



PRODUCT BRIEF | 2U-24 Bay 2.5" Ultra Performance NVMe / PCIe Solid State Flash Array

NDS-2244

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The Viking Enterprise Solutions (VES) NDS-2244 Ultra High Performance Solid State Flash Array has twenty-four (24) 2.5" drive bays supporting high-power NVMe 25W SSDs. The NDS-2244 can provide high bandwidth / low latency access for up to 24 servers. The NDS-2244 also provides support for dynamic reconfiguration of SSDs to servers when supported by drivers, OS, and processors.

Developed as a high performance, flexible system for tier-one primary storage applications requiring high I/O, high bandwidth and/or sub-millisecond latency in a small form-factor.

Unparalleled Performance

Fully leverages the greater speed of PCIe SSDs compared to SAS / SATA SSDs, the NDS-2244 is the first product in its class to achieve greater than 15M IOPs with sub-millisecond latency in a 2U form factor (4K read blocks).

Provides full bandwidth up to 24 servers (x4 PCIe gen3 - 768 Gb/s full duplex).

Robust Enterprise-grade Functionality

The NDS-2244 offers robust enterprise-grade availability, reliability and serviceability. For easy swap-out, all active data path components are contained within field replaceable units (FRUs) including fans, SSD drives, interposers, power supply units (PSUs) and IO Modules.

VES, a product division of Sanmina Corporation, provides advanced data center products including flash and spinning disk-based storage server appliances, JBOD storage systems and other products for a variety of data center and storage applications. VES solutions are tailored for integration into OEMs, System Integrator and Internet Data Center partners' products, reducing development and operating costs while improving time-to-market.

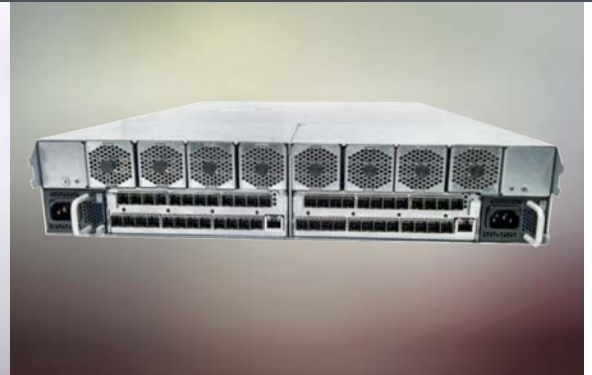
Dual-port Access to NVMe Drives

The NDS-2244's unique architecture provides dual-port access to NVMe / PCIe drives providing redundant paths to the SSD.

Hot-Swap Functionality NVMe Drives

The NDS-2244 architecture supports drive hot-swap without taking the unit or any other drives off-line.

Dual I/O Modules – Dual I/O Modules provide switching to configure the SSDs in the NDS-2244. The I/O Modules provide redundancy for both data plane and data center management connectivity.



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2U Rackmount Enclosure

- ▶ Dimensions:
89mm (2U) H x 446mm
(19" rack) W x 650mm D
- ▶ Weight for VES NDS-2244 w/24 SSDs Single Shipping Pack: 80 lbs. typical
- ▶ Weight for VES NDS-2244 without SSDs for Rack Installation: 65 lbs. typical (no rail kit, drives, or carriers)

Operating Environment

- ▶ Temperature: 5° to 35°C
- ▶ Temperature gradient: 20°C per hour
- ▶ Relative humidity: 10 to 80 percent

Safety Standards

- ▶ IEC/EN/UL/CSA 60950-1, 2nd Edition

AC Power

- ▶ Input voltage: Auto ranging, 90-264V AC 47-63H

Hot-Swap Field Replaceable Units

- ▶ 24 independent PCIe gen3 NVMe SSDs with interposer & carrier
- ▶ 1+1 redundant 1100W power supplies
- ▶ 7+1 redundant fans

Environmental Protection

- ▶ RoHS and WEEE compliant

Other

- ▶ Individual SSD power control

Drive Configuration

- ▶ Three logical groups of eight SSD
- ▶ Flexible configuration
- ▶ Full bandwidth: Each SSD on an individual NDS-2244 x4 port
- ▶ Maximum Capacity: Eight SSDs on a NDS-2244 x4 port

Monitoring & Reporting

- ▶ Monitoring for temperature, power supplies & fans including fan speed control, SSDs & I/O Modules
- ▶ Automatic enclosure management failover between redundant
- ▶ Service Processors
- ▶ 1GbE datacenter management connection – RJ45
- ▶ Web-based (HTTPS) host interface
- ▶ 25W NVMe SSD

Host Adaptor Card

- ▶ NDS-2244: 24 x2 PCIe gen3 x4 ports
- ▶ 24 on each IO Module
- ▶ Mini-SAS HD cables
- ▶ HHHHL PCIe x8 card for host server
- ▶ Four x4 Mini-SAS HD ports
- ▶ Allows full bandwidth or over provisioned configurations

