

PRODUCT BRIEF | SAS-4 High-Density and High-Availability JBOD

VDS4607

Performance-oriented Enterprise Class Expansion Storage Enclosure

Viking Enterprise Solutions' VDS4607 JBOD enclosure is a high-density SAS-4 data storage solution that packages 60, 3.5-inch SAS or SATA HDDs with two active 24Gb/s I/O modules. The VDS4607 JBOD enclosure offers best-in-class performance and capacity, space-saving density, and "green" energy efficiency. The VDS4607 fits into an industry-standard 19" rack / 36" deep. Its flexible configuration allows it to be deployed in a variety of applications.

Applications

The VDS4607 JBOD enclosure was designed to enable scaling of storage capacity in order to match the needs of a wide range of enterprise-grade storage applications requiring full redundancy. Applications include data backup, archiving and disaster recovery; physical security and surveillance; media storage repository; AI & HPC, data mining and analytics; private cloud and cloud infrastructure.

The VDS4607 enables the expansion of external storage in file, block and object storage format through a standard 24Gb/s (SAS-4) interface between the JBOD and any standard Host Bus Adapter in a server. The VDS4607 provides density, capacity, cost/GB, and offers a reduced footprint for even the largest of today's most demanding data centers.

The Viking Enterprise Solutions (VES) Advantage

VES offers a broad portfolio of product offerings, including: Leading-edge performance SSD arrays, supporting SAS and NVMe technologies.

Leading-edge, high-performance and high-availability solutions
Industry-leading cold storage and object storage solutions
Purpose-built compute and storage platforms.

FEATURES

- Full-featured robust 24Gb/s high-performance SAS-4 storage enclosure
- Operation with either single I/O controller or dual I/O controllers for redundant fail-over
- Multiple Drive partitioning/split-bus zoning modes
- Hot-pluggable I/O controller(s) and dual redundant, high efficiency, advanced power supplies
- SFF-8674 24Gb/s (SAS-4) host connections
- Flexibility to choose SAS or SATA or Dual Actuator drives to achieve the right performance, reliability and price
- Modular design increases product configuration flexibility
- SAS point-to-point connectivity isolates drive failures, increasing reliability and fault tolerance and improving performance

VES provides accelerated time-to-market server and product needs, providing the opportunity to leverage a best-in-class portfolio of proven product designs.

Customers can rely on our industry-leading design team and our experiences as a world-class electronics manufacturing services organization.

High-Density SAS-4 Connected Enclosure Supports 60 Hard Drives in 4U. Provides Exceptional Performance and Scalability for Large Enterprise Storage Environments.



VDS4607

Host/Expansion Interfaces

- ▶ One or two SAS 4.0 I/O controller modules per system, each I/O module supporting four 24Gb/s (SAS-4) SFF-8674 ports

Capacity

- ▶ 60 drive capacity per 4U enclosure
- ▶ Support up to 14 Watt HDD

Firmware

- ▶ SCSI Enclosure Services (SES) 3.0

I/O Controller Models

- ▶ Dual redundant 24Gb/s (SAS-4) JBOD I/O modules, each with support for storage expansion enclosures

4U Rackmount Enclosure

- ▶ Dimensions:
7.0 in. H x 16.6 in. W X 34 in. D (17.8 cm H X 42.1 cm W X 86.3 cm D)
- ▶ Weight with drives: 220 lbs (100 kg) max
- ▶ Standard Rackmount Rail Kit with integrated cable management

Drive Partitioning/Split-Bus Zoning

- ▶ Controller module can be zoned in four pre-defined zoning schemes
- ▶ Additional zoning schemes can be developed upon request

Redundant Hot-Swappable Components

- ▶ Up to two SAS 4 JBOD I/O controller modules
- ▶ Two AC power supplies
- ▶ Two Regulator modules to provide hard drive power
- ▶ Up to 60 Drives

Disk Drives

- ▶ 60 independent point-to-point connections to each SAS or SATA disk drive with dual-port access & fail-over by each controller to each drive
 - ▶ Form factor: 3.5" & 2.5" SAS, SATA & SSD drives
 - ▶ Rotational speeds up to 15K RPM
 - ▶ Interface: 12Gb/6Gb/3Gb SAS; 6Gb/3Gb SATA

AC Power

- ▶ Input voltage: 200-240V AC
 - ▶ Input frequency: 50-60Hz
- ▶ Input current: 10.0 Amps max @ 230VAC
- ▶ Maximum system continuous DC output power rating: 1600 Watts – Reduced power at low line voltages

Monitoring and Reporting

- ▶ Monitoring for temperature, advanced power & cooling modules including fan speed control, disk drives & I/O module(s), as well as error rates & quality of service
- ▶ In-band reporting of all serial number, part number, & revisions of each FRU & chassis

Performance

- ▶ Up to 48 GB/s (sustained reads) using 12 Gb/s SSD drives
- ▶ Up to 38 GB/s (sustained reads) using 6 Gb/s SSD drives

Operating Environment

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

Non-Operating Environment

- ▶ Temperature: -40° to 60°C
- ▶ Relative humidity: 10% to 90% (non-condensing)
- ▶ Altitude: -200 ft to 40,000 feet
- ▶ Shock: 10G at 11ms, 1/2 sine wave pulse
- ▶ Vibration: 0.5G at 5Hz to 500Hz

Electromagnetic Emissions & Immunity Standards

- ▶ CE Mark
- ▶ EN55023
- ▶ EN61000 Class A
- ▶ FCC Class A
- ▶ Canadian IECS-003

Safety Standards

- ▶ IEC/EN/UL 62368 3rd edition
- ▶ CSA 22.2-950

Quality Standards

- ▶ Manufactured under an ISO 9002 registered quality system

Environment Protection

- ▶ RoHS & WEEE compliant

