

Network Storage Server (NSS) VS Series HA Appliances

HIGH-PERFORMANCE, HIGH-AVAILABILITY STORAGE VIRTUALIZATION FOR BUSINESS CONTINUITY

Enterprises must ensure data availability or risk the loss of business transactions, revenue, and customers. FalconStor® Network Storage Server (NSS) VS Series Appliances protect critical business applications and data by enabling high availability (HA) and storage virtualization with scalability, load balancing, network interoperability, and high performance. Storage volumes can be allocated without interrupting business operations. To address the challenges of explosive data growth, these appliances include thin provisioning, mirroring, performance tiering, and data migration, maximizing storage efficiencies and minimizing storage overhead. Other advanced features include application-consistent snapshots, WAN-optimized replication, and automated disaster recovery (DR) for fast, efficient data protection for even the most complex, demanding, heterogeneous enterprise environments.



Highlights

All-inclusive functionality

- Mirroring, snapshots, journaling, remote replication
- Simple, capacity-based pricing
- HA architecture with active/active controllers
- Scales to hundreds of terabytes to support large enterprises

Heterogeneous support

- iSCSI, Fibre Channel (FC), & FCoE connectivity
- Physical or virtual servers
- Microsoft Windows, Linux, Unix, Solaris, HP-UX

Mirror volumes, up to 1,000 snapshots

- Enables highly granular recovery points
- Data assurance and business continuity

WAN-optimized replication via MicroScan™ technology

- Reduces bandwidth requirements & costs by up to 95%
- Enables rapid disaster recovery

Automated DR via RecoverTrac™ tool

- Automates complex application recovery and DR testing
- Supports P2P, P2V, and V2V recovery

Data tiering

- Populates data on appropriate disk volumes: SATA, SAS, FC, solid-state disk (SSD)

Data migration

- Easily moves data volumes between tiers or SANs

Thin provisioning

- Increases utilization of disk capacity
- Simplifies administration
- Reduces capital expenditures (CapEx)

Optimized I/O performance

- Accelerates storage performance for mission-critical applications
- Alternate-READ mirror volumes eliminate I/O bottlenecks
- HotZone® and SafeCache™ technologies improve READ/WRITE performance

VMware integration

- Supports VAAI
- Supports VMware Site Recovery Manager

Microsoft Stretch Cluster support

- Certified for Microsoft GeoCluster operation

Specifications: FalconStor NSS VS Series HA Appliances

	NSS VS630	NSS VS700	NSS VS750
Physical Characteristics			
Host type	iSCSI	FC/iSCSI	FC/iSCSI
Number of storage controllers	One, expandable to two for high availability (HA)		
Platform rack	Rack 2U	Rack 2U	Rack 5U
RAM included	16GB	16GB	16GB
Maximum # of disks supported	192	192	288
CPU cores	4	4	4
Dimensions	3.40" (8.64 cm) x 17.44" (44.31cm) x 26.80" (68.07cm)		8.6" (21.79 cm) x 17.44" (44.31cm) x 26.80" (68.07cm)
Weight	50.71 lb (23 kg) maximum configuration		78 lb (35.3 kg) maximum configuration
Power supply	Two (2) hot-plug 870W PSUs (1+1)		Two (2) hot-plug 1100W PSUs (1+1)
BTU/hour	2968	2968	3412
Temperature	50° to 95°F (10° to 35°C)		
Humidity	20% to 80%, noncondensing		
Altitude	-50 to 10,000 ft (-16 to 3048 m)		
Host Connections			
iSCSI target ports	4 x 1GbE (host)	4 x 1GbE (host)	2 x 10GbE + 4 x 1GbE (host)
# of FC target/initiator ports	—	4 x 8 Gb/s (host/SAN)	4 x 8 Gb/s (host/SAN)
Maximum # of expansion heads	3	3	3
Maximum # of expansion units	4 - 8	4 - 8	4 - 8
Maximum # of drives	288	288	288
Advanced Features			
Thin provisioning	Included	Included	Included
Synchronous data mirroring	Included	Included	Included
Replication (continuous or periodic) with compression and encryption	Included	Included	Included
DynaPath® for Microsoft Windows and Linux multipathing	Included	Included	Included
Snapshots (TimeMark®/TimeView®) per LUN	Up to 1,000		
DiskSafe™ agent	Included	Included	Included
FileSafe™	Included	Included	Included
Email alerts	Included	Included	Included
Centralized Client Manager (CCM)	Included	Included	Included
Support for VMware vCenter Site Recovery Manager with automated failover/failback	Included	Included	Included
Multisite cluster for Microsoft Windows	Included	Included	Included
RecoverTrac tool for automated DR	Included	Included	Included

Snapshot agents are available for the following environments: Microsoft Exchange Server, Microsoft SQL Server, Microsoft VSS, IBM DB2, IBM Informix, Lotus Notes/Domino, Oracle, Sybase, MySQL, Ingres, SAP, Novell GroupWise, Pervasive.SQL, SAP MaxDB, and VSS, as well as file systems (Linux, HP-UX, Solaris, AIX, Microsoft Windows, Novell NetWare).

Specifications: FalconStor NSS VS Series HA Expansion Heads

	NSS XM 700S-A	NSS XM 702S-A	NSS XM 700A-A	NSS XM 700B-A	NSS XM 702A-A	NSS XM 700N-A	NSS XM 702N-A
Capacity Expansion							
Type	15K SAS	15K SAS	15K SAS	NL-SAS	NL-SAS	SLC SSD	SLC SSD
HDD form factor	3.5" (8.9 cm)	2.5" (6.4 cm)	3.5" (8.9 cm)	3.5" (8.9 cm)	2.5" (6.4 cm)	3.5" (8.9 cm)	2.5" (6.4 cm)
Capacity	7.2TB	3.5 TB	12TB	24TB	12TB	1.7 TB	3.5 TB
Number of bays	12	24	12	12	24	12	24
Expansion Head							
RAID level	Support for RAID levels 0, 1, 5, 6, 10 Up to 96 physical disks per group in RAID 0, 1, 10 Up to 30 physical disks per group in RAID 5, 6						
Connectivity to FalconStor NSS VS heads	6Gb SAS (SFF-8088 mini connector)						
Dimensions	3.42" (8.68 cm) x 17.57" (44.63 cm) x 22.09" (56.1 cm)	3.42" (8.68 cm) x 17.57" (44.63 cm) x 20" (50.8 cm)	3.42" (8.68 cm) x 17.57" (44.63 cm) x 22.09" (56.1 cm)	3.42" (8.68 cm) x 17.57" (44.63 cm) x 22.09" (56.1 cm)	3.42" (8.68 cm) x 17.57" (44.63 cm) x 20" (50.8 cm)	3.42" (8.68 cm) x 17.57" (44.63 cm) x 22.09" (56.1 cm)	3.42" (8.68 cm) x 17.57" (44.63 cm) x 20" (50.8 cm)
Weight (maximum configuration)	53.35 lb (24.2 kg)	64.59 lbs (29.3 kg)	53.35 lb (24.2 kg)	53.35 lb (24.2 kg)	64.59 lbs (29.3 kg)	53.35 lb (24.2 kg)	64.59 lbs (29.3 kg)
Operating temperature	50° to 95°F (10° to 35°C) with a maximum temperature gradation of 50°F (10°C) per hour						
Operating relative humidity	20% to 80% (non-condensing) with a maximum humidity gradation of 10% per hour						
Operating altitude	-50 to 10,000 ft (-16 to 3048 m) Note: For altitudes above 2950 ft, the maximum operating temperature is de-rated 1°F/550 ft.						
Power supplies (per supply)	600 W peak output						
Maximum heat dissipation	150 W						
Input voltage range	90 to 264 VAC						
Frequency range	47 to 63 Hz						
Maximum input current at rated power	55 A for 10 ms or less, 25 A for 10 - 150 ms						
Available hard-drive power (per slot) supporting continuous consumption	25 W	12 W	25 W	25 W	12 W	25 W	12 W

Specifications: FalconStor NSS VS Series HA Expansion Units

	NSS XM 701S-A	NSS XM 703S-A	NSS XM 701A-A	NSS XM 701B-A	NSS XM 703A-A	NSS XM 701N-A	NSS XM 703N-A
Capacity Expansion							
Type	15K SAS	15K SAS	NL-SAS	NL-SAS	NL-SAS	SLC SSD	SLC SSD
HDD form factor	3.5" (8.9 cm)	2.5" (6.4 cm)	3.5" (8.9 cm)	3.5" (8.9 cm)	2.5" (6.4 cm)	3.5" (8.9 cm)	2.5" (6.4 cm)
Capacity	7.2 TB	3.5 TB	12TB	24TB	12TB	1.7 TB	3.5 TB
Number of bays	12	24	12	12	24	12	24
Capacity Expansion Units							
Connectivity to capacity expansion	6Gb SAS (SFF-8088 mini connector)						
Maximum number of units per head	7	3	7	7	3	7	3
Dimensions	3.39" (8.7 cm) x 18.8" (48.2 cm) x 23.17" (59.4 cm)	3.39" (8.7 cm) x 17.57" (44.63 cm) x 29.1" (54.1 cm)	3.39" (8.7 cm) x 18.8" (48.2 cm) x 23.17" (59.4 cm)	3.39" (8.7 cm) x 18.8" (48.2 cm) x 23.17" (59.4 cm)	3.39" (8.7 cm) x 17.57" (44.63 cm) x 29.1" (54.1 cm)	3.39" (8.7 cm) x 18.8" (48.2 cm) x 23.17" (59.4 cm)	3.39" (8.7 cm) x 17.57" (44.63 cm) x 29.1" (54.1 cm)
Weight (maximum configuration)	62.6 lb (28.39 kg)	51 lbs (23.31 kg)	62.6 lb (28.39 kg)	62.6 lb (28.39 kg)	51 lbs (23.31 kg)	62.6 lb (28.39 kg)	51 lbs (23.31 kg)
Power supply (per PSU)	600 W						
Host heat dissipation	188 W						
Input voltage range	100-240 VAC, auto-sensing						
Frequency range	50 - 60 Hz						
Amperage	8.6 A at 100 V, 4.3 A at 240 V						
Available hard-drive power (per slot)	Up to 1.16 A at +5 V, up to 1.6 A at +12V	Up to 1.2 A at +5 V, up to 0.5 A at +12 V	Up to 1.16 A at +5 V, up to 1.6 A at +12V	Up to 1.16 A at +5 V, up to 1.6 A at +12V	Up to 1.2 A at +5 V, up to 0.5 A at +12 V	Up to 1.16 A at +5 V, up to 1.6 A at +12V	Up to 1.2 A at +5 V, up to 0.5 A at +12 V
Temperature	Operating: 50° to 95°F (10° to 35°C) with a maximum temperature gradation of 50°F (10°C) per hour Storage: -40° to 149°F (-40° to 65°C) with a temperature gradation of 68°F (20°C) per hour						
Relative humidity	Operating: 8% to 85% (non-condensing) with a maximum humidity gradation of 10% per hour Storage: 5% to 95% (non-condensing)						
Altitude	Operating: -50 to 10,000 ft (-16 to 3048 m) Storage: -50 to 35,000 ft (-16 to 10,600 m)						