

## File-interface Deduplication System (FDS) 100 Series Storage Appliances

Data deduplication eliminates tape at remote and branch offices

*FalconStor® File-interface Deduplication System (FDS) 100 Series Storage Appliances enhance the benefits and alleviate the challenges of traditional disk-to-disk (D2D) backup and data protection, offering high performance, Symantec NetBackup OpenStorage (OST) integration, enterprise-level functionality, and integrated replication.*

### Highlights

#### Remote office data protection

- > Fully configured, turnkey appliances from 1TB to 4TB, usable capacity, protecting up to 100TB of original data
- > Up to 95% data reduction for capacity optimization
- > Reliable data protection from multiple sources with fast recovery
- > Extends local disk retention for fast data recovery
- > Eliminates tape at remote sites

#### High performance

- > Flexible post-process or concurrent deduplication
- > High-performance data ingest rates, up to 200 MB/s (720 Gb/hr) for CIFS/NFS connectivity

#### Seamless implementation

- > Non-disruptive simple NAS share, NFS/CIFS, supports backup, archive, database, virtual machine data or simple copy
- > Certified with all leading backup and archiving applications (see certification matrix on [www.falconstor.com](http://www.falconstor.com))

#### Cost-effective DR

- > 150:1 multi-site data replication with real-time monitoring, folder-level policy management, and statistical analysis
- > WAN-optimized replication reduces network bandwidth requirements by as much as 99%

Organizations are looking for ways to efficiently protect growing data repositories and server infrastructures. Common data protection and retention methods such as D2D backup and archiving accelerate the proliferation of data by generating multiple copies of redundant data. A lack of technical resources at remote offices further complicates data protection strategies. Ineffective tape backup procedures leave data vulnerable, and disk-based backup creates islands of storage with data too voluminous to replicate to a disaster recovery (DR) site.

The FalconStor FDS 100 Series is a family of preconfigured turnkey storage appliances that meet the data protection needs of remote offices, reducing capacity requirements by as much as 20 times (95%) or more. Easy to install, these appliances offer flexible disk-based data protection, optimized global deduplication and long-term data retention, and integrated replication, making centralized DR practical for remote/branch offices (ROBO) throughout companies of all sizes.

### Easy to deploy, with policy-based management

FalconStor FDS offers non-disruptive integration to any major backup or archive application using a LAN-based file interface or Symantec OST protocol. An easy-to-use file interface ensures seamless integration with all major backup software, database utilities, archiving applications, virtual machine data, and even manual file copies, with little or no change to current D2D backup applications or file and data archiving processes.

A centralized GUI enables user-defined policies, such as concurrent or scheduled deduplication and exclusion of whole directories, specific file types, or individual files based on when they were last modified or accessed. Flexible schedules can be applied to deduplication, replication, and data integrity monitoring based on application and business needs.

### High performance

Offering both post-processing and concurrent block-level deduplication, FalconStor FDS ensures that you can meet tight backup windows. To accelerate data restore, FalconStor FDS uses direct block-level access during read operations with no file system overhead, and enables high-performance data access for both deduplicated and non-deduplicated data.

FalconStor FDS 100 Series appliances offer backup speeds of up to 200 MB/s (720 GB/hr). All data is written to a common data repository, so redundant data segments are eliminated across all data sets, optimizing storage resources.

### WAN-optimized replication for multi-site DR

Built-in WAN-optimized replication ensures that only globally unique blocks of data are transmitted, reducing bandwidth requirements by as much as 99%. A wizard-based management console enables real-time visibility and performance monitoring of up to 150 remote sites. Policies and schedules can be applied to replication with folder-level granularity, for maximum flexibility. In addition, data can be encrypted during replication to optimize data security.



## Flexible, scalable architecture

FalconStor provides enterprise-level functionality on a flexible set of deployment models: Preconfigured turnkey appliances, gateway appliances, and virtual appliances. FalconStor FDS 100 Series appliances are available in tower or rack mount configurations and offer from 1TB to 4TB of physical, RAID-protected usable capacity corresponding to between 20TB and 80TB of logical repository, based on an average 20:1 deduplication ratio.

### Specifications

#### FDS RA101

#### FDS SA101

#### FDS SA102

Physical Characteristics			
Form factor	Tower	2U	2U
Appliance type	Storage	Storage	Storage
Hot-plug hard drives	4	4	6
RAID level	5	5	6
Disk type	SATA	SATA	SATA
Repository capacity: usable	1TB	1TB	2TB
Logical storage capacity (based on a 20:1 deduplication ratio)	20TB	20TB	40TB
Ingest speed	150 MB/s	150 MB/s	200 MB/s
Maximum ingest speed	Based on 10GbE and Symantec OST		
Repository scalability	N/A	N/A	Up to 4TB with software key upgrade, no add'l hardware required
Power supply	Single cabled power supply (375W)	Redundant hot-plug auto-switching (870W)	Redundant hot-plug auto-switching (870W)
Dimensions: head (HxWxL)	17.3 x 8.6 x 20.5" (43.9 x 21.8 x 52.1 cm)	3.4 x 17.44 x 26.8" (8.64 x 44.31 x 68.07 cm)	3.4 x 17.44 x 26.8" (8.64 x 44.31 x 68.07 cm)
Dimensions: storage array (HxWxL)	N/A	N/A	N/A
Weight	62.61 lb (28.4 kg)	57.54 lb (26.1 kg)	57.54 lb (26.1 kg)
Host Connections			
NFS/CIFS — 1 Gb/s	1 port	4 ports	4 ports
NFS/CIFS — 10 Gb/s	Optional	Optional	Optional
8Gb FC ports	N/A	N/A	N/A
Symantec NetBackup OST (IP)	Included	Included	Included
Host expansion port interface cards: 4x1GbE ports; 1x10 GbE port	2 expansion slots	4 expansion slots	4 expansion slots
Capabilities			
Deduplication	Included	Included	Included
Hosted backup	Included	Included	Included
Replication with encryption	Included	Included	Included
High availability	N/A	N/A	N/A
Environmental Requirements			
Voltage	90 - 264 VAC, autoranging, 47 - 63 Hz		
BTU	1672 BTU/hr max	2969 (high output), 1944 (energy-smart)	2970 (high output), 1944 (energy-smart)
Temperature	Operating: 50° to 95°F (10° to 35°C) Storage: -40° to 149°F (-40° to 65°C)		
Relative humidity	Operating: 20% to 80% (noncondensing) with maximum gradation of 10% per hour		
Altitude	-50 to 10,000 feet (-16 to 3048 meters)		

Note: "MB" is defined as 1024 x 1024 bytes, "GB" is defined as 1000MB, and "TB" is defined as 1000GB.

For more information, visit [www.falconstor.com](http://www.falconstor.com) or contact your local FalconStor representative.

**Corporate Headquarters**  
USA  
+1 631 777 5188  
[salesinfo@falconstor.com](mailto:salesinfo@falconstor.com)

**European Headquarters**  
France  
+33 1 39 23 95 50  
[salesemea@falconstor.com](mailto:salesemea@falconstor.com)

**Asia-Pacific Headquarters**  
Taiwan  
+886 4 2259 1868  
[salesasia@falconstor.com](mailto:salesasia@falconstor.com)

**FalconStor**  
Software

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