



PRODUCT BRIEF | 2U 24 NVMe PCI Gen 4 drive Storage Server

VSS2249P

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

The Viking Enterprise Solutions (VES) VSS2249P storage Server offers 24, 2.5-inch U.2 (SFF-8639) SSDs utilizing the PCIe Gen 4 NVMe interface combined with two server modules equipped with AMD EPYC Rome CPUs. This is a dual-node system: each server has access to 12 NVMe SSDs via x4 PCIe Gen 4 lanes for optimum performance.

The enclosure contains two hot swappable server modules. Each of the server modules includes an AMD EPYC™ Rome CPU, with two x16 PCIe Gen4 slots and one OCPNIC v3.0 that supports Gen 4 PCIe add-in cards, and up to 8 DIMMs. The VSS2249P fits into an industry standard 19-inch 1.0 meter rack. The storage server's flexible configuration allows it to be deployed in a variety of applications. This extremely fast 2U storage server supports 96 PCIe lanes to the drives and network, delivering a non-blocking architecture.

The VSS2249P alleviates job pipeline congestion, a common limitation caused by I/O bottlenecks in many high-performance applications, such as 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.

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

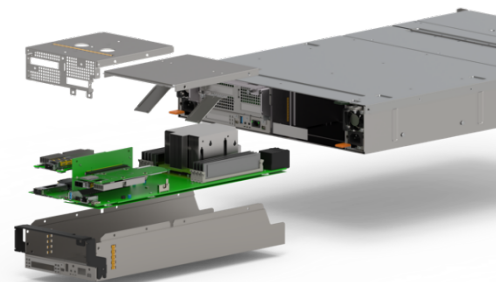
FEATURES

- ▶ 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
- ▶ 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)



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.



VSS2249P

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

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)

Drive Partitioning

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

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

