

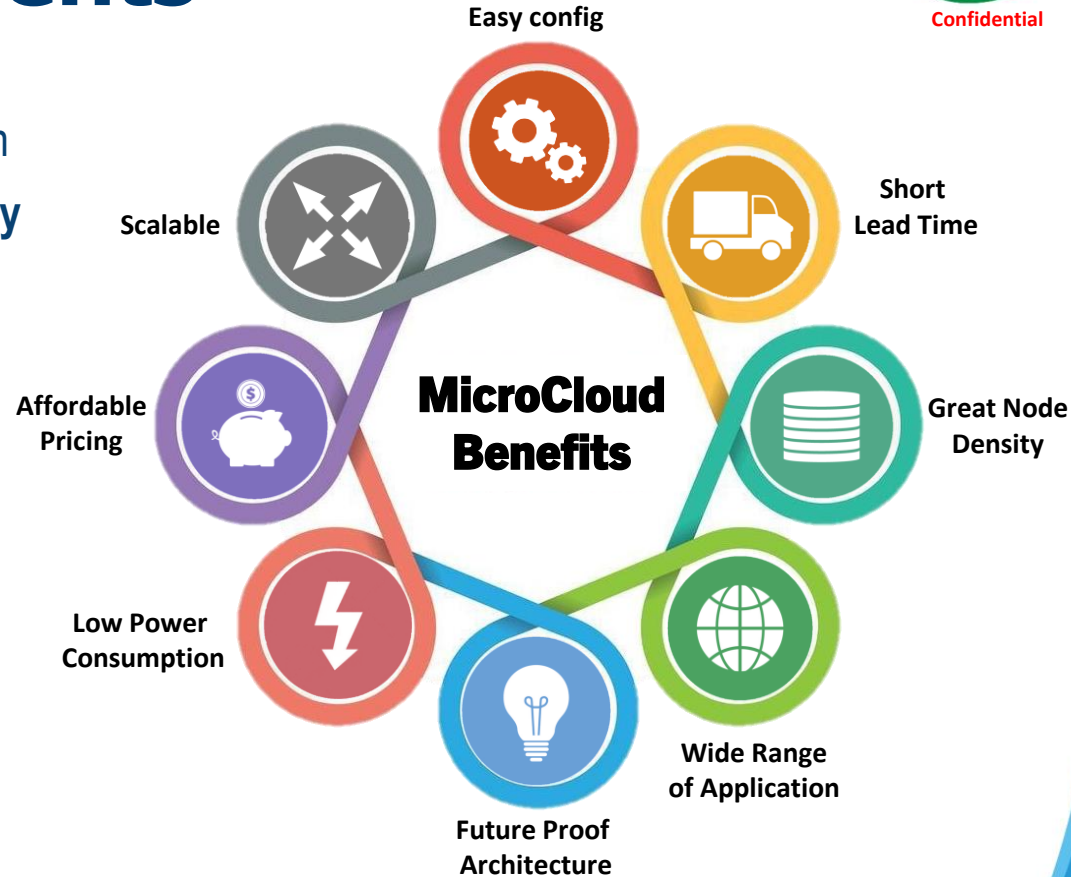


# AMD AM5 Ryzen Microcloud AS -531MR-H8TNR



# MicroCloud Benefits

- **Easy to configure** – off the shelf system
- Compact form factor, **great node density**
- **Low power** consumption
- **Affordable** pricing
- **Future proof** architecture
- Good combination **with rack and SW**
- **Wide range of application** possibilities
- **Scalable** performance
- Local assembly – short lead time



# AS -531MR-H8TNR

## Key Features

- High-density, Enterprise Performance, Cost-effective, Multi-node UP server
- Up to 128G DDR5 5200Mhz ECC/none ECC UDIMM
- PCI-E 5.0 x8 expansion slot per node
- 1+1 Redundant 2000W Titanium Level Power
- Up to 8x hot-pluggable node in 3U chassis



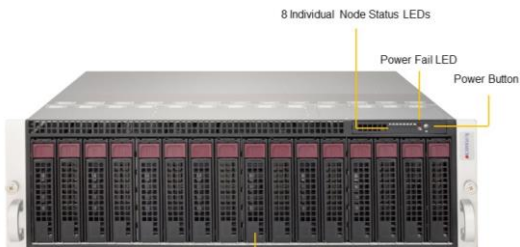
## Applications:

- Cloud Computing
- Web/Collocation Services
- Web Cache, CDN, Video Streaming
- Social Networking, Downloads
- Corporate – WINS, DNS, Print, Login

# AS -531MR-H8TNR

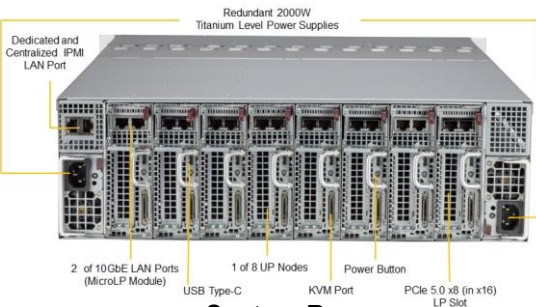
## Specifications

- Motherboard: M13SRD-F
- Chassis: CSE-938NH-R2K04BP2
- Single Node part: PIO-531MR-H8TNR-NODE



16x 3.5" Hot-swap SATA3 Drive Bays (2 per node)

### System Front



### System Rear

#### Processor Support – AMD Ryzen

- Supports AMD Ryzen (Zen4), AM5 Socket, LGA-1718, CPU

#### Memory Capacity – 4 DIMM Slots

- 4x 288-pin DDR5 DIMM Slot
- Up to 128G DDR5 5200Mhz ECC/none ECC UDIMM

#### Expansion – 1 PCI-E Slots

- 1x PCI-E 5.0 LP x8 (Open-end)

#### Networking & I/O – 4 10GBase-T

- ASPEED BMC on board (AST2600)
- 1x USB Type C 3.2, 1x VGA+ 2x USB 2.0 + 1x COM (w/ KVM dongle)
- MLP options: Supermicro Micro-LP Network cards per node (\* 2x10GbE by default)

#### System Management – Dedicated IPMI Port

- Built-in Server management tool (IPMI 2.0, KVM/media over LAN) with dedicated LAN port

#### Drive Bays – 24 Hot-Swap U.2 NVMe

- 2x NVMe U.2
- 2x 2.5/3.5" Hot-Swap SATA; SAS (RAID/HBA ACO card is required)
- 1x NVMe 22110 M.2 connector onboard

#### System Cooling – 4 8cm Fans

- 4x 8cm heavy duty fans with optimal fan speed control

#### Power Supply – 1+1 2000W Titanium

- 1+1 2000\*W 80+ Titanium Redundant PSU

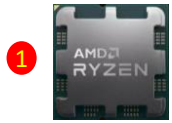
#### Dimensions

- 17.26" (W) x 5.21" (H) x 23.2" (D)



# AS -531MR-H8TNR

## Front Hot-swap Storage drives/ Rear Hot-swap Server nodes



### AMD Ryzen

Supports AMD Ryzen (Zen4),  
AM5 Socket, LGA-1718, CPU



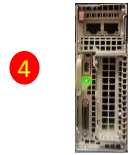
Up to 4x 32GB **DDR5**  
ECC/non-ECC UDIMM slots



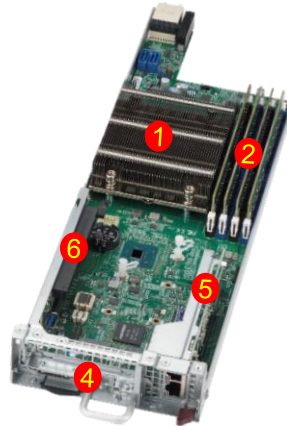
2 x Front Hot-swappable 3.5" SAS/  
SATA3 or 2.5" Hybrid SAS/  
SATA3/NVMe U.2 drives  
1x M.2 (M-key, 2280/22110, via PCIe)



Rear I/O on MB  
1x KVM interface  
1x USB TypeC (10G/ 5G)  
1x UID, 1x Power button



- Expansion Slots**
- 5 1 x Micro LP PCI-E 5.0 x8
- 6 1 x Standard LP PCI-E 5.0 x8 (in x16 slot)  
**GPU /RAID /Telco /NIC**



### Micro LP Network Options



Dual 1GbE (RJ45)  
**AOC-CGP-i2**



Single 25GbE (SFP28)  
**AOC-C25G-m1S**



Single 10GbE (SFP+)  
**AOC-CTG-i1S**



Dual 10GbE (RJ45)  
**AOC-CTGS-i2T**



Dual 10GbE (SFP+)  
**AOC-CTG-i2S**

### Remote monitoring



1+1 1GbE Dedicated IPMI  
Management port for 8 nodes



1+1 Redundant 2000W  
Titanium Level Power  
w/ PMBus

# CPU support list

OPN	Model Name	Core	Thread	TDP	Base Clock	Max. Boost Clock	L2	L3
100-000000514-00	Ryzen 9 7950X*	16C	32T	170W	4.5 GHz	up to 5.7 GHz	16 MB	64MB
100-000000589-00	Ryzen 9 7900X*	12C	24T	170W	4.7 GHz	up to 5.6 GHz	12 MB	64 MB
100-000000591-00	Ryzen 7 7700X	8C	16T	105W	4.5 GHz	up to 5.4 GHz	8 MB	32 MB
100-000000593-00	Ryzen 5 7600X	6C	12T	105W	4.7 GHz	up to 5.3 GHz	6 MB	32 MB
100-000000590	Ryzen 9 - 7900	12C	24T	65W	3.7 GHz	up to 5.4 GHz	12 MB	64 MB
100-000000592	Ryzen 7 - 7700	8C	16T	65W	3.8 GHz	up to 5.3 GHz	8 MB	32 MB
100-000001015-00	Ryzen 5 - 7600	6C	12T	65W	3.8 GHz	up to 5.1 GHz	6 MB	32 MB

\*170W CPU supported for OEM project only

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