

H252-Z12 (rev. A02)

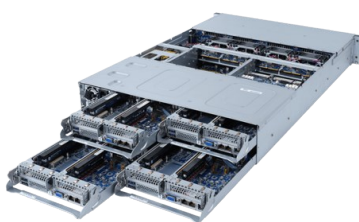
HCI Server – AMD UP 2U 4 Nodes Server with 12 x SATA | Application: HCI & Hybrid/Private Cloud Server

- 2U - 4 nodes rear access server system
- AMD EPYC™ 7003 processors with AMD 3D V-Cache™ Technology
- AMD EPYC™ 7003 series processor family
- 4 x LGA 4094 sockets
- 8-Channel RDIMM/LRDIMM DDR4, 32 x DIMMs
- 8 x 1Gb/s LAN ports (Intel® I350-AM2)
- 4 x Dedicated management ports
- 1 x CMC global management port
- 12 x 3.5" SATA hot-swappable SSD bays
- 8 x M.2 with PCIe Gen3 x4 interface
- 8 x Low profile PCIe x16 expansion slots
- 4 x OCP 2.0 Gen3 x16 mezzanine slots
- Aspeed® AST2500 remote management controller
- 1600W (240V) 80 PLUS Platinum redundant PSU



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Dimensions (WxHxD, mm)

2U 4 Nodes - Rear access
440 x 87.5 x 695

Motherboard

MZ12-HD8 Rev. 3.0

CPU

AMD EPYC™ 7003 processors with AMD 3D V-Cache™ Technology
AMD EPYC™ 7003 series processor family
Single processor, 7nm technology
Up to 64-core, 128 threads per processor
TDP up to 225W, cTDP up to 240W

Conditional support 280W
Non-supported M.2 devices if using 280W CPU

Compatible with AMD EPYC™ 7002 series processor family

Socket

Per Node:
1 x LGA 4094

Total:
4 x LGA 4094
Socket SP3

Chipset

System on Chip

Memory

Per node:
8 x DIMM slots

Total:
32 x DIMM slots
DDR4 memory supported only
8-Channel memory architecture
RDIMM modules up to 128GB supported
LRDIMM modules up to 128GB supported
3DS RDIMM/LRDIMM modules up to 256GB supported
Memory speed: Up to 3200 MHz

LAN

Per node:
2 x 1GbE LAN ports (1 x Intel® I350-AM2)
NC-SI function supported
1 x Dedicated management port

Total:
8 x 1GbE LAN ports (1 x Intel® I350-AM2)
NC-SI function supported
4 x Dedicated management ports
1 x 10/100/1000 *CMC global management port

*CMC: Chassis Management Controller, to monitor all status of computing nodes

Video

Integrated in Aspeed® AST2500
2D Video Graphic Adapter with PCIe bus interface
1920x1200@60Hz 32bpp, DDR4 SDRAM

Management chip on CMC board:
Integrated in Aspeed™ AST2520A2-GP

Audio

N/A

Storage

Per node:
3 x 3.5" SATA hot-swappable SSD bays

Total:
12 x 3.5" SATA hot-swappable SSD bays

SAS

N/A

RAID

N/A

Peripheral Drives

N/A

Expansion Slots

Per node:
1 x Low profile half-length slot with PCIe x16 (Gen4 x16 bus)
1 x Low profile half-length slot with PCIe x16 (Gen3 x16 bus)
1 x OCP 2.0 mezzanine slot with PCIe Gen3 x16 bandwidth (Type1, P1, P2, P3, P4 with NC-SI supported)

2 x M.2 slots:
- M-key
- PCIe Gen3 x4
- Supports NGFF-2242/2260/2280/22110 cards
CPU TDP is limited to **155W** if using M.2 device

Total:
4 x Low profile half-length slots with PCIe x16 (Gen4 x16 bus)
4 x Low profile half-length slots with PCIe x16 (Gen3 x16 bus)
4 x OCP 2.0 mezzanine slots with PCIe Gen3 x16 bandwidth (Type1, P1, P2, P3, P4 with NC-SI supported)

8 x M.2 slots:
- M-key
- PCIe Gen3 x4
- Supports NGFF-2242/2260/2280/22110 cards
CPU TDP is limited to **155W** if using M.2 device

Internal I/O

Per node:
2 x M.2 slots
1 x USB 3.0 header
1 x TPM header
1 x OCP 2.0 mezzanine slot
1 x Front panel header
1 x Back plane board header
1 x IPMB connector
1 x Clear CMOS jumper
1 x BIOS recovery jumper

Front I/O

Per node:
1 x Power button with LED
1 x ID button with LED
1 x Status LED
1 x Reset button

Total:
4 x Power buttons with LED
4 x ID button with LED
4 x Status LED
4 x Reset buttons

1 x CMC status LED
1 x CMC Reset button

Rear I/O

Per node:
2 x USB 3.0
1 x VGA
2 x RJ45
1 x MLAN
1 x ID LED

Total:
8 x USB 3.0
4 x VGA
8 x RJ45
4 x MLAN
4 x ID LEDs
*1 x CMC global management port

*Only one CMC global management port per system

Backplane I/O

12 x ports
Speed and bandwidth: SATA 6Gb/s per port

TPM

1 x TPM header with SPI interface
Optional TPM2.0 kit: **CTM010**

Power Supply

2 x 1600W redundant PSUs
80 PLUS Platinum

AC Input:
- 100-120V~/ 12A, 50-60Hz
- 200-240V~/ 10A, 50-60Hz

DC Input:
- 240Vdc/ 10A

DC Output:
- Max 1000W/ 100-120V~
+ 12V/ 81.5A
+ 12Vsb/ 2.5A
- Max 1600W/ 200-240V~ or 240Vdc Input
+ 12V/ 133A
+ 12Vsb/ 2.5A

System Management

Aspeed® AST2500 management controller
GIGABYTE Management Console (AMI MegaRAC SP-X) web interface

Dashboard
HTML5 KVM
Sensor Monitor (Voltage, RPM, Temperature, CPU Status ...etc.)
Sensor Reading History Data
FRU Information
SEL Log in Linear Storage / Circular Storage Policy
Hardware Inventory
Fan Profile
System Firewall
Power Consumption
Power Control
LDAP / AD / RADIUS Support
Backup & Restore Configuration
Remote BIOS/BMC/CPLD Update
Event Log Filter
User Management
Media Redirection Settings
PAM Order Settings
SSL Settings
SMTP Settings

OS Compatibility

Windows Server 2016 (X2APIC/256T not supported)
Windows Server 2019
Windows Server 2022

Red Hat Enterprise Linux 8.3 (x64) or later
Red Hat Enterprise Linux 9.0 (x64) or later

SUSE Linux Enterprise Server 12 SP5 (x64) or later
SUSE Linux Enterprise Server 15 SP2 (x64) or later

Ubuntu 18.04.5 LTS (x64) or later
Ubuntu 20.04 LTS (x64) or later
Ubuntu 22.04 LTS (x64) or later

VMware ESXi 6.7 Update3 P03 or later
VMware ESXi 7.0 Update1 or later
VMware ESXi 8.0 or later

Citrix Hypervisor 8.2.0 or later

System Fans

4 x 80x80x38mm (16,300rpm)

Operating Properties

Operating temperature: 10°C to 35°C
Operating humidity: 8%-80% (non-condensing)
Non-operating temperature: -40°C to 60°C
Non-operating humidity: 20%-95% (non-condensing)

Ambient temperature limited to 30°C if using 280W CPU

Packaging Dimensions

1167 x 700 x 309 mm

Packaging Content

1 x H252-Z12
4 x CPU heatsinks
1 x Rail Kit

Part Numbers

- Barebone package: 6NH252Z12MR-00 Rev. A02
- Motherboard: 9MZ12HD8NR-00
- Rail kit: 25HB2-A66122-K0R
- CPU heatsink: 25ST1-44320J-A0R
- M.2 extension card: 9CMTPO51NR-00 (**optional**)
- Back plane board: 9CBPHOC3NR-00
- Fan module: 25ST2-88382B-D0R
- Power Supply: 25EPO-21600B-L0S
- Ring topology kit: 6NH23NR48SR-00 (**optional**)

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* Due to standard PC architecture, a certain amount of memory is reserved for system usage and therefore the actual memory size is less than the stated amount.

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