VIKING™
Enterprise Solutions

PRODUCT BRIEF | High Density 6 Gb/s LFF HDD Storage Server
NSS41000

NAS Storage for Scale-out Implementation

As data storage capacity continues to expand at breakneck speed, customers are increasingly looking for a storage solution to meet cost-competitive scale-out solutions. The NSS41000 is ideally designed to address the virtual storage and meet some of today's most demanding requirements. The system can operate in a free air environment, has the capacity of up to 1PB in 4U, yet designed to minimize power consumption.

The NSS41000 can be deployed in a private or public cloud and can be implemented with erasure coding technologies or in RAIDed environments with dual socket Intel(R) Xeon(R) E5-2600 family v4 processors.

The system has been designed to address tool-less service of all FRUs (field replaceable units). The system offers remote management capabilities of all features and can be monitored using IPMI 2.0 specification. Target device communication and management is enabled via standard serial ATA (SATA) 3.0 protocol with enclosure services linked via SCSI firmware.

The NSS41000 fits into an industry standard 19-inch 4U rack that conforms to the EIA-310-D Specification deep rack.

FEATURES

- ► Full-featured robust SATA 3.0 storage enclosure
- ► Dual socket Intel(R) Xeon(R) E5-2600 family v4 CPUs server with integrated storage architecture
- ► Multiple drive partitioning/splitbus zoning modes
- ► Dual redundant high efficiency advanced power supplies and cooling modules
- ► Standard chassis customization and branding available
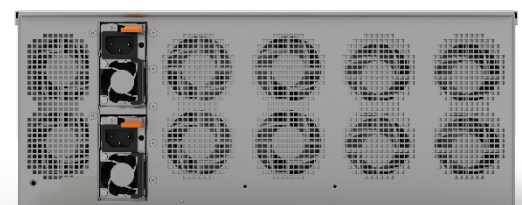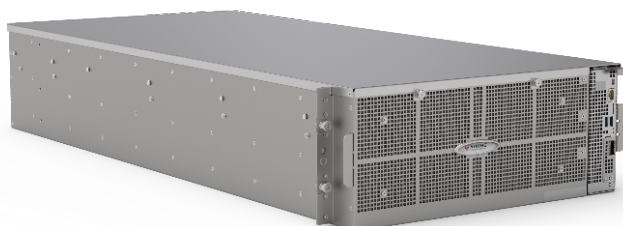

VES Portfolio of Storage and Storage Server Solutions

VES offers a broad portfolio of product offerings, including:
  Leading edge high performance & high availability solutions
  Industry leading cold storage & object storage solutions
  Purpose built compute & storage platforms

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

Very high density SATA 3.0 connected enclosure supports 100 Hard Drives in 4U. Provides exceptional NAS performance and capacity for scale-out implementation.

NSS41000

Host Interfaces

- One Haswell/Broadwell server
  - Dual socket
  - Up to eight DDR4 DIMMS per socket
  - Efficient power supplies
  - 40 GB networking

Redundant Hot-Swappable Components

- Two 1+1 redundant power supplies
  - 1600 watt
  - 2A standby power for energy savings when idle
- Two independent AC power inlets
- Up to 100 Drives
- Five fan modules

Firmware

- SCSI enclosure services (SES) 3.0 based firmware or
- IPMI 2.0 baseboard management controller
- Console events logged onto microSD card

Drive Partitioning

- Additional zoning configurations can be developed upon request

4U Rackmount Enclosure

- Dimensions:

  6.9 in. H X 17.2 in. W X 42.1 in. D (17.5 cm H X 42.9 cm W X 107.0 cm D)
- Weight with drives: 264 lbs (120 kg) max
- Standard rackmount rail kit with integrated cable management

Failure Notifications

- SCSI enclosure services (SES 3.0) over in-band interface

Electromagnetic Emissions & Immunity Standards

- CE Mark
- EN55022/EN61000 Class A
- FCC Class A
- Canadian IECS-003

Disk Drives

- 100 independent point-to-point connections to each SATA disk drive
- Form factor: 3.5-inch SATA drives
- Rotational speeds up to 15K RPM
  – Interface: 6Gb/3Gb SATA
- Tool-less HDD carriers
- Optional second M.2 2280 type M size SATA or PCIe SSD

AC Power

- Input voltage: 200-240V AC
- Input frequency: 50-60 Hz
- Maximum system continuous DC output power rating: 1600W

Performance (EDFB)

- Up to 11Gb/s sequential read
- Up to 10Gb/s sequential write

Capacity

- 100 drive capacity per 4U enclosure
- 1 PB total storage capacity

Safety Standards

- UL 60950
- CSA 22.2-950

Quality Standards

- Manufactured under an ISO 9002 registered quality system

Environment Protection

- RoHS and WEEE compliant

Operating Environment

- Temperature: Up to 45°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 5Hz to 500Hz
- Acoustics: 7.6 Bels at normal

Non-Operating Environment

- Temperature: -40° to 60°C
- Relative humidity: 10% to 90% (non condensing)
- Altitude: -200 ft to 40,000 ft
- Shock: 7G at 11ms, half sine wave pulse
- Vibration: 0.5G at 5Hz to 500Hz

Monitoring & Reporting

- Monitors temperature, advanced power and cooling modules (includes) fan speed disk drives, error rates and quality of service
- IPMI reporting of all serial numbers, part number and revisions

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