H13 Hyper Systems

Flexible and High Performance for Enterprise Data Centers

1U A+ Server 1125HS-TNR (NVMe/SAS/SATA)

2U A+ Server 2025HS-TNR (NVMe/SAS/SATA)

2U A+ Server 2125HS-TNR (NVMe/SAS/SATA)

Enterprise-focused platform designed for utmost performance and flexibility

Gain high performance, flexibility, scalability and serviceability to demanding IT environments, and to power mission-critical enterprise workloads.

- Two 4th Gen AMD EPYC™ processors
- 24 DIMMs for up to 6 TB of DDR5-4800 memory
- Flexible NVMe, SAS, and SATA3 drive options
- Configurable PCIe 5.0 expansion capabilities with CXL 1.1+ memory expansion
- Open Compute Project (OCP) 3.0 AIOM slots
- Titanium-Level efficiency power supplies

You can't successfully run an enterprise data center with one-off servers dedicated to specific purposes, where inconsistencies, oversights, or configuration errors can imperil application availability. So when we set out to bring our H12 Ultra product line into the future, we upgraded it to a hyper level of performance with even more flexible configurations—yet all based on the same motherboard, firmware, BIOS, and operating system support. Let your servers be hyper, while you relax with a simpler and more easily managed data center.

Introducing H13 Hyper Systems

Our H13 Hyper systems are your new flagship data center systems, certified to run the major enterprise applications while affording you a flexible range of computing, networking, storage, and I/O expansion capabilities. Choose NVMe, SATA, or SAS storage to achieve the number of I/O operations per second (IOPS) your applications need to perform at their best. And use Open Compute Project (OCP) 3.0 add-in modules (AIOMs) for consistent and standard networking capabilities across all of your server deployments.

Every one of our H13 Hyper systems is based on the same H13DSH motherboard with two 4th Gen AMD EPYC™ processors and up to 24 of the fastest 12-channel DDR5-4800 DIMMs for up to 6 TB of main memory. Consistency means you have only one set of firmware, BIOS settings, and operating system

patches to manage. Every system built on this motherboard is designed for reliability, availability and serviceability so that if a problem occurs, your applications can be back up and running quickly.

Best of all, H13 Hyper systems support the 4th Gen AMD EPYC processor product line, offering up to 128 cores per CPU—up to 256 cores per server. The AMD EPYC 9004 Series delivers the fastest integer and floating point performance in the industry, predicting hyper-fast performance for your enterprise applications. With a consistent set of features across the product line, you choose the number of cores and the clock frequency your applications need, and the rest comes at no additional expense. The CPU's 128 lanes of PCIe 5.0 bandwidth enables massive amounts of parallel I/O in the system, and system configurations are available to meet just about any storage need.

Designed for Enterprise Applications

You need high performance for your enterprise applications. The flexible selection of density and storage capacity gives you a high-performance server for every purpose, including:

- Virtualization and cloud, including virtual desktop infrastructure with GPU acceleration
- Hyperconverged infrastructure

- Enterprise applications including database, customer relationship management, and enterprise resource planning
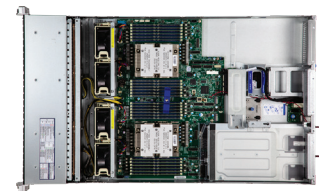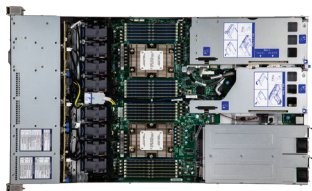- High performance computing clusters

Consistent Deployment

You get consistent, tool-less deployment and maintenance of both the motherboard and the systems themselves. And our versatile motherboard powers all three of our H13 Hyper systems. Each system has configuration options that enable varying numbers of expansion slots and disk drives, simply by ordering or swapping in the appropriate kits. This means that you can have systems tailored to application needs but with complete

architectural consistency. This helps to reduce the chance of errors that can cause downtime, and ease the need for staff to train on multiple server types. With H13 Hyper systems, they are all based on the same infrastructure.

Open Management

Our open management APIs and tools are ready to support you. In addition to a dedicated IPMI port, and a Web IPMI interface, Supermicro® SuperCloud Composer software helps you configure, maintain, and monitor all of your systems using single-pane-of-glass management. If your DevOps teams prefer to use their own tools, industry-standard Redfish® APIs provide access to higher-level tools and scripting languages.

H13 Generation	Dual-Socket AS -1125HS-TNR	Dual-Socket AS -2025HS-TNR	Dual Socket AS -2125HS-TNR
Form Factor	• 1U rackmount	• 2U rackmount	• 2U rackmount
Processor Support	• Two SP5 sockets for two AMD EPYC™ 9004 Series CPUs including those with AMD 3D V-Cache™ technology • Up to 128 cores, up to 400W cTDP[†]	• Two SP5 sockets for two AMD EPYC™ 9004 Series CPUs including those with AMD 3D V-Cache technology • Up to 128 cores, up to 400W cTDP[†]	• Two SP5 sockets for two AMD EPYC™ 9004 Series CPUs including those with AMD 3D V-Cache technology • Up to 128 cores, up to 400W cTDP[†]
Memory Slots & Capacity	• 12-channel DDR5 memory support • 24 DIMM slots for up to 6 TB ECC DDR5-4800 RDIMM	• 12-channel DDR5 memory support • 24 DIMM slots for up to 6 TB ECC DDR5-4800 RDIMM	• 12-channel DDR5 memory support • 24 DIMM slots for up to 6 TB ECC DDR5-4800 RDIMM
On-Board Devices	• System on Chip • Hardware root of trust • IPMI 2.0 with virtual-media-over-LAN and KVM-over-LAN support • ASPEED AST2600 BMC graphics	• System on Chip • Hardware root of trust • IPMI 2.0 with virtual-media-over-LAN and KVM-over-LAN support • ASPEED AST2600 BMC graphics	• System on Chip • Hardware root of trust • IPMI 2.0 with virtual-media-over-LAN and KVM-over-LAN support • ASPEED AST2600 BMC graphics
I/O Ports	• Integrated IPMI 2.0 plus KVM with dedicated LAN • 3 USB 3.0 ports • 1 VGA port • 1 TPM 2.0 header	• Integrated IPMI 2.0 plus KVM with dedicated LAN • 2 USB 3.0 ports • 1 VGA port • 1 TPM 2.0 header	• Integrated IPMI 2.0 plus KVM with dedicated LAN • 2 USB 3.0 ports • 1 VGA port • 1 TPM 2.0 header
Drive Bays	• 8 hot-swap 2.5" NVMe/SAS/SATA drives[1] (Option for up to 12 drives) • 2 M.2 NVMe boot drives	• 12 hot-swap 3.5" NVMe/SAS/SATA drives[1] • 2 M.2 NVMe boot drives	• 24 hot-swap 2.5" NVMe/SATA drives[1] • 2 M.2 NVMe boot drives

Expansion Slots	• 3 PCIe 5.0 x16 Slots	• Configuration options for PCIe 5.0 Slots:
		  − 4 x16 Slots:
		  − 8 x8 Slots
		  − 1 x16 Slot plus 6 x8 Slots
		  − 2 x16 Slots plus 4 x8 Slots
		  − 3 x16 Slots plus 2 x8 Slots
			• When configured with 24 NVMe drives:
			  − 1 PCIe 5.0 x16 Slot
			  − 2 PCIe 5.0 x8 Slots

Networking	• 1 AIOM/OCP 3.0 network interface slot	• 1 AIOM/OCP 3.0 network interface slot, up to 2 AIOM slots with optional kit	• 1 AIOM/OCP 3.0 network interface slot, up to 2 AIOM slots with optional kit
BIOS	• AMI Code Base 256 Mb (32 MB) SPI EEPROM		
Front Panel	• Power On/Off and System Reset buttons • Power status, HDD activity, network activity, system overheat, fan failure, and UID LEDs		
System Management	• Built-in server management tool (IPMI 2.0, KVM/media over LAN) with dedicated LAN port • Redfish APIs • Supermicro SuperCloud Composer • Supermicro Server Manager (SSM) and Supermicro Update Manager (SUM)		
Power & Cooling	• 1200W Redundant Power Supplies (Titanium Level)[2]	• 1600W Redundant Power Supplies (Titanium Level)[2]	• 1600W Redundant Power Supplies (Titanium Level)[2]

[†] Certain CPUs with high TDP may be supported only under specific conditions. Please contact Supermicro Technical Support for additional information about specialized system optimization
1. Optional parts are required for NVMe/SAS/SATA configurations
2. Full power supply redundancy is based on configuration and application load

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