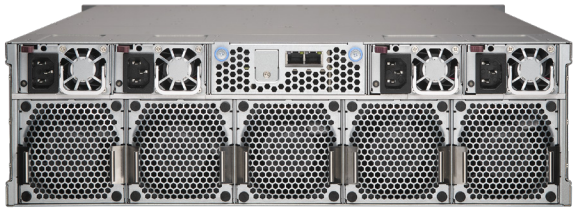
H13 MicroCloud System

High-Density Multi-Node Systems for Diverse Cloud Workloads

A+ Server AS-3015MR-H10TNR (front)



A+ Server AS-3015MR-H10TNR (rear)

What is MicroCloud?

The Supermicro H13 MicroCloud is a high-density, multi-node server solution designed to maximize productivity per square foot with a compact 3U form factor. Featuring shared power and cooling infrastructure, this innovative system reduces infrastructure costs while delivering scalable performance for a variety of workloads.

The H13 MicroCloud family, previously centered around the 3U8N (AS-3015MR-H8TNR) model, has now expanded with the addition of the 3U10N (AS-3015MR-H10TNR), marking a significant leap in server density and scalability. This new model provides businesses with an unprecedented level of flexibility, enabling them to maximize performance per rack unit while optimizing efficiency for high-volume cloud workloads. By integrating the 3U10N model, Supermicro reaffirms its commitment to delivering cutting-edge, high-density solutions tailored for modern data center needs.

With this expansion, businesses now have greater flexibility and choice when deploying high-performance, cost-efficient server infrastructure.

Why MicroCloud?

Many cloud applications require dedicated servers with bare-metal performance. Powered by AMD EPYC™ 4005 Series processors, the 3U, multi-node MicroCloud is an easy-to-configure system with excellent node density.

Benefits include:

- **Up to 3.3x rack space savings compared to traditional server deployments.**
- **Reduced cabling by up to 2.2x, simplifying data center operations.**
- **Lower power consumption by at least 12.5% per node.**
- **Cost-Effective Performance, delivering better. performance per dollar than equivalent 1U deployments.**

Multi-Node Systems for Diverse Workloads

This Supermicro multi-node system is designed for applications that require large numbers of discrete servers. It is ideal for both virtualized and non-virtualized environments, including:

- **Web hosting, CDN, and video streaming.**
- **E-commerce platforms and cloud-based applications.**
- **Centralized software development and CI/CD pipelines.**
- **Cloud gaming infrastructure leveraging high-performance processors.**
- **Dedicated hosting solutions with customizable node configurations.**

Powered by AMD EPYC 4005 Series Processors

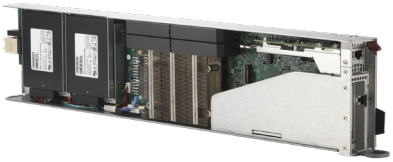
The EPYC™ 4005 Series delivers enterprise-grade performance at an exceptional value, bringing cutting edge efficiency and power to cloud and high-performance computing. Designed for scalability and versatility, these processors empower businesses to optimize workloads efficiently. With best-in-class energy efficiency, they reduce operational costs while maintaining peak performance.

Features include:

- **Up to 16 cores and 32 threads, with boost frequencies reaching 5.7 GHz.**
- **DDR5-5600 memory support for improved bandwidth and efficiency.**
- **PCIe 5.0 connectivity for high-speed storage and networking options.**
- **Optimized for cloud, AI, and high-performance computing workloads.**

Specific Features	Single-Socket AS -3015MR-H8TNR Node
Target Applications	Designed for high-demand web services, including Web Cache, CDN, and Video Streaming. Its high-performance architecture makes it ideal for Web Hosting, Email Servers, and Application Servers, delivering seamless content distribution and optimized load balancing.
Nodes	8 hot-swappable nodes
Expansion	1 PCIe 5.0 x8 LP slot + 1 MicroLP per node
Storage	2 front NVMe U.2/SAS/SATA3 drive bays per node*
Networking	Supports MicroLP interface cards with up to 25GbE connectivity
Power Supply	2200W Redundant (1+1) 80+ Titanium level

* Supports SAS3 and SATA with add-on cards



Specific Features	Single-Socket AS -3015MR-H10TNR Node
Target Applications	Built for Cloud Computing and high-volume Web Hosting, this model supports Web Cache, CDN, and Video Streaming. It excels in Web/ Collocation Services, ensuring superior efficiency and high-density performance for multi-tenant environments.
Nodes	10 single-processor nodes
Expansion	1 PCIe 5.0 x16 LP slot + 1 PCIe 5.0 x4 MicroLP per node
Storage	Up to 2 NVMe U.2 + 2 SATA drives per node
Networking	1GbE/10GbE/25GbE MicroLP AOC options
Power Supply	2000W Redundant (1+1, 2+2 or 3+1) 80+ Titanium level

Common Features Across These Models

Process Support	Single AM5 socket, AMD EPYC™ 4005 Series, up to 170W TDP per nodev
Memory Slots & Capacity	4 DIMM slots per node, supporting up to 192GB DDR5-5600
Management & Monitoring	Redfish APIs, Supermicro Server Manager (SSM), SuperCloud Composer
Form Factor	3U rackmount, optimized for space and energy efficiency
Front & Real I/O Options	KVM connector with VGA, USB 2.0x2, Serial Port, UID LED, power button, and multiple networking choices
Cooling & Power	8cm heavy-duty fans with speed control; redundant 2000W-2200W 80+ Titanium level PSU