VIKING™
Enterprise Solutions

PRODUCT BRIEF | High Density, 102 LFF drives, High Availability JBOD

NDS41020

Enterprise Class High Density 102 drive High Availability JBOD

Viking Enterprise Solutions introduces the NDS41020 JBOD enclosure, a high-density data storage solution that packages 102, 3.5-inch HDDs at 12 Gb/s SAS with two active I/O modules. The NDS41020 JBOD enclosure offers best in-class performance and capacity, space-saving density, "green" energy efficiency, and high-availability of all active components. The NDS41020, with its CMA, fits into an industry standard 19-inch, 1.0 meter deep rack.

Applications Use Cases

The NDS41020 JBOD Enclosure was designed to enable vertical scaling of storage capacity in order to match the needs of a wide range of enterprise-grade storage applications requiring full redundancy. The NDS41020 enables the expansion of external storage in file, block and object storage format through a standard SAS interface between the JBOD and any standard storage server. The NDS41020 provides leading-edge density, capacity, $/GB, and offers a reduced footprint for even the largest of today's most demanding data centers.

FEATURES

- Dual I/O modules provide the ability for true failover when the functional IOM is programmed to see all drives.
- Multiple drive partitioning/split bus zoning configurations
- Hot-pluggable I/O controllers, fan modules and redundant, high-efficiency, advanced power modules and 5V regulators
- Four 4-wide mini-SAS HD host or expansion ports per I/O module
- Modular design increases product configuration flexibility
- Standard chassis customization & branding available
- SAS point-to-point connectivity isolates drive failures, increasing reliability and fault tolerance, while improving performance
- SAS daisy-chain expansion to additional storage arrays and other SFF-8644 SAS compliant host/expansion ports
- Single SAS 3.0 I/O module configuration is available, featuring four 4-wide, 12 Gb/s mini SAS HD ports and support for 6 Gb/s SATA drives.

The VES Advantage

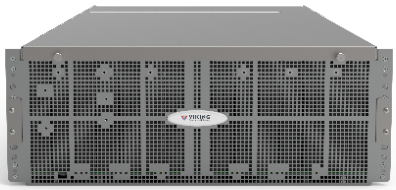
VES offers a broad portfolio of product offerings, including:
Leading edge performance SSD arrays, supporting SAS and NVMe technologies
Leading edge high performance and high availability solutions
Industry leading cold storage and object storage solutions
Purpose-built compute and storage platforms

VES provides an 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 a world class electronics manufacturing services organization.

Provides exceptional performance, scalability and thermal management for today's high density storage environments.

High density 12 Gb/s LFF HDD. Very high density SAS 3.0 connected enclosure supports 102 drives in a 4U design.



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NDS41020

AC Power

- Input voltage 200-240V AC
- Input frequency: 50-60 Hz
- Power supplies: 2 (n+1)
- Input current: 9.4 amps max @ 200V AC per power supply
- Maximum system continuous DC output power rating: 1600W

Hot-swappable Components

- Two JBOD IO modules
- Two AC to DC power modules
  - Two 1600W power supplies
  - Two +5V regulators per enclosure/system provide hard drive power
- Two independent AC power inputs
- Up to 102 drives in the main bay

Firmware

- SCSI enclosure services (SES) 3.0-based firmware

Drive Partitioning/ Split Bus Zoning

- Drive array can be zoned in four pre-defined zoning configurations supported by the I/O modules
- Additional zoning configurations can be developed upon request

Capacity

- 102-drive capacity per 4U enclosure
  - 102 drive slots compatible with LFF or SFF drives
  - 12Gb/s supported on all drive slots

Failure Notifications

- SCSI enclosure services (SES-3.0) over in-band interface and via system status and FRU LEDs

Host Expansion Interfaces

- Two SAS 3.0 JBOD I/O modules, each with 4-wide mini-SAS HD host or expansion ports

Operating Environment

- Temperature: 5° to 35°C
- Relative humidity: 20% to 80% (non-condensing)
- Altitude: -200 ft to 10,000 ft
- Shock: 3.5G at 11ms, half sine wave pulse
- Vibration: 0.10G at 5 Hz to 500 Hz
- Acoustics (declared sound power): 92 dB with I/O modules; at idle/active operation tested to ISO 7779

Non-operating Environment

- Temperature: 5°C to 45°C
- Relative humidity: 10% to 90% (non-condensing)
- Altitude: -200 ft to 10,000 ft
- Shock: 7G at 11ms, 1/2 sine wave pulse
- Vibration: 3G at 5 Hz to 500 Hz

Disk Drives

- Form factor: 3.5-inch HDDs or 2.5-inch SSD SAS drives
- Interface: 12Gb/6Gb SAS; 6Gb SATA
- 10W per drive

Safety Standards

- UL 60950
- CSA 22.2-950

Quality Standards

- Manufactured under an ISO 9002 quality system

Environment Protection

- RoHS & WEEE compliant

4U Rackmount Enclosure

- Dimensions: 6.9 in. H X 17.2 in. W X 39.4 in. D (17.2 cm H X 43.8 cm W X 100.0 cm D)
- Weight with drives: 275.0 lbs (124.7 kg) max
- Standard rackmount rail kit with optional cable management system

Electromagnetic Emissions & Immunity Standards

- CE Mark
- EN55022: 2010
- EN61000 3-2:2014
- EN61000 3-2:2013
- FCC Class A
- Canadian IECS-003

Monitoring & Reporting

- Monitors temperature, power, cooling (including fan speed control), disk drives, and I/O modules
- In-band reporting of all FRU and chassis serial numbers, part numbers and revisions

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For price, availability and sales information, please email us at sales@vikingenterprise.com or call us at +1 (408) 964-3730.
www.vikingenterprisesolutions.com