

Vantage 2520-WS

Flexible, Scalable, and Secure



The Vantage 2520-WS is a robust and versatile server motherboard designed for high-performance enterprise applications. It supports dual Intel Xeon E5-2600 v3/v4 processors, providing exceptional processing power for demanding workloads. With up to 2TB of DDR4 ECC memory across 16 DIMM slots, it offers substantial memory capacity, making it ideal for virtualization and data-intensive tasks.

Overview

The Vantage 2520-WS server motherboard is designed for enterprise environments, offering a robust set of features that cater to high-performance computing, scalability, and reliability.

Features

Dual Processor Support:

- Supports two Intel Xeon E5-2600 v3/v4 series processors.
- Intel C612 Chipset
- High core count and multi-threading capabilities, ideal for intensive workloads.

High Memory Capacity and Performance:

- Up to 2TB DDR4 ECC LRDIMM.
- 16 DIMM slots for maximum memory density.
- Supports DDR4 memory speeds up to 2133 MHz, enhancing performance for memory-intensive applications.

Advanced Networking:

- Dual 10GBase-T Ethernet ports with Intel X540 controller.
- High-speed network connectivity suitable for data centers and cloud environments.
- Dedicated IPMI LAN port for out-of-band management.

Storage and Expansion Options:

- 10 SATA3 (6Gb/s) ports for high-speed storage devices.
- 2 Mini-SAS HD connectors for 8 additional SAS3 (12Gb/s) ports (via optional add-on card).
- Supports RAID 0, 1, 5, 10 via Intel Rapid Storage Technology enterprise (RSTe), ensuring data redundancy and protection.

Comprehensive I/O Connectivity:

- Multiple USB ports: 5 USB 3.0 ports and 6 USB 2.0 ports on the rear, plus internal headers.
- VGA port for video output via the ASPEED AST2400 BMC.
- Serial COM port for legacy device support.

Vantage 2520-WS

- Six PCIe 3.0 slots (3 x16, 3 x8) for add-on cards.
- Supports GPUs, network cards, and other expansion devices, making it highly adaptable for different workloads.

Introduction

The Vantageo 2520-WS is a high-performance server motherboard designed to meet the needs of enterprise-level computing environments. Featuring dual LGA 2011-3 sockets, it supports Intel Xeon E5-2600 v3/v4 processors, making it a powerful platform for multi-core processing tasks.

With its extensive memory capacity, advanced networking capabilities, and robust storage options, the Vantageo 2520-WS is ideal for applications requiring high reliability, scalability, and performance. Whether used in data centers, cloud computing, virtualization, or high-performance computing, this motherboard provides the essential features and flexibility needed for demanding workloads. The inclusion of integrated management tools and support for cutting-edge technologies further enhances its appeal for mission-critical operations.

Integrated Management and Monitoring:

- Integrated IPMI 2.0 with KVM-over-LAN support, powered by ASPEED AST2400.
- Remote management features allow for monitoring and controlling the system over the network.
- Enhanced security with TPM (Trusted Platform Module) support.

Reliability and Durability:

- ECC memory support to detect and correct single-bit memory errors, increasing system reliability.
- Designed for continuous operation with a wide range of environmental tolerances.
- Robust power delivery system with dual 8-pin CPU power connectors and a 24-pin ATX connector.

BIOS Features:

- UEFI BIOS with support for advanced configurations, ACPI, PXE boot, Wake-on-LAN, and SMBIOS.
- Customizable BIOS settings for optimized performance and security.

Form Factor and Compatibility:

- Extended ATX (E-ATX) form factor, ensuring compatibility with a wide range of server chassis.
- Standardized design for easy integration into existing infrastructure.

Use Cases:

- Ideal for virtualization, database management, cloud computing, high-performance computing, and enterprise-grade applications.
- Suitable for data centers and environments requiring scalable, reliable, and high-performance server solutions.

These features make the Vantageo 2520-WS a versatile and powerful choice for a wide range of demanding server applications.



Vantageo 2520-WS	
Features	Technical Specification
Chipset	Intel® C612
CPU	Intel® Xeon® processor E5-2600 v3, Intel® Xeon® processor E5-2600 v4. Dual Socket R3 (LGA 2011) supported, CPU TDP support Up to 145W, 1 QPI up to 9.6GT/s
Cores / Cache	Up to 22 cores / Up to 55MB cache
Memory Capacity	Up to 2TB 3DS ECC LRDIMM, in 16 DIMM slots16x 288-pin DDR4 DIMM slots
Memory Type	2400 /2133/1866/1600MHz ECC DDR4 SDRAM 72-bit
DIMM Sizes	RDIMM: 4GB, 8GB, 16GB, 32GB, 64GB LRDIMM: 32GB, 64GB 3DS LRDIMM: 128GB
Memory Voltage	1.2V
SATA	Intel® C612 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10
AHCI SATA	SATA3 (6Gbps); RAID 0, 1, 5, 10
SCU SATA	SATA3 (6Gbps); RAID 0, 1, 5, 10
IPMI	Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support ASPEED AST2400 BMC
Network Controllers	Dual LAN with Intel® X540 10GBase-T Ethernet Controller Single LAN with Virtual Machine Device Queues reduce I/O overhead Single LAN with Supports 10Base-T, 100BASE-TX, and 1000BASE-T, RJ45 output
Graphics	Aspeed AST2400 BMC
SATA	10 SATA3 (6Gbps) port
LAN	2 RJ45 10GBase-T ports 1 RJ45 Dedicated IPMI LAN port
USB	6 USB 2.0 ports (2 rear + 4 headers) 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)
Video Output	1 VGA port
Serial Port / Header	2 COM Ports (1 rear, 1 header) 2 fast UART 16550 serial
TPM	1 TPM Header
PCI-E	3 PCI-E 3.0 x16, 3 PCI-E 3.0 x8
BIOS Type	128Mb SPI Flash EEPROM with AMI BIOS
BIOS Features	Plug and Play (PnP) PCI 2.3 ACPI 1.0 / 2.0 / 3.0 / 4.0 USB Keyboard support SMBIOS 2.7.1 UEFI 2.3.1
Power Configurations	ACPI Power Management Power-on mode for AC power recovery
Voltage	+3.3V, +5V, +5V standby, 3.3V standby, 5 Phase-switching voltage regulator, Memory Voltages, Monitors for CPU Cores, VBAT
FAN	8x 4-pin fan headers (up to 8 fans), 8x fans with tachometer monitoring, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control
SATA	Monitoring for CPU and chassis environment, CPU thermal trip support, Thermal Control for 8 Fan Connectors, Thermal Monitor 2 (TM2) support

Disclaimer: Technical data is subject to modification and delivery subject to availability. . Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.

Vantageo 2520-WS

Features	Technical Specification
LED	CPU / System Overheat LED, Suspend static indicator LED, UID/Remote UID
Other Features	Chassis intrusion detection, Chassis intrusion header, RoHS, SDDC
Processor Support	Dual and Single Intel® and AMD processors
Dimensions	Height 3.5" (89 mm) Width 17.2" (437 mm) Depth 25.5" (647 mm) Gross Weight 33 lbs (14.97 kg) Packaging (W x H x L) 24" (610 mm) x 9" (229 mm) x 34" (864 mm)
Expansion Slots	7x Low-profile expansion slot(s)
Drive Bays	Optional 2x 2.5" hot-swap SAS3/SATA drive bay Optional 2x 3.5" fixed drive bay 8x 3.5" (tool-less) or 2.5" (screw) hot-swap SAS3/SATA drive bay
Backplane	8-Port 2U SAS3 12Gbps TQ backplane, support up to 8x 3.5-inch SAS3/SATA3 HDD/SSD
Peripheral Drives	Optional 1x slim DVD-ROM drive bay Optional 1x COM port tray Optional 2x USB 2.0 ports Optional 2x USB 3.0 ports
Button	Power On/Off button System Reset button
LED	Power status LED HDD activity LED System Information LED Power Fail LED 2 Network Activity LEDs
Fans	3x 80mm heavy duty fan(s) with PWM fan(s) speed control
System Monitoring	Optional Chassis intrusion switch
Power Supply	600W / 650W 1U Redundant Power Supply
Operating Environment	Operating Temperature Range 10°C - 35°C (50°F - 95°F) Non-Operating Temperature Range -40°C - 70°C (-40°F - 158°F) Operating Relative Humidity Range 8% - 90% (non-condensing)

Disclaimer: Technical data is subject to modification and delivery subject to availability. . Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.