

Vantage 22T1 Server

Flexible, Scalable, and Secure



2U 12Bay AMD EPYC 9005 General Server

The dual-socket AMD EPYC SP5 server platform, housed in a 2U chassis with 12 2.5" front storage bays and up to 7 PCIe 5.0 x16 expansion slots, can fulfill various applications. In addition to the onboard 2-port GbE LAN, it also supports one OCP3 NIC mezzanine.

Applications

A general-purpose server that provides scalable capacity and flexibility, suitable for various applications such as cloud computing services, content delivery networks, network function virtualization, 5G core and edge telecom micro data centers, and AI inference and machine learning.

Key Features

- Dual AMD Socket SP5 supporting AMD EPYC™ 9005/9004 series processors with up to 400W TDP for extreme compute workloads.
- 24 DDR5 DIMM slots across 12 memory channels (1DPC) delivering up to 6400 MT/s and massive memory capacity for memory-intensive applications.
- Multiple PCIe 5.0 x16 slots across three risers, supporting full-height, full-length GPU cards for AI, HPC, and acceleration workloads.
- Supports up to 12 hot-swap drives, including SATA, SAS, and PCIe 4.0 NVMe U.2, plus dual M.2 slots for OS or boot drives.

Technical details Vantageo 22T1

Form Factor	2U Rackmount
Processor	Dual AMD socket SP5 supporting AMD EPYC™ 9005/9004 Series processors, up to TDP 400W (*CPUs with TDP over 360W only supported under specific conditions.)
Memory	(24) DDR5 DIMM slots, 12 channels(1DPC), RDIMM/RIMM-3DS - Max. frequency 6400MT/s - Max. capacity per DIMM: RDIMM: 96GB/ 128 GB / RDIMM-3DS: 256GB
Expansion Slots	Riser 1: (1) PCIe 5.0 x16 FHFL slot from CPU0 supports GPU card (1) PCIe 5.0 x16 FHFL slot (x8 signal) from CPU0 (1) PCIe 5.0 x16 FHHL slot (x8 signal) from CPU0 Riser 2: (1) PCIe 5.0 x16 FHFL slot from CPU1 supports GPU card (1) PCIe 5.0 x16 FHFL slot (x8 signal) from CPU1 (1) PCIe 5.0 x16 FHHL slot (x8 signal) from CPU1 Riser 3: (1) PCIe 5.0 x16 FHFL slot from CPU1 supports GPU card
Networking	(2) 10G SFP+ Ethernet Ports (Intel® X710-BM2) through OCP3.0 NIC OCP-321
Storage	(12) Hot-swap 3.5"/2.5" drive bays support (8) SATA 3.0/SAS + (4) U.2 PCIe 4.0 NVMe * SAS card is required for SAS device support (2) M.2 2280 PCIe3.0 x2 ports from CPU0
Raid Controller	Broadcom 93XX / 94XX / 95XX / 96XX / PCIe SAS Raid Card 12Gbps 1GB/2GB/4GB/ 8GB cache, support Raid, 0, 1, 5, 6, 10, 50 ,60 with battery backup Broadcom 93XX / 94XX / 95XX / 96XX / PCIe SAS Raid Card 12Gbps 8GB cache, External 12G SAS Port support Raid, 0, 1, 5, 6, 10, 50 ,60 with battery backup(Supports NVMe) Raid controller cooling with heat sink
Front I/O	(12) Hot-swap 3.5"/2.5" drive bays (1) USB 3.0 Type-A Port (1) USB 2.0 Type-A Port (1) VGA D-Sub Port (1) System Power LED button (1) UID LED button (1) Reset button (4) Status LEDs: Fault/LAN/M.2
Rear I/O Ports	(2) 1000Base-T Ethernet ports (1) 1000Base-T Dedicated Server Management port, IPMI Management, WEB based HTTPs Support (2) USB 3.0 Type-A port (1) VGA D-Sub port (1) COM RJ45 port (1) UID LED button External DVD R/RW USB keyboard and Mouse Support

Technical details

Power Supply	(1+1) Redundant 2000W CRPS 80+ Platinum
Environmental	System Operating Temperature: 0°C ~ 35°C Non-operating Temperature: -20°C ~ 70°C Non-operating Relative Humidity: 5% to 85% (non-condensing)
Dimension (D x W x H)	438mm (17.2") Wx 87mm (3.4") Hx 770mm (30.3") D
Operating buttons	On/off switch ID button Reset button
Status LEDs	Power ON Customer self service Light path diagnostic led Hard disks access

Certified or supported operating system & virtualization Software	Compatible with mainstream server operating systems: Microsoft Windows Sever - 2025 Datacenter Microsoft Windows Sever - 2025 Standard Microsoft Windows Sever - 2022 Datacenter Microsoft Windows Sever - 2022 Standard Microsoft Windows Sever - 2019 Datacenter Microsoft Windows Sever - 2019 Standard Microsoft-Hyper V Red Hat Enterprise Linux 9.0 - 9.x Red Hat Enterprise Linux 8.6 - 8.x Red Hat Enterprise Linux 8.4 LTS, 8.5 and Late Red Hat Open stack 17.0 - 17.X Red Hat Openshift Virtualization Red Hat Openshift Kubernetes Open Source Linux KVM SUSE Linux Enterprise Server 15 SP3 and Later SUSE Linux Enterprise Server 15.5 Virtualization (KVM and XEM) Ubuntu Server 21.10 & 22.04 LTS and Later VMWare vSphere 9.0 VMWare vSphere 8.0 VMWare vSphere 7.0 VM Essential Docker.
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Technical details

Server Management	AST2600 with dual BMC supports IPMI and Redfish (1) 1000Base-T Dedicated Server Management Port Dual BIOS22, (1) MicroSD card slot for BMC log RESTful API to discover and deploy servers Web Management interface Monitoring of critical components like Fan, Power ,CPU , HDD, Raid Telemetry details Support sending alarm notification securely to OEM / Personal for troubleshooting <u>Vantageo Manage Grid</u>
Security	TPM 2.0(Trusted Platform Module), Authenticated BIOS, Secure Boot, Silicon Root of Trust, Disk Encryption, Hardware Root of Trust Sign firmware updates and BIOS code / Scan for malicious firmware Malicious code free design Secured Configuration Upgrade Secured Default Passwords Secure Erase Advanced Encryption Standard (AES) Rapid OS Recovery Secure Recovery Infrastructure lifecycle management-Checks Hardware security identifies configuration drift indicative of a breach.
BIOS	UEFI compliant BIOS Flash EPROM update by software BIOS settings save and restore Local BIOS update from USB device Secure boot support
Remote Management	Remote management supports hardware components, Power on/off and boot process. Supports Management log , Audit Logs and dedicated Management roles bases on users Ports can be integrate with industry wide KVM solution. Remote KVM Support for Virtual Media Redirection Monitoring fan, power supply, memory, CPU, RAID, NIC for failures. Remote management supports telemetry streaming and Idle Server Detection. Supports Role Based Security through LDAP or Local and able to provide pre-failure alarms for CPU, Memory and HDD by SMTP. Out of band management

Technical details

Supported Components

CPU

Name	# of CPU Cores	# of Threads	Max. Boost Clock	Base Clock	L3 Cache	Default TDP
AMD EPYC™ 9965	192	384	Up to 3.7 GHz	2.25 GHz	384 MB	500W
AMD EPYC™ 9845	160	320	Up to 3.7 GHz	2.1 GHz	320 MB	390W
AMD EPYC™ 9825	144	288	Up to 3.7 GHz	2.2 GHz	384 MB	390W
AMD EPYC™ 9755	128	256	Up to 4.1 GHz	2.7 GHz	512 MB	500W
AMD EPYC™ 9745	128	256	Up to 3.7 GHz	2.4 GHz	256 MB	400W
AMD EPYC™ 9655P	96	192	Up to 4.5 GHz	2.6 GHz	384 MB	400W
AMD EPYC™ 9655	96	192	Up to 4.5 GHz	2.6 GHz	384 MB	400W
AMD EPYC™ 9645	96	192	Up to 3.7 GHz	2.3 GHz	256 MB	320W
AMD EPYC™ 9575F	64	128	Up to 5 GHz	3.3 GHz	256 MB	400W
AMD EPYC™ 9565	72	144	Up to 4.3 GHz	3.15 GHz	384 MB	400W
AMD EPYC™ 9555P	64	128	Up to 4.4 GHz	3.2 GHz	256 MB	360W
AMD EPYC™ 9555	64	128	Up to 4.4 GHz	3.2 GHz	256 MB	360W
AMD EPYC™ 9535	64	128	Up to 4.3 GHz	2.4 GHz	256 MB	300W
AMD EPYC™ 9475F	48	96	Up to 4.8 GHz	3.65 GHz	256 MB	400W
AMD EPYC™ 9455P	48	96	Up to 4.4 GHz	3.15 GHz	256 MB	300W
AMD EPYC™ 9455	48	96	Up to 4.4 GHz	3.15 GHz	256 MB	300W
AMD EPYC™ 9375F	32	64	Up to 4.8 GHz	3.8 GHz	256 MB	320W
AMD EPYC™ 9365	36	72	Up to 4.3 GHz	3.4 GHz	192 MB	300W
AMD EPYC™ 9355P	32	64	Up to 4.4 GHz	3.55 GHz	256 MB	280W
AMD EPYC™ 9355	32	64	Up to 4.4 GHz	3.55 GHz	256 MB	280W
AMD EPYC™ 9335	32	64	Up to 4.4 GHz	3 GHz	128 MB	210W
AMD EPYC™ 9275F	24	48	Up to 4.8 GHz	4.1 GHz	256 MB	320W
AMD EPYC™ 9255	24	48	Up to 4.3 GHz	3.2 GHz	128 MB	200W
AMD EPYC™ 9175F	16	32	Up to 5 GHz	4.2 GHz	512 MB	320W
AMD EPYC™ 9135	16	32	Up to 4.3 GHz	3.65 GHz	64 MB	200W
AMD EPYC™ 9115	16	32	Up to 4.1 GHz	2.6 GHz	64 MB	125W
AMD EPYC™ 9015	8	16	Up to 4.1 GHz	3.6 GHz	64 MB	125W
AMD EPYC™ 9754S	128	128	Up to 3.1 GHz	2.25 GHz	256 MB	360W
AMD EPYC™ 9754	128	256	Up to 3.1 GHz	2.25 GHz	256 MB	360W
AMD EPYC™ 9734	112	224	Up to 3 GHz	2.2 GHz	256 MB	340W
AMD EPYC™ 9684X	96	192	Up to 3.7 GHz	2.55 GHz	1152 MB	400W
AMD EPYC™ 9654P	96	192	Up to 3.7 GHz	2.4 GHz	384 MB	360W
AMD EPYC™ 9654	96	192	Up to 3.7 GHz	2.4 GHz	384 MB	360W
AMD EPYC™ 9634	84	168	Up to 3.7 GHz	2.25 GHz	384 MB	290W
AMD EPYC™ 9554P	64	128	Up to 3.75 GHz	3.1 GHz	256 MB	360W
AMD EPYC™ 9554	64	128	Up to 3.75 GHz	3.1 GHz	256 MB	360W
AMD EPYC™ 9534	64	128	Up to 3.7 GHz	2.45 GHz	256 MB	280W
AMD EPYC™ 9474F	48	96	Up to 4.1 GHz	3.6 GHz	256 MB	360W
AMD EPYC™ 9454P	48	96	Up to 3.8 GHz	2.75 GHz	256 MB	290W
AMD EPYC™ 9454	48	96	Up to 3.8 GHz	2.75 GHz	256 MB	290W
AMD EPYC™ 9384X	32	64	Up to 3.9 GHz	3.1 GHz	768 MB	320W
AMD EPYC™ 9374F	32	64	Up to 4.3 GHz	3.85 GHz	256 MB	320W
AMD EPYC™ 9354P	32	64	Up to 3.8 GHz	3.25 GHz	256 MB	280W
AMD EPYC™ 9354	32	64	Up to 3.8 GHz	3.25 GHz	256 MB	280W
AMD EPYC™ 9334	32	64	Up to 3.9 GHz	2.7 GHz	128 MB	210W
AMD EPYC™ 9274F	24	48	Up to 4.3 GHz	4.05 GHz	256 MB	320W
AMD EPYC™ 9254	24	48	Up to 4.15 GHz	2.9 GHz	128 MB	200W
AMD EPYC™ 9224	24	48	Up to 3.7 GHz	2.5 GHz	64 MB	200W
AMD EPYC™ 9184X	16	32	Up to 4.2 GHz	3.55 GHz	768 MB	320W
AMD EPYC™ 9174F	16	32	Up to 4.4 GHz	4.1 GHz	256 MB	320W
AMD EPYC™ 9124	16	32	Up to 3.7 GHz	3 GHz	64 MB	200W

Technical details

Memory	SK Hynix / DDR5 / ECC / Registered DIMM / 96GB / 2R*4 / 6400MHz / HMCGM4MHBRB505N / 24DIMMs SK Hynix / DDR5 / ECC / Registered DIMM / 32GB / 2R*8 / 5600MHz / HMCG88AGBRA186N / 24DIMMs SK Hynix / DDR5 / ECC / Registered DIMM / 32GB / 1R*4 / 5600MHz / HMCG84AGBRA190N / 24DIMMs Samsung / DDR5 / ECC / Registered DIMM / 96GB / 2R*4 / 6400MHz / M321RYGA0PB2-CCPKC / 24DIMMs Samsung / DDR5 / ECC / Registered DIMM / 32GB / 2R*8 / 5600MHz / M321R4GA3PB0-CWM / 24DIMMs Samsung / DDR5 / ECC / Registered DIMM / 64GB / 2R*4 / 5600MHz / M321R8GA0PB0-CWM / 24DIMMs Samsung / DDR5 / ECC / Registered DIMM / 16GB / 1R*8 / 4800MHz / M321R2GA3BB6-CQK / 24DIMMs Samsung / DDR5 / ECC / RegisteredDIMM / 16GB / 1R*8 / 4800MHz / M321R2GA3BB6-CQK / 24DIMMs Samsung / DDR5 / ECC / Registered DIMM / 128GB / 4R*4 / 4800MHz / M321RAGA0B20-CWK / 24DIMMs Samsung / DDR5 / ECC / Registered DIMM / 64GB / 2R*4 / 4800MHz / M321R8GA0BB0-CQK / 24DIMMs Samsung / DDR5 / ECC / RegisteredDIMM / 64GB / 2R*4 / 4800MHz / M321R8GA0BB0-CQK / 24DIMMs Samsung / DDR5 / ECC / Registered DIMM / 32GB / 2R*8 / 4800MHz / M321R4GA0BB0-CQK / 24DIMMs Samsung / DDR5 / ECC / Registered DIMM / 64GB / 2R / 4800MHz / M321R8GA0BB0-CQKVG / 24DIMMs Micron / DDR5 / ECC / Registered DIMM / 64GB / 2R*4 / 6400MHz / MTC40F2046S1RC64BD2 / 24DIMMs Micron / DDR5 / ECC / Registered DIMM / 64GB / 2R*4 / 5600MHz / MTC40F2046S1RC56BD1 / 24DIMMs Micron / DDR5 / ECC / Registered DIMM / 32GB / 2R*8 / 5600MHz / MTC20F2085S1RC56BD1 / 24DIMMs Micron / DDR5 / ECC / Registered DIMM / 96GB / 2R*4 / 4800MHz / MTC40F204WS1RC48BB1 / 24DIMMs Micron / DDR5 / ECC / Registered DIMM / 48GB / 2R*8 / 4800MHz / MTC20F208XS1RC48BB1 / 24DIMMs Micron / DDR5 / ECC / Registered DIMM / 64GB / 2R*8 / 4800MHz / MTC40F2046S1RC48BA1 / 24DIMMs Micron / DDR5 / ECC / Registered DIMM / 32GB / 2R*8 / 4800MHz / MTC20F2085S1RC48BA1 / 24DIMMs Micron / DDR5 / ECC / RegisteredDIMM / 32GB / 2R*8 / 4800MHz / MTC20F2085S1RC48BA1 / 24DIMMs Micron / DDR5 / ECC / Registered DIMM / 64GB / 2R*4 / 4800MHz / MTC40F2046S1RC48BA1 / 24DIMMs Micron / DDR5 / ECC / Registered DIMM / 16GB / 1R*8 / 4800MHz / MTC10F1084S1RC48BA1 / 24DIMMs Micron / DDR5 / ECC / Registered DIMM / 128GB / 4R*4 / 4800MHz / M321RAGA0B20-CWK / 24DIMMs
SAS HDD	HDD-600GB-SAS-2.5"-10K-12Gb/s-2.5-inch hard disk box HDD-1.2TB-SAS-2.5"-10K-12Gb/s-TOSHIBA-2.5-inch hard disk box HDD-1.8TB-SAS-2.5"-10K-12Gb/s-2.5-inch hard disk box HDD-2.4TB-SAS-2.5"-10K-12Gb/s-2.5-inch hard disk box HDD-1.2TB-SAS-2.5"-10K-12Gb/s-TOSHIBA-3.5-inch hard disk box HDD-12TB-SAS-3.5"-7.2K-12Gb/s-3.5-inch hard disk box HDD-1.8TB-SAS-2.5"-10K-12Gb/s-3.5-inch hard disk box HDD-2.4TB-SAS-2.5"-10K-12Gb/s-3.5-inch hard disk box HDD-4TB-SAS-3.5"-7.2K-12Gb/s-WD-3.5-inch hard disk box HDD-600GB-SAS-2.5"-10K-12Gb/s-SEAGATE-2.5-inch hard disk box HDD-600GB-SAS-2.5"-10K-12Gb/s-SEAGATE-3.5-inch hard disk box HDD-600GB-SAS-2.5"-10K-12Gb/s-3.5-inch hard disk box
SATA HDD	HDD-12TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box HDD-14TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box HDD-16TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box HDD-16TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box HDD-20TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box HDD-2TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box HDD-4TB-SAS-3.5"-7.2K-12Gb/s-WD-3.5-inch hard disk box HDD-4TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box HDD-8TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box HDD-8TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box HDD-24TB-SATA-3.5"-7.2K-6Gb/s-3.5-inch hard disk box

Technical details

SSD SATA	SSD-480GB-SATA-2.5"-6Gb/s-Intensive read type-Samsung PM893-2.5-inch hard disk box SSD-960GB-SATA-2.5"-6Gb/s-Intensive read type-Samsung PM893-2.5-inch hard disk box SSD-1.92TB-SATA-2.5"-6Gb/s-Intensive read type-Samsung PM893-2.5-inch hard disk box SSD-1.92TB-SATA-2.5"-6Gb/s-Intensive read type-Samsung PM893-3.5-inch hard disk box SSD-240GB-SATA-2.5"-6Gb/s-Intensive read type-Intel S4510-2.5-inch hard disk box SSD-240GB-SATA-2.5"-6Gb/s-Intensive read type-Intel S4510-3.5-inch hard disk box SSD-3.84TB-SATA-2.5"-6Gb/s-Read-write hybrid-Samsung PM897-2.5-inch hard disk box SSD-3.84TB-SATA-2.5"-6Gb/s-Read-write hybrid-Samsung PM897-3.5-inch hard disk box SSD-3.84TB-SATA-2.5"-6Gb/s-Intensive read type-Intel S4520-2.5-inch hard disk box SSD-3.84TB-SATA-2.5"-6Gb/s-Intensive read type-Intel S4520-3.5-inch hard disk box SSD-480GB-SATA-2.5"-6Gb/s-Read-write hybrid-Samsung PM897-2.5-inch hard disk box SSD-480GB-SATA-2.5"-6Gb/s-Read-write hybrid-Samsung PM897-3.5-inch hard disk box SSD-480GB-SATA-2.5"-6Gb/s-Intensive read type-Samsung PM893-3.5-inch hard disk box SSD-480GB-SATA-M.2-2280-6Gb/s-Intensive read type-Intel S4520 SSD-480GB-SATA-M.2-2280-6Gb/s-Intensive read type-Micron SSD-7.68TB-SATA-2.5"-6Gb/s-Intensive read type-Intel S4520-2.5-inch hard disk box SSD-7.68TB-SATA-2.5"-6Gb/s-Intensive read type-Intel S4520-3.5-inch hard disk box SSD-960GB-SATA-2.5"-6Gb/s-Read-write hybrid-Intel S4620-2.5-inch hard disk box SSD-960GB-SATA-2.5"-6Gb/s-Read-write hybrid-Intel S4620-3.5-inch hard disk box SSD-960GB-SATA-2.5"-6Gb/s-Intensive read type-Samsung PM893-3.5-inch hard disk box SSD-960GB-SATA-M.2-2280-6Gb/s-Intensive read type-Micron
NVME SSD	SSD-960GB/1.92TB/ 3.84TB / 7.68TB and 15.36TB/30.72TB/61.44TB-NVMe PCIe-2.5 -PCIe 4.0*4-Intensive read type SSD-1.6TB/3.2TB/6.4TB / 12.8 TB-NVMe PCIe-2.5 -PCIe 4.0*4-Read-write hybrid
Fibre Channel Card	PCIe FC HBA-LPE31002-2x16G SFP+ -PCIe3.0x8-with optical module PCIe FC HBA-LPe32002-2x32G SFP+ -PCIe3.0x8-with optical module
NIC card	Intel E810-2CQDA2 dual port upto 100G PCIe Ethernet Card PCIe NIC-I350-Intel-2x1G-RJ45-PCIe3.0x8 PCIe NIC-I350-Intel-4x1G-RJ45-PCIe3.0x8 PCIe NIC-MCX512A-ACAT-Mellanox CX5-2x25G SFP28-PCIe3.0x8-no optical module PCIe NIC-X710-Intel-2x10G-RJ45-PCIe3.0x8 PCIe NIC-NS312-Mellanox CX4-2x25G SFP28-PCIe3.0x8-no optical module PCIe NIC-MCX512A-ACUT-Mellanox CX5-2x25G SFP28-PCIe3.0x8-no optical module PCIe NIC-MCX623106AN-CDAT-Mellanox CX6-2x100G QSFP56-PCIe4.0x16-no optical module PCIe NIC-XXV710-Intel-2x25G SFP28-PCIe3.0x8-no optical module 1P/2P PCIe Mellanox InfiniBand/Ethernet PCIe Adapter 100G/200G/400G *Network Card Support Secure Firmware Boot

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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