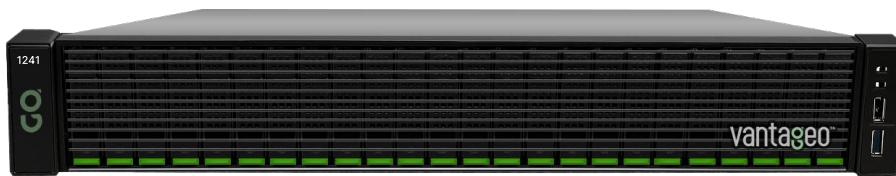


Vantage 12G1-RG Server

Flexible, Scalable, and Secure



The path to AMD's 5nm 'Zen 4' architecture was paved with many successful generations of EPYC innovations and chiplet designs, and AMD EPYC 9004 Series processors continue this progression. Adding a host of new features to target a wide range of workloads, the new family of EPYC processors will deliver even better CPU performance and performance per watt, and do so on a platform with 2x the throughput of PCIe 4.0 lanes that also has support for 50% more memory channels. For this new platform, Vantageo has products ready to get the most out of EPYC-based systems that support fast PCIe Gen5 accelerators and Gen5 NVMe drives, in addition to support for high performant DDR5 memory.

Key Specifications:

Single AMD EPYC™ 9004 Series Processors
12-Channel DDR5 RDIMM, 24 x DIMMs
2 x 10Gb/s LAN ports via Broadcom® BCM57416
2 x MCIO 8i connectors with PCIe Gen5 x8 or SATA interface
4 x MCIO 8i connectors with PCIe Gen5 x8 interface
1 x MCIO 8i connector with PCIe Gen4 x8 interface
1 x M.2 slot with PCIe Gen4 x4 interface
4 x PCIe Gen5 x16 expansion slots

Architecture

- Compute density increased with more transistors packed in less space

CPU cores

- Dedicated cores and targeted workloads for Zen 4c & Zen 4 cores

Cache

- Select CPUs have 3x or more L3 cache for technical computing

Vantageo 12G1-RG

Compatibility:

- All 9004 series processors are supported on one platform

Channels:

- Memory capacity can achieve 6TB per socket

Memory

- Increased IO throughput achieving 128GB/s bandwidth in PCIe x16 lanes

Lanes

- Increased IO throughput achieving 128GB/s bandwidth in PCIe x16 lanes

Support

- Disaggregated compute architecture possible via Compute Express Link

High Performance

- Servers and motherboards by Vantageo are tested to ensure peak performance for demanding CPU workloads. All the latest technology is supported.

Compute Density

- One single socket solution can outperform many dual CPU servers. Dual socket models also support 192 cores in a 2U chassis. More compact performance.

Fast & Stable Connectivity

- Keeping pace with the challenges for next gen technology, well designed Vantageo boards provide users the signal integrity for PCIe 5.0

Modularity

- Our building block design allows new models to quickly come to market. And users can now have BMC on a OCP module customized by Vantageo.

Collaboration

- AMD and Vantageo have maintained a healthy relationship that values shared knowledge in order to get the latest technology into data centers.

Optimal Price

- Our broad portfolio of products and models allows customers to only select the features they require while doing so at a lower TCO.

Technical details

Vantageo 12G1-RG Details

Form Factor	2U
CPU	AMD EPYC™ 9005 Series Processors AMD EPYC™ 9004 Series Processors Single processor, cTDP up to 400W
Socket	1 x LGA 6096 Socket SP5
Chipset	System on Chip
Memory	24 x DIMM slots DDR5 memory supported 12-Channel memory per processor
AMD EPYC™ 9005:	RDIMM: Up to 4800 MT/s (1DPC) RDIMM: Up to 4000 MT/s (1R 2DPC), 3600 MT/s (2R 2DPC)
AMD EPYC™ 9004:	RDIMM: Up to 4800 MT/s (1DPC), 3600 MT/s (2DPC)
LAN	2 x 10Gb/s LAN (1 x Broadcom® BCM57416) - Support NCSI function 1 x 10/100/1000 Mbps Management LAN
Video	Integrated in ASPEED® AST2600 - 1 x VGA port
Audio	N/A
Storage Interface	MCIO: 2 x MCIO 8i for 4 x Gen5 NVMe or 16 x SATA 4 x MCIO 8i for 8 x Gen5 NVMe 1 x MCIO 8i for 2 x Gen4 NVMe
M.2:	1 x M.2 (2280/22110), PCIe Gen4 x4
RAID	N/A
PCIe Expansion Slots	Slot_7: PCIe x16 (Gen5 x16) Slot_6: PCIe x16 (Gen5 x16) Slot_4: PCIe x16 (Gen5 x16) Slot_3: PCIe x16 (Gen5 x16) Slot_7: PCIe x16 (Gen5 x16) Slot_6: PCIe x16 (Gen5 x16) Slot_4: PCIe x16 (Gen5 x16) Slot_3: PCIe x16 (Gen5 x16)
Internal I/O	1 x 24-pin ATX main power connector 2 x 8-pin ATX 12V power connectors 1 x 6-pin ATX 12V power connector 1 x CPU fan header 5 x System fan headers 1 x USB 3.2 Gen1 x2 header 1 x M.2 slot 7 x MCIO 8i connectors 1 x Front panel header

Technical details

	1 x Backplane board header 1 x PMBus connector 1 x IPMB connector 1 x TPM header
Rear I/O	2 x USB 3.2 Gen1 ports (Type-A) 1 x VGA port 1 x COM port 2 x RJ45 ports 1 x MLAN port 1 x ID button with LED
Security Modules	1 x TPM header with SPI interface - Optional TPM2.0
OS Compatibility	Please refer to OS compatibility table in support page
Board Management	ASPEED® AST2600 Baseboard Management Controller Vantageo Management Console 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 • Advanced power capping • 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
PSU Connectors	1 x 24-pin ATX main power connector 2 x 8-pin ATX 12V power connectors 1 x 6-pin ATX 12V power connector
Operating Properties	Operating temperature: 10°C to 40°C Operating humidity: 8%-80% (non-condensing) Non-operating temperature: -40°C to 60°C Non-operating humidity: 20%-95% (non-condensing)

Technical details

Recommended support

24x7 - 4 hours Response, Next Business Day Call to Resolution CTR

24x7 - 4 hours Response, 24 Hours Call to Resolution CTR

24x7 - 4 Hours Response, 6 Hours Call to Resolution CTR

Default support Next Business Day Consulting and deployment offerings are also available. Contact Vantageo representative for the more information.

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