2U 4-Node Rear View
- 2U 2-Node Rear View
- 2U 2 or 4-Node Front View

- **CPU**
- Up to 2nd gen Intel® Xeon® Scalable processors, up to 145W TDP

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

- **Power Supply**
- Up to redundant 1600W high-efficiency digital power supplies

- **Input/Output**
- Dual redundant Gigabit Ethernet with dedicated iKVM LAN port
- Up to 2 PCI-E 3.0 x8 or 1 PCI-E 3.0 x16 slot

- **Storage**
- SATA3

- **Form Factor**
- 2U

- **DIMM Slots**
- Up to 8 DIMM slots in each of the 8 slots

**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**

**Titanium Level**

- High-efficiency digital power supplies
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.

FatTwin™ ADVANCED I/O FOR BIG DATA AND HPC APPLICATIONS

Four or Eight Nodes
Available in four or eight node models

2-Socket
Supports up to two Intel® Xeon® Scalable processors, up to 165W TDP

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

NVMe/SAS3/SATA3
Up to eight swap 3.5" or 12 fixed 2.5" drives, PCI-E 4.0 x 16 support available

Input/Output
Front or rear I/O models including GPU support, Super I/O Module (SIOM) networking* with dedicated IPMI LAN port per node

Power Supply
Up to redundant 2200W high-efficiency digital power supplies

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

*For more details, please refer to page 14
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 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 PCIe slots that are traditionally reserved for add-on cards.

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

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

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.

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

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

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.

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

Supermicro, the Supermicro logo, Building Block Solutions, We Keep IT Green, SuperServer, Twin, BigTwin, TwinPro, TwinPro², SuperDoctor are trademarks and/or registered trademarks of Super Micro Computer, Inc.

Intel, the Intel logo, and Xeon are trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries. All other brands names and trademarks are the property of their respective owners.

All pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.

© Copyright Super Micro Computer, Inc. All rights reserved.