

H13 MicroCloud System

High Density Multi-Node System for the Cloud



(front)



A+ Server 3015MR-H8TNR (rear)

3U, 8-Node-Per-Chassis Flexible Architecture

Maximize resource savings through shared power and cooling with the following resources per node:

- Single AMD Ryzen™ 7000 Series processor
- Up to 128 GB DDR5-5200 memory
- Two U.2 NVMe drives and one M.2 NVMe
- One PCIe 5.0 expansion slot
- Flexible networking options with PCIe 5.0 MicroLP interfaces
- Redundant Titanium level shared power supplies

Many cloud applications need dedicated servers with bare-metal performance. Powered by AMD Ryzen™ 7000 Series processors, the 3U, multi-node AS -3015MR-H8TNR MicroCloud is an easy-to-configure system with 8 single-processor nodes delivering excellent node density. You reap the benefits of low power consumption through shared power and cooling infrastructure, and affordable pricing that is favorable compared to the same number of 1U servers. With hot-swappable nodes, the system is easy to maintain and also easy to upgrade with future nodes.

Multi-Node System for Dedicated Hosting

This new Supermicro multi-node system is designed for applications that need a large number of discrete servers. They are ideal for virtualized and nonvirtualized applications including:

- **E-commerce sites** that support customers with their digital transformation using dedicated hosting
- **Centralized code development** with high-powered multi-threaded processing that helps reduce compile times
- **Cloud gaming** powered by AMD Ryzen, the ultimate gaming processor
- **Content creation**, whether editing 4K footage or crafting complex designs, AMD Ryzen performance helps creative teams iterate their projects more quickly

- **Virtual private servers** that can give service-provider customers a dedicated core per virtual machine, up to 16 customers on a single node



Powered by the AMD Ryzen 7000 Series

With the same high-performance 'Zen 4' cores that power AMD server processors, the Ryzen 7000 Series delivers up to 16 cores, 32 threads, and boost frequencies up to 5.7 GHz. It has all of the features you need for cloud and dedicated hosting applications including fast DDR5-5200 memory and PCIe 5.0 I/O. They can equally propel e-commerce, software development, and creative applications with options ranging from six to 16 cores. Supported processors and their maximum boost frequencies include:

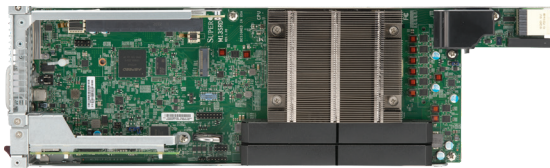
- AMD Ryzen 9 7950X with 16 cores and up to 5.7 GHz
- AMD Ryzen 9 7950X3D with 16 cores and up to 5.7 GHz
- AMD Ryzen 9 7900X with 12 cores and up to 5.6 GHz
- AMD Ryzen 9 7900X3D with 12 cores and up to 5.6 GHz
- AMD Ryzen 9 7900 with 12 cores and up to 5.4 GHz
- AMD Ryzen 7 7800X3D with 8 cores and up to 5.0 GHz
- AMD Ryzen 7 7700X with up to 8 cores and 5.4 GHz
- AMD Ryzen 7 7700 with up to 8 cores and 5.3 GHz
- AMD Ryzen 5 7600X with up to 6 cores and 5.3 GHz
- AMD Ryzen 5 7600 with up to 6 cores and 5.1 GHz

Flexible Node Configurations

Each node incorporates a single Supermicro low-profile interface card for network connectivity up to 10 Gigabit Ethernet. In addition to an M.2 boot-drive slot, each node includes a single 8-lane PCIe 5.0 low-profile slot. This can be used for GPU accelerators to speed rendering in cloud gaming environments, or for content creating and transcoding work. If the priority is to protect data with a RAID configuration, HBA and RAID cards can be used in the single slot.

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 per node, 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-3015MR-H8TNR Node

Processor Support	<ul style="list-style-type: none"> Single AM5 socket for one AMD Ryzen™ 5, 7, 9, and 3D 7000 Series processor Up to 16 cores, up to 170W TDP per socket¹
Memory Slots & Capacity	<ul style="list-style-type: none"> 2-channel DDR5 memory support 4 DIMM slots for up to 128 GB ECC or non-ECC DDR5-5200 UDIMMs
On-Board Devices	<ul style="list-style-type: none"> KVM connector with 2x USB 2.0, VGA, and 1 COM port 1x USB type C 3.2 On board TPM 2.0 + extra header
I/O Ports	<p>Choice of one Supermicro micro low-profile interface card:</p> <ul style="list-style-type: none"> Dual RJ45 1 GbE ports (AOC-CGP-i2) Dual RJ45 10 GbE ports (AOC-CTG-B2T [Broadcom]) Dual RJ45 10 GbE ports (AOC-CTGS-i2T [Intel]) Dual SFP+ 10 GbE ports (AOC-CTG-i2S) <p>1 USB Type C port Universal information (UID) LED and power button</p>
Internal Drives	<ul style="list-style-type: none"> 1 M.2 NVMe slot 2 hot-swap front-panel-accessible drives with the following options: <ul style="list-style-type: none"> 2 NVMe U.2 drives 2x 2.5/3.5" hot-swap SAS/SATA (PCIe RAID or HBA add-on card required)
Expansion Slots	<ul style="list-style-type: none"> 1 x8 PCIe 5.0 low-profile slot
BIOS	<ul style="list-style-type: none"> AMI 256 Mb (32 MB) SPI Flash ROM ASPEED AST2600 BMC graphics
System Management	<ul style="list-style-type: none"> Redfish APIs Supermicro SuperCloud Composer Supermicro Server Manager (SSM) and Supermicro Update Manager (SUM)

Chassis

Form Factor	<ul style="list-style-type: none"> 3U rackmount 8 slots for hot-swap server nodes
Front Panel	<ul style="list-style-type: none"> 8 individual node status LEDs 16 slots for 2 drives connected to each node
Rear Panel	<ul style="list-style-type: none"> Dedicated 1+1 GbE with built-in server management tool (IPMI 2.0, KVM/media over LAN) with 1+1 dedicated LAN ports System-level on/off and Universal Information (UID) buttons Power status and UID LEDs
Shared Power & Cooling	<ul style="list-style-type: none"> 4 x 8cm heavy duty fans with optimal speed control Redundant 2200W 80+ Titanium Level power supplies with PMBus

¹Certain CPUs with high TDP may be supported only under specific conditions. Please contact Supermicro Technical Support for additional information about specialized system optimization