SUPERMICR®

# Supermicro A+ Family
## Outstanding Performance
## Drives Business Agility

AMD
EPYC

Supermicro's latest portfolio of A+ server and storage systems supporting the 2nd Generation AMD EPYC™ processors, offers new levels of optimized performance per watt per dollar, and deliver higher core density, more memory bandwidth, and unparalleled I/O performance and capacity.
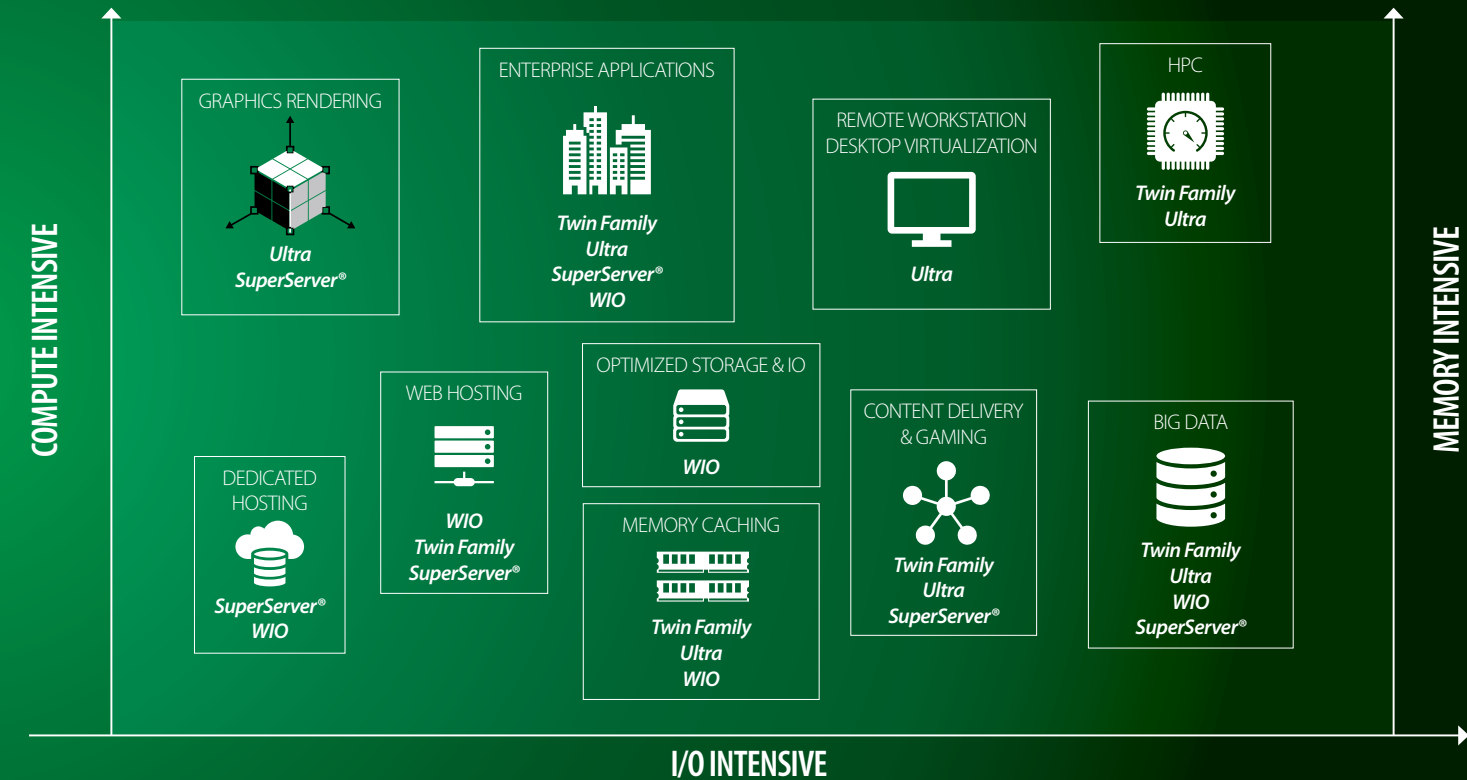
Supporting up to 64 AMD "Zen" 2 cores and 128 threads per socket, Supermicro A+ solutions are coupled with high-throughput, low-latency, hot-swappable U.2 NVMe SSDs, up to 4TB of DDR4-3200MHz memory (8 memory channels per socket), and up to 128 PCI-E lanes on a dual- or single-socket system.

Supermicro's new generation A+ solutions supporting AMD EPYC™ family of processors enable a new range of powerful and energy-efficient server options to radically lower data center TCO through an optimized balance of compute, memory, I/O, and storage resources.

For more information, please visit **www.supermicro.com/epyc**

**COMPUTE INTENSIVE**

**MEMORY INTENSIVE**

**I/O INTENSIVE**

GRAPHICS RENDERING

*Ultra*
*SuperServer®*

ENTERPRISE APPLICATIONS

*Twin Family*
*Ultra*
*SuperServer®*
*WIO*

REMOTE WORKSTATION
DESKTOP VIRTUALIZATION

*Ultra*

HPC

*Twin Family*
*Ultra*

DEDICATED
HOSTING

*SuperServer®*
*WIO*

WEB HOSTING

*WIO*
*Twin Family*
*SuperServer®*

OPTIMIZED STORAGE & IO

*WIO*

MEMORY CACHING

*Twin Family*
*Ultra*
*WIO*

CONTENT DELIVERY
& GAMING

*Twin Family*
*Ultra*
*SuperServer®*

BIG DATA

*Twin Family*
*Ultra*
*WIO*
*SuperServer®*

EPYC

# New H12 Generation WIO SuperServer®

## COST AND ENERGY EFFICIENCY FOR DATA CENTER ENVIRONMENTS



**NEW!**

**1U WIO 3.5" Drive Bays**



**NEW!**

**1U WIO 2.5" Drive Bays**

# New H12 Generation Twin Family

## INNOVATIVE MULTI-NODE ARCHITECTURES WITH REDUCED TCO AND TCE



**NEW!**

**2U TwinPro 4-Node 3.5" Drive Bays**



**NEW!**

**2U BigTwin 4-Node 2.5" Drive Bays**

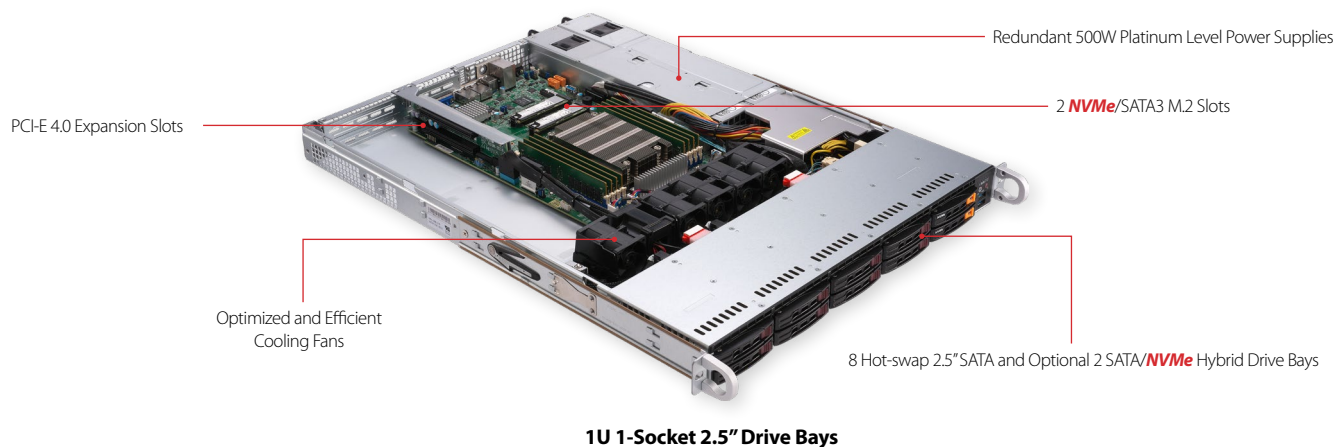| WIO SuperServer | Twin Family | |
|---|---|---|
| Single AMD EPYC™ 7002 Series processors, up to 225W TDP | Single AMD EPYC™ 7002 Series per node, up to 225W TDP | Dual AMD EPYC™ 7002 Series per node, up to 225W TDP* |
| 8 DDR4-3200MHz DIMM slots | 8 DDR4-3200MHz DIMM slots per node | 16 DDR4-3200MHz DIMM slots per node |
| 3 PCI-E 4.0 x16 slots (2 FHFL and 1 LP slots) | 2 PCI-E 4.0 x16 slots (2 LP slots) per node | 2 PCI-E 4.0 x16 slots (2 LP slots) per node |
| 3.5" SATA3 storage (up to 4 optional U.2 NVMe)    2.5" SATA3 storage (up to 2 optional U.2 NVMe) | 3x 3.5" SATA3 storage per node | 6x 2.5" SATA3 storage per node |
| Dual 10G Ethernet onboard networking | Onboard flexible SIOM networking up to 100G | Onboard flexible SIOM networking up to 100G |

# H12 Generation WIO SuperServer®

## COST AND ENERGY EFFICIENCY FOR DATA CENTER ENVIRONMENTS

Single-socket cost-effective systems in 1U
10x 2.5" or 4x 3.5" hot-swappable drive bays
Onboard dual 10 Gigabit Ethernet networking

Supermicro WIO SuperServer® systems offer a wide range of I/O options to deliver truly optimized systems for specific requirements. Users can optimize the storage and networking alternatives to accelerate performance, increase efficiency and find the perfect fit for their applications. In addition to enabling customizable configurations and optimization for multiple application requirements, Supermicro WIO SuperServers also provide attractive cost advantages and investment protection.

Redundant 500W Platinum Level Power Supplies

2 **NVMe**/SATA3 M.2 Slots

PCI-E 4.0 Expansion Slots

Optimized and Efficient Cooling Fans

8 Hot-swap 2.5" SATA and Optional 2 SATA/**NVMe** Hybrid Drive Bays

**1U 1-Socket 2.5" Drive Bays**

**1U 4x 3.5" Hot-swap Drive Bays**

**1U 10x 2.5" Hot-swap Drive Bays**

**1U**
**FORM-FACTOR**

### Rackmount
Up to 10x 2.5" drive bays in 1U;
Up to 4x 3.5" drive bays in 1U

**CPU**

### 1-Socket
Up to AMD EPYC™ 7002 series processors;
up to 225W

**MEMORY**

### 8 DIMM Slots
Up to 2TB ECC memory with 256GB DIMMs, up to DDR4-3200MHz

**STORAGE**

### NVMe/SATA3
Hybrid backplane supporting NVMe and SATA3 drives; 2 PCI-E 4.0 x4 M.2 slots

**I/O**

### Onboard Networking
Dual 10GbE RJ45 LAN ports with dedicated IPMI LAN port;
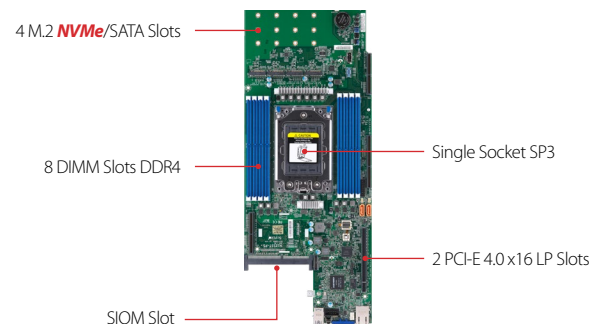2 PCI-E 4.0 x16 FHFL slots and 1 PCI-E 4.0 x16 LP slot in 1U

**POWER SUPPLY**

### Platinum Level
Up to redundant 500W high-efficiency digital power supplies

# H12 Generation TwinPro™

## INNOVATIVE MULTI-NODE ARCHITECTURE WITH REDUCED TCO AND TCE

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 M.2 **NVMe**/SATA Slots

8 DIMM Slots DDR4

SIOM Slot

Up to Redundant 2000W Platinum Level Power Supplies

Single Socket SP3

2 PCI-E 4.0 x16 LP Slots

VGA Port

Dedicated IPMI/KVM LAN Port

2 USB 3.0 Ports

**Node View**
Single EPYC® processors supported
8 DIMMs for up to 2 TB of memory

**System Rear View**

**2U 4-Node 3.5″ Front View**

**2U**
**FORM-FACTOR**

### Four Nodes
Four sets of 3x 3.5″ drives

**CPU**

### 1-Socket
Up to AMD EPYC™ 7002 series processors; up to 225W

**MEMORY**

### 8 DIMM Slots
Up to 2TB ECC memory with 256GB DIMMs per node, up to DDR4-3200MHz

**STORAGE**

### SATA3
4 M.2 NVMe/SATA slots per node

**I/O**

### Flexible Networking
Super I/O Module (SIOM) networking* with dedicated IPMI LAN port per node; Up to 2 PCI-E 4.0 x16 LP slots

**POWER SUPPLY**

### Platinum Level
Up to redundant 2000W high-efficiency digital power supplies

# H12 Generation BigTwin™
## NO-COMPROMISE 2U 4-NODE TWIN ARCHITECTURE

2U systems supporting four nodes with 16 DIMM slots
Flexible storage options including all NVMe and hybrid NVMe/SAS3/SATA3
SIOM networking options including 10GbE, 25GbE, 100GbE and IB

The new H12 generation 2U BigTwin design supports the latest AMD EPYC™ 7002 series processors with up to 16 DIMMs of DDR4-3200MHz memory, two PCI-E 4.0 x16 LP expansion slots, flexible onboard networking via SIOM, and up to six 2.5" drive bays per node, with additional options for SAS3 storage.

16 DIMM Slots DDR4

Dual Socket SP3

2 PCI-E 4.0 x16 LP slots

SIOM slot
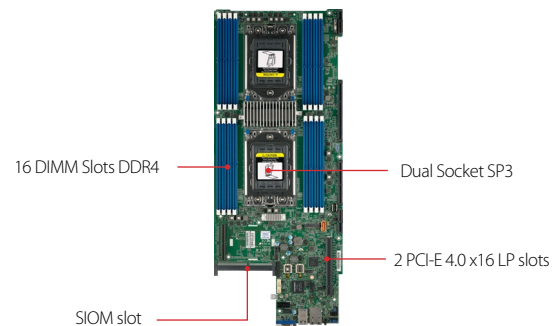
**Node View**
Dual EPYC® processors supported
16 DIMMs for up to 4 TB of memory

Up to Redundant 2600W
Titanium Level Power Supplies

VGA Port

Dedicated IPMI/KVM
LAN Port

2 USB 3.0 Ports

**System Rear View**

**All-Flash NVMe**

**Hybrid NVMe/SAS3/SATA3**

**SATA3 Model**

**2U**
**FORM-FACTOR**

*Four Nodes*
Four sets of 6x 2.5" drives

**CPU**

*2-Socket*
Up to AMD EPYC™ 7002 series processors;
up to 225W**

**MEMORY**

*Up to 16 DIMM Slots*
Up to 4TB ECC memory with 256GB
DIMMs per node, up to DDR4-3200MHz

**STORAGE**

*NVMe/SAS3/SATA3*
All NVMe or SATA3 or hybrid NVMe/SAS3;
1 NVMe/SATA3 M.2 slot per node

**I/O**
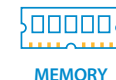
*Flexible Networking*
Super I/O Module (SIOM) networking*
with dedicated IPMI LAN port per node;
Additional 2 PCI-E 4.0 x16 LP slots

**POWER SUPPLY**

*Up to Titanium Level*
Up to redundant 2600W high-efficiency
digital power supplies

*\* For more details, please refer to page 23*
*\*\* Max TDP support may vary per system configurations, please check with your Supermicro sales representative.*

# H11 Ultra

## INDUSTRY LEADING IOPS, ENERGY EFFICIENCY AND FLEXIBILITY

# H11 BigTwin™

## NO-COMPROMISE 2U 4-NODE TWIN ARCHITECTURE

# H11 WIO

## EFFICIENCY AND STORAGE OPTIMIZED ARCHITECTURE

# H11 Mainstream

## EFFICIENT, COST-EFFECTIVE DESIGNS FOR THE MAINSTREAM



| H11 Ultra | H11 BigTwin™ | H11 WIO | H11 Mainstream |
|---|---|---|---|
| Dual AMD EPYC™ 7002 Series, up to 225W TDP | Dual AMD EPYC™ 7002 Series per node, up to 225W TDP | Single AMD EPYC™ 7002 Series, up to 225W TDP | Single or dual AMD EPYC™ 7002 Series, up to 225W TDP |
| 32 DDR4-3200MHz DIMM slots | 16 DDR4-3200MHz DIMM slots per node | 16 DDR4-3200MHz DIMM slots | Up to 16 DDR4-3200MHz DIMM slots |
| Up to 7 PCI-E 3.0 slots | 2 PCI-E 3.0 x16 slots (2 LP slots) | Up to 5 PCI-E 3.0 slots (3 FHFL and 2 LP slots) | Up to 6 PCI-E 3.0 slots |
| 2.5" or 3.5" SATA3, SAS3, Hybrid and All-NVMe storage | 2.5" All-NVMe/Hybrid SAS3 storage | U.2 NVMe or 2.5" SATA3 storage | 3.5" SATA3 and optional SAS3 storage |
| Flexible onboard networking up to 2x 25G Ethernet | Onboard flexible SIOM networking up to 100G Ethernet | Onboard networking dual 10G Ethernet | Onboard networking up to dual 10G Ethernet |

# H11 Generation Ultra
## INDUSTRY LEADING IOPS, ENERGY EFFICIENCY AND FLEXIBILITY

Supermicro Ultra SuperServers are designed to deliver the highest performance, flexibility, scalability and serviceability to demanding IT environments, and to power mission-critical Enterprise workloads
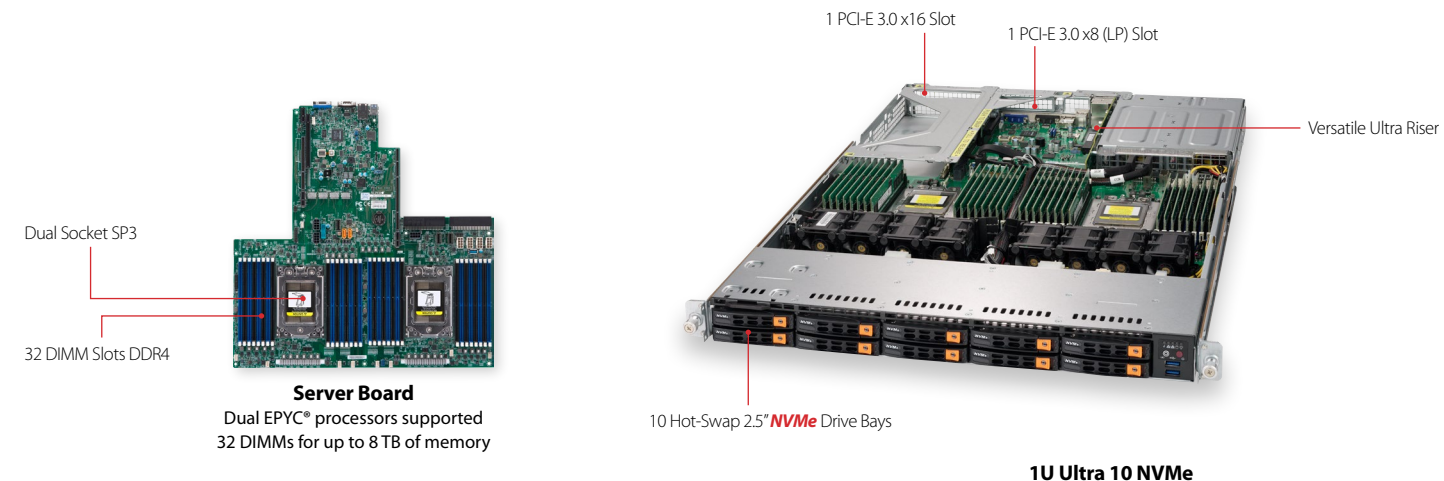
1 PCI-E 3.0 x16 Slot

1 PCI-E 3.0 x8 (LP) Slot

Versatile Ultra Riser

Dual Socket SP3

32 DIMM Slots DDR4

**Server Board**
Dual EPYC® processors supported
32 DIMMs for up to 8 TB of memory

10 Hot-Swap 2.5" *NVMe* Drive Bays

**1U Ultra 10 NVMe**

**1U Ultra 4x 3.5" Drive Bays**

**2U Ultra 12x 3.5" Drive Bays**

**1U Ultra 24x 2.5" NVMe Drive Bays**

**1U/2U**
**FORM-FACTOR**

*Rackmount*
Up to 10x 2.5" or 4x 3.5" drive bays in 1U;
Up to 24x 2.5" or 12x 3.5" drive bays in 1U

**CPU**

*2-Socket*
Up to AMD EPYC™ 7002 series processors;
up to 225W
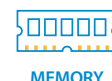
**MEMORY**

*32 DIMM Slots*
Up to 8TB ECC memory with 256GB
DIMMs, up to DDR4-3200MHz

**STORAGE**

*NVMe/SAS3/SATA3*
1 PCI-E/SATA M.2 support on some
models

**I/O**

*Flexible Networking*
Rich PCI-E expansion options including
GPU support; Flexible networking via
Ultra Riser adapters* with dedicated IPMI
LAN port

**POWER SUPPLY**

*Up to Titanium Level*
Up to redundant 1600W high-efficiency
digital power supplies

* For more details, please refer to page 22

# H11 Generation BigTwin™

## NO-COMPROMISE 2U 4-NODE TWIN ARCHITECTURE

2U systems supporting four independent nodes with 16 DIMM slots
Flexible storage options including all NVMe and hybrid NVMe/SAS3/SATA3
SIOM networking options including 10GbE, 25GbE, 100GbE and IB

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.



16 DIMM Slots DDR4

Dual Socket SP3

2 PCI-E 3.0 x16 LP slots

SIOM slot

Up to Redundant 2600W Titanium Level Power Supplies

VGA Port

Dedicated IPMI/KVM LAN Port

2 USB 3.0 Ports
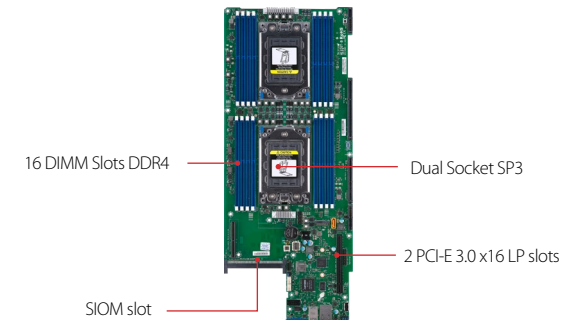
**Node View**
Dual EPYC® processors supported
16 DIMMs for up to 4 TB of memory
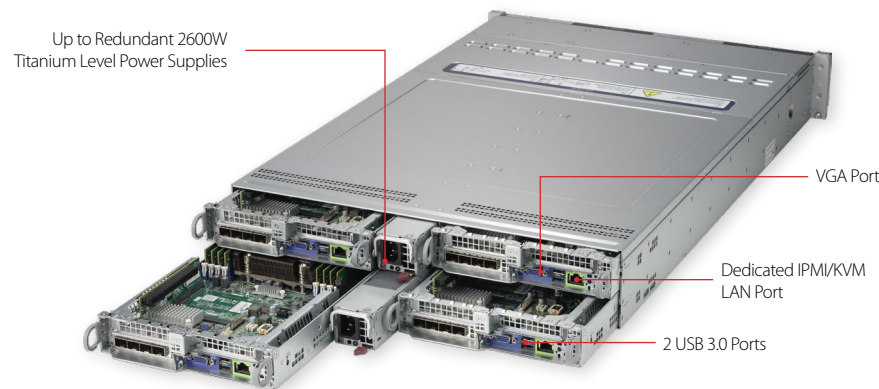
**Rear System View**



**All-Flash NVMe**

**Hybrid NVMe/SAS3/SATA3**

**SATA3 Model**

**2U**
FORM-FACTOR

***Four Nodes***
Four sets of 6x 2.5" drives

**CPU**

***2-Socket***
Up to AMD EPYC™ 7002 series processors per node; up to 225W**

**MEMORY**

***Up to 16 DIMM Slots***
Up to 4TB ECC memory with 256GB DIMMs per node, up to DDR4-3200MHz

**STORAGE**

***NVMe/SAS3/SATA3***
All NVMe or SATA3 or hybrid NVMe/SAS3; 1 NVMe/SATA3 M.2 slot per node

**I/O**

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

**POWER SUPPLY**

***Up to Titanium Level***
Up to redundant 2600W high-efficiency digital power supplies

\* For more details, please refer to page 23
\*\* Max TDP support may vary per system configurations, please check with your Supermicro sales representative.

# H11 Generation WIO SuperServer®

## EFFICIENCY AND STORAGE OPTIMIZED ARCHITECTURE
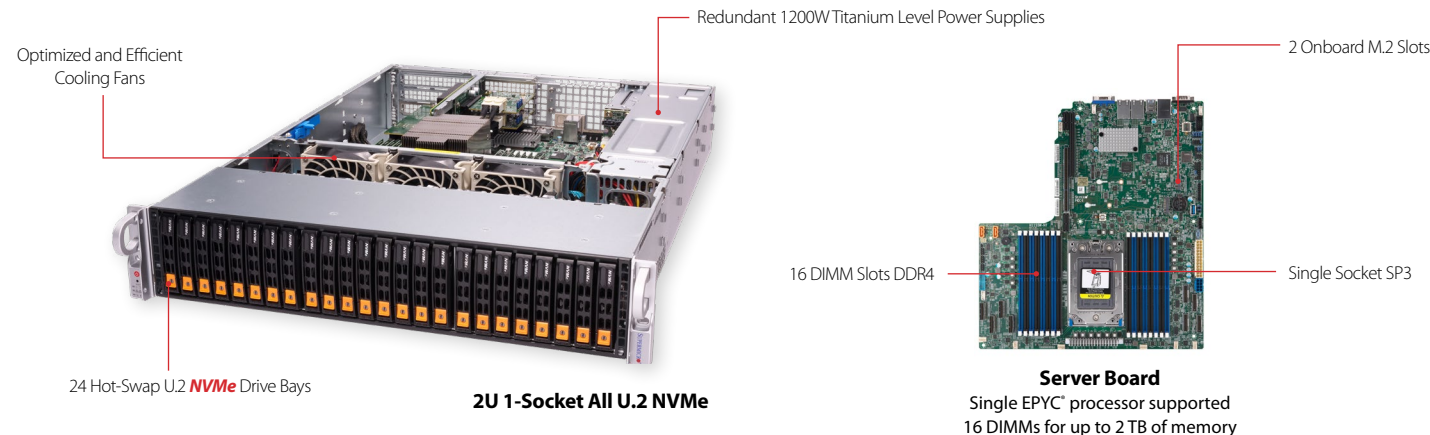
Single-socket cost-effective systems in 1U/2U
Up to 10 U.2 NVMe in 1U or 24 U.2 NVMe storage devices in 2U
Onboard dual 10 Gigabit Ethernet networking

Supermicro WIO SuperServer® systems offer a wide range of I/O options to deliver truly optimized systems for specific requirements. Users can optimize the storage and networking alternatives to accelerate performance, increase efficiency and find the perfect fit for their applications. In addition to enabling customizable configurations and optimization for multiple application requirements.

Optimized and Efficient Cooling Fans

Redundant 1200W Titanium Level Power Supplies

2 Onboard M.2 Slots

16 DIMM Slots DDR4

Single Socket SP3

24 Hot-Swap U.2 *NVMe* Drive Bays

**2U 1-Socket All U.2 NVMe**

**Server Board**
Single EPYC® processor supported
16 DIMMs for up to 2 TB of memory

**1U 10x 2.5" Hot-swap Drive Bays**

**1U 24x 2.5" Hot-swap Drive Bays**

**2U 16x 2.5" Hot-swap Drive Bays**

**1U/2U**
**FORM-FACTOR**

***Rackmount***
Up to 10x 2.5" drive bays in 1U;
Up to 24x 2.5" drive bays in 2U

**CPU**

***1-Socket***
Up to AMD EPYC™ 7002 series processors;
up to 225W

**MEMORY**

***16 DIMM Slots***
Up to 4TB ECC memory with 256GB
DIMMs, up to DDR4-3200MHz

**STORAGE**
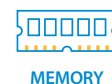
***All-NVMe/SATA3***
Hybrid backplane supporting NVMe and
SATA3 drives; 2 PCI-E 3.0 x4 M.2 slots

**I/O**

***Onboard Networking***
Dual 10GbE RJ45 LAN ports with dedicated
IPMI LAN port;
Up to 3 PCI-E 3.0 slots in 1U and 5 slots in 2U

**POWER SUPPLY**

***Up to Titanium Level***
Up to redundant 1200W high-efficiency
digital power supplies

# H11 Generation Mainstream SuperServer®

## EFFICIENT, COST-EFFECTIVE DESIGNS FOR THE MAINSTREAM APPLICATIONS

1U, 2U and tower systems supporting single or dual processors
1-socket and 2-socket models for optimal efficiency and performance
Hot-swappable 3.5" SATA3 with SAS3 options

2 PCI-E 3.0 x16 Slots

3 PCI-E 3.0 x8 Slots

1 Onboard M.2 Slot

16 DIMM Slots DDR4

Dual Socket SP3
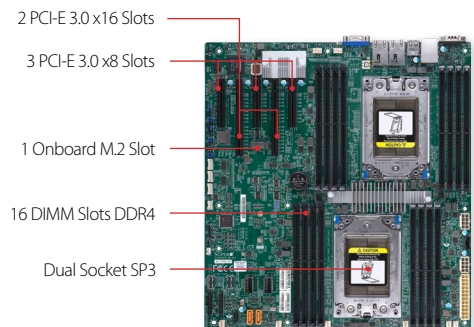
**Server Board**
Dual EPYC® processors supported
16 DIMMs for up to 2 TB of memory
(for tower system shown on the right only)

8 Hot-Swap 3.5" Drive Bays

Hot-Swap Cooling Fans

**Tower 2-Socket 3.5" Hot-swap Drive Bays**

**1U 4x 3.5" Hot-swap Drive Bays**

**2U 8x 3.5" Hot-swap Drive Bays**

**Multi**
**FORM-FACTOR**

### Rackmount and Tower
4x 3.5" drive bays in 1U; 8x 3.5" drive bays in 2U; 8x 3.5" and 2x 5.25" drive bays in 4U tower

**CPU**

### 1 or 2-Socket
Up to AMD EPYC™ 7002 series processors; up to 225W

**MEMORY**

### Up to 16 DIMM Slots
Up to 4TB ECC memory with 256GB DIMMs, up to DDR4-3200MHz

**STORAGE**

### SAS3/SATA3
Up to 8x 3.5" SAS3 drives via Broadcom 3008 in 2U; PCI-E M.2 support available

**I/O**

### Onboard Networking
Up to dual 10GbE with dedicated IPMI LAN port; Up to 6 PCI-E 3.0 slots

**POWER SUPPLY**

### Up to Platinum Level
Up to redundant 1280W high-efficiency digital power supplies

# H12 Generation WIO Serverboard

## PCI-E 4.0 READY OPTIMIZED FOR THE WIO PLATFORM
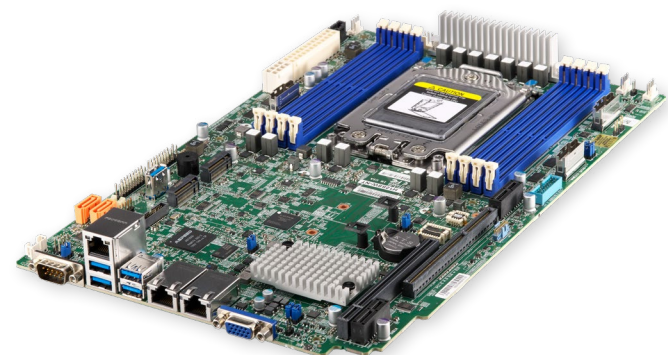
### Single-socket WIO Form-Factor

- Up to 2nd Gen AMD EPYC processors, up to 225W TDP
- 8 DIMM slots, up to DDR4-3200MHz
- 3 PCI-E 4.0 x16 and 2 M.2 slots
- Up to 16 SATA and 6 NVMe interfaces
- Dual 1GbE or 10GbE ports with dedicated IPMI LAN port

**NEW!** **H12SSW**

# H11 Generation WIO Serverboard

## OPTIMIZED FOR STORAGE APPLICATIONS ON THE WIO PLATFORM
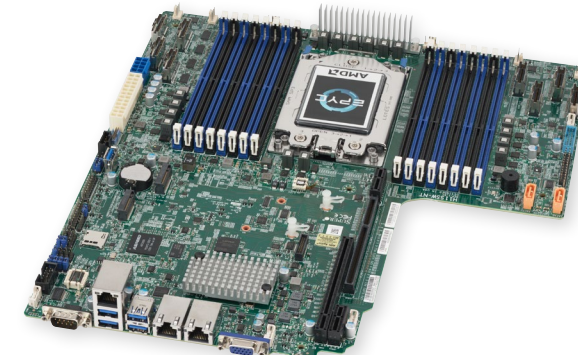
### Single-socket WIO Form-Factor

- Up to 2nd Gen AMD EPYC processors, up to 225W TDP
- 16 DIMM slots, up to DDR4-3200MHz (1 DIMM per channel)
- 3 PCI-E 3.0 x16 and 2 M.2 slots
- Up to 16 SATA and 16 NVMe interfaces
- Dual 1GbE or 10GbE ports with dedicated IPMI LAN port

**H11SSW**

# H11 Generation E-ATX Serverboard
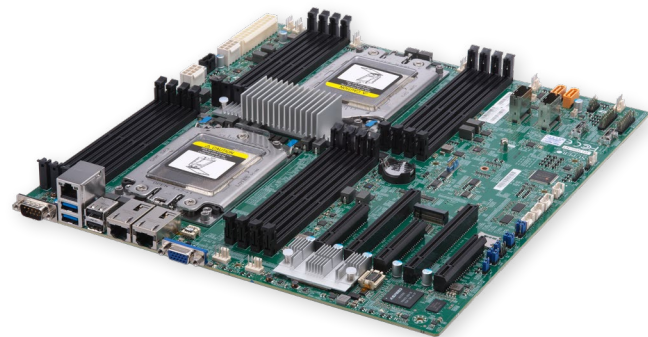
**H11DSi**

## Dual-socket E-ATX Form-Factor

- Up to 2nd Gen AMD EPYC processors, up to 225W TDP
- 16 DIMM slots, up to DDR4-3200MHz
- 2 PCI-E 3.0 x16, 3 PCI-E 3.0 x8 and 1 M.2 slots
- Up to 10 SATA and 2 NVMe interfaces
- Dual 1GbE or 10GbE ports with dedicated IPMI LAN port
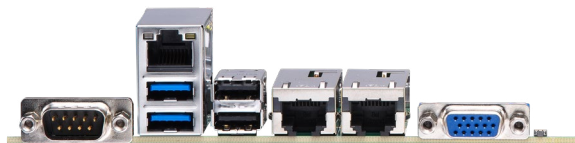


# H11 Generation ATX Serverboard
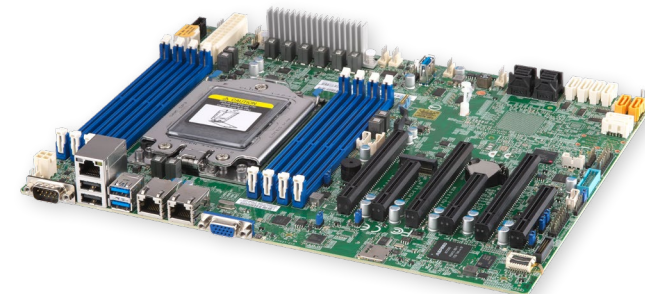
## Single-socket ATX Form-Factor

- Up to 2nd Gen AMD EPYC processors, up to 225W TDP
- 8 DIMM slots, up to DDR4-3200MHz
- 3 PCI-E 3.0 x16, 3 PCI-E 3.0 x8 and 1 M.2 slots
- Up to 16 SATA, 8 SAS and 2 NVMe interfaces
- Dual 1GbE or 10GbE ports



**H11SSL**

# Storage Options  <span>SAS3 ADD-ON CARD OPTIONS</span>

Supermicro SAS3 add-on cards feature up to 16 internal SAS ports for high-performance storage applications. It addresses the growing demand for increased data throughput and scalability requirement across the enterprise-class server platforms and delivers cost effective storage solutions using SATA3 drives and maximum performance and reliability with SAS3 drives.

Mini-SAS cables may be required to purchase separately. For more product information and technical specifications, please visit supermicro.com or scan the QR code on the right to retrieve the complete list of options and verify your system compatibility.

| SAS3 Host Bus Adapters in IT Mode | | | SAS3 RAID Adapters | | |
|---|---|---|---|---|---|
| AOC-S3616L-L16iT | AOC-S3216L-L16iT | AOC-S3008L-L8e | AOC-S3108L-H8iR-16DD | AOC-S3108L-H8iR | AOC-S3008L-L8i |
| Broadcom® SAS 3616 | Broadcom® SAS 3216 | Broadcom® SAS 3008 | Broadcom® SAS 3108 | Broadcom® SAS 3108 | Broadcom® SAS 3008 |
| 16 ports, 12Gb/s per port, 16 Internal, Low Profile, 1024 SATA/SAS Drives | 16 ports, 12Gb/s per port, 16 Internal, Low Profile, 1024 SATA/SAS Drives | 8 ports, 12Gb/s per port, 8 Internal, Low Profile, 122 SATA/SAS Drives | 8 ports, 12Gb/s per port, 8 Internal, Low Profile, 16 SATA/SAS Drives | 8 ports, 12Gb/s per port, 8 Internal, Low Profile, 240 SATA/SAS Drives | 8 ports, 12Gb/s per port, 8 Internal, Low Profile, 63 SATA/SAS Drives |

# CHOOSE YOUR ONBOARD I/O  Supermicro SIOM

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 | 4x GbE RJ45 | 2x 10GbE SFP+ | 4x 10GbE SFP+ | 2x 10GbE RJ45 | 4x 10GbE RJ45 |
|---|---|---|---|---|---|
| AOC-MGP-i2M | AOC-MGP-i4M | AOC-MTGN-i2SM | AOC-MTG-i4SM | AOC-MTG-i2TM | AOC-MTG-i4TM |

| 2x 10GbE RJ45 | 2x 25GbE SFP28 & 2x GbE RJ45 | 2x 25GbE SFP28 & 2x 10GbE RJ45 | 2x FDR IB QSFP & 2x GbE RJ45 | 1x FDR IB QSFP & 2x GbE RJ45 | 1x EDR IB/100GbE QSFP28 & 1x GbE RJ45 |
|---|---|---|---|---|---|
| AOC-MTG-b2TM | AOC-MH25G-b2S2GM | AOC-MH25G-m2S2TM | AOC-MHIBF-m2Q2GM | AOC-MHIBF-m1Q2GM | AOC-MHIBE-m1CGM |