

TG580V3

HETEROGENEOUS COMPUTING FLAGSHIP

TG580V3 is a new generation flagship 4U dual-processor 8-card GPU server product launched by Aethlumis, based on the 5th/4th Gen Intel® Xeon® Scalable processors, fully upgraded in CPU, GPU, and I/O specifications, supports various mainstream AI acceleration cards in the industry, and has excellent performance, flexible architecture, strong scalability, rich configuration, and high reliability. It is suitable for application scenarios such as artificial intelligence, high-performance computing, and data analysis.



EXCELLENT PERFORMANCE PREFERRED FOR ARTIFICIAL INTELLIGENCE

- Supports 2 x 5th/4th Gen Intel® Xeon® Scalable processors, 4 x UPI interconnections, supporting up to 350W TDP;
- Supports 10 x 450W GPU cards, providing ultimate heterogeneous computing power;
- Supports GPU to CPU x32 transmission bandwidth, which is twice the industry x16, meeting the requirements of high communication bandwidth scenarios between CPUs and GPUs;
- Supports 32 x DDR5 memory, with a maximum frequency of 5600MHz and a 75% increase in memory bandwidth.

LEADING ARCHITECTURE WITH FLEXIBLE CONFIGURATION

- Supports two configurations: 8-card direct and 10 card switch, supports multiple GPU topologies, and flexibly matches the needs of different application scenarios;
- Supports GPU Direct, support storage/network RDMA/GPU P2P direct data transmission, meet cluster deployment requirements;
- Ultra high scalability, supports up to 15 x standard PCIe slots, can be configured with 8 x dual-width GPUs+7 x PCIe standard cards+1 x OCP 3.0 network card;
- Flexible and optional storage configuration, meeting the needs of high-capacity and high-performance local storage, supporting up to 24 x U.2 NVMe.

STABLE, RELIABLE, AND INTELLIGENT MANAGEMENT

- The key components of the system are designed with redundancy and hot swapping, and support tool free disassembly and assembly to improve maintenance efficiency and system availability;
- Integrate intelligent management chips, provide an open management platform, support multiple management protocols such as IPMI2.0, Redfish, SNMP, etc;
- Supporting various management functions such as remote KVM, virtual media, critical component status monitoring, and abnormal alarms, achieving comprehensive remote system level intelligent management.

TECHNICAL SPECIFICATIONS

GPU computing module	Cards - Direct	8 / 10 cards - PCIe5.0 Switch	8-card/10 card PCIe 4.0 Switch
CPU	Supports 2 x 5th/4th Gen Intel® Xeon® Scalable processors, TDP 350W		
GPU	Supports up to 8 x dual- width GPUs	Supports up to 10 x dual-width GPUs	Supports up to 10 x dual-width GPUs
Memory	Supports 32 x DDR5 DIMMs, up to 5600MHz Supports RDIMM, 3DS RDIMM, and up to 8TB of memory		
Storage controller	Integrated 6Gb/s onboard SATA, optional support for 12Gb/s SAS HBA and 12Gb/s SAS RAID card Supports VMD and VROC		
PCIe extension	Supports up to 12 x PCIe standard slots Supports 8 x GPUs+1 x PCIe 5.0 x16+2 x PCIe 5.0 x8 Supports 8 x GPUs+4 x PCIe 5.0 x8 Optional support for 1 x built-in RAID or SAS HBA standard card (PCIe 4.0x8)	Supports up to 15 x PCIe standard slots Supports 8 x GPUs+5 x PCIe 5.0 x16 Supports 10 x GPUs+1 x PCIe 5.0 x16 Optional supports for 2 x built-in RAID or SAS HBA standard cards (PCIe 4.0x8)	Supports up to 14 x PCIe standard slots Supports 8 x GPUs+2 x PCIe 4.0 x16+2 x PCIe 5.0 x16+1 x PCIe 5.0 x8 Supports 10 x GPUs+1 x PCIe 5.0 x16 Optional support for 1 x built-in RAID or SAS HBA standard card (PCIe 4.0x8)
Local storage	Supports 12 x 3.5 "/2.5" hard drives, optional 8 x 3.5 "/2.5" hard drives Supports up to 4 x U.2 NVMe SSDs Supports 2 x M.2 (SATA 3.0/PCIe 4.0 x4, 2280&22110)	Supports 12 x 3.5 "/2.5" hard drives, optional 8 x 3.5 "/2.5" hard drives Supports 24 x 2.5 "hard drives Supports up to 24 x U.2 NVMe SSDs Supports 2 x M.2 (SATA 3.0/PCIe 4.0 x4, 2280&22110)	Supports 12 x 3.5 "/2.5" hard drives, optional 8 x 3.5 "/2.5" hard drives Supports up to 8 x U.2 NVMe SSDs Supports 2 x M.2 (SATA 3.0/PCIe 4.0 x4, 2280&22110)
Network	1 x 1Gb RJ45 dedicated management network port Supports 1 x OCP3.0 network card, optional PCIe 5.0 x8 or x16 (direct configuration only supports PCIe 5.0 x8), supports NCSI Optional 4x1GbE/2x10Gb SFP+/4x10Gb SFP+/2x25Gb SFP28, supporting other OCP 3.0 compliant network cards		
I/O ports	Front: 2 x USB 3.0 and 1 x VGA interface Rear: 1 x serial port, 2 x USB 3.0 interfaces, 1 x VGA interface, and 1 x RJ45 management port		
Fan	8 x 8056 high-speed fans, hot swappable, N+1 redundant Supports optional configuration of rear fan module		
Power supply	Can configure 4 x CRPS power modules, support hot swapping, and support 2+2/3/1/1+1 redundant mode Optional 1600W/2000W/2400W/2700W, platinum grade power supply		

Management function	Integrated BMC management chip AST2600, supporting functions such as IPMI2.0, Redfish, SOL, KVM, virtual media, etc
Safety functions	Optional TPM/TCM security module, intrusion detection when opening the chassis cover, locking the upper cover of the chassis (tool free) Support BIOS/BMC dual flash redundant design
Chassis size	4U standard rackmount 3.5" HDD chassis size, W 448mm x H 175mm x D 822 mm (including mounting ears 842 mm) 2.5" HDD chassis size, W 448mm x H 175mm x D 772 mm (including mounting ears 792 mm)
Temperature	Operating temperature: 5°C - 35°C Storage temperature: -40°C - 65°C
Humidity	Operating Relative Humidity: 8% to 90% (non-condensing) Storage Relative Humidity: 5% to 95% (non-condensing)
OS	Supports mainstream operating systems such as Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, CentOS, Ubuntu, and Debian Please contact the sales staff for details

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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