

## File-interface Deduplication System (FDS) 600 Series Storage Appliances

Enterprise-level performance and scalable data deduplication made easy

*FalconStor® File-interface Deduplication System (FDS) 600 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

#### Enterprise-level data protection

- > Fully configured turnkey appliances offering 22TB to 68TB capacity
- > High-speed data deduplication with integrated replication and Symantec OST support
- > 95% data reduction provides up to 1.36 PB of logical storage capacity
- > Extends local disk retention for fast data recovery

#### High performance

- > Flexible post-process or concurrent deduplication
- > High-performance data ingest rates, up to 600 MB/s (2.2 TB/hr) for CIFS/NFS, 1500 MB/s (5.4 TB/hr) for Symantec OST

#### 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 600 Series is a family of preconfigured turnkey storage appliances that are easy to install, providing enterprise-level deduplication performance and functionality to organizations 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 600 Series appliances offer backup speeds of up to 600 MB/s (2.2 TB/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 600 Series appliances offer from 22TB to 68TB of physical, RAID protected, usable capacity corresponding to between 440TB and 1.36 PB of logical repository, based on an average 20:1 deduplication ratio. Each member of the FalconStor FDS 600 Series can scale from the initially installed storage up to 68TB using easy-to-install, field expansion storage arrays.



## Specifications

**FDS SA622**
**FDS SA634**
**FDS SA645**
**FDS SA657**
**FDS SA668**
**FDS GA700**

Physical Characteristics						
Form factor	8U	11U	17U	17U	17U	2U
Appliance type	Storage	Storage	Storage	Storage	Storage	Gateway
Hot-plug hard drives	36	51	81	81	81	N/A
RAID level	6	6	6	6	6	N/A
Disk type	SATA	SATA	SATA	SATA	SATA	N/A
Repository capacity: usable	22.8 TB	34TB	45.5 TB	57TB	68TB	Up to 68TB
Logical storage storage capacity (based on a 20:1 deduplication ratio)	456TB	680TB	910TB	1140TB (1.14PB)	1360TB (1.36PB)	Up to 1360TB (1.36PB)
Ingest speed	300 MB/s	400 MB/s	400 MB/s	500 MB/s	600 MB/s	N/A
Maximum ingest speed (based on 10GbE and Symantec OST)	750 MB/s (2.7TB/hr)	750 MB/s (2.7TB/hr)	1500 MB/s (5.4TB/hr)	1500 MB/s (5.4TB/hr)	1500 MB/s (5.4TB/hr)	N/A
Repository scalability	Up to 68TB (add up to 46TB with expansion arrays)	Up to 68TB (add up to 34TB with expansion arrays)	Up to 68TB (add up to 24TB with expansion arrays)	Up to 68TB (add up to 11TB with expansion arrays)	N/A	N/A
Power supply	Redundant hot-plug auto-switching (870W)	Redundant hot-plug auto-switching (870W)	Redundant hot-plug auto-switching (870W)	Redundant hot-plug auto-switching (870W)	Redundant hot-plug auto-switching (870W)	Redundant hot-plug auto-switching (870W)
Dimensions: head (HxWxL)	3.4 x 17.44 x 26.8" (8.64 x 44.31 x 68.07 cm)					
Dimensions: storage array (HxWxL)	Two 5.16x17.57x18.9" (13.11x44.63 x48.01 cm)	Three 5.16x17.57x18.9" (13.11x44.63 x48.01 cm)	Five 5.16x17.57x18.9" (13.11x44.63 x48.01 cm)	Five 5.16x17.57x18.9" (13.11x44.63 x48.01 cm)	Five 5.16x17.57x18.9" (13.11x44.63 x48.01 cm)	N/A
Weight (lb)	213.54 lb (96.86 kg)	291.54 lb (132.24 kg)	447.54 lb (203 kg)	447.54 lb (203 kg)	447.54 lb (203 kg)	57.54 lb (26.1 kg)
Host Connections						
NFS/CIFS — 1 Gb/s	4 ports	4 ports	4 ports	4 ports	4 ports	4 ports
NFS/CIFS — 10 Gb/s	Optional	Optional	Optional	Optional	Optional	Optional
8Gb FC ports	N/A	N/A	N/A	N/A	N/A	4 ports
Symantec NetBackup OST (IP)	Included	Included	Included	Included	Included	Included
Host expansion port interface cards: 4x1GbE ports; 1x10 GbE port	2 expansion slots	2 expansion slots	2 expansion slots	2 expansion slots	2 expansion slots	2 expansion slots
Capabilities						
Deduplication	Included	Included	Included	Included	Included	Included
Hosted backup	Included	Included	Included	Included	Included	Included
Replication with encryption	Included	Included	Included	Included	Included	Included
High availability	N/A	N/A	N/A	N/A	N/A	Included
Environmental Requirements						
Voltage	90 - 264 VAC, autoranging, 47 - 63 Hz					
BTU	5529 (high output), 4805 (energy-smart)	6959 (high output), 6235 (energy-smart)	9818 (high output), 9095 (energy-smart)	9818 (high output), 9095 (energy-smart)	9818 (high output), 9095 (energy-smart)	2969 (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.

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