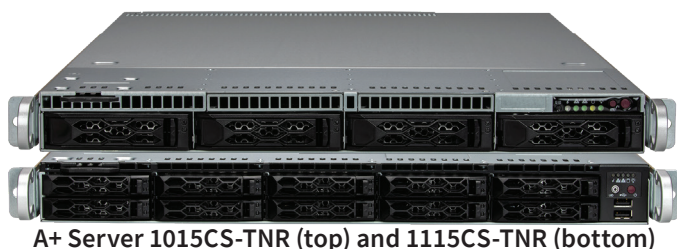


H13 CLOUDDC Systems

Ultimate Scalability and Flexibility for Cloud Data Centers



A+ Server 1015CS-TNR (top) and 1115CS-TNR (bottom)



A+ Server 2015CS-TNR

Our cloud-data-center-optimized servers are ready to take you into the future with H13 generation technology that can help you deliver cost-optimized services in an increasingly competitive economy.

Cloud-Optimized Single-Socket Systems

H13 CloudDC systems are single-socket systems optimized for AMD EPYC™ 9004 Series Processors with up to 96 cores and 192 threads—ready to power a wide range of cloud workloads. The capacity for up to 3TB of memory accessed through twelve high-speed channels provides the right balance of CPU-to-memory resources to power workloads ranging from financial services to virtualization. Internally, the system utilizes 128 PCIe 5.0 lanes that support high-speed, high-bandwidth networking and storage. Our 2U server's I/O capacity extends to up to four PCIe expansion slots, each with 16-lane capability.

Advanced I/O

The H13 CloudDC line supports up to two AIOM slots with OCP 3.0 support, each with x16 PCIe 5.0 connectivity. These enable you to dial in the type and bandwidth of network connectivity that meets your business needs. Support 100 Gigabit Ethernet to connect with the network you have in place today, as well as 200-Gbps InfiniBand connectivity for extremely high-bandwidth, low-latency cluster interconnections.

Single-Socket 1U and 2U Options

Flexible configurations for I/O and storage designed for cloud data centers

- Single-socket servers with up to 96 cores of AMD EPYC™ 9004 Series Processors performance
- Tool-less design for rapid deployment and easy maintenance
- Up to 3TB DDR5-4800MHz in 12 DIMMs
- PCIe 5.0 I/O for double the bandwidth of our prior generation servers
- Two 16-lane AIOM slots for flexible networking
- 2.5" and 3.5" NVMe and SATA drive options to meet virtually any workload storage requirements

Key Applications

H13 CloudDC systems are designed for cost-effective service delivery in cloud computing environments, including the following workloads:

- Internet infrastructure including Web hosting, name, and email services
- Virtualization
- Public and private cloud computing
- Content-delivery networks (CDNs)
- Deep learning inferencing
- Financial services applications

Designed for AMD EPYC™ 9004 Series Processors

A single AMD EPYC™ 9004 Series Processor gives you a no-compromise single-socket system, delivering the core density that once required two processors to achieve. With AMD you get more cores per dollar, more virtual instances on a server, and more subscribers in your data center. The CPU's 128 lanes of PCIe 5.0 connectivity eliminates the need to scale up computing power just to accommodate more I/O bandwidth. The system-on-chip nature of the processor eliminates the need for external chip sets that contribute to design complexity and power consumption. Best of all, you only need to purchase



and power a single processor for a high-performing, highly configurable system.

Innovative, Tool-Less Design

Cloud data centers are all about scale, with a constant flow of new servers that scale capacity to new heights and also refresh existing infrastructure. Most of the time servers don't need to be touched. But when it is time to update server connectivity with a faster network, or respond to a rare component failure with a replacement part, the value of the H13 CloudDC product line can't be overstated.

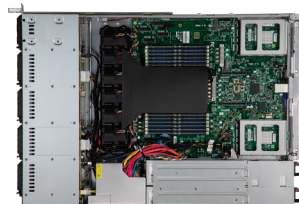
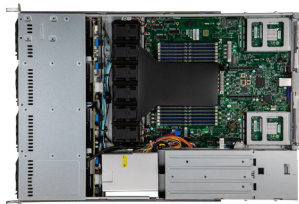
The front-panel-accessible drives and their brackets are hot swappable and require no tools. Rear-panel components including power supplies, PCIe devices, and AIOM cards are all tool-less. The chassis lid can be opened by hand and mid-chassis fans pop out for replacement.

Open Architecture

Our open architecture approach for memory and storage gives you the convenience of preinstalled, Supermicro-qualified devices. Whatever your choice, our approach gives you flexibility, easy maintenance, and operating cost reduction.

Open Management

Regardless of your data center's management approach, 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	AS -1015CS-TNR ¹	AS -1115CS-TNR ¹	AS -2015CS-TNR ¹
Form Factor	<ul style="list-style-type: none"> • 1U rackmount 	<ul style="list-style-type: none"> • 1U rackmount 	<ul style="list-style-type: none"> • 2U rackmount
Mechanical	<ul style="list-style-type: none"> • Tool-less drive trays and brackets 	<ul style="list-style-type: none"> • Tool-less drive trays and brackets 	<ul style="list-style-type: none"> • Tool-less drive trays and brackets
Processor Support	<ul style="list-style-type: none"> • Single SP5 socket for AMD EPYC™ 9004 Series processor, up to 96 cores 	<ul style="list-style-type: none"> • Single SP5 socket for AMD EPYC™ 9004 Series processor, up to 96 cores 	<ul style="list-style-type: none"> • Single SP5 socket for AMD EPYC™ 9004 Series processor, up to 96 cores
Memory Slots & Capacity	<ul style="list-style-type: none"> • Up to 3TB 3DS ECC DDR5-4800MHz in 12 DIMMs 	<ul style="list-style-type: none"> • Up to 3TB 3DS ECC DDR5-4800MHz in 12 DIMMs 	<ul style="list-style-type: none"> • Up to 3TB 3DS ECC DDR5-4800MHz in 12 DIMMs
Expansion Slots	<ul style="list-style-type: none"> • 2 PCIe 5.0 x16 (FHHL) slots • 2 PCIe 5.0 x16 AIOM/OCP 3.0 for flexible networking 	<ul style="list-style-type: none"> • 2 PCIe 5.0 x16 (FHHL) slots • 2 PCIe 5.0 x16 AIOM/OCP 3.0 for flexible networking 	<ul style="list-style-type: none"> • 2 PCIe 5.0x16 FHHL slots, 2 PCIe 5.0x16 FHFL slots • 2 PCIe 5.0 x16 AIOM/OCP 3.0 for flexible networking
Storage	<ul style="list-style-type: none"> • 4 Hot-swap 3.5" NVMe/SAS/SATA drive bays³ • 2 M.2 NVMe PCIe 3.0 x2 	<ul style="list-style-type: none"> • 10 Hot-swap 2.5" NVMe/SAS/SATA drive bays³ • 2 M.2 NVMe PCIe 3.0 x2 	<ul style="list-style-type: none"> • 12 Hot-swap 3.5" NVMe/SAS/SATA drive bays³ • Optional 2x 2.5" SATA drive bays via rear drive bay kits • 2 M.2 NVMe PCIe 3.0 x2
I/O Ports	<ul style="list-style-type: none"> • 2 USB 3.0 ports (rear) • TPM 2.0 header • 1 VGA, 1 COM, ASPEED AST2600 BMC graphics 	<ul style="list-style-type: none"> • 2 USB 3.0 ports (rear) and 2 USB 2.0 ports (front) • TPM 2.0 header • 1 VGA, 1 COM, ASPEED AST2600 BMC graphics 	<ul style="list-style-type: none"> • 2 USB 3.0 ports (rear), • TPM 2.0 header • 1 VGA, 1 COM, ASPEED AST2600 BMC graphics
Security	<ul style="list-style-type: none"> • Hardware root of trust 	<ul style="list-style-type: none"> • Hardware root of trust 	<ul style="list-style-type: none"> • Hardware root of trust
System Management	<ul style="list-style-type: none"> • 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) 		
System Cooling	<ul style="list-style-type: none"> • 6 Counter-rotating 40x40x56mm PWM fans 	<ul style="list-style-type: none"> • 6 Counter-rotating 40x40x56mm PWM fans 	<ul style="list-style-type: none"> • 3x 80x80x38mm middle cooling fans
Power Supply	<ul style="list-style-type: none"> • Redundant 860W Platinum Level PSUs⁴ 	<ul style="list-style-type: none"> • Redundant 860W Platinum Level PSUs⁴ 	<ul style="list-style-type: none"> • Redundant 1200W Titanium Level PSUs⁴

1. Sold only as a completely assembled system
 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
 3. Optional parts are required for NVMe/SATA configurations
 4. Full redundancy based on configuration and application load.