

TG581V3

FLAGSHIP AI SERVER

Aethlumis TG581V3 is a flagship 4U dual-processor AI server product based on the latest AMD EPYC™ 9004 series processor building, with comprehensive upgrades in CPU, GPU, and I/O specifications. It has the characteristics of high computing power, strong scalability, rich configuration, and high reliability, and is suitable for application scenarios such as artificial intelligence, high-performance computing, and data analysis.



ULTIMATE PERFORMANCE BORN FOR AI

- Supports 2 x AMD EPYC™ 9004 series processors adopting new Zen 4 core architecture and 5nm new technology, Supporting up to 400W models with strong computing performance;
- Supports 10 x 450W dual width, full height, and full length GPUs, significantly improving heterogeneous computing power;
- Supports GPU to CPU x32 transmission bandwidth, doubling the industry's x16, meeting the requirements of high communication bandwidth scenarios between CPU and GPU;
- Supports 24 x DDR5 DIMMs, with a maximum frequency of 4800MHz, and a 50% increase in memory bandwidth compared to the previous generation.

LEADING ARCHITECTURE AND FLEXIBLE CONFIGURATION

- Supports two solutions: 8-card direct connection and 10-card switch, Supports multiple GPU topology configurations, and flexibly matches the needs of different application scenarios;
- Ultra high scalability, Supporting up to 15 x standard PCIe slots, capable of configuring 8 x dual width GPUs+7 x PCIe standard cards+1 x OCP 3.0 network card;
- The storage configuration can be flexibly changed according to needs, meeting the local storage needs of high capacity and performance, and Supporting up to 8 x U.2 NVMe.

STABLE, RELIABLE, INTELLIGENT MANAGEMENT

- The key components of the system are redundant, hot swap design, and Supports tool-free disassembly, improve the efficiency of fault maintenance, improve the availability of the system;
- Integrated intelligent management chip, providing open management platform, Supporting IPMI2.0, Redfish, SNMP and other management protocols;
- Supports various management functions such as remote KVM, virtual media, status monitoring of key components, and abnormal alarm, and realizes a comprehensive remote system-level intelligent management.

TECHNICAL SPECIFICATIONS

Item	4U8 GPUs - Direct	4U8/10 GPUs -Switch
CPU	Supports 2 x AMD EPYC™ 9004 series processors, maximum power 400W	
Memory	Supports 24 x DDR5 DIMMs, a total of 24 x channels, up to 4800MHz	
Memory type	Supports RDIMM, 3DS RDIMM, and up to 6TB of memory	
Storage	Supports 12 x 3.5"hot-swappable bays Supports 8 x 3.5"hot-swappable bays Supports 24 x 2.5"hot-swappable bays Supports up to 4 x U.2 NVMe SSDs 1 x M.2 SSD 2280&22110 size, Supporting PCIe 3.0 x4	Supports 12 x 3.5"hot-swappable bays Supports 8 x 3.5" hot-swappable bays Supports 24 x 2.5"hot-swappable bays Supports up to 8 x U.2 NVMe SSDs 1 x M.2 SSD 2280&22110, Supporting PCIe 3.0 x4
PCIe extension	Supports up to 8 x full height, full length, and dual width GPU cards Supports up to 11 x standard PCIe slots Supports 1 x PCIe 5.0 x16+2 x PCIe 5.0 x8 in addition to 8 x GPUs	Supports up to 10 x full height, full length, and double width GPU cards (8 x cards are optimal) Supports up to 15 x standard PCIe slots, Supports 5 x PCIe 5.0 x16 in addition to 8 x GPUs, and Supports built-in optional 2 x standard single width and half height cards (PCIe 4.0x8)
Network	1 x 1Gb RJ45 dedicated management network port, Supports 1 x OCP3.0 network card, default PCIe 5.0x8, optional x16 signal Optional TTY self-developed network card module 4x1GbE/2x10Gb SFP+/4x10Gb SFP+/2x25Gb SFP28 Supports NCSI	
I/O Ports	Front end: 2 x USB 3.0, 1 x VGA interface Rear: 1 x COM, 2 x USB 3.0 interfaces, 1 x VGA interface, and 1 x RJ45 management port	
Management	Integrated BMC management chip AST2600, Supporting functions such as IPMI2.0, Redfish, SOL, KVM, virtual media, etc	
Security	Optional TPM/TCM security module, intrusion detection when opening the chassis cover, and locking the upper cover of the chassis (tool free) Supports BMC dual flash redundancy design	
Power Supply	Can be configured with 4 x CRPS power modules, Supports hot swapping, and Supports 2+2/3+1/1+1 redundancy mode Optional 1600W/2000W/2400W/2700W Optional platinum or titanium grade power module	
FAN	N+1 redundancy, hot swappable Supports for rear fan module selection	

Dimension	2.5 "hard drive chassis size, width 448x height 175x depth 772mm (including ear hook 792mm) 3.5 "hard drive chassis size, width 448x height 175x depth 822mm (including hanging ears 842mm)
Operating environment	5 °C -35 °C (without direct light)
Operating humidity	8% -90% (non-condensing)
OS	Microsoft Windows Server、Red Hat Enterprise Linux、SUSE Linux Enterprise Server、CentOS、Ubuntu、Oracle Linux、VMware ESXi、Citrix XenServer Please consult sales personnel for specific versions

DATA CENTER SOLUTIONS BASED ON BUSINESS OBJECTIVES

- Maximize the value of your IT and enterprise solutions with a business-focused approach that helps reduce IT complexity, lower costs, and improve efficiency. While leveraging your existing technologies, we seamlessly integrate innovative, customized solutions designed to meet your specific needs. Based on your business applications, we deliver an efficient, agile, open, and intelligent end-to-end data center solution that simplifies IT, addresses business challenges, and continuously creates value for your organization. For more information, please contact your sales representative.

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