H13 Hyper-U Systems

Flexible and Efficient Single-Socket Server Family

1U A+ Server 1115HS-TNR (NVMe/SAS/SATA)

2U A+ Server 2015HS-TNR (NVMe/SAS/SATA)

2U A+ Server 2115HS-TNR (NVMe/SAS/SATA)

Enterprise-focused platform designed for single-socket performance and flexibility

Deliver flexibility, power efficiency, memory density, and serviceability to many IT workloads.

- One 4th Gen AMD EPYC™ processor
- Up to 24 DIMMs for up to 6 TB of DDR5 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 slot
- Titanium-Level efficient power supplies

The time has arrived when a single-socket server can power workloads with more cores than most 2-socket servers could manage only a short time ago. The 128 cores delivered by 4th Gen AMD EPYC™ processors can power many data center workloads with less CPU cost and lower power consumption. With this processor generation, the reason for moving to two sockets—more I/O and more memory—has been eliminated. Even a single-socket server can have up to 6 TB of memory and 128 lanes of PCIe 5.0 connectivity.

Designed for Memory-Dense Workloads

You can strike a new balance in your data center: max out the 6 TB of memory to support the demands of memory-intensive workloads, or choose 3 TB of memory for everyday IT operations including the following:

- Virtualization and cloud computing
- Internet infrastructure workloads
- In-memory databases
- Low-latency finance applications
- Software-defined storage and scale-out file systems
- Blockchain workloads
- Media streaming applications
- Artificial intelligence training and inferencing

Introducing H13 Hyper-U Systems

As with our H13 Hyper systems, we deliver a wide range of flexible configuration options all based on the same H13SSH motherboard, with the same firmware, BIOS, and operating system support. So you get enterprise-grade simplicity with only one set of firmware to manage across a wide range of servers. With consistency comes reduced chance of errors.

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. Use an Open Compute Project (OCP) 3.0 add-in module (AIOM) for consistent and standard networking capabilities across all of your server deployments. Configure up to 3 TB of memory using one DIMM per channel, or up to 6 TB of memory with two DIMMs per channel. Choose low-cost 64 GB DIMMs for up to 1.5 TB of memory—6 GB for each of 256 VMs!

Best of all, H13 Hyper-U systems support the 4th Gen AMD EPYC processor product line, offering up to 128 cores per CPU. 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

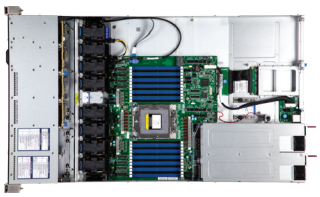
rest comes at no additional cost. The CPU's 128 lanes of PCIe 5.0 bandwidth enables massive amounts of parallel I/O, and system configurations are available to meet just about any storage need.

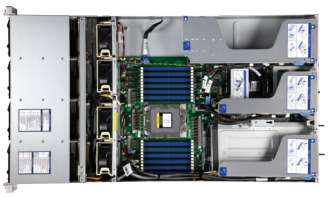
Consistent Deployment

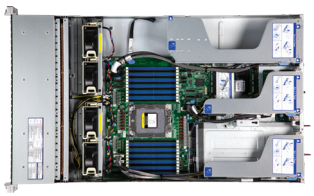
You get consistent, tool-less deployment and maintenance of both the motherboard and the systems themselves. Each system offers configuration options that enable varying numbers of expansion slots and disk drives, simply by ordering or swapping in the appropriate kits. This means that you can have systems 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-U 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	Single-Socket AS -1115HS-TNR	Single-Socket AS -2015HS-TNR	Single-Socket AS -2115HS-TNR
Form Factor	• 1U rackmount	• 2U rackmount	• 2U rackmount
Processor Support	• One SP5 socket for one AMD EPYC™ 9004 Series CPU • Up to 128 cores†	• One SP5 sockets for one AMD EPYC™ 9004 Series CPU • Up to 128 cores†	• One SP5 sockets for one AMD EPYC™ 9004 Series CPU • Up to 128 cores†
Memory Slots & Capacity	• 12-channel DDR5 memory support • 24 DIMM slots for up to 6 TB ECC 3600 or 4000 RDIMM (2 DIMMs per channel) or 12 DIMM slots up to 3TB	• 12-channel DDR5 memory support • 24 DIMM slots for up to 6 TB ECC 3600 or 4000 RDIMM (2 DIMMs per channel) or 12 DIMM slots up to 3TB	• 12-channel DDR5 memory support • 24 DIMM slots for up to 6 TB ECC 3600 or 4000 RDIMM (2 DIMMs per channel) or 12 DIMM slots up to 3TB
On-Board Devices	• System on Chip • Hardware root of trust • ASPEED AST2600 BMC graphics	• System on Chip • Hardware root of trust • ASPEED AST2600 BMC graphics	• System on Chip • Hardware root of trust • ASPEED AST2600 BMC graphics
I/O Ports	• 1 GbE port for IPMI 2.0 with virtual-media-over-LAN and KVM-over-LAN support • 3 USB 3.0 ports • 1 VGA port • 1 TPM 2.0 header	• 1 GbE port for IPMI 2.0 with virtual-media-over-LAN and KVM-over-LAN support • 2 USB 3.0 ports • 1 VGA port • 1 TPM 2.0 header	• 1 GbE port for IPMI 2.0 with virtual-media-over-LAN and KVM-over-LAN support • 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" U.3 NVMe/SAS/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	• PCIe 5.0 slots available with 24 NVMe drives: – 1 x16 slot or 2 x8 slots • PCIe 5.0 slots available with 24 SATA drives: – 4 x16 slots, 8 x8 slots, 1 x16 slot plus 6 x8 slots, 2 x16 slots plus 4 x8 slots, or 3 x16 slots plus 2 x8 slots
Networking	• 1 AIOM/OCP 3.0 network interface slot	• 1 AIOM/OCP 3.0 network interface slot	• 1 AIOM/OCP 3.0 network interface slot
BIOS	• AMI Code Base 256 Mb (32 MB) SPI EEPROM		
Front Panel	• Power On/Off button • 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	• 2x 1200W Redundant Power Supplies (Titanium Level)[2]	• 2x 1200W Redundant Power Supplies (Titanium Level)[2]	• 2x 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