SUPERMICRO®

A+ Server Solutions

World's Most Versatile Portfolio of AMD Processor-Based Systems Supporting AMD EPYC™ & Ryzen™ Series Processors

SUPERMICRO® H13 AND H12 GENERATION A+ SERVERS

The Most Comprehensive Portfolio of AMD Processor-Based Systems, now with AMD EPYC™ 9004 Series and Ryzen™ 7000 Series Processors, Including Servers, Storage, GPU-Optimized, Blade, and Multi-Node Solutions to Exactly Match System Requirements to Your Workload

AMD

December 2023

Introducing H13 Generation A+ Servers

AMD EPYC™ 9004 Series Processors

- Up to 128 "Zen 4C" cores or 96 "Zen 4" cores per socket with AMD 3D V-Cache™ technology
- Up to 6TB of memory of 12-channel DDR5 with ECC 4800MHz and Advanced Memory Device Correction (AMDC) and now supports 2 DIMMs per channel (2DPC) with single socket
- PCIe 5.0 up to 160 lanes (4U GPU system)
- Next Generation Reliability, Availability, and Serviceability (RAS)

Workload Optimized Systems with Open Architectures

- Vast I/O, storage, networking and expansion slot options for maximum versatility
- Flexibile networking options with Advanced I/O Modules (AIOMs), up to 400Gbps throughput per card and OCP 3.0 support
- Market-leading GPU optimized servers for large scale AI/ML and HPC workloads
- Compute Express Link (CXL 1.1+) peripheral support including memory expansion through PCIe 5.0 lanes

Increased Operational Efficiency

- Tool-less chassis design
- Rear and Front I/O options
- Hot-swappable nodes with shared power for multi-node system
- Titanium level redundant power supplies
- Efficient resource-saving multi-node designs with shared power and cooling.

H13 GPU Optimized System

Maximum Acceleration for AI/Deep Learning and HPC

H13 GrandTwin™ System

Leading Multi-Node Architecture with Front or Rear I/O

H13 Flash Storage System

Purpose-built All-Flash E3.S Petascale Storage Solution

H13 WIO System

Excellent Density and Energy Efficiency for Intelligent Edge

H13 Hyper System

Industry Leading IOPS Servers with Energy Efficiency and Flexibility

H13 Short Depth Front I/O

Compact Front I/O design optimized for Telco deployments

H13 CloudDC System

All-in-One Servers with Flexible I/O Options for Cloud Scale Data Centers

H13 Workstation System

Server-Grade Workstations for High Compute and Graphic Workloads

H13 8U 8-GPU SYSTEMS

Next-Gen Large Scale AI Training Platform

Industry standard OCP Accelerator Module (OAM) with eight accelerators interconnected on an AMD Universal Base Board (UBB 2.0)

Industry-leading 1.5TB HBM3 GPU memory in a single server node

1:1 400G networking dedicated for each GPU designed for large scale AI and supercomputing clusters

2-socket design supporting 4th Gen AMD EPYC™ Processors

Up to 24 DIMMs for up to 6 TB of DDR5-4800 memory

AS -8125GS-TNMR2

AS -8125GS-TNHR

8U dual processors system with NVIDIA HGX H100 8-GPU, supports PCIe 5.0 with 1: 1 networking at 400G to the 8 GPUs and up to 16 NVMe and 2 SATA SSD drives

AS -8125GS-TNMR2

8U dual-processor system with AMD Instinct™ MI300X accelerator, supports PCIe® 5.0 with 1 : 1 networking at 400G to the 8 GPUs and up to 16x hot-swap NVMe drives and 2 SATA drives

Streamline deployment at scale for AI & LLM

Built on Supermicro's proven AI building-block system architecture, the new 8U 8-GPU system with AMD Instinct MI300X accelerators streamline deployment at scale for the largest AI models and reduce lead time. The 8U 8-GPU air-cooled solution is feature maximized and power optimized supporting dedicated I/O and dedicated storage per GPU, full performance GPUs, CPUs, and memory, and high-speed networking for large scale cluster deployments. These powerful GPUs enhance operations-per-second and performance-per watt at rack scale.

Key Applications

- Large Scale Deep Learning
- Generative AI and Large Language Model Training
- AI-fused HPC applications
- Industrial Automation
- Business Intelligence & Analytics

H13 2U & 4U QUAD APU SYSTEMS

Next-Gen Large Scale HPC and AI Inferencing Systems

Four APUs combine high-performance AMD CPU, GPU and HBM3 memory for a total of 912 AMD CDNA™ 3 GPU compute units and 96 "Zen 4" cores, and 512GB of unified HBM3 memory in one system

PCIe 5.0 expansion slots for high-speed networking including RDMA to APU memory

2 PCIe 5.0 Open Compute Project (OCP) 3.0 AIOM slots

Fully optimized for the most popular AI & ML frameworks—PyTorch, TensorFlow, JAX, ONYX-RT, Triton

AS -2145GH-TNMR

AS -2145GH-TNMR

2U liquid-cooled system with quad AMD Instinct™ MI300A accelerators, each APU combines high-performance AMD CPU, GPU and HBM3 memory, Supports 8x hot-swap NVMe drives

AS -4145GH-TNMR

4U air-cooled system with quad AMD Instinct™ MI300A accelerators, each APU combines high-performance AMD CPU, GPU and HBM3 memory, Supports 8x hot-swap NVMe drives (Optional 24x SAS/SATA drives)

Quad-Socket MI300A APU-Based Systems

Supermicro offers two quad-socket APU-based servers that give flexibility in cooling models. The 2U AS -2145GH-TNMR is a dense, liquid-cooled system that delivers exceptional TCO with over 51% data center energy cost savings. Furthermore, there is a 70% reduction in fans compared to air-cooled solutions. The 4U AS -4145GH-TNMR provides more storage and 8-16 extra PCIe 5.0 AOC cards. Each server supports two compact AIOMs and offers PCIe 5.0 x16 slots for 400G Ethernet InfiniBand networks to develop a supercomputing cluster while speeding the flow of data directly to APU memory.

Key Applications

- HPC
- AI-fused HPC applications
- CSP
- Research Lab/ National Lab

H13 4U PCIe GPU SYSTEMS

Flexible, High Density GPU Systems for AI and HPC

High performance AI/ Deep Learning and HPC-optimized systems

Single and Dual processor AMD EPYC™ 9004 Series Processor

Double the CPU to GPU throughput with PCIe 5.0

Supports up to 10 FHFL double-width GPU units including AMD Instinct™ MI200 series and NVIDIA H100 GPUs

AS -4125GS-TNRT1

AS -4125GS-TNRT

4U dual processors, direct attached GPU system, supporting 8 PCIe 5.0 GPUs, AMD Instinct, NVIDIA Enterprise level GPUs

AS -4125GS-TNRT1

4U single processors, single-root GPU system with PLX, supporting 10 PCIe 5.0 GPUs, AMD Instinct, NVIDIA Enterprise level GPUs

AS -4125GS-TNRT2

4U dual processors, dual-root GPU system with PLX, supporting 10 PCIe 5.0 GPUs, AMD Instinct, NVIDIA Enterprise level GPUs

Maximum Acceleration 4U GPU Systems

The Supermicro 4U GPU servers are 4U single and dual processor systems, supporting up to 10 FHFL double-width PCIe GPU cards, including the latest NVIDIA H100 and AMD Instinct GPUs. The 4U GPU-optimized systems provide maximum acceleration, flexibility, and balance for AI/deep learning, HPC, and Graphically-intensive workloads.

Key Applications

- AI
- HPC
- Research/ National Laboratory
- 3D Simulation
- Cloud Gaming
- Media/ Video Streaming

H13 GrandTwin™ Systems

Leading Multi-node Architecture with Front or Rear I/O

2U 4-node system optimized for single processor per node performance

Configurable up to six 2.5" drive bays supporting NVMe or SATA per node

Field serviceable from front/cold aisle to reduce downtime for higher availability

Flexible networking options with AIOM / OCP 3.0 support

AS -2115GT-HNTF

2U 4-Node Rear I/O GrandTwin

AS -2115GT-HNTR

2U system with up to 6 U.2 NVMe/ SATA drives per node

2U 4-Node Front I/O GrandTwin

AS -2115GT-HNTF

2U system with up to 4 U.2 NVMe/ SATA drives per node

Highly Configurable Single Processor System with Front or Rear I/O

GrandTwin™ is an all-new multi-node architecture purpose-built for single-processor performance. The design maximizes compute, memory and efficiency to deliver maximum density. Powered by AMD EPYC™ 9004 Series Processors now with AMD 3D V-Cache™ technology, GrandTwin's flexible modular design can be easily adapted for a wide range of applications, with the ability to add or remove components as required, reducing cost.

For front I/O configurations, all I/O and node trays are fully accessible from the cold aisle, simplifying installation and servicing in space-contrained environments. Flexible storage and networking options are available via front AIOM modules, allowing countless custom configurations.

Key Applications

- HCI
- HPC
- CDN
- Technical Computing (EDA, CFD, FEA)
- Cloud Computing
- Big Data Analytics
- Scale-Out Storage

H13 Hyper Systems

Industry Leading IOPS Rackmount Servers with Energy Efficiency and Flexibility

Dual AMD EPYC™ 9004 Series Processors

3 PCIe 5.0 x16 slots (1U), or up to 4 PCIe 5.0 x16 slots/ 8 PCIe 5.0 x8 slots (2U) and CXL 1.1+ support

Up to 2 AIOM networking slots with OCP 3.0 support

Flexible NVMe and SATA hot-swap drive options

Tool-less design for easy deployment and maintenance

AS -1125HS-TNR

1U Hyper

AS -1125HS-TNR

1U dual processor server with 24 DIMMs and up to 12 hot-swap 2.5" NVMe/ SATA drives

2U Hyper

AS -2025HS-TNR

2U dual processor server with 24 DIMMs and 12 hot-swap 3.5" NVMe/SATA drives

2U Hyper

AS -2125HS-TN

2U dual processor server with 24 DIMMs and 24 hot-swap 2.5" NVMe/SATA drives

Highest Performance A+ Hyper Servers

The new H13 Hyper series brings next-generation versatility and performance to Supermicro's range of rackmount servers, built to take on the most demanding workloads along with the storage & I/O flexibility that provide customer fit for a wide range of application needs.

- Uncompromised performance design with 2 CPU sockets and 24 DIMMs optimized for supporting the highest processor TDP
- Best-in-class server features including all NVMe, hybrid storage and low latency optimizations
- Fast PCIe 5.0 expansion slots for accelerators, AIOM/OCP 3.0 networking, and CXL 1.1+ peripheral support including memory expansion.

Key Applications

- Enterprise Server
- Hyperconverged Storage
- Virtualization
- AI Training/Inferencing
- Big Data Analytics
- Cloud Computing
- CDN
- In-Memory Database

H13 Hyper-U Systems

Enterprise-Focused Servers delivering Memory Density, Flexibility, and Power Efficiency

Single AMD EPYC™ 9004 Series Processor with up to 128 cores

Up to 12-channel 24 DIMMs (2 DIMMs per channel) for up to 6 TB of DDR5 memory in a single-socket platform

Flexible NVMe, SAS, and SATA3 drive options

Configurable PCIe 5.0 expansion capabilities for GPUs and CXL 1.1+ support

AS -1115HS-TNR

1U Hyper-U

AS -1115HS-TNR
1U single processor server, supports 8 hot-swap 2.5" NVMe/SATA/SAS drives

2U Hyper-U

AS -2015HS-TNR
2U single processor server, supports 12 hot-swap 3.5" NVMe/SATA/SAS drives

2U Hyper-U

AS -2115HS-TNR
2U single processor server, supports 24 hot-swap 2.5" NVMe/SATA/SAS drives

Designed for Enterprise and Cloud Native Workloads

Supermicro H13 Hyper-U series are the ultimate single processor servers that can offer more cores than most 2 socket servers can, ideal for cloud native workloads, such as virtualization and HCI.

The 1U and 2U Hyper-U systems offer high-performance, density, and power efficiency on the latest AMD processors supporting up to 128 cores and up to 12 channels of DDR5 in 24 DIMMs slots. Additionally, the systems have configurable expansion capabilities such as CLX 1.1+ memory expansion devices, and GPU to support AI inferencing and other accelerated workloads.

Key Applications

- Enterprise Server
- Cloud Computing
- Virtualization
- AI Inference and Machine Learning
- Software-Defined Storage

H13 CloudDC Systems

All-in-One Servers with Flexible I/O Options for Cloud-Scale Data Centers

Single AMD EPYC™ 9004 Series Processor

Up to 12 hot-swap NVMe/SATA drives

2 PCIe 5.0 x16 slots (1U) or
up to 4 PCIe 5.0 x16 slots (2U)

Flexible networking options with AIOM/
OCP 3.0 support

Best-in-class serviceability features with
tool-less chassis design

AS -1115CS-TNR

CloudDC - 1U

AS -1015CS-TNR
1U single processor server with
12 DIMMs, supports dual AIOM and
4 hot-swap 3.5" NVMe/SATA drives

CloudDC - 1U

AS -1115CS-TNR
1U single processor server with
12 DIMMs, supports dual AIOM and
10 hot-swap 2.5" NVMe/SATA drives

CloudDC - 2U

AS -2015CS-TNR
2U single processor server with
12 DIMMs, supports 2 double-width PCIe GPUs, dual
AIOM and 12 hot-swap 3.5" NVMe/SATA drives

Cost Optimized Versatile Solutions for Rapid Cloud Deployment and Easy Maintenance

Ultimate flexibility on I/O and storage with 2 to 4 PCIe 5.0 slots and dual AIOM slots (PCIe 5.0; OCP 3.0 compliant) for maximum data throughput. Supermicro H13 CloudDC systems offer convenient serviceability with tool-less brackets, hot-swap drive trays and redundant power supplies that ensure a rapid deployment and more efficient maintenance in data centers.

The H13 CloudDC servers are designed for cost-effective service delivery in cloud computing environments, including Internet infrastructure such as web hosting, email services, public and private cloud computing, and content-delivery networks (CDNs).

Key Applications

- Cloud Computing
- Web Server
- Hyper-converged Storage
- Virtualization, File Servers
- Head-node Computing
- Telcom Security Server
- CDN

H13 WIO Systems

Excellent Density and Energy Efficiency for Intelligent Edge

Single AMD EPYC™ 8004 Series Processor

6 DIMM slots; Up to 576GB DDR5-4800

Up to 10 SATA/NVMe/SAS (1U)

Up to 12 SATA/SAS or 6 NVMe and SATA/SAS (2U)

Redundant titanium level power supply

Up to 2 PCIe 5.0 x16 FHFL slots and

1 PCIe 5.0 x16 LP (1U), 2 PCIe 5.0 x8 LP (2U)

AS -1115SV-WTNRT

WIO - 1U

AS -1015SV-WTNRT
1U single processor server with 6 DIMMs, supports 4 hot-swap 3.5"/2.5" SATA/NVMe/SAS drives

WIO - 1U

AS -1115SV-WTNRT
1U single processor server with 6 DIMMs, supports 10 hot-swap 2.5" SATA/NVMe/SAS drives

WIO - 2U

AS -2015SV-WTNRT
2U single processor server with 6 DIMMs, supports 12 hot-swap 3.5"/2.5" SATA/NVMe/SAS drives

Cost and Energy Efficient for Intelligent Edge and Data Center Application

The Supermicro WIO systems are energy-efficient single socket (SP6) servers that lower the operating costs for data center, enterprise edge, cloud computing and network security applications. The Supermicro WIO with AMD EPYC™ 8004 series processor are designed for impressive performance balanced with cost, power, and flexible I/O options.

Key Applications

- Cloud Services
- Enterprise Edge
- Virtualization
- Database Storage
- Web Server
- DNS and Gateway Server

H13 Short Depth Front I/O

Compact Front I/O design optimized for Telco deployments

Single AMD EPYC™ 8004 Series Processor

6 DIMM slots; Up to 576GB DDR5-4800

Up to 2 2.5" Internal Drives

2 PCIe 5.0 x16 FHFL Slots

Both AC and DC Power Supply Options Available

AS -1115S-FWTRT

Short Depth - AC

AS -1115S-FWTRT
1U Single Processor with 6 DIMM supporting up to 3 PCIe5.0 and up to 2 2.5" Internal Drives

Short Depth - DC

AS -1115S-FDWTRT
1U Single Processor with 6 DIMM supporting up to 3 PCIe 5.0 and up to 2 2.5" Internal Drives

NEBS Compliant Design Optimized for Edge and Telco Application

The short-depth front I/O system is a compact form factor solutions quieter than traditional servers, ideal for Telco and Edge deployments with space and thermal limitations. Powered by AMD EPYC 8004 series processor supporting operating temperatures of up to 40~55°, depending on the processor core count. The new systems use Platinum power supplies for increased energy efficiency, resulting in higher performance per watt. The H13 Short depth front I/O system offers AC and DC options and features NEBS compliant design required for telco related operations.

Key Applications

- Virtualization
- Edge Cloud AI Computing
- vRAN/O-RAN/NEBS environment
- Telco 5G
- CDN/vCDN/Cloud CDN

H13 MicroCloud System

High Density Multi-Node System for Cloud and Dedicated Hosting

8 nodes in 3U system

Supporting single AMD Ryzen™ 7000 series processor per node

Up to 128GB ECC/non ECC UDIMM; DDR5 5200MHz, in 4 DIMM sockets per node

Single 8-lane PCIe 5.0 low profile slot per node (can be used for GPU accelerator)

8 sets of 2 front NVMe U.2/ SAS/ SATA3 drives w/ optional kits

AS -3015MR-H8TNR

3U MicroCloud

AS -3015MR-H8TNR

AMD Ryzen 7000 Series,
8 single processor server nodes with 2 NVMe U.2 SAS/SATA drives

3U 8-Nodes Flexible Architecture for Dedicated Hosting

Supermicro H13 MicroCloud is a 3U, multi-node server powered by AMD Ryzen™ 7000 series processors with 8 single-processor nodes delivering excellent density and power efficiency.

The MicroCloud system is designed for applications that require large numbers of discrete servers, offering 8 nodes containing up to two front-accessible NVMe U.2, as well as a single 8 lane PCIe 5.0 low profile slot that can be used for GPU accelerators for Web Hosting, Cloud Gaming, Content Creation, and Virtual Private Servers.

Key Applications

- Cloud Computing
- Web Cache, CDN, Video Streaming
- Web Colocation Services
- Social Networking Downloads
- Corporate -WINS, DNS, Print, Login

H13 Mainstream 1U System

Powerful and Economical Server for SMB

Supporting single AMD Ryzen 7000 series processor

Cost-Optimized for SMB

Up to 192GB DDR5 5200MHz

1x PCIe 5.0 x16 (FHHL) slot

668W Platinum certified power supply

AS -1015A-MT

Mainstream -1U

AS -1015A-MT

AMD Ryzen 7000 Series,
1U single processor with 1x 3.5" SATA drive

Ryzen™ 7000 powered server for Web Hosting and SMB applications

Supermicro H13 1U system offers versatile storage options with 2 PCIe Gen5 M.2 slots and flexible configurations, effortlessly adapting to your growing business needs. This economical server is designed for small and medium businesses, remote offices, and branch offices, delivering unparalleled performance

Key Applications

- Cloud Computing
- Web Hosting, CDN, Video Streaming
- SMB Application
- Email/ Firewall/ Application Server

H13 Mini Tower System

Flexible Tower Workstation Optimized for Content Creation

Single AMD Ryzen 7000 series processor

4x DIMM up to 128GB, 4x 32GB DRAM

Up to 192GB DDR5-5200 memory

2x PCIe 5.0 x16 Slots (x16/NA or x8/x8)

668W Platinum level shared power supplies

AS -3015A-I

Mini Tower

AS -3015A-I

Versatile mini-tower system that
can be deployed as a server, workstation or as a desktop

Versatile Workstation Solutions for Content Creation and Entry Level Server Applications

Designed with versatility in mind, the latest mini-tower system based on AMD Ryzen 7000 series processor offers versatile storage options with 2 PCIe Gen5 M.2 slots and a flexible configuration, ensuring it seamlessly adapts to your evolving business requirements.

With remote management features via IPMI, this system can be deployed as an entry level server, workstation or as a desktop. No more settling for one-size-fits-all solutions - this system is ready to be tailored to elevate your IT infrastructure.

Key Applications

- 2D/3D Content Creation
- SMB Application
- Email/ Firewall/ Application Server

H13 All-Flash EDSFF System

All-Flash EDSFF Petascale for Software-Defined Data Center Workloads

Single 4th Generation AMD EPYC 9004 Scalable processor

24 DIMMs slots; up to 6TB DDR5 4800MHz

Two PCIe 5.0 x16 FHHL Slots, two PCIe 5.0 x16 AIOM Slots (OCP 3.0 SFF compliant)

16 hot-swap EDSFF E3.S (7.5mm) NVMe drive bays

Optional configuration supports 8 E3.S drives and 4 CXL devices in E3.S 2T form factor for memory expansion in 1U

ASG-1115S-NE316R

1U High Capacity All-Flash

ASG -1115S-NE316R
16 EDSFF (E3 7.5mm NVMe SSD)

2U High-Capacity All-Flash

ASG-2115S-NE332R
32 EDSFF (E3 7.5mm NVMe SSD)

Extreme Density, High-Performance All-Flash Servers

Supermicro H13 All-Flash NVMe storage systems powered by AMD EPYC 9004 series processors are designed with the latest EDSFF and CXL technologies allowing unprecedented capacity and performance to enable today's data hungry workloads supporting latest software-defined storage and NVMe over fabrics solutions, as well as in-memory databases.

The new all-flash petascale servers take advantage of 128 PCIe 5.0 lanes, supporting up to 32 E3.S (x2) in 2U, and 16 E3.S drives (x4) in 1U, or configured with 8 E3.S (x4) drives and 4 CXL devices in E3.S 2T (x8) form factor allowing memory expansion.

Key Applications

- Software-Defined Storage
- Data Intensive HPC
- Private and Hybrid Cloud
- NVMe Over Fabrics Solution
- In-Memory Computing

H12 UNIVERSAL GPU SYSTEM

Modular Platform for HPC Applications and Advanced Data Center AI Infrastructure

Dual AMD EPYC™ 7003 series processors

Supports the new AMD Instinct MI250 OAM Accelerator

32 DIMM slots per node supporting DDR4-3200MHz

Flexible Storage configuration with 10 hot-swap 2.5" U.2 NVMe drives

4U with optional 1U extension for a 5U system providing PCIe slots expansion with Supermicro AIOM support.

Supports next-generation GPUs in a variety of form factors

Universal GPU server OCP standards-based design

Modular design for flexibility/future-proofing

Optimized thermal capability for 500W/700W GPUs

4U 4-GPU

5U 4-GPU

AS -4124GQ-TNMI

OPEN, MODULAR, STANDARDS BASED UNIVERSAL GPU SYSTEM

Supermicro A+ Universal GPU systems are open, modular, standards-based servers which provide superior performance and serviceability with dual AMD EPYC™ 7003 series processors, supporting AMD Instinct™ MI250 OAM Accelerator and various GPU and accelerator form factors, and featuring a hot-swappable, tool-less design. The system's "future proofed" design allows to standardize on one GPU platforms with multiple configurations for all data center needs with optimized thermal management.

Key Applications

- AI/ML
- HPC
- Vertical Markets (thermal modeling and other parallel-processing intensive tasks)
- Big Data Analytics

H12 TWIN SYSTEMS
Leading Multi-node Architectures

Highly configurable 2U 4-node systems

2-socket with 16 DIMMs or
1-socket with 8 DIMMs per node

Flexible storage and I/O options including NVMe/SATA3 and SIOM networking

A+ BigTwin® (2U4N)

BigTwin® - 2U 4 DP Nodes

AS -2124BT-HNTR
2U System with 4 hot-pluggable Dual-Processor Server Nodes with U.2 NVMe

BigTwin® - 2U 4 DP Nodes

AS -2124BT-HTR
2U System with 4 hot-pluggable Dual-Processor Server Nodes with SATA

TwinPro® - 2U 4 UP Nodes

AS -2014TP-HTR
2U System with 4 hot-pluggable Single-Processor Server Nodes

NO-COMPROMISE 2U 4-NODE ARCHITECTURE

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

TwinPro systems are designed for simplified deployment and maintenance, and assembled with the highest quality to ensure continuous operation even at maximum capacity.

With AMD EPYC™ 7003 Series Processors with AMD 3D V-Cache™ Technology, 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.

Key Applications

- HCI
- HPC
- CDN
- 5G UPF
- Technical Computing (EDA, CFD, FEA)
- Cloud Computing
- Big Data Analytics
- Back-up and Recovery
- Scale-Out Storage

H12 ULTRA SYSTEMS

Industry Leading IOPS, Energy Efficiency, and Flexibility

Optimized for highest processor TDPs

Up to 24x Hybrid NVMe/SAS/SATA drive bays

Up to 3 double width GPUs

AS -2124US-TNRP

1U Ultra, 12 NVMe

AS -1124US-TNRP

1U Dual-Processor Server with 32 DIMMs and 12x hot-swap 2.5" U.2 NVMe drives

1U Ultra, 8TB DDR4

AS -1024US-TRT

1U Dual-Processor Server with 32 DIMMs and 4x hot-swap 3.5" SATA/NVMe drives

2U Ultra, 8TB DDR4

AS -2124US-TNRP

2U Dual-Processor Server with 32 DIMMs and 24x hot-swap 2.5" U.2 NVMe drives

2U Ultra, 8TB DDR4

AS -2024US-TRT

2U Dual-Processor Server with 32 DIMMs and 12x hot-swap 3.5" SATA/NVMe drives

HIGHEST PERFORMANCE A+ ULTRA SERVERS

Supermicro® A+ Ultra system are designed to deliver the highest performance, flexibility, scalability and serviceability to demanding IT environments, and to power mission-critical Enterprise workloads, including support for dual AMD EPYC™ 7003/7002 Series Processors* and 32 DIMMs of DDR4-3200MHz memory for up to 8TB of capacity.

- Uncompromised performance design with 2 CPU sockets and 32 DIMMs optimized for supporting the highest processor TDPs
- Best-in-class server features including all NVMe, hybrid storage and low latency optimizations
- Vast networking and expansion possibilities with Ultra Riser cards

Key Applications

- Enterprise Server
- Hyperconverged Storage
- Virtualization
- AI Training/Inferencing
- Big Data Analytics
- Cloud Computing
- CDN
- In-Memory Database

** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*

H12 FatTwin®

Advanced 4U Twin Architecture with 8 and 4 Nodes

Highly modular multi-node (4U 8-Node or 4U 4-Node) systems with tool-less design and independent backplanes built-in per node to eliminate a single point of failure

Front or Rear I/O accessible service design depending on data center environments

All-hybrid drive bays
- NVMe, SAS, or SATA

AS -F1114S-FT

FatTwin® - Front I/O 8 UP Nodes

AS -F1114S-FT

4U Front I/O System with 8 Hot-pluggable Single-Processor Server Nodes with 2-4x 2.5" SATA3/NVMe drives per node

FatTwin® - Rear I/O 4 UP Nodes

AS -F2014S-RNTR

4U Rear I/O System with 4 Hot-pluggable Single-Processor Server Nodes with 8x 3.5" drives and 4x M.2 per node

FatTwin® - Rear I/O 8 UP Nodes

AS -F1114S-RNTR

4U Rear I/O System with 8 Hot-pluggable Single-Processor Server Nodes with 6x 2.5" drives and 4x M.2 per node

FRONT OR REAR I/O TWIN ARCHITECTURE TO MAXIMIZE SERVICEABILITY AND RELIABILITY

The innovative FatTwin architecture provides flexibility and system accessibility for unique datacenter requirements with front or rear I/O, as well as electrically isolated, modularized left/right nodes with redundant power supplies for maximum reliability.

- Single AMD EPYC™ 7003/7002 Series Processor* (TDP up to 280W) per node
- Flexible AIOM networking
- Electrically isolated Redundant Titanium Level power supplies per side (2 left, 2 right)

Key Applications

- Hyperscale / Hyperconverged
- HPC and Big Data
- Data Center Enterprise Applications
- Scale Out Storage
- Telco Data Center & Virtualization Server

H12 SuperBlade®

Performance and Density Optimized Resource Saving Architecture

Up to 20 hot-pluggable nodes in 8U

Highest density GPU platform for AI and Deep Learning

Integrated HPC network fabrics for up to 200G HDR InfiniBand with 100% non-blocking switch

SBE-820C/H/L/J *(Front View)*

Up to 20 Single Processor Nodes in 8U with 8 DIMMs and mezzanine card for advanced networking

SBA-4114S-T2N
SATA/NVMe Model (AIOM module)

SBA-4114S-C2N
SAS/SATA/NVMe Model (AIOM module)

SBA-4119SG
GPU Model with 2 GPUs, M.2 NVMe

RESOURCE SAVING ARCHITECTURE

SuperBlade with AMD EPYC™ 7003 Series Processors with AMD 3D V-Cache is an ideal choice for modern technical computing workloads including EDA.

The system can contain up to 20 CPUs in an 8U chassis, including a network switch built into the chassis. A shared cooling, power and networking infrastructure is key to the high density and server efficiency offered by blade solutions. Supermicro's high performance, density optimized, and energy-efficient SuperBlade® can significantly reduce initial capital and operational expenses for many organizations.

In particular, Supermicro's new generation blade product portfolio has been designed to optimize the TCO of key components for today's datacenters, such as free-air cooling, power efficiency, node density and networking management.

Key Applications

- EDA
- HPC
- AI/ML/DL
- Hybrid Cloud
- Virtualization
- Health
- Financial Services

** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*

H12 WIO SERVERS

Industry's Widest Variety of I/O Optimized Servers

Cost saving single-socket I/O configurability with up to 64 cores, 8 or 16 DIMMs

Up to 10x (1U) or 24x (2U) U.2 NVMe and dual onboard 10G

Redundant high-efficiency 750W Platinum Level or 1200W Titanium power supplies

AS -1114S-WN10RT

1U WIO

AS -1014S-WTRT

1U Single-Processor Server with 8 DIMMs, 4x 3.5" SATA drives, 2x M.2, optional 4x U.2 NVMe and 2x NVIDIA T4 GPUs

1U WIO

AS -1114S-WTRT

1U Single-Processor Server with 8 DIMMs, 10x 2.5" SATA, 2x M.2, optional 2x U.2 NVMe drives and 2 NVIDIA T4 GPUs

1U WIO

AS -1114S-WN10RT

1U Single-Processor Server with 16 DIMMs and 10x 2.5" U.2 NVMe drives

2U WIO

AS -2114S-WN24RT

2U Single-Processor Server with 16 DIMMs and 24x U.2 NVMe drives

COST AND ENERGY EFFICIENCY FOR DATA CENTER ENVIRONMENTS

Supermicro® A+ WIO 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, A+ WIO servers also provide attractive cost advantages and investment protection.

Key Applications

- Enterprise Mission-critical Applications
- Data Center Cloud Computing
- Virtualization
- Big Data
- Financial Analysis

H12 MAINSTREAM & TOWER

Versatile Entry Level and Volume Servers for Enterprise Server Applications

Highly versatile servers to enable a wide variety of enterprise server applications

Choices of multiple form factors including rackmount, short-depth rackmount and tower

A rich selection of storage options, AOCs, CPU TDP and memory speed support

SuperWorkstation
5U Rackmountable/Tower
AS -5014A-TT

AS -2014S-TR
2U Single-Processor Server with 8 DIMMs

AS -2024S-TR
2U Dual-Processor with 16 DIMMs

AS -3014TS-i
Mid-Tower Single-Processor Server with 8 DIMMs, up to 3 GPUs

SuperWorkstation

AS -5014A-TT
AMD Ryzen™ Threadripper™ PRO 3000WX Series Processor with 8 DIMMs, 6 PCIe x16 and dual 10GbE

MAINSTREAM APPLICATION OPTIMIZED

The A+ H12 Mainstream Application Optimized product family from Supermicro® is a series of servers designed for entry level or volume selections. Enterprise IT managers can choose the exact model for their applications, with a precise set of integrated features needed for their applications.

These powerful yet cost-effective systems provide excellent flexibility and value at entry-level price points.

Key Applications

- SMB
- Virtualization
- Web Server
- AI – Inferencing
- Cloud Computing
- Head-node Computing

H13 GPU-Optimized

(For Complete System Only)

8U 8-GPU System

8U Universal GPU

MODEL	AS -8125GS-TNMR2	AS -8125GS-TNHR
Processor Support	AMD EPYC™ 9004 Series Processor Dual Socket (Socket SP5) supported TDP up to 400W	AMD EPYC™ 9004 Series Processors Dual Socket (Socket SP5)
Key Applications	• Generative AI • Deep Learning • High Performance Computing	• AI/Deep Learning Training • High Performance Computing
Outstanding Features	• High density 8U system with AMD Instinct MI300X accelerators • 8 NIC for GPU direct RDMA (1:1 GPU Ratio) • 8 NVMe for GPU direct storage • 2 M.2 NVMe for boot drive	• High density 8U system with NVIDIA® HGX™ H100 8-GPU • Highest performance GPU communication using NVIDIA® NVLINK™ + NVIDIA® NVSwitch™ • 8 NIC for GPU direct RDMA (1:1 GPU Ratio) • 8 NVMe for GPU direct storage • 1 M.2 NVMe for boot drive
Serverboard	SUPER® H13DSG-OM	SUPER® H13DSG-O-CPU-D
Chipset	System on chip	System on Chip
System Memory (Max.)	System on chip	Up to 6TB 3DS ECC RDIMM DDR5-4800 MHz in 24 DIMMs
Expansion Slots	8 PCIe 5.0 x16 LP, and up to 4 FHFL PCIe 5.0 x16 Slots	8 PCIe 5.0 x16 LP, 2 FHFL PCIe 5.0 x16 Slots
Onboard Storage Controller	AMD SP5	AMD SP5
Connectivity	Optional FHFL x16 NIC for node management	Optional FHFL x16 NIC for node management
VGA/Audio	1 VGA port	1 VGA port
Management	IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	16x 2.5" hot-swap NVMe drive bays (2x 2.5" SATA)	14x 2.5" hot-swap NVMe/SATA drive bays (12x 2.5" NVMe, 2x 2.5" SATA)
Power Supply	Redundant 9000W Titanium level (96%) with option to increase to 12KW redundant power	Redundant 9000W Titanium level (96%) with option to increase to 12KW redundant power
Cooling System	10 heavy duty fan(s)	10 heavy duty fan(s)
Form Factor	8U Rackmount Enclosure: 437 x 355.6 x 843.28mm (17.2" x 14" x 33.2") Package: 698 x 750 x 1300mm (27.5" x 29.5" x 51.2")	8U Rackmount Enclosure: 437 x 355.6 x 843.28mm (17.2" x 14" x 33.2") Package: 698 x 750 x 1300mm (27.5" x 29.5" x 51.2")

H13 GPU-Optimized

(For Complete System Only)

4U Quad APU System

2U Quad APU System

MODEL	AS -4145GH-TNMR	AS -2145GH-TNMR
Processor Support	AMD Instinct™ MI300A Accelerated Processing Units (APUs) Quad Socket (Socket SH5) supported	AMD Instinct™ MI300A Accelerated Processing Units (APUs) Quad Socket (Socket SH5) supported
Key Applications	• Research Lab • High Performance Compute (HPC) • Cloud Solution Provider (CSP) • Large Language Model (LLM) • Artificial Intelligence (AI)	• Research Lab • High Performance Compute (HPC) • Cloud Solution Provider (CSP) • Large Language Model (LLM) • Artificial Intelligence (AI
Outstanding Features	• Unified memory and caches across CPU & GPU maximizes performance • Optimized 4-Way Server	• Unified memory and caches across CPU & GPU maximizes performance • Optimized 4-Way Server
Serverboard	SUPER® H13QSH	SUPER® H13QSH
Chipset	AMD SH5	AMD SH5
System Memory (Max.)	Up to 512GB: Onboard HBM3 (128GB per APU)	Up to 512GB: Onboard HBM3 (128GB per APU)
Expansion Slots	4 PCIe 5.0 x16 FHHL slot(s) 2 PCIe 5.0 x16 AIOM slot(s)	6 PCIe 5.0 x16 FHHL slot(s) 2 PCIe 5.0 x16 AIOM slot(s) If Slot 1~8 are configured as PCIe x8, Slot9~16 can be enabled
Onboard Storage Controller		
Connectivity	via AIOM	via AIOM
VGA/Audio	1 VGA port 1 Display Port	1 VGA port 1 Display Port
Management	IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC); Redfish API; SPM; SSM; SUM; SuperDoctor® 5	IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC); Redfish API; SPM; SSM; SUM; SuperDoctor® 5
Drive Bays	24x 2.5" hot-swap NVMe/SAS3/SATA3 drive bays; 24x 2.5" NVMe hybrid;	8x 2.5" hot-swap NVMe/SAS3/SATA3 drive bays;
Peripheral Bays	None	None
Power Supply	2+ 2 redundant 1600W hot-swappable Titanium-Level power supplies	2+ 2 redundant 1600W hot-swappable Titanium-Level power supplies
Cooling System	10x 8cm heavy duty fan(s)	3x 8cm heavy duty fan(s)
Form Factor	4U Rackmount Enclosure: 440.9 x 177 x 800mm (17.3" x 6.96" x 31.5") Package: 720 x 435 x 1080mm (28.34" x 17.12" x 42.5")	2U Rackmount Enclosure: 438.4 x 87.9 x 812.9mm (17.3" x 3.5" x 32") Package: 672 x 250 x 1100mm (26.5" x 9.75" x 43.5")

H13 GPU-Optimized

(For Complete System Only)

4U 8-GPU with PCIe

4U 10-GPU with PCIe

4U 10-GPU with PCIe

MODEL	AS -4125GS-TNRT	AS -4125GS-TNRT1	AS -4125GS-TNRT2
Processor Support	AMD EPYC™ 9004 Series Processors Dual Socket (Socket SP5)	AMD EPYC™ 9004 Series Processors Single Socket (Socket SP5)	AMD EPYC™ 9004 Series Processors Dual Socket (Socket SP5)
Key Applications	• AI/Deep Learning • High Performance Computing (HPC) • Rendering/VDI • Molecular Dynamics Simulation	• AI/Deep Learning • High Performance Computing (HPC) • Rendering/VDI • Molecular Dynamics Simulation	• AI/Deep Learning • High Performance Computing (HPC) • Rendering/VDI • Molecular Dynamics Simulation
Outstanding Features	• Drive configurations for 2x 2.5" hot-swap SATA and up to 4x 2.5" hot-swap NVMe bays • Up to 10 PCIe 5.0 slots for up to 8 direct-attached double-width, full length, enterprise-level GPUs • Flexible GPU support: active and passive GPUs • Dual onboard 10GbE ports with up to 1 AIOM/OCP 3.0 slot • 1 M.2 slot onboard • 8 hot-swap cooling fans	• Drive configurations for 2x 2.5" hot-swap SATA and up to 8x 2.5" hot-swap NVMe bays • Single root architecture with PCIe switch for up to 10 double width, full length enterprise-level GPUs • Flexible GPU support: active and passive GPUs • Dual onboard 10GbE ports with up to 1 AIOM/OCP 3.0 slot • 1 M.2 slot onboard • 8 hot-swap cooling fans	• Drive configurations for 2x 2.5" hot-swap SATA and up to 8x 2.5" hot-swap NVMe bays • Dual root architecture with PCIe switch for up to 10 double width, full length enterprise-level GPUs • Flexible GPU support: active and passive GPUs • Dual onboard 10GbE ports with up to 1 AIOM/OCP 3.0 slot • 1 M.2 slot onboard • 8 hot-swap cooling fans
Serverboard	SUPER® H13DSG-O-CPU	SUPER® H13DSG-O-CPU	SUPER® H13DSG-O-CPU
Chipset	System on Chip	System on Chip	System on Chip
System Memory (Max.)	Up to 6TB 3DS ECC RDIMM DDR5-4800 MHz in 24 DIMMs	Up to 6TB 3DS ECC RDIMM DDR5-4800 MHz in 24 DIMMs	Up to 6TB 3DS ECC RDIMM DDR5-4800 MHz in 24 DIMMs
Expansion Slots	9 PCIe 5.0 X16 Slots	12 PCIe 5.0 X16 Slots	12 PCIe 5.0 X16 Slots
Onboard Storage Controller	AMD SP5	AMD SP5	AMD SP5
Connectivity	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X710	2x 10GbE RJ45 port(s) with Intel® Ethernet Controller X710	2x 10GbE RJ45 port(s)with Intel® Ethernet Controller X710
VGA/Audio	1 VGA port	1 VGA port	1 VGA port
Management	IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	IPMI 2.0; KVM with dedicated LAN; NMI; OOB Management Package (SFT-OOB-LIC); Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	24x 2.5" hot-swap drive bays (up to 4x 2.5" NVMe dedicated)	24x 2.5" hot-swap drive bays (up to 8x 2.5" NVMe dedicated)	24x 2.5" hot-swap drive bays (up to 8x 2.5" NVMe dedicated)
Power Supply	Redundant 4000W Titanium level (96%)	Redundant 4000W Titanium level (96%)	Redundant 4000W Titanium level (96%)
Cooling System	8 heavy duty fan(s)	8 heavy duty fan(s)	8 heavy duty fan(s)
Form Factor	4U Rackmount Enclosure: 437 x 178 x 737mm (17.2" x 7" x 29") Package: (27" x 26.57" x 41")	4U Rackmount Enclosure: 437 x 178 x 737mm (17.2" x 7" x 29") Package: (27" x 26.57" x 41")	4U Rackmount Enclosure: 437 x 178 x 737mm (17.2" x 7" x 29") Package: (27" x 26.57" x 41")

H12 GPU-Optimized

(For Complete System Only)

4U 8-GPU with PCIe

2U 2-Node, 4-GPU with PCIe

4U 8-GPU with HGX

2U 4-GPU with HGX

MODEL	AS -4124GS-TNR+	AS -2114GT-DNR	AS -4124GO-NART	AS -2124GQ-NART
Processor Support	Dual AMD EPYC™ 7003/7002 Series Processors*	Single AMD EPYC™ 7003/7002 Series Processor*	Dual AMD EPYC™ 7003/7002 Series Processors*	Dual AMD EPYC™ 7003/7002 Series Processors*
Key Applications	• HPC • AI/ML • Cloud Gaming • Research & Academia	• Cloud Gaming • Media/Video Streaming Gaming • AI Inference and Machine Learning	• AI Compute / Model Training / Deep Learning • HPC • System for All AI Workload	• AI Compute / Model Training / Deep Learning • HPC
Outstanding Features	• 160 PCIe lanes • 8 direct attached GPUs • PCIe 4.0 • Flexible architecture • AIOM support	• 4 NVMe for GPUDirect Storage • Up to 8 DIMMs per node • M.2 Support • Supports 6 PCIe and 1 Mezzanine card	• Highest 8 GPU communication using NVIDIA NVLink and NVSwitch • Up to 8 NICS for GPUDirect RDMA (1:1 GPU Ratio) • Up to 8 NVMe for GPUDirect Storage with optional backplane	• High-density 2U with 4 GPU peer-to-peer communication • Directly attached GPUs for low latency • 4 NICs for GPUDirect RDMA (1:1 GPU Ratio)
Serverboard	SUPER® H12DSG-O-CPU	SUPER® H12SSG-AN6	SUPER® H12DGO-6	SUPER® H12DSG-Q-CPU6
System Memory (Max.)	Up to 8TB ECC DDR4 3200MHz SDRAM in 32 DIMMs	Up to 2TB ECC DDR4 3200MHz SDRAM in 8 DIMMs	Up to 8TB ECC DDR4 3200MHz SDRAM in 32 DIMMs	Up to 8TB ECC DDR4 3200MHz SDRAM in 32 DIMMs
Expansion Slots	9 PCIe 4.0 x16 (Option: 10 PCIe 4.0 x16 slots without NVMe devices)	6 PCIe 4.0 x16 (4 Internal and 2 external); 1 AIOM card support; 2 M.2 PCIe 4.0 x4 slots 2280/22110; M-key	8 PCIe 4.0 x16 (LP) slots from PCIe Switch; 1 PCIe 4.0 x16 (LP); 1 PCIe 4.0 x8 slot from CPUs	4 PCIe 4.0 x16 (LP) slots; 1 PCIe 4.0 x8 (LP) slot
Onboard Storage Controller	2x 2.5" SATA in RAID 1 via onboard Marvell 9230	AMD SP3	SATA3, PCIe 4.0 U.2 NVMe and PCIe 4.0 M.2 NVMe	SATA/NVMe Hybrid or SAS with optional HBA
Connectivity	2 GbE LAN ports (rear)	AIOM Network Card For Flexible Networking Options (not included)	OCP 3.0 / AIOM NIC	Dual RJ45 10GbE-aggregate host LAN, RJ45 1GbE IPMI
VGA/Audio	Aspeed AST2500 BMC	Aspeed AST2600 BMC	Aspeed AST2600 BMC	Aspeed AST2600 BMC
Management	IPMI 2.0 with virtual media over LAN and KVM-over-LAN support	IPMI2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watchdog	IPMI 2.0 with Virtual Media over LAN and KVM-over-LAN support. Dedicated IPMI LAN port	IPMI 2.0 with Virtual Media over LAN and KVM-over-LAN support. Dedicated IPMI LAN port
Drive Bays	Up to 24x 2.5" SAS/SATA drive bays	2 Front Hot-swap U.2 NVMe Gen4 drive bays per node	6x hot-swap 2.5" drive bays (SATA/NVMe Hybrid or SAS with optional HBA) Up to 10x hot-swap 2.5" drive bays with optional backplane, 2 NVMe M.2 (Internal)	4x hot-swap 2.5" drive bays (SATA/NVMe Hybrid or SAS with optional HBA)
Power Supply	2000W (2+2) Redundant Titanium Level (96%+) power supplies	Redundant 1 + 1 2600W Titanium Level (96%) (Full redundancy based on configuration and application load)	Four 2200W high-efficiency Platinum Level power supplies	Two 2200W high-efficiency Platinum Level power supplies
Cooling System	8x hot-swap heavy duty PWM fans	4x 80mm heavy duty PWM fans	4x hot-swap heavy duty PWM fans	4x hot-swap heavy duty PWM fans
Form Factor	4U Rackmount 178 x 437 x 737mm (7.0" x 17.2" x 29")	2U (2-node) Rackmount 447 x 88 x 760mm (17.6" x 3.47" x 29.9")	4U Rackmount 446 x 174 x 900mm (17.6" x 6.9" x 35.4")	2U Rackmount 437 x 89 x 823mm (17.2" x 3.5" x 32.4")

** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*
*** Can be sold as barebone system*

H13 GrandTwin™

(For Complete System Only)

2U 4-Node Rear I/O

2U 4-Node Front I/O

MODEL	AS -2115GT-HNTR	AS -2115GT-HNTF
Processor Support	AMD EPYC™ 9004 Series Processors Single Socket (Socket SP5)	AMD EPYC™ 9004 Series Processors Single Socket (Socket SP5)
Key Applications	• HPC • Mission Critical Web Applications • EDA (Electric Design Automation) • Telco Edge Cloud • High-availability Cache Cluster • Multi-Purpose CDN • MEC (Multi-Access Edge Computing) • Cloud Gaming	• HPC • Mission Critical Web Applications • EDA (Electric Design Automation) • Telco Edge Cloud • High-availability Cache Cluster • Multi-Purpose CDN • MEC (Multi-Access Edge Computing) • Cloud Gaming
Outstanding Features	• Up to 6 2.5" hot-swap NVMe/SATA drives per node • 2x AIOM / OCP 3.0 slots per node • 2x M.2 NVMe/SATA slots per node • Front access node trays for easy serviceability and maintenance	• Flexible front slots to configure storage or AIOM/OCP 3.0 cards • up to 4 2.5" hot-swap NVMe/SATA drives per node or • up to 1x AIOM / OCP 3.0 slots per node • 2x M.2 NVMe/SATA slots per node • GrandTwin I/O for flexible networking options • Front access node trays for easy serviceability and maintenance
Serverboard	SUPER® H13SST-G	SUPER® H13SST-G
Chipset	System on Chip	System on Chip
System Memory (Max.)	Up to 3TB 3DS ECC RDIMM DDR5-4800MHz in 12 DIMMs	Up to 3TB 3DS ECC RDIMM DDR5-4800MHz in 12 DIMMs
Expansion Slots	2 AIOM/OCP 3.0 slots per node	1 PCIe 4.0 x16 LP slot optional, internal only
Onboard Storage Controller	AMD SP5	AMD SP5
Connectivity	via AIOM and onboard dedicated BMC port	via AIOM and GrandTwin I/O Module
VGA/Audio	1 VGA port	1 VGA port
Management	SuperCloud Composer; SuperDoctor® 5 (SD5); Supermicro Diagnostics Offline (SDO); Supermicro Intelligent Mgmt (BMC Resources); Supermicro IPMI Utilities; Supermicro Power Manager (SPM); Supermicro Server Manager (SSM); Supermicro Server Mgmt (Redfish® API); Supermicro Thin-Agent Service (TAS); Supermicro Update Manager (SUM)	SuperCloud Composer; SuperDoctor® 5 (SD5); Supermicro Diagnostics Offline (SDO); Supermicro Intelligent Mgmt (BMC Resources); Supermicro IPMI Utilities; Supermicro Power Manager (SPM); Supermicro Server Manager (SSM); Supermicro Server Mgmt (Redfish® API); Supermicro Thin-Agent Service (TAS); Supermicro Update Manager (SUM)
Drive Bays	6x 2.5" hot-swap NVMe/SATA drive bays	4x 2.5" hot-swap NVMe/SATA drive bays
Power Supply	Redundant 2200W Titanium level (96%)	Redundant 2200W Titanium level (96%)
Cooling System	2x 8cm heavy duty fans	2x 8cm heavy duty fans
Form Factor	2U Rackmount Enclosure: 449 x 88 x 711.2mm (17.67" x 3.46" x 28") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")	2U Rackmount Enclosure: 449 x 88 x 711.2mm (17.67" x 3.46" x 28") Package: 626 x 248 x 1150mm (24.65" x 9.76" x 45.28")

H13 MicroCloud
(For Complete System Only)

H13 Mainstream
(For Complete System Only)

MODEL	AS -3015MR-H8TNR	AS -1015A-MT	AS -3015A-I
Processor Support	AMD Ryzen™ Zen4 7000 series Processors Single Socket LGA-1718 (Socket AM5) supported TDP up to 170W	AMD Ryzen™ 7000 Series Processors Single Socket supported TDP up to 170W	Zen4 Gen AMD Ryzen™ 7000 series processors Single Socket supported TDP up to 170W
Key Applications	• Corporate - WINS, DNS, Print, Login • Social Networking, Downloads • Web Cache, CDN, Video Streaming • Web/Collocation Services • Cloud Computing	• Designed for small and medium businesses • Email/Firewall/Application Server • Web/Hosting Application	• Designed for small and medium businesses • Email/Firewall/Application Server • 2D/3D Content Creation
Outstanding Features	• Up to 8x hot-pluggable node in 3U chassis • UID LED • Hot-swappable SAS/SATA3(Limited Support) HDDs • High density, Enterprise performance, Cost effective, Multi-node UP server • 1+1 Redundant 2200W Titanium Level high-efficiency power supplies • 1 PCIe 5.0 (x8) Low-profile expansion slot per node	•	• Remote management via IPMI with dedicated IPMI LAN port
Serverboard	SUPER● H13SRD-F	SUPER● H13SAE-MF	SUPER● H13SAE-MF
Chipset	AMD Knoll - Integrated I/O Controller Hub	AMD B650	AMD B650
System Memory (Max.)	4 DIMM slots Up to 128 ECC UDIMM, DDR5-5200MHz	4 DIMM slots Up to 128GB: 4x 32 GB DRAM	4 DIMM slots Up to 128GB: 4x 32 GB DRAM
Expansion Slots	PCIe 5.0 x16 LP slot(s) PCIe 5.0 x8 MLP slot(s)	PCIe 5.0 x16 slot(s)	2 PCIe 5.0 x16 slot(s)
Onboard Storage Controller	AMD AM5		
Connectivity	PCIe 5.0 MicroLP interfaces	1x 1GbE RJ45 port(s) with Realtek RTL8211F PHY (dedicated IPMI) 2x 1GbE RJ45 port(s) with Intel® Ethernet Controller I210-AT	1x 1GbE RJ45 port(s) with Realtek RTL8211F PHY (dedicated IPMI) 2x 1GbE RJ45 port(s) with Intel® Ethernet Controller I210-AT
VGA/Audio	1 VGA port	1 VGA port	1 VGA port
Management	Intel Node Manager; IPMI 2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog		
Drive Bays	2x 3.5" hot-swap NVMe/SAS/SATA drive bays;	1x 3.5" SATA drive bays;	4x 3.5" SATA drive bays;
Power Supply	Redundant 2200W Titanium level (80%)	500WW Platinum level (93%)	668WW Platinum level (92%)
Cooling System	4x 8cm heavy duty fan(s)	6x 40mmcm heavy duty fan(s)	2x 9cm heavy duty fan(s)
Form Factor	3U Rackmount Enclosure: 438 x 132 x 589mm (17.26" x 5.21" x 23.2") Package: 667 x 295.91 x 863.6mm (26.26" x 11.65" x 34")	1U Rackmount Enclosure: 437 x 43 x 429mm (17.2" x 1.7" x 16.9") Package: 686 x 203 x 610mm (27" x 8" x 24")	Mini-Tower Rackmount Enclosure: 184 x 362 x 425mm (7.25" x 14.25" x 16.75") Package: 279 x 508 x 533mm (11" x 20" x 21")

H12 TWIN SYSTEMS

TwinPro® - 2U 4 UP Nodes

BigTwin® - 2U 4 DP Nodes

BigTwin® - 2U 4 DP Nodes

MODEL	AS -2014TP-HTR	AS -2124BT-HNTR**	AS -2124BT-HTR**
Processor Support	Single AMD EPYC™ 7003/7002 Series Processor*	Dual AMD EPYC™ 7003/7002 Series Processors	Dual AMD EPYC™ 7003/7002 Series Processors
Key Applications	• Hyperscale and Hyperconverged Solutions • Compute Intensive Application • Enterprise Server • Data Center • HPC	• Hyperscale and Hyperconverged Solutions • Compute Intensive Application • Enterprise Server • Data Center • HPC	• Hyperscale and Hyperconverged Solutions • Compute Intensive Application • Enterprise Server • Data Center • HPC
Outstanding Features	• Up to 3 3.5" SATA drives per node • Up to 8 DIMMs per node • Flexible SIOM options • M.2 support • 2 PCIe add-on cards per node	• Up to 6 2.5" drives per node (4 NVMe + 2 SATA) or (6 SATA) • Up to 16 DIMMs per node • Flexible SIOM options • M.2 support • 2 PCIe add-on cards per node	• Up to 6 2.5" SATA drives per node • Up to 16 DIMMs per node • Flexible SIOM options • M.2 Support • 2 PCIe add-on cards per node
Serverboard	SUPER® H12SST-PS	SUPER® H12DST-B	SUPER® H12DST-B
System Memory (Max.)	Up to 2TB ECC 3DS LRDIMM, up to DDR4-3200MHz; 8 DIMM slots	Up to 4TB ECC 3DS LRDIMM, up to DDR4-3200MHz; 16 DIMM slots	Up to 4TB ECC 3DS LRDIMM, up to DDR4-3200MHz; 16 DIMM slots
Expansion Slots	2 PCIe 4.0 X16 (LP) 1 SIOM card support 4 M.2 SATA/PCIe slots 22110/2280/2260/2242 M-key	2 PCIe 4.0 X16 (LP) 1 SIOM card support 1 M.2 SATA/PCIe slot 2280/2210 M-key	2 PCIe 4.0 x16 (LP) 1 SIOM card support 1 M.2 SATA/PCIe slot 2280/2210 M-key
Onboard Storage Controller	SATA3	NVMe and SATA3	SATA3
Connectivity	SIOM Network Card For Flexible Networking Options (not included, must add 1 per node)	SIOM Network Card For Flexible Networking Options (not included, must add 1 per node)	SIOM Network Card For Flexible Networking Options (not included, must add 1 per node)
VGA/Audio	Aspeed AST2500 BMC	Aspeed AST2500 BMC	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	IPMI2.0; KVM with dedicated LAN; SPM; SSM; SUM; SuperDoctor® 5; Watchdog
Drive Bays	3 Hot-swap 3.5" SATA drive bays per node	6 hot-swap 2.5" drive bays per node (4 NVMe + 2 SATA) or (6 SATA)	6 hot-swap 2.5" SATA drive bays per node
Power Supply	Redundant 2000W Titanium Level (96%) (Full redundancy based on configuration and application load)	Redundant 2200W Titanium Level (96%) (Full redundancy based on configuration and application load)	Redundant 2200W Titanium Level (96%) (Full redundancy based on configuration and application load)
Cooling System	4x 80mm heavy duty PWM fans	4x 80mm heavy-duty PWM fans	4x 80mm heavy-duty PWM fans
Form Factor	2U (4-Node) Rackmount 438 x 88 x 724mm (17.25" x 3.47" x 28.5")	2U (4-Node) Rackmount 447 x 88 x 730mm (17.6" x 3.47" x 28.75")	2U (4-Node) Rackmount 447 x 88 x 730mm (17.6" x 3.47" x 28.75")

** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*
*** For complete system only and AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache Technology requires liquid cooling.*

H12 FatTwin®

(For Complete System Only)

8 Nodes, Front I/O

8 Nodes, Rear IO

4 Nodes, Rear IO

MODEL	AS -F1114S-FT	AS -F1114S-RNTR	AS -F2014S-RNTR
Processor Support	Single AMD EPYC™ 7003/7002 Series Processor*	Single AMD EPYC™ 7003/7002 Series Processor*	Single AMD EPYC™ 7003/7002 Series Processor*
Key Applications	• Hyperscale and Hyperconverged Solutions • Cloud Computing • Cluster Node • Data Center • HPC cluster computer nodes	• Hyperscale / Hyperconverged • HPC and Big Data • Data Center Enterprise Applications • Scale Out Storage • Telco Data Center • Virtualization Server	• Hyperscale / Hyperconverged • HPC and Big Data • Data Center Enterprise Applications • Scale Out Storage • Telco Data Center • Virtualization Server
Outstanding Features	• 8 nodes in a 4U system • 280W CPU support • Supports up to 64 cores • 2x LP PCIe x16 slots; 1x AIOM PCIe x16 slot per node • Supports 2-4x 2.5" SATA drives per node • Quad 2000W Titanium Level high-efficiency power supplies	• Up to 6 hot-swap optional SATA/NVMe drives per node • 4 onboard M.2 SATA/NVMe support per node • Flexible AIOM module per node • 1 PCIe add-on card per node • Up to 8 DIMMs per node	• Can support up to 8 SATA/NVMe drives per node • Can support up to 10 2.5" SATA drives • 4 onboard SATA/NVMe M.2 Support per node • Flexible AIOM module per node • 1 PCIe add-on cards per node • Up to 8 DIMMs per node
Serverboard	SUPER® H12SSFF-AN6	SUPER® H12SSFR-AN6	SUPER® H12SSFR-AN6
System Memory (Max.)	Up to 4TB ECC 3DS LRDIMM, up to DDR4-3200MHz; 16 DIMM slots	Up to 2TB ECC 3DS LRDIMM, up to DDR4-3200MHz; 8 DIMM slots	Up to 2TB ECC 3DS LRDIMM, up to DDR4-3200MHz; 8 DIMM slots
Expansion Slots	1 PCIe 4.0 x16 (AIOM) 2 PCIe 4.0 x16 (LP) per node	FatTwin Rear IO: PCIe 4.0 x16 LP Riser and PCIe 4.0 x8 Internal RAID AOC	FatTwin Rear IO: PCIe 4.0 x16 LP Riser and PCIe 4.0 x8 Internal RAID AOC
Onboard Storage Controller	NVMe and SATA3	NVMe and SATA3	NVMe and SATA3
Connectivity	AIOM Network Card For Flexible Networking Options (not included, must 1 per Node)	AIOM Network Card For Flexible Networking Options (not included, must add 1 per node)	AIOM Network Card For Flexible Networking Options (not included, must add 1 per node)
VGA/Audio	1 VGA; Aspeed AST2600 BMC per node	1 VGA, Aspeed AST2600 BMC per node	1 VGA, Aspeed AST2600 BMC per node
Management	IPMI 2.0, KVM with dedicated LAN, SSM, SUM SuperDoctor® 5, Watch Dog	IPMI 2.0, KVM with dedicated LAN, SSM, SUM SuperDoctor® 5, Watch Dog	IPMI 2.0, KVM with dedicated LAN, SSM, SUM SuperDoctor® 5, Watch Dog
Drive Bays	2-4x 2.5" SATA3/NVMe drive bays per node	4 hot-swap 2.5" SATA with 2 hot-swap 2.5" SATA/NVMe drive bays per node	8 Hot-swap 3.5" SATA drive bays per node
Power Supply	2000W or above Redundant Power Supplies with PMBus	Redundant 2200W Titanium Level (96%) power supplies (Full redundancy based on configuration and application load)	Redundant 2200W Titanium Level (96%) (Full redundancy based on configuration and application load)
Cooling System	8x 8cm 13.5k RPM rear fans per enclosure	3x 4cm 17.6K RPM	2x 80mm heavy duty PWM fans
Form Factor	4U (8-node) Rackmount 448 x 177 x 737mm (17.63" x 6.96" x 29")	4U (8-node) Rackmount 447 x 177 x 730mm (17.6" x 7" x 28.75")	4U (4-node) Rackmount 447 x 177 x 730mm (17.6" x 7" x 28.75")

** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*

H13 HYPER

(For Complete System Only)

1U Hyper

2U Hyper

2U Hyper

MODEL	AS -1125HS-TNR	AS -2025HS-TNR	AS -2125HS-TNR
Processor Support	AMD EPYC™ 9004 Series Processors Dual Socket (Socket SP5)	AMD EPYC™ 9004 Series Processors Dual Socket (Socket SP5)	AMD EPYC™ 9004 Series Processors Dual Socket (Socket SP5)
Key Applications	• Software-defined Storage • Virtualization • Enterprise Server • Cloud Computing • AI Inference and Machine Learning	• Software-defined Storage • Virtualization • Enterprise Server • Cloud Computing • AI Inference and Machine Learning	• Software-defined Storage • Virtualization • Enterprise Server • Cloud Computing • AI Inference and Machine Learning
Outstanding Features	• Tool-less system design for easy maintenance	• Tool-less system design for easy maintenance	• Tool-less system design for easy maintenance
Serverboard	SUPER® H13DSH	SUPER® H13DSH	SUPER® H13DSH
Chipset	System On Chip	System On Chip	System on Chip
System Memory (Max.)	Up to 6TB 3DS ECC RDIMM DDR5-4800MHz in 24 DIMMs	Up to 6TB 3DS ECC RDIMM DDR5-4800MHz in 24 DIMMs	Up to 6TB 3DS ECC RDIMM DDR5-4800MHz in 24 DIMMs
Expansion Slots	2 PCIe 5.0 x16 FH, 10.5"L and 1 PCIe 5.0 x16, FH, 6.6"L	Configurable PCIe slot options up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 FH, 10.5"L	Configurable PCIe slot options up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 FH, 10.5"L
Onboard Storage Controller	AMD SP5	AMD SP5	AMD SP5
Connectivity	AIOM / OCP 3.0	AIOM / OCP 3.0	AIOM / OCP 3.0
VGA/Audio	1 VGA port	1 VGA port	1 VGA port
Management	IPMICFG; IPMIView for Linux/ Windows; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	IPMICFG; IPMIView for Linux/ Windows; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	IPMICFG; IPMIView for Linux/ Windows; IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	8x 2.5" hot-swap NVMe/SAS/SATA drives bays (Option for up to 12 drives); Optional RAID support via RAID Controller AOC	12x 3.5" hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC	24x 2.5" hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC
Power Supply	Redundant 1200W Titanium level (96%)	Redundant 1600W Titanium level (96%)	Redundant 1600W Titanium level (96%)
Cooling System	8x heavy-duty fans w/ Optimal Fan Speed Control	8x heavy-duty fans w/ optimal Fan Speed Control	4x heavy-duty fans w/ Optimal Fan Speed Control
Form Factor	1U Rackmount Enclosure: 437 x 43 x 747mm (17.2" x 1.7" x 29.4") Package: 605 x 206 x 1032mm (23.8" x 8.1" x 40.6")	2U Rackmount Enclosure: 437 x 88.9 x 803mm (17.2" x 3.5" x 31.6") Package: 605 x 263 x 1107mm (23.8" x 10.4" x 43.6")	2U Rackmount Enclosure: 437 x 88.9 x 760mm (17.2" x 3.5" x 29.9") Package: 605 x 263 x 1107mm (23.8" x 10.4" x 43.6")

H13 HYPER-U

(For Complete System Only)

1U Hyper

2U Hyper

2U Hyper

MODEL	AS -1115HS-TNR	AS -2015HS-TNR	AS -2115HS-TNR
Processor Support	AMD EPYC™ 9004 Series Processor Single Socket (Socket SP5) supported4 UPI	AMD EPYC™ 9004 Series Processor Single Socket (Socket SP5) supported4 UPI	AMD EPYC™ 9004 Series Processor Single Socket (Socket SP5) supported4 UPI
Key Applications	• Software-defined Storage • Virtualization • Enterprise Server • Cloud Computing • AI Inference and Machine Learning	• Software-defined Storage • Virtualization • Enterprise Server • Cloud Computing • AI Inference and Machine Learning	• Software-defined Storage • Virtualization • Enterprise Server • Cloud Computing • AI Inference and Machine Learning
Outstanding Features	• Tool-less system design for easy maintenance	• Tool-less system design for easy maintenance	• Tool-less system design for easy maintenance
Serverboard	SUPER® H13SSH	SUPER® H13SSH	SUPER® H13SSH
Chipset	System On Chip	System On Chip	System On Chip
System Memory (Max.)	24 DIMM slots Up to 3TB: DDR5-4800MHz (12 DIMM slots, 1DPC) Up to 6TB: DDR5-4000MHz/ 3600MHz (24 DIMM slots, 2DPC)	24 DIMM slots Up to 3TB: DDR5-4800MHz (12 DIMM slots, 1DPC) Up to 6TB: DDR5-4000MHz/ 3600MHz (24 DIMM slots, 2DPC)	24 DIMM slots Up to 3TB: DDR5-4800MHz (12 DIMM slots, 1DPC) Up to 6TB: DDR5-4000MHz/ 3600MHz (24 DIMM slots, 2DPC)
Expansion Slots	2 PCIe 5.0 x16 FH, 10.5"L and 1 PCIe 5.0 x16, FH, 6.6"L	Configurable PCIe slot options up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 FH, 10.5"L	Configurable PCIe slot options up to 8 PCIe 5.0 x8 or 4 PCIe 5.0 x16 FH, 10.5"L
Onboard Storage Controller	AMD SP5	AMD SP5	AMD SP5
Connectivity	via AIOM	via AIOM	via AIOM
VGA/Audio	1 VGA port	1 VGA port	1 VGA port
Management	IPMICFG; IPMIView for Linux/ Windows; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	IPMICFG; IPMIView for Linux/ Windows; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	IPMICFG; IPMIView for Linux/ Windows; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	8x 2.5" hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC	12x 3.5" hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC	24x 2.5" hot-swap NVMe/SATA/SAS drive bays; Optional RAID support via RAID Controller AOC
Power Supply	Redundant 1200W Titanium level (96%)	Redundant 1600W Titanium level (96%)	Redundant 1600W Titanium level (96%)
Cooling System	8x 4cm heavy duty fan(s)	4x 8cm heavy duty fan(s)	4x 8cm heavy duty fan(s)
Form Factor	1U Rackmount Enclosure: 437 x 43 x 747mm (17.2" x 1.7" x 29.4") Package: 605 x 206 x 1032mm (23.8" x 8.1" x 40.6")	2U Rackmount Enclosure: 437 x 88.9 x 803mm (17.2" x 3.5" x 31.6") Package: 605 x 263 x 1107mm (23.8" x 10.4" x 43.6")	2U Rackmount Enclosure: 437 x 88.9 x 760mm (17.2" x 3.5" x 29.9") Package: 605 x 263 x 1107mm (23.8" x 10.4" x 43.6")

H12 ULTRA

(For Complete System Only)

1U Ultra, 8TB DDR4

1U Ultra, 12 NVMe

MODEL	AS -1024US-TRT	AS -1124US-TNRP
Processor Support	Dual AMD EPYC™ 7003/7002 Series Processors*	Dual AMD EPYC™ 7003/7002 Series Processors*
Key Applications	• Virtualization • Cloud Computing • High End Enterprise Server	• Virtualization • Cloud Computing • High End Enterprise Server
Outstanding Features	• Optional 4 NVMe ready • 32 DIMMs • 3+1 PCIe add-on cards • 4x 3.5" SATA/SAS/NVMe drive bays • 280W CPU support • Redundant Titanium Level (96%) power supplies • Maximum IO output in 1U platform	• 32 DIMMs • 3+1 PCIe add-on cards • 12-Port NVMe Gen 4.0/3.0 support • 280W CPU support • Redundant Titanium Level (96%) power supplies • Maximum IO output in 1U platform
Serverboard	SUPER® H12DSU-iN	SUPER® H12DSU-iN
System Memory (Max.)	Up to 8TB ECC DDR4 3200MHz SDRAM in 32 DIMMs	Up to 8TB ECC DDR4 3200MHz SDRAM in 32 DIMMs
Expansion Slots	2 PCIe x16 (FH /9.5"L) slots 1 PCIe x16 slot (LP) 1 PCIe x16 slot (internal LP)	2 PCIe x16 (FH /9.5"L) slots 1 PCIe x16 slot (LP) 1 PCIe x16 slot (internal LP)
Onboard Storage Controller	4 SATA3 (6 Gbps) ports; Optional 4 SAS3 drives support VS additional option parts or, Optional 4 NVMe drives support vs addition NVMe trays required.	12 hot-Swappable U.2 drives support; Optional 12 SAS3 /12SATA support with additional SAS/SATA Kit
Connectivity	Dual 10GBase-T RJ45 LAN ports via Intel Carlsville X710-AT2; 3 USB 3.0 ports (2 rear, 1 Type A)	Dual port 10G RJ45 & dual port 10G SFP+, Intel Carlsville X710-TM4; 4 USB 3.0 ports (1 front, 2 rear, 1 Type A)
VGA/Audio	1 VGA; 1 ASPEED AST2500 BMC	1 VGA; 1 ASPEED AST2500 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	4x hot-swap 3.5" drive bays support	12x hot-swap 2.5" drives support
Power Supply	1000W Redundant Titanium Level (96%+) power supplies (Full redundancy based on configuration and application load)	1200W Redundant Titanium Level (96%) power supplies (Full redundancy based on configuration and application load)
Cooling System	8 heavy-duty fans w/ Optimal Fan Speed Control	8 heavy-duty fans w/ optimal Fan Speed Control
Form Factor	437 x 43 x 754mm (17.2" x 1.7" x 29.7")	1U Rackmount 437 x 43 x 724mm (17.2" x 1.7" x 28.5")

** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*

H12 ULTRA

(For Complete System Only)

2U Ultra, 8TB DDR4

2U Ultra, 24 NVMe

MODEL	AS -2024US-TRT	AS -2124US-TNRP
Processor Support	Dual AMD EPYC™ 7003/7002 Series Processors*	Dual AMD EPYC™ 7003/7002 Series Processors*
Key Applications	• Virtualization • Cloud Computing • High End Enterprise Server • Hyperconverge Storage	• Virtualization • Cloud Computing • High End Enterprise Server • Hyperconverge Storage
Outstanding Features	• 32 DIMMs • 5+1 PCIe add-on cards • 12x 3.5" SATA/SAS (SAS via AOC)/support up to 4 NVMe • 280W CPU support • 1600W redundant Titanium Level (96%) power supplies • Maximum IO output in 2U platform	• 32 DIMMs • 1 PCIe add-on cards • 24x 2.5" hot-swap NVMe drive bays • 280W CPU support • 1600W redundant Titanium Level (96%) power supplies • Maximum IO output in 2U platform
Serverboard	SUPER® H12DSU-iN	SUPER® H12DSU-iN
System Memory (Max.)	Up to 8TB ECC DDR4 3200MHz SDRAM in 32 DIMMs	Up to 8TB ECC DDR4 3200MHz SDRAM in 32 DIMMs
Expansion Slots	2 PCIe 4.0 x16 slots (FH, 10.5" L) 1 PCIe 4.0 x16 slot (FH, 9.5" L) 1 PCIe 4.0 x16 slot (LP) 1 PCIe 4.0 x8 slot (FH, 9.5" L, in x16 slot) 1 PCIe 4.0 x8 slot (internal LP, in x16 slot)	1 PCIe 4.0 x16 slot (FH, 9.5" L)
Onboard Storage Controller	8 SATA3 (6 Gbps) ports + 4 hybrid SATA/NVMe function ready for HDD slots 0~3 with additional NVMe HDD trays for NMVe drives; Optional 12 SAS3 drive support VS SAS card with cables	24x Hot-Swappable U.2 drive bays support with optional up to 24x SAS3 drive bays support VS SAS card and cables
Connectivity	Dual port 10G RJ45, Intel Carlsville X710-AT2; 3 USB 3.0 ports (2 rear + 1 Type A)	Dual 10G RJ45 & Dual 10G SFP+ ports, Intel Carlsville X710-TM4 3 USB 3.0 ports (2 rear, 1 Type A)
VGA/Audio	1 VGA; 1 ASPEED AST2500 BMC	1 VGA; 1 ASPEED AST2500 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	12x hot-swap 3.5" drive bays support	24x hot-swap 2.5" drive bays support
Peripheral Bays	2x 2.5" peripheral drive bays with additional rear drive bay kits + cable	N/A
Power Supply	1600W redundant Titanium Level (96%+) power supplies (Full redundancy based on configuration and application load)	1600W redundant Titanium Level (96%) power supplies (Full redundancy based on configuration and application load)
Cooling System	4x heavy-duty fans w/ optimal Fan Speed Control	4x heavy-duty fans w/ optimal Fan Speed Control
Form Factor	437 x 89 x 723mm (17.2" x 3.5" x 28.46")	2U Rackmount 437 x 89 x 723mm (17.2" x 3.5" x 28.46")

** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*

H13 CloudDC

(For Complete System Only)

1U CloudDC

1U CloudDC

2U CloudDC

MODEL	AS -1015CS-TNR	AS -1115CS-TNR	AS -2015CS-TNR
Processor Support	AMD EPYC™ 9004 Series Processors Single Socket (Socket SP5)	AMD EPYC™ 9004 Series Processors Single Socket (Socket SP5)	AMD EPYC™ 9004 Series Processors Single Socket (Socket SP5)
Key Applications	• CDN, Edge Nodes • DNS & Gateway Servers, Firewall Application • Cloud Computing, Compact Server • Data Center Optimized, Value IaaS • Web Server, Firewall Application	• CDN, Edge Nodes • DNS & Gateway Servers, Firewall Application • Cloud Computing, Compact Server • Data Center Optimized, Value IaaS • Web Server, Firewall Application	• CDN, Edge Nodes • DNS & Gateway Servers, Firewall Application • Cloud Computing, Compact Server • Data Center Optimized, Value IaaS • Web Server, Firewall Application
Outstanding Features	• Up to 4x SATA/SAS/NVMe tool-less drive bays • 3.5" tool-less drive trays also support 2.5" drives • Dual AIOM slots for flexible networking (OCP3.0) • Compact server with tool-less drive trays • Balanced architecture in compact chassis (25.6") • 2 On-board Gen 3 M.2 NVMe 80mm/110mm (Boot)	• Up to 10x NVMe/SATA/SAS hybrid tool-less drive bays • Dual AIOM slots for flexible networking (OCP3.0) • Compact server with tool-less drive trays • Balanced architecture in compact chassis (23.5") • 2 On-board Gen 3 M.2 NVMe 80mm/110mm (Boot)	• Up to 12x NVMe/SATA/SAS hybrid tool-less drive bays • Optional hot-swappable 2.5" rear drive bays • Flexible expansion with up to 2x PCIe 5.0 x16 and 4x PCIe 5.0 x8 (convertible to 2x PCIe 5.0 x16) slots • Dual AIOM slots for flexible networking (OCP3.0) • Compact server with tool-less drive trays • Balanced architecture in compact chassis (25.6") • 3.5" tool-less drive trays also support 2.5" drives • 2 On-board Gen 3 M.2 NVMe 80mm/110mm (Boot)
Serverboard	SUPER® H13SSW	SUPER® H13SSW	SUPER® H13SSW
Chipset	System on Chip	System on Chip	System on Chip
System Memory (Max.)	Up to 3TB 3DS ECC RDIMM DDR5-4800MHz in 12 DIMMs	Up to 3TB 3DS ECC RDIMM DDR5-4800MHz in 12 DIMMs	Up to 3TB 3DS ECC RDIMM DDR5-4800MHz in 12 DIMMs
Expansion Slots	2 Gen5 x16 FHHL slots	2 Gen5 x16 FHHL slots	2 Gen5 x16 FHHL slots 2 Gen5 x16 FHFL slots
Onboard Storage Controller	AMD SP5	AMD SP5	AMD SP5
Connectivity	Dual AIOM/ OCP3.0, 2 USB 3.0 ports (2 rear)	Dual AIOM/ OCP3.0, 2 USB 3.0 ports (2 rear)	Dual AIOM/ OCP3.0, 2 USB 3.0 ports (2 rear)
VGA/Audio	1 VGA; 1 ASPEED AST2600 BMC	1 VGA; 1 ASPEED AST2600 BMC	1 VGA; 1 ASPEED AST2600 BMC
Management	IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog	IPMI 2.0; KVM with dedicated LAN; NMI; Redfish API; SPM; SSM; SUM; SuperDoctor® 5; Watch Dog
Drive Bays	4x 3.5" hot-swap NVMe/SATA/SAS hybrid drive bays; Optional RAID support via RAID controller AOC	10x 2.5" hot-swap NVMe/SATA/SAS hybrid drive bays; Optional RAID support via RAID controller AOC	12x 3.5" hot-swap NVMe/SATA/SAS hybrid drive bays; Optional RAID support via RAID controller AOC
Peripheral Bays	2x 2.5" (optional)	N/A	N/A
Power Supply	Redundant 860W Platinum level (94%)	Redundant 860W Platinum level (94%)	Redundant 1200W Titanium level (96%)
Cooling System	6x 4cm heavy duty fans	6x 4cm heavy duty fans	3x 8cm heavy duty fans
Form Factor	1U Rackmount Enclosure: 437 x 43 x 650mm (17.2" x 1.7" x 25.6") Package: 605 x 197 x 878mm (23.8" x 7.8" x 34.6")	1U Rackmount Enclosure: 437 x 43 x 597mm (17.2" x 1.7" x 23.5") Package: 605 x 197 x 822mm (23.8" x 7.8" x 32.4")	2U Rackmount Enclosure: 437 x 89 x 648mm (17.2" x 3.5" x 25.5") Package: 678 x 290 x 876mm (26.7" x 11.4" x 34.5")

H12 CloudDC

(For Complete System Only)

Cost Effective 1U

Cost Effective 2U

MODEL	AS -1114CS-TNR	AS -2014CS-TR
Processor Support	Single AMD EPYC™ 7003/7002 Series Processor*	Single AMD EPYC™ 7003/7002 Series Processor*
Key Applications	• Financial Services • Cloud Computing • Network Appliance • Private Cloud • Content Delivery Network (CDN) • Deep Learning Inferencing	• Financial Services • Cloud Computing • Network Appliance • Private Cloud • Content Delivery Network (CDN) • Deep Learning Inferencing
Outstanding Features	• Dual AIOM slots for flexible networking • 2x PCIe 4.0 x16 FH/HL slots • 860W redundant Platinum Level power supplies • Tool-less drive trays and tool-less brackets • 280W CPU support • 16 DIMMs	• Dual AIOM slots for flexible networking • 4x PCIe 4.0 x16 (2 FH, 10.5"L) or 2x PCIe 4.0 x16 FH/HL + 4x PCIe 4.0 x8 FH/HL slots • 920W redundant Platinum Level high-efficiency power supplies • Tool-less drive trays and tool-less brackets • 280W CPU support • 16 DIMMs
Serverboard	SUPER® H12SSW-AN6	SUPER® H12SSW-AN6
System Memory (Max.)	Up to 4TB 3DS ECC DDR4-3200MHz RDIMM/LRDIMM, in 16 DIMMs slot	Up to 4TB 3DS ECC DDR4-3200MHz RDIMM/LRDIMM, in 16 DIMMs slot
Expansion Slots	2 PCIe 4.0 x16 (FH/HL)	4 PCIe 4.0 x16 (2 FH, 10.5"L) or, 2 PCIe 4.0 x16 (FH/HL) + 4 PCIe 4.0 x8(2 FH/HL, 2 FH/HL)
Onboard Storage Controller	10x hot-swappable SATA drives bays support; Optional 10x SAS3/ NVMe support with additional SAS/NVMe kit	12x 3.5" SATA /SAS (SAS via AOC)/NVMe drive bays with optional kit + 2x 2.5" (with optional kit)
Connectivity	Dual AIOM slots, 2 USB 3.0 ports (2 rear)	Dual AIOM slots, 2 USB 3.0 ports (2 rear)
VGA/Audio	1 VGA; 1 ASPEED AST2600 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	10x hot-swap 2.5" drive bays support	12x hot-swap 3.5" drive bays support
Peripheral Bays	N/A	2x 2.5" Peripheral drive bays with additional rear drive bay kits + cable
Power Supply	860W redundant Platinum Level high-efficiency power supplies	920W redundant Platinum Level high-efficiency power supplies
Cooling System	6x 40x40x56mm counter-rotation PWM fans	3x 80x80x38mm middle cooling fans
Form Factor	1U Rackmount 437 x 43 x 597mm (17.2" x 1.7" x 23.5")	2U Rackmount 437 x 89 x 648mm (17.2" x 3.5" x 25.5")

** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*

H13 Storage Servers

(For Complete System Only)

MODEL	ASG-1115S-NE316R	ASG-2115S-NE332R
Processor Support	AMD EPYC™ 9004 Series Processor (the latest AMD EPYC™ 9004 Series Processor with AMD 3D V-Cache™ Technology) Single Socket (Socket SP5) supported TDP up to 300W; 4 UPI	AMD EPYC™ 9004 Series Processor (the latest AMD EPYC™ 9004 Series Processor with AMD 3D V-Cache™ Technology) Single Socket (Socket SP5) supported TDP up to 300W; 4 UPI
Key Applications	• In-Memory Computing • Software-defined Storage • NVMe Over Fabrics Solution • Private & Hybrid Cloud • Data Intensive HPC	• In-Memory Computing • Software-defined Storage • NVMe Over Fabrics Solution • Private & Hybrid Cloud • Data Intensive HPC
Outstanding Features	• Two PCIe 5.0 x16 slots & two AIOM connectors (OCP 3.0 SFF compliant) • Supports 24 DIMMs with 2DPC, up to 6TB memory capacity with 24 DIMMs of 256GB 3DS RDIMM/RDIMM DDR5 ECC memory • Single Socket SP5 4th Generation AMD EPYC 9004 Scalable processors. Up to 300W TDP. • Redundant Titanium 1600W Power Supplies • Composable Infrastructure Platform	• Two PCIe 5.0 x16 slots & two AIOM connectors (OCP 3.0 SFF compliant) • Supports 24 DIMMs with 2DPC, up to 6TB memory capacity with 24 DIMMs of 256GB 3DS RDIMM/RDIMM DDR5 ECC memory • Single Socket SP5 4th Generation AMD EPYC 9004 Scalable processors. Up to 300W TDP. • Redundant Titanium 2000W Power Supplies • Composable Infrastructure Platform
Serverboard	SUPER® H13SSF	SUPER® H13SSF
Chipset	AMD SP5	AMD SP5
System Memory (Max.)	24 DIMM slots Up to 6TB: 24x 256 GB DRAM 4800MHz ECC DDR5 RDIMM;LRDIMM	
Expansion Slots	2 PCIe 5.0 x16 AIOM slot(s) 2 PCIe 5.0 x16 FH slot(s)	2 PCIe 5.0 x16 AIOM slot(s) 2 PCIe 5.0 x16 FH slot(s)
Onboard Storage Controller	N/A	N/A
Connectivity	via AIOM	via AIOM
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	16x E3.S Hot-swap NVMe (1T/2T) drive slots	
Power Supply	Redundant 1600W Titanium level (96%)	Redundant 2000W Titanium level (96%)
Cooling System	8x 4cm heavy duty fan(s)	4x 8cm heavy duty fan(s)
Form Factor	1U Rackmount Enclosure: 438.4 x 43.6 x 773.25mm (17.2" x 1.7" x 30.4") Package: 604.774 x 199.898 x 1029.97mm (23.81" x 7.87" x 40.55")	2U Rackmount Enclosure: 438.4 x 89.8 x 789.9mm (17.2" x 3.5" x 30.8")

H13 SHORT-DEPTH FRONT I/O

(For Complete System Only)

Short-Depth AC

Short-Depth DC

MODEL	AS -1115S-FWTRT	AS -1115S-FDWTRT
Processor Support	Single Socket AMD EPYC™ 8004 Series Processor up to 225W	Single Socket AMD EPYC™ 8004 Series Processor up to 225W
Key Applications	• Virtualization • Edge Cloud AI Computing • vRAN/O-RAN/NEBS environment • Telco 5G • CDN/vCDN/Cloud CDN	• Virtualization • Edge Cloud AI Computing • vRAN/O-RAN/NEBS environment • Telco 5G • CDN/vCDN/Cloud CDN
Outstanding Features	• NEBS compliant design • 3 PCIe 5.0 x16 expansion slots • Supports double width GPU • 2 On-board PCIe 3.0 x4 M.2 NVMe 80mm/110mm (Boot)	• NEBS compliant design • 3 PCIe 5.0 x16 expansion slots • Supports double width GPU • 2 On-board PCIe 3.0 x4 M.2 NVMe 80mm/110mm (Boot)
Serverboard	SUPER® H13SVW-NT	SUPER® H13SVW-NT
System Memory (Max.)	6 DIMM slots, DDR5-4800MHz memory, support up to 576GB	6 DIMM slots, DDR5-4800MHz memory, support up to 576GB
Expansion Slots	Slot 1: PCIe 5.0 x16 FHFL Slot 2: PCIe 5.0 x16 FHFL Slot 3: PCIe 5.0 x16 LP	Slot 1: PCIe 5.0 x16 FHFL Slot 2: PCIe 5.0 x16 FHFL Slot 3: PCIe 5.0 x16 LP
Onboard Storage Controller	System on Chip	System on Chip
Connectivity	2x 10GbE RJ45 port(s) with Broadcom BCM57416	2x 10GbE RJ45 port(s) with Broadcom BCM57416
VGA/Audio	1 onboard VGA port	1 onboard VGA port
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	2x 2.5" SATA/SAS/NVMe drive bays;	2x 2.5" SATA/SAS/NVMe drive bays;
Power Supply	2x 800W Redundant AC Platinum Level power supplies	2x 600W Redundant DC power supplies
Cooling System	6x 4cm heavy duty fan(s)	6x 4cm heavy duty fan(s)
Form Factor	1U Rackmount Enclosure: 436.88 x 44.5 x 429.3mm (17.2" x 1.7" x 16.9") Package: 685 x 203 x 609mm (27" x 8" x 24")	1U Rackmount Enclosure: 436.88 x 44.5 x 429.3mm (17.2" x 1.7" x 16.9") Package: 685 x 203 x 609mm (27" x 8" x 24")

H12 WIO / STORAGE

(For Complete System Only)

2U UP WIO

High Capacity Storage

MODEL	AS -2114S-WN24RT	ASG-1014S-ACR12N4H
Processor Support	Single AMD EPYC™ 7003/7002 Series Processor*; TDP up to 280W	Single AMD EPYC™ 7003/7002 Series Processor* TDP up to 240W
Key Applications	• Virtualization • Hyperconverge Storage • Cloud Computing • All Flash Storage	• Object Storage • Scale-Out Density • Database Applications • Hadoop & Ceph storage solutions
Outstanding Features	• 24-Port NVMe SSD Support • Up to 4TB DDR4 ECC RDIMM • Dual 10GBaseT LAN Ports • 2x M.2 Support by default • 2 SATA DOMs Support with Embedded Power	• Up to 4TB ECC DDR4 • 4x 2.5" 7mm hot-swap NVMe drive bays • 3x PCIe 4.0 x16 slots (1x slot occupied by storage controller) • Pull-out drawer storage bay w/internal cable arm design
Serverboard	SUPER® H12SSW-NTR	SUPER® 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 PCIe 4.0 x16 (FH/HL)	2 PCIe 4.0 x16 (FHHL); 1 PCIe 4.0 x8 (LP)
Onboard Storage Controller	24 Hot-Swappable U.2 NVMe drive support	NVMe drive bays via CPU SAS3/SATA3 drive bays via Broadcom 3916 RAID controller
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; 2 USB 2.0 port(s) (2 Front_USB) 4 USB 3.0 port(s) (4 Rear_USB)
VGA/Audio	1 VGA 1 Aspeed AST2500 BMC	1 VGA; 1 ASPEED AST2500 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 2.5" 7mm NVMe drive bays
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 with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*

H12 SuperBlade®

(For Complete System Only)

MODEL	SBA-4114S-C2N	SBA-4114S-T2N	SBA -4119SG
Processor Support	Single AMD EPYC™ 7003/7002 Series Processor*; TDP up to 280W	Single AMD EPYC™ 7003/7002 Series Processor*; TDP up to 280W	Single AMD EPYC™ 7003/7002 Series Processor*; TDP up to 280W
Key Applications	• Resource saving and high density • Data center • HPC • EDA	• Resource saving and high density • Data center • HPC • EDA	• Resource saving and high density • Data center • HPC • Cloud Gaming, Inference
Outstanding Features	• 2x hot-plug 2.5" NVMe/SAS3/SATA3 drive bays • 2 NVMe/SATA M.2 • 2x 25G on board • Flexible AIOM module per node	• 2x hot-plug 2.5" NVMe/SATA3 drive bays • 2 NVMe/SATA M.2 • 2x 25G on board • Flexible AIOM module per node	• 1 NVMe/SATA M.2 • 2 PCIe 4.0 x16 slots • 2x 25G on board
Serverboard	MBD-BH12SSI-M25	MBD-BH12SSI-M25	MBD-BH12SSI-M25
System Memory (Max.)	Up to 2TB DDR4-3200MHz RDIMM	Up to 2TB DDR4-3200MHz RDIMM	Up to 2TB DDR4-3200MHz RDIMM
Expansion Slots	N/A	N/A	2 PCIe 4.0 x16
Onboard Storage Controller	Broadcom 3108	AMD SP3	AMD SP3
Connectivity	25G Ethernet/100G EDR/200G HDR; Optional AIOM Network Card	25G Ethernet/100G EDR/200G HDR; Optional AIOM Network Card	25G Ethernet/100G EDR/200G HDR
VGA/Audio	N/A	N/A	N/A
Management	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN	IPMI 2.0, KVM over IP, Virtual Media over LAN
Drive Bays	2x hot-plug 2.5" NVMe/SAS3/SATA3 drive bays; 2x M.2 NVMe/SATA3	2x hot-plug 2.5" NVMe/SATA3 drive bays; 2x M.2 NVMe/SATA3	1x M.2 NVMe/SATA3
Power Supply	N/A	N/A	N/A
Cooling System	Passive HS for CPU	Passive HS for CPU	Passive HS for CPU
SuperBlade Enclosures	820C 820H 820J 820L	820C 820H 820J 820L	820C 820H 820J 820L

** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*

H12 SuperBlade®

(For Complete System Only)

Up to 20 hot-plug server blades

Rear View

Up to 20 hot-plug server blades

Rear View

MODEL	SBE-820C	SBE-820J
Server Blade	Up to 20 hot-plug server blades	Up to 20 hot-plug server blades
Module Support	Supports: • SBA-4114S-C2N • SBA-4114S-T2N • SBA-4119SG	Supports: • SBA-4114S-C2N • SBA-4114S-T2N • SBA-4119SG
LED	• Fault LED • Power LED	• Fault LED • Power LED
InfiniBand Switch	1x 100G EDR IB or OPA switch	N/A
Gigabit Ethernet Switch	Up to 2 hot-plug 25G Ethernet Switches	Up to 4 hot plug 25G Ethernet switch
Management Module	1 hot-plug management module providing remote KVM and IPMI 2.0 functionalities	2 hot-plug management modules providing remote KVM and IPMI 2.0 functionalities
Power Supply	4/6/8 hot-swap 2200W power supplies, up to N+N redundancy, 4 pcs of 1200W BBP, 3 optional cooling fan modules(PWS-DF005-2F)	4/6/8 hot-swap 2200W power supplies, up to N+N redundancy, 4 pcs of 1200W BBP, 3 optional cooling fan modules(PWS-DF005-2F)
Cooling Design	Front to back	Front to back
Dimensions (HxWxD)	356 x 447 x 812.8mm (14" x 17.6" x 32")	356 x 447 x 812.8mm (14" x 17.6" x 32")

** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*

H12 SuperBlade®

(For Complete System Only)

Up to 20 hot-plug server blades

Rear View

Up to 20 hot-plug server blades

Rear View

MODEL	SBE-820L	SBE-820H
Server Blade	Up to 20 hot-plug server blades	Up to 20 hot-plug server blades
Module Support	Supports: • SBA-4114S-C2N • SBA-4114S-T2N • SBA-4119SG	Supports: • SBA-4114S-C2N • SBA-4114S-T2N • SBA-4119SG
LED	• Fault LED • Power LED	• Fault LED • Power LED
InfiniBand Switch	N/A	1x 200G HDR IB switch
Gigabit Ethernet Switch	Up to 2 hot-plug 10G Ethernet Switches	Up to 2 hot-plug 25G Ethernet Switches
Management Module	1 hot-plug CMM (Central Management Modules) providing remote KVM and IPMI 2.0 functionalities	1 hot-plug management modules providing remote KVM and IPMI 2.0 functionalities
Power Supply	4/6/8pcs hot-swap 2200W power supplies, up to N+N redundancy, 3 optional cooling fan modules (PWS-DF005-2F)	4/6/8 hot-swap 2200W power supplies, up to N+N redundancy, 4 pcs of 1200W BBP, 3 optional cooling fan modules(PWS-DF005-2F)
Cooling Design	Front to back	Front to back
Dimensions (HxWxD)	356 x 447 x 812.8mm (14" x 17.6" x 32")	356 x 447 x 812.8mm (14" x 17.6" x 32")

** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*

H12 MAINSTREAM

2U UP

2U DP

MODEL	AS -2014S-TR	AS -2024S-TR	AS -3014TS-i	AS -5014A-TT
Processor Support	Single AMD EPYC™ 7003/7002 Series Processor; TDP up to 280W	Dual AMD EPYC™ 7003/7002 Series Processors	Single AMD EPYC™ 7003/7002 Series Processors*; TDP up to 280W	AMD Ryzen™ Threadripper™ PRO 3000WX Series Processor, up to 64 Cores
Key Applications	• Backup storage • Web or Database Servers • Compact Network Appliance	• Data processing & Storage • Cloud Computing • Hosting & Application delivery • Cloud and Virtualization needs • Content Delivery Network (CDN)	• Entry-Level Worksation • Video and Music Production • Office Applications	• Media and Entertainment Content Creation • Product Design and Engineering Simulation • AI and Deep Learning
Outstanding Features	• 12x 3.5" hot-swap drive bays • Up to 2TB DDR4 ECC RDIMM • 2x 1GbE LAN • 2x M.2 Support	• 6 PCIe Gen4 expansion slots for next generation AOC • Tool-less Drive Trays and Tool-less Brackets • 920W Redundant Platinum Level High-Efficiency Power Supplies • 12x 3.5/2.5" Hot-swap drive bays with NVMe support	• 4x 3.5" internal SATA HDD Bays • Up to 2TB DDR4 ECC RDIMM • 2x 1GbE LAN • 2x M.2 Support	• 5U Rackmountable / Tower • 6 PCIe 4.0 x16 slots • M.2 Support • 10GBase-T LAN port, 1x 1GbE LAN port
Serverboard	SUPER® H12SSL-i	SUPER® H12DSi-N6	SUPER® H12SSL-i	SUPER® M12SWA-TF
Chipset	System on Chip (SoC)	System on Chip (SoC)	System on Chip (SoC)	AMD WRX80
System Memory (Max.)	Up to 2TB 3DS ECC DDR4-3200MHz RDIMM/LRDIMM in 8 DIMM slots	Up to 4TB 3DS ECC DDR4-3200MHz RDIMM/LRDIMM in 16 DIMM slots	Up to 2TB 3DS ECC DDR4-3200MHz RDIMM/LRDIMM, in 8 DIMM slots	Up to 2TB ECC DDR4 3200-MHz Memory, in 8 DIMM slots
Expansion Slots	5 PCIe 4.0 x16 LP slots 2 PCIe 4.0 x8 LP slots	3 PCIe 4.0 x16 LP slots 3 PCIe 4.0 x8 LP slots	5 PCIe 4.0 x16 (FH) 2 PCIe 4.0 x8 (FH)	6 PCIe 4.0 x16 slots M.2 Interface: 4 PCIe 4.0 x4, RAID 0, 1, 5 & 10 M.2 Form Factor: 2280, 22110 M.2 Key: M-Key
Onboard Storage Controller	SP3	SP3	SP3	4 SATA3 (6Gbps) ports; RAID 0, 1, 5, 10
Connectivity	Dual Gigabit Ethernet via Broadcom BCM5720 Controller; 5 USB 3.0 ports (4 rear, 2 via header)	Dual Gigabit Ethernet via Broadcom BCM5720 Controller 2 USB 2.0 and 2 USB 3.0 ports in the rear	Dual Gigabit Ethernet via Broadcom BCM5720 Controller; 5 USB 3.0 ports (4 rear, 2 via header)	10GBase-T LAN port, 1x 1GbE LAN port (shared with IPMI)
VGA/Audio	1 VGA 1 Aspeed AST2500 BMC	1 VGA; 1 ASPEED AST2600 BMC	1 VGA; 1 Aspeed AST2500 BMC	1 VGA port (dedicated for IPMI); 7.1 HD Audio
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	Built-in Server management tool (IPMI 2.0, KVM/media over LAN) with dedicated LAN port	Intel® Node Manager, IPMI 2.0, SSM, SPM, SUM, SuperDoctor® 5, Watchdog
Drive Bays	12 Hot-Swappable 3.5"/ 2.5" SATA/ NVMe drive bays; Optional 2x 2.5" SATA/NVMe drive support with optional kits	12x hot-swap 3.5/2.5" SATA/NVMe drive bays; 4 NVMe and 8 SATA default configuration"	4x internal 3.5" SATA/NVMe drive bays; 4x 2.5" SATA/NVMe drive bays	4x internal fixed 3.5"/2.5" SATA/ NVMe drive bays; 2x front fixed 2.5" SATA/NVMe drive bays
Power Supply	920W Redundant Power Supplies Platinum Level (94%) (Full redundancy based on configuration and application load)	920W redundant Platinum Level High-Efficiency power supplies	900W redundant Gold Level power supplies	2000W Platinum Level power supply
Cooling System	3 heavy duty fans w/ Optimal Fan Speed Control	3 heavy duty fans w/ Optimal Fan Speed Control	2 system fans w/ Optimal Fan Speed control	1x 12cm rear exhaust fan, 3x 12cm front cooling fans (optional), 3x 12cm top cooling fans (optional) ; Optional high-performance closed-loop water cooling for CPU
Form Factor	437 x 89 x 648mm (17.2" x 3.5" x 25.5")	437 x 89 x 648mm (17.2" x 3.5" x 25.5")	Mid-Tower 193 x 424 x 525mm (7.6" x 16.7" x 20.68")	5U Rackmountable / Tower 222 x 535 x 573 mm (21.06" x 8.74" x 22.56")

** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*

H13 WIO

WIO -1U

WIO -1U

WIO -2U

MODEL	AS -1015SV-WTNRT	AS -1115SV-WTNRT	AS -2015SV-WTNRT
Processor Support	AMD EPYC™ 8004 Series Processor Single Socket supported TDP up to 225W	AMD EPYC™ 8004 Series Processor Single Socket supported TDP up to 225W	AMD EPYC™ 8004 Series Processor Single Socket supported TDP up to 225W
Key Applications	• Virtualization • Edge/Cloud Computing Services • Database/Storage • Firewall Applications • Data Center Optimized	• Virtualization • Edge/Cloud Computing Services • Database/Storage • Firewall Applications • Data Center Optimized	• Virtualization • Edge/Cloud Computing Services • Database/Storage • Firewall Applications • Data Center Optimized
Outstanding Features	• Support up to 2x PCIe 5.0 x16 FHFL expansion slots, and 1x PCIe 5.0 x16 LP expansion slot • Support double width GPU • PCIe 5.0 NVMe drives supported • Flexible I/O expansion • 2 On-board PCIe 3.0 x4 M.2 NVMe 80mm/110mm (Boot)	• Support up to 2x PCIe 5.0 x16 FHFL expansion slots, and 1x PCIe 5.0 x16 LP expansion slot • Support double width GPU • PCIe 5.0 NVMe drives supported • Flexible I/O expansion • 2 On-board PCIe 3.0 x4 M.2 NVMe 80mm/110mm (Boot)	• Support up to 2x PCIe 5.0 x16 FHFL expansion slots, and 2 PCIe 5.0 x8 LP expansion slots • Support double width GPU • PCIe 5.0 NVMe drives supported • Flexible I/O expansion • 2 On-board PCIe 3.0 x4 M.2 NVMe 80mm/110mm (Boot)
Serverboard	SUPER● H13SVW-NT	SUPER● H13SVW-NT	SUPER● H13SVW-NT
System Memory (Max.)	System On Chip	System On Chip	System On Chip
Expansion Slots	Slot 1: PCIe 5.0 x16 FHFL Slot 2: PCIe 5.0 x16 FHFL Slot 3: PCIe 5.0 x16 LP	Slot 1: PCIe 5.0 x16 FHFL Slot 2: PCIe 5.0 x16 FHFL Slot 3: PCIe 5.0 x16 LP	2 PCIe 5.0 x16 FHFL slot(s) 2 PCIe 5.0 x8 LP slot(s)
Onboard Storage Controller			
Connectivity	2x 10Gb RJ45 port(s) with Broadcom BCM57416	2x 10Gb RJ45 port(s) with Broadcom BCM57416	2x 10Gb RJ45 port(s) with Broadcom BCM57416
VGA/Audio	1 onboard VGA port	1 onboard VGA port	1 onboard VGA port
Management			
Drive Bays	4x 3.5" hot-swap SATA/SAS/NVMe drive bays;	10x 2.5" hot-swap SATA/SAS/NVMe drive bays; 6x 2.5" NVMe hybrid;	12x 3.5" hot-swap SATA/SAS/NVMe drive bays; 6x 3.5" NVMe hybrid;
Peripheral Bays			
Power Supply	None	None	None
Cooling System	6x 4cm heavy duty fan(s)	6x 4cm heavy duty fan(s)	3x 8cm heavy duty fan(s)
Form Factor	1U Rackmount Enclosure: 437 x 43 x 650mm (17.2" x 1.7" x 25.6") Package: 597 x 216 x 856mm (23.5" x 8.5" x 33.7")	1U Rackmount Enclosure: 437 x 43 x 597mm (17.2" x 1.7" x 23.5") Package: 597 x 197 x 800mm (23.5" x 7.75" x 31.5")	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")

H12WIO

1U UP WIO

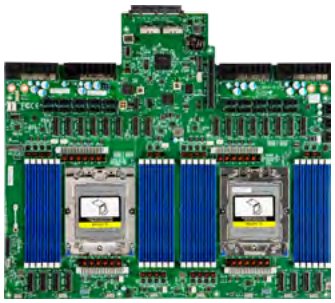
1U 10NVMe, UP WIO

1U UP WIO

MODEL	AS -1014S-WTRT	AS -1114S-WN10RT**	AS -1114S-WTRT
Processor Support	Single AMD EPYC™ 7003/7002 Series Processor* TDP up to 240W	Single AMD EPYC™ 7003/7002 Series Processor* TDP up to 280W	Single AMD EPYC™ 7003/7002 Series Processor* TDP up to 240W
Key Applications	• Database Processing & Storage • Data Center • FireWall Applications	• Virtualization • Cloud Computing • All Flash Storage	• Database Processing & Storage • Data Center • FireWall Applications
Outstanding Features	• Support up to 3 PCIe cards • Up to 2TB DDR4 ECC RDIMM • Dual 10GBaseT LAN ports • 2x M.2 support by default • 2 SATA DOMs support with embedded power	• 10-Port NVMe SSD support • Up to 4TB DDR4 ECC RDIMM • Dual 10GBaseT LAN ports • 2x M.2 Support by default • 2 SATA DOMs support with embedded power • 10 Gen4/ Gen3 U.2 NVMe SSD support	• Support up to 3 PCIe cards • Up to 2TB DDR4 ECC RDIMM • Dual 10GBaseT LAN Ports • 2x M.2 Support by default • 2 SATA DOMs Support with Embedded Power
Serverboard	• SUPER® H12SSW-NT	SUPER® H12SSW-NTR	• SUPER® H12SSW-NT
System Memory (Max.)	Up to 2TB 3DS ECC DDR4-3200MHz RDIMM/ LRDIMM, in 8 DIMM slots	Up to 4TB 3DS ECC RDIMM/LRDIMM; DDR4 up to 3200MHz, in 16 DIMM slots	Up to 2TB 3DS ECC RDIMM/LRDIMM; DDR4 up to 3200MHz, in 8 DIMM slots
Expansion Slots	2 PCIe 4.0 x16 (FH/HL) slots 1 PCIe 4.0 x16 (LP) slot	2 PCIe 4.0 x16 (FH/HL) slots 1 PCIe 4.0 x16 (LP) slot	2 PCIe 4.0 x16 (FH/HL) slots 1 PCIe 4.0 x16 (LP) slot
Onboard Storage Controller	4 Hot-Swappable 3.5" SATA drive support; Optional 4 U.2 NVMe (PCIe Gen 3) drive support vs additional NVMe cables required	10 Hot-Swappable U.2 NVMe drive support; Optional 10 SATA3 drive support vs additional SATA cables required	10 Hot-Swappable 2.5" SATA drive support; Optional 2 U.2 NVMe (PCIe Gen 3) drive support vs additional NVMe cables required
Connectivity	2 10GBase-T Ethernet via Broadcom BCM57416 Controller; 7 USB 3.0 ports (4 rear, 2 front, 1 Type A)	2 10GBase-T Ethernet via Broadcom BCM57416 Controller; 7 USB 3.0 ports (4 rear, 2 front, 1 Type A)	2 10GBase-T Ethernet via Broadcom BCM57416 Controller; 7 USB 3.0 ports (4 rear, 2 front, 1 Type A)
VGA/Audio	1 VGA 1 Aspeed AST2500 BMC	1 VGA 1 Aspeed AST2500 BMC	1 VGA 1 Aspeed AST2500 BMC
Management	Built-in Server management tool (IPMI 2.0, KVM/media over LAN) with dedicated LAN port; Software Out of Band License key (SFT-OOB-LIC) included for OOB BIOS 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; Software Out of Band License key (SFT-OOB-LIC) included for OOB BIOS management
Drive Bays	4 Hot-Swappable 3.5" SATA drive support; Optional 4 U.2 NVMe (PCIe Gen 3) drive support vs additional NVMe cables required	10 Hot-Swappable U.2 NVMe drive support; Optional 10 SATA3 drive support vs additional SATA cables required	10 Hot-Swappable 2.5" SATA drive support; Optional 2 U.2 NVMe (PCIe Gen 3) drive support vs additional NVMe cables required
Peripheral Bays	Optional to support 1x Slim DVD-ROM Drive	N/A	N/A
Power Supply	500W Redundant Power Supplies Platinum Level (94%) (Full redundancy based on configuration and application load)	750W Redundant Power Supplies Platinum Level (94%) (Full redundancy based on configuration and application load)	500W Redundant Power Supplies Platinum Level (94%) (Full redundancy based on configuration and application load)
Cooling System	4 heavy duty fans w/ Optimal Fan Speed Control, Additional 1 heavy duty fan support w/ Optimal Fan Speed Control	6 heavy duty fans w/ Optimal Fan Speed Control	4 heavy duty fans w/ Optimal Fan Speed Control, Additional 1 heavy duty fan support w/ Optimal Fan Speed Control
Form Factor	1U Rackmount 437 x 43 x 650mm (17.2" x 1.7" x 25.6")	437 x 43 x 597mm (17.2" x 1.7" x 23.5")	437 x 43 x 597mm (17.2" x 1.7" x 23.5")

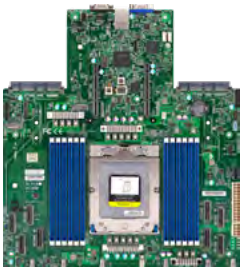
** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*
*** For complete system only*

H13 MOTHERBOARDS



MODEL	H13DSH	H13DSG-O-CPU
Processor	AMD EPYC™ 9004 Series Processors	AMD EPYC™ 9004 Series Processors
Chipset	System on Chip	System on Chip
Form Factor	Proprietary, 17" x 11.5" (43.18cm x 29.21cm)	Proprietary, 17" x 14.7" (43.18cm x 37.34cm)
Memory Capacity & Slots	Up to 6TB 3DS ECC RDIMM DDR5-4800MHz in 24 DIMMs	Up to 6TB 3DS ECC RDIMM DDR5-4800MHz in 24 DIMMs
Expansion Slots	1 PCIe 5.0 x16 AIOM / OCP 3.0 2 PCIe 5.0 x16 (in x16 slot) M.2 Interface: 2 PCIe 3.0 x4 Form Factor: 2280/22110 M.2 Key: M-Key	1 PCIe 5.0 x16 AIOM / OCP 3.0 M.2 Interface: 1 PCIe 3.0 x4 Form Factor: 2280/22110 M.2 Key: M-Key
Onboard Storage Controller	N/A	Asmedia ASM1061
Onboard LAN	N/A	N/A
Onboard VGA	1 Aspeed AST2600 BMC port(s)	N/A
USB Ports	2 USB 3.1 Gen1 ports via header	1 USB 2.0 port via header
Other Onboard I/O Devices	TPM 2.0 header 4 MCIO (PCIe 5.0 x8/SATA3) ports 6 MCIO (PCIe 5.0 x8) ports	TPM 2.0 header 20 MCIO (PCIe 5.0 x8) ports
Manageability	SuperDoctorR 5, SPM, SUM, SSM, Watchdog, IPMICFG, IPMIView for Linux/Windows, SMCIPMITool, IPMI 2.0, KVM with dedicated LAN	SuperDoctorR 5, SPM, SUM, SSM, Watchdog, IPMICFG, IPMIView for Linux/Windows, SMCIPMITool, IPMI 2.0, KVM with dedicated LAN
PC Health Monitoring	VBAT, Memory temperature, CPU temperature, 3.3V standby, +5V standby, +5V, +3.3V, +12V, VRM temperature, CPU thermal trip support, 1.8V standby	VBAT, Memory temperature, CPU temperature, 3.3V standby, +5V standby, +5V, +3.3V, +12V, VRM temperature, CPU thermal trip support, 1.8V standby
Thermal Control	8x 6-pin fan headers (up to 8 fans)	10x 4-pin fan headers (up to 10 fans)
Other Features	RoT	RoT
BIOS	AMI 32MB SPI Flash EEPROM	AMI 32MB SPI Flash EEPROM

H13 MOTHERBOARDS



MODEL	H13SST-G H13SST-GC	H13SSW
Processor	AMD EPYC™ 9004 Series Processors	AMD EPYC™ 9004 Series Processors
Chipset	System on Chip	System on Chip
Form Factor	Proprietary GrandTwin, 8.53" x 12.42" (21.67cm x 31.55cm)	Proprietary, 12.29" x 13.4" (31.22cm x 34.04cm)
Memory Capacity & Slots	Up to 3TB 3DS ECC RDIMM DDR5-4800MHz in 12 DIMMs	Up to 3TB 3DS ECC RDIMM DDR5-4800MHz in 12 DIMMs
Expansion Slots	M.2 Interface: 2 SATA/PCIe 5.0 x4 Form Factor: 2280 M.2 Key: M-Key	1 PCIe 5.0 x16 Right Riser Slot 1 PCIe 5.0 x16 Left Riser Slot 2 PCIe 5.0 x16 AIOM / OCP 3.0 M.2 Interface: 2 PCIe 3.0 x2 Form Factor: 2280/22110 M.2 Key: M-Key
Onboard Storage Controller	-GC: Broadcom 3808 SAS3 (12 Gbps) controller for 8 SAS3 (12 Gbps) ports	N/A
Onboard LAN	N/A	N/A
Onboard VGA	1 Aspeed AST2600 BMC port(s)	1 VGA port(s) 1 Aspeed AST2600 BMC port(s)
USB Ports	N/A	2 USB 2.0 port(s) via header 2 USB 3.1 Gen1 ports
Other Onboard I/O Devices	1 MCIO (PCIe 5.0 x8/SATA3) ports 4 MCIO (PCIe 5.0 x8) ports -GC: 8 SAS3 ports via SlimSAS	1 COM Port (1 Serial Port) TPM 2.0 header 2 MCIO (PCIe 5.0 x8/SATA3) ports 6 MCIO (PCIe 5.0 x8) ports
Manageability	SuperDoctor® 5, SPM, SUM, SSM, Watchdog, IPMICFG, IPMIView for Linux/Windows, SMCIPMITool, IPMI 2.0, KVM with dedicated LAN	SuperDoctor® 5, SPM, SUM, SSM, Watchdog, IPMICFG, IPMIView for Linux/Windows, SMCIPMITool, IPMI 2.0, KVM with dedicated LAN
PC Health Monitoring	VBAT, Memory temperature, CPU temperature, 3.3V standby, +5V standby, +5V, +3.3V, +12V, VRM temperature, CPU thermal trip support, 1.8V standby	VBAT, Memory temperature, CPU temperature, 3.3V standby, +5V standby, +5V, +3.3V, +12V, VRM temperature, CPU thermal trip support, 1.8V standby
Thermal Control	1x 4-pin fan header (up to 1 fan)	6x 4-pin fan headers (up to 6 fans)
Other Features	RoT	RoT
BIOS	AMI 32MB SPI Flash EEPROM	AMI 32MB SPI Flash EEPROM

H12 MOTHERBOARDS

ATX Mainstream

EATX Mainstream

MODEL	H12SSL-i H12SSL-C H12SSL-CT H12SSL-NT	H12DSi-N6 H12DSi-NT6
Processor	Single AMD EPYC™ 7003/7002 Series Processor*	Dual AMD EPYC™ 7003/7002 Series Processors*
Chipset	System on Chip	System on Chip
Form Factor	ATX 12" x 9.6"	EATX 12" x 13.05"
Memory Capacity & Slots	2TB ECC Registered, DDR4-3200MHz SDRAM in 8 DIMMs	4TB ECC Registered, DDR4-3200MHz SDRAM in 16 DIMMs
Expansion Slots	5 PCIe 4.0 x16 2 PCIe 4.0 x8 M.2 Interface: 2 PCIe 4.0 x4 M.2 Form Factor: 22110, 2280 M.2 Key: M-Key	3 PCIe 4.0 x16 3 PCIe 4.0 x8 M.2 Interface: 1 PCIe 4.0 x4 M.2 Form Factor: 22110, 2280 M.2 Key: M-Key
Onboard Storage Controller	-C: Broadcom 3008 SAS3 (12 Gbps) controller for 8 SAS3 (12 Gbps) ports; RAID 0,1,10 -CT: Broadcom 3008 SAS3 (12 Gbps) controller for 8 SAS3 (12 Gbps) ports; RAID 0,1,10	10 SATA3 (6 Gbps) ports
Onboard LAN	-i: Dual LAN with Broadcom BCM5720L Gigabit Ethernet Controller -C: Dual LAN with Broadcom BCM5720L Gigabit Ethernet Controller -CT: Dual LAN with Broadcom BCM57416 10GBase-T Ethernet Controller -NT: Dual LAN with Broadcom BCM57416 10GBase-T Ethernet Controller	-N6: Dual LAN with Broadcom BCM5720L Gigabit Ethernet Controller -NT6: Dual LAN with Broadcom BCM57416 10GBase-T Ethernet Controller
Onboard VGA	1 VGA; Aspeed AST2500 BMC	1 VGA; Aspeed AST2600 BMC
USB Ports	6 USB 3.0 ports (4 rear + 2 headers)	2 USB 2.0 ports (2 rear) 4 USB 3.0 ports (2 rear + 2 headers)
Other Onboard I/O Devices	1 COM Ports SATA DOM power connector TPM 1.2/ 2.0 header -i: 1 PCIe 4.0 NVMe x4 Internal Port -NT: 2 PCIe 4.0 NVMe x4 Internal Ports	1 COM Ports SATA DOM power connector TPM 1.2/ 2.0 header 4 PCIe 4.0 NVMe x4 Internal Ports
Manageability	IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5
PC Health Monitoring	+3.3V, +5V, +5V standby, 3.3V standby, Monitors CPU voltages, Supports system management utility, VBAT	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, CPU temperature, LAN temperature, Memory temperature, Memory Voltages, Monitors CPU voltages
Thermal Control	7x fan header, 4-pin type of fan header, 7 fans with tachometer status monitoring, Dual Cooling Zone, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control	8x fan header, 4-pin type of fan header, Dual Cooling Zone, Fan speed control, Overheat LED indication, PWM fan speed control
Other Features	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, UID	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, UID, WOL
BIOS	AMI 256Mb Flash EEPROM	AMI 256Mb Flash EEPROM

** AMD EPYC™ 7003 Series Processor with AMD 3D V-Cache™ Technology requires BIOS version 2.3 or newer.*

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License	• No license required	• SFT-OOB-LIC	• SFT-DCMS-SINGLE	• SFT-DCMS-SINGLE + • SFT-SDDC-SINGLE
Key Features*	• Secure remote console (KVM/ HTML5) • System temperature monitoring • System power thresholds & alerts • Component monitoring • Email alerting • Remote configuration • Offline diagnostics • Crash dump • License management	• Remote BMC management • Remote BIOS management • Out-of-Band systems checks • TPM Provisioning • Mount/Unmount ISO images from Samba/HTTP • Basic Redfish APIs • CIM management • SysLog	• Remote OS deployment • Auto-discovery • Power capping • RAID monitoring and configuration • HDD monitoring • Advanced Redfish APIs • FW update policy • System lock down • Crash screen/video capture	• 3rd Party vendor support • POD & Rack-level management • SDI Lifecycle management • Manage Composable Dissagregated Infrastructure • Zero-touch provisioning for network configuration • Single pane of glass for data center deployment • Rich analytics & telemetry • User defined role-based access control

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Supermicro Worldwide

Worldwide Headquarters
Super Micro Computer, Inc.
980 Rock Avenue, San Jose, CA 95131 USA
Tel: +1-408-503-8000
Fax: +1-408-503-8008
General Info: Marketing@Supermicro.com
Tech Support: Support@Supermicro.com
Webmaster: Webmaster@Supermicro.com

European Branch
Super Micro Computer, B.V.
Het Sterrenbeeld 28, 5215 ML,
's-Hertogenbosch, The Netherlands
Tel: +31-73-640-0390
Fax: +31-73-641-6525
General Info: Sales_Europe@supermicro.com
Support: Support_Europe@supermicro.com

Taiwan Office
Super Micro Computer, Inc.
3F., No.150, Jian 1st Rd., Zhonghe Dist.,
New Taipei City 235, Taiwan (R.O.C.)
Tel: +886-2-8226-3990
Fax: +886-2-8226-3992
Support: Support@Supermicro.com.tw

Beijing, China Office
Supermicro Technology (Beijing) Co., Ltd
Suite 701, Tower D, Jiahua Building,
No.9, Shangdi 3rd Street,
Haidian District, 100085,
Beijing, China
Tel: +86-10-62969165
E-mail: Sales-CN@supermicro.com

Japan Office
Supermicro Japan
21F Shibuya Infoss Tower, 20-1,
Sakuragaoka-cho, Shibuya-Ku,Tokyo,
150-0031 Japan
Tel: +81-3-5728-5196
Fax: +81-3-5728-5197
Sales inquiry: Sales_Inquiry_JP@Supermicro.com
Tech Support: Support_Japan@Supermicro.com

U.S. East Coast Office
Super Micro Computer, Inc.
525 Washington Blvd, 20th Floor
Jersey City, NJ 07310 USA
General Info: Marketing@Supermicro.com

U.K. Sales Office
Super Micro Computer, B.V.
77 New Cavendish Street,
The Harley Building,
London, W1W 6XB, UK
Tel: +31-73-640-0390 Ext. 2800
General Info: Sales_Europe@supermicro.com
Support: Support_Europe@supermicro.com

Supermicro Science & Technology Park
Super Micro Computer, Inc.
No.1899, Xingfeng Rd., Bade Dist.,
Taoyuan City 334, Taiwan (R.O.C.)
Tel: +886-2-8226-3990
Fax: +886-3-362-8266
Support: Support@Supermicro.com.tw

Shanghai, China Office
Super Micro Computer, Inc.
Room 702, No 398, North Caoxi Road,
HuiZhi Building, Xuhui District,
Shanghai, China 200030
Tel: +86-21-61152558
Tech Support: +86-21-61152556
E-mail: Sales-CN@supermicro.com
Support: Support-CN@supermicro.com

Korea Office
Super Micro Computer Holding B.V.
#1001, Trade Tower, 511, Yeongdong-daero,
Gangnam-gu, Seoul, Korea, 06164
Tel: +82-2-554-0045
Fax: +82-2-554-0146
Sales Inquiry: Sales-Asia@supermicro.com.tw

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Worldwide Headquarters
Super Micro Computer, Inc.
980 Rock Ave.
San Jose, CA 95131, USA
Tel: +1-408-503-8000
Fax: +1-408-503-8008
E-mail: Marketing@Supermicro.com

EMEA Headquarters
Super Micro Computer, B.V.
Het Sterrenbeeld 28, 5215 ML,
's-Hertogenbosch, The Netherlands
Tel: +31-73-640-0390
Fax: +31-73-641-6525
E-mail: Sales_Europe@Supermicro.com
Tech Support: Support_Europe@Supermicro.com

APAC Headquarters
Super Micro Computer, Taiwan Inc.
3F, No. 150, Jian 1st Rd., Zhonghe Dist.,
New Taipei City 235, Taiwan
Tel: +886-2-8226-3990
Fax: +886-2-8226-3991
E-mail: Marketing@Supermicro.com.tw

MKT-0002-09/2023-R61

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