

PRODUCT BRIEF | 2U 24 NVMe PCI Gen 4 Drive Multi-Node Storage Server

VSS2249PQ

Ultra Performance Storage Server Using Gen 4 PCIe NVMe SSDs and AMD EPYC™ Milan CPUs

The Viking Enterprise Solutions (VES) VSS2249PQ is a high-performance data storage solution designed to meet the demanding requirements of modern data centers, particularly those utilizing virtualization. Its robust features and compatibility with VMware environments make it an ideal choice for businesses seeking reliable, scalable, and cost-effective storage solutions.

The VSS2249PQ storage server is a high-performance solution designed for demanding workloads. It offers 24 U.2 PCIe Gen 4 NVMe drive bays in a compact 2U form factor. Powered by AMD EPYC Milan CPUs, each server module provides 8 DIMM slots and four x16 PCIe Gen 4 slots for flexible expansion.

The server's non-blocking architecture ensures optimal performance by directly connecting 12 NVMe SSDs to each CPU via x4 PCIe Gen 4 lanes. This design, combined with 96 PCIe lanes for drives and networking, makes the VSS2249PQ an ideal choice for high-performance applications, such as hyper-converged, virtualization, edge computing storage, analytics, machine learning, AI, OLTP databases, high frequency trading, as well as modeling, simulation, scientific research, and other high performance use cases.



FEATURES

- Dimensions: 3.43 in. H x 17.2 in. W x 27.44 in. D (87 mm H x 438 mm W x 697 mm D)
- Latest AMD CPU technology provides 128 Gen 4 PCIe lanes per CPU and 24 hot-pluggable Gen 4 PCIe NVMe SSDs
- Highest performance – each SSD interface via x4 lane PCIe Gen 4 link
- VMware Ready certification
- Management interface for drive access and provisioning
- Hot-pluggable servers, power supplies, fans, and drives
- Up to 24 U.2 (SFF-8639) SSDs utilizing PCIe and NVMe protocols, (up to 25W per drive)
- Environmental operation up to 35°C ambient inlet
- Standard chassis customization and branding available
- Optional rail kit with CMA (cable management assembly)
- Optional TPM (trusted platform module)

VES offers a broad portfolio of product offerings:

- Leading-edge performing SSD arrays, SAS & NVMe
- Leading-edge high performance and high availability solutions
- Industry leading cold storage & object storage solutions
- Purpose-built compute and storage platforms

Working with VES provides an accelerated time-to-market for all server and storage product needs, and enables customers to leverage Viking Enterprise Solutions' portfolio of proven product designs. Customers are also backed by an industry-leading design team and world-class electronics manufacturing services organization.

A front load enclosure with 24 U.2 NVMe drives. Each server has access to only 12 drives, providing highest possible performance.



VSS2249PQ

AC Power

- ▶ Nominal input range: 200-240V AC
- ▶ Input frequency: 50-60 Hz
- ▶ Power source: dual redundant 1600W
- ▶ Input current: 4 A max @ 180V AC per PSU
- ▶ Inrush current: 40 A peak per PSU
- ▶ Maximum system output power rating: 2200W

Hot-swappable Components

- ▶ Two server modules
- ▶ Six fans for redundancy
- ▶ Two AC to DC 1600W power modules
- ▶ Two independent AC power inputs
- ▶ U.2 (SFF-8639) SSDs utilizing Gen 4 PCIe and NVMe technology (hot pluggable)

Firmware

- ▶ IPMI and Redfish (R) management
- ▶ CLI and GUI control for drive management & status of the enclosure

Third Party Interoperability and Certifications

- ▶ VMWare Ready Platform and Compute

2U Enclosure

- ▶ Dimensions: 3.43 in. H X 17.2 in. W X 27.44 in. D (87 mm H X 438 mm W X 697 mm D)
- ▶ Weight with drives, CMA, and rail kit: 58.7lbs (26.7 kg) max
- ▶ Optional rail kit with CMA (cable management assembly)
- ▶ Optional TPM (trusted platform module)

Failure Notifications

- ▶ Status LEDs for the enclosure, drives, servers, and fans

Performance

- ▶ 24-drive capacity
- ▶ Up to 25W per drive

Operating Environment

- ▶ Temperature: 5°C to 35°C
- ▶ Relative humidity: 20% to 80% (non-condensing)
- ▶ Altitude: -200 ft to 10,000 ft
- ▶ Shock: 5G at 11ms, 1/2 sine wave pulse
- ▶ Vibration: 0.10G at 5 Hz to 500 Hz

Non-Operating Environment

- ▶ Temperature: -40°C to 60°C
- ▶ Relative humidity: 10% to 90% (non-condensing)
- ▶ Altitude: -200 ft to 40,000 ft
- ▶ Shock: 10G at 11ms, half sine wave pulse
- ▶ Vibration: 0.5G at 5 Hz to 500 Hz

Drive Partitioning

- ▶ Management software controls the visibility and access to each drive

Safety Standards

- ▶ IEC 62368 -1:2018

Quality Standards

- ▶ Manufactured under an ISO 9002 registered quality system

Servers

- ▶ AMD EPYC™ processors
- ▶ Eight lanes Gen 3 PCIe NTB
- ▶ Each CPU sees 12 drives
- ▶ Each drive is single ported with x4 PCIe Gen 4 connection direct to CPU for maximum performance

Electromagnetic Emissions & Immunity Standards

- ▶ EN 55035:2017
- ▶ EN 55024:2010
- ▶ EN 55032:2015 + AC:2016
- ▶ EN 61000-3-2:2014
- ▶ EN 61000-3-3:2013
- ▶ FCC 47 CFR PART 15 SUBPART B
- ▶ ICES-003 ISSUE 6:2016

Monitoring & Reporting

- ▶ Monitors temperature, power, cooling (including fan speed control), drives, as well as error rates and quality of service
- ▶ Reporting of all serial number, part number, and revisions of the server modules, power supplies, drives & chassis

