



Product Brief

SX-255 Archive Server for Sony ODA



An SX-255 Archive Server manages a Sony ODS-L30M Optical Disc Archive (ODA) library creating a digital archive that is optimized for video, image and other applications that store larger files.. The SX-255 systems scale to manage a library with up to six internal drives and 535 slots, providing 1.765 PB of capacity. In addition, it will manage an unlimited number of offline ODA cartridges.

A Cloud File Gateway may be added that allows files to be stored on Azure Blob storage as an alternative to ODA. The single server can store some files on ODA and others on Azure, according to user-defined policies. The Cloud File Gateway may be used to share selected files with remote sites and to move files instantly offline for data protection purposes.

Introduction

The SX-255 archive server manages a Sony ODS-L30M library with up to six internal ODA drives and 535 slots.



The SX-255 runs XenData Archive Series software on a Windows Server operating system. Files are presented in a standard file/folder structure which is typically shared over the network. Files are transferred to and from the archive using either the standard Windows network protocol (CIFS/SMB) or FTP file transfers. In addition, files may be transferred locally. This non-proprietary approach to the interface means that the archive can be used simultaneously by multiple standard applications and it does not tie the user to any particular application.

In addition to the standard file/folder interface, the SX-255 provides an interface using an XML API. The XML instructions are sent and received from a network socket (port 3466) and include the ability to pull assets from a source location and push them back to that location. The XenData XML interface has been adopted by an increasing number of third party application providers.

The SX-255 base model includes system disk and a 6 TB disk cache which is used to enhance archive and restore performance and may also be used to retain selected files on disk. The base model SX-255 may be upgraded by adding up to two additional 6 TB cache disks. Upgrade options are two disks in a mirror configuration for redundancy and two or three disks in a striped configuration for higher capacities and performance. In addition, for the highest performance, the 6 TB disk may be replaced with three 800 GB high endurance SSDs.

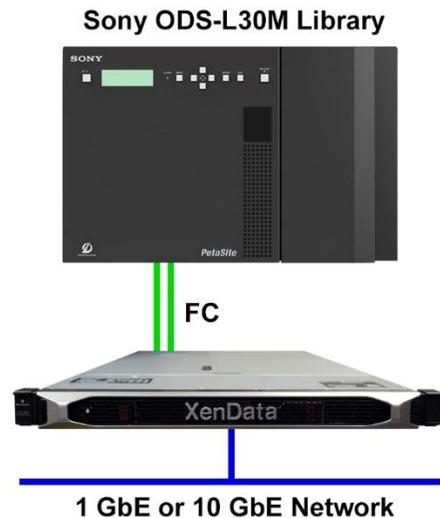
Archive Configuration

The SX-255 connects directly to the ODS-L30M library via Fibre Channel (FC) cables. The base SX-255 configuration has two FC ports; up to four additional FC ports may be added.

The SX-255 connects to an Ethernet network via 1 GbE or 10 GbE. The network share supports the standard Windows network protocol (CIFS/SMB) and FTP file transfers. The base SX-255 includes four 1 GbE network ports and a flexible LOM (LAN on motherboard) for an optional 10 GbE adapter.

In addition to Ethernet and SAN connectivity, the SX-255 includes three USB 3.0 connections that may be used to connected storage devices allowing files to be transferred locally between the USB device and ODA.

The SX-255 also supports up to two external Optical Disc Archive drives. Having an external drive connected to the system is particularly useful when the system is being used with offline cartridges, as the external drives make is very easy to bring content back online. The Sony ODS-D55U, ODS-D77U and ODS-D280U external drive models are supported.



Functionality

Standard File System Interface

The digital archive accepts all file types and presents them in a single Windows file/folder structure. Files are written to and retrieved from the archive as though from a standard disk drive.

File Mover API

In addition to the file system interface, an XML interface is provided. The XML instructions include the ability to pull assets from a source location and push them back to that location. The instructions are sent and received from a network socket (port 3466).

Standard Network Protocols

The solution is optimized for CIFS/SMB and FTP, as well as local file transfers.

Disk Cache Enhances Performance

The administrator defines policies for disk caching that can be tailored for different file types and folders.

Supports Near-line and Offline Optical Cartridges

Manages ODA cartridges in a library and an unlimited number of cartridges taken offline by exporting from the library.

Multiple Cartridge Pool Support

The software allows groups of files to be allocated to specified groups of ODA cartridges.

Dynamic Expansion of ODA Pools

The system will dynamically expand ODA cartridge pools to meet

capacity demands, minimizing system administration.

Optimized Restores

The system restores a queue of files in the shortest possible time. The restore requests are processed in an order that minimizes unnecessary disc swaps and cartridge movement.

File Version Control

Provides comprehensive file version control. Deleted files and old file versions may be restored from ODA (unless the files have been purged using a repack operation).

Partial File Restore

The File Mover API is available with partial file restore (PFR) based on timecodes. In addition, the XenData file system interface supports PFR based on byte offset.

Repack of ODA Cartridges

This copies only current files, excluding deleted files and old versions of files, to new ODA cartridges. Benefits: permits recovery of capacity from rewritable ODA cartridges.

Supports WORM

XenData systems support both standard rewritable cartridges and unalterable WORM cartridges.

Metadata Backup and Restore

A file system metadata backup and restore utility provides rapid system restore in case of rebuild after disk cache failure.

Alert Module

A software module is included which provides e-mail and on-screen alerts. These are tailored to the needs of archive system operators, system administrators and IT support personnel.

Cartridge Contents and Search Reports

The files contained on any cartridge, including offline cartridges, can be listed in a report. Additionally, search reports list all the files and their ODA cartridge barcode locations that match a user-defined search term. The reports may be exported to Excel for further analysis.

Migrate to New ODA Generation

The software makes for easy system upgrades, going from an older to a later generation of ODA.

Industry Standard File Security

The file server runs a Windows Server operating system and integrates fully with the Microsoft Windows security model based on Active Directory.

Cloud File Gateway

Allows files to be stored on Azure Blob storage as an alternative to ODA. This may be used to share files with remote sites and to move files instantly offline for data protection purposes.

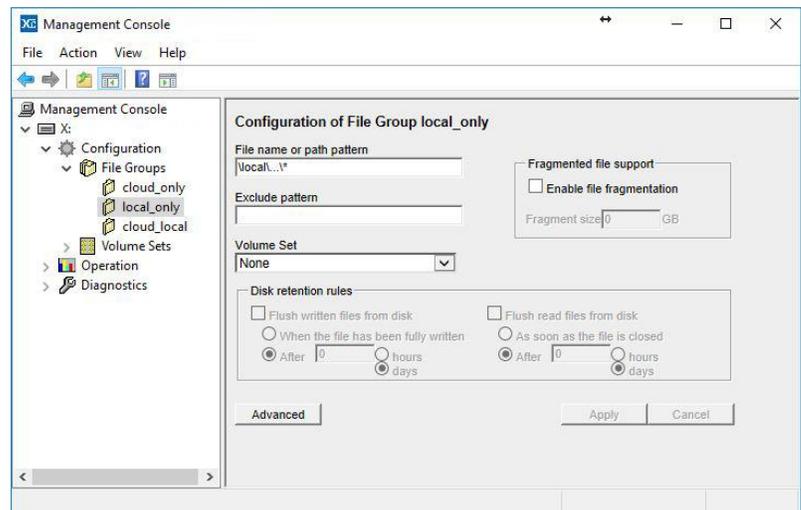
XenData File Management Policies

The system administrator defines policies that determine where files will be physically stored on the digital archive. These policies support tiered storage management. The SX-255 supports three main levels of storage hierarchy:

- ❖ **Disk** with one instance of a file on the disk cache and, in addition, there will typically be an instance on ODA. In this case, the file will be retrieved from disk when accessed over the network.
- ❖ **Near-line ODA** with an instance of the file on an ODA cartridge within the library and no instances on disk cache. When a file on near-line ODA is accessed over the network, the XenData software automatically transfers the file over the network directly from ODA in response to the network read request.
- ❖ **Offline** with no instances on disk and instances of a file on an ODA cartridge which has been exported from the library.

The XenData file management policies are defined by the administrator using the XenData Management Console. Policies allow groups of files to be allocated to specified groups of ODA cartridges, or alternatively to Azure Blob storage. The SX-255 may have many different policies, tailored to the needs of the different file types and folders that are being archived.

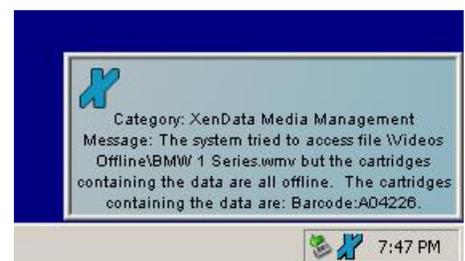
No matter where a file is held in the storage hierarchy, its position in the archive file/folder system does not change. When a file is flushed and it transitions from disk cache to near-line ODA, the file path, file name and properties do not change, except the Microsoft offline attribute changes to identify that the file is no longer on disk. When a file moves from near-line ODA to being offline because the ODA cartridge on which it is stored is exported from the library or ejected from an external ODA drive, the file also remains unchanged in the archive file system.



Offline ODA Management

An SX-255 manages an unlimited number of ODA cartridges that have been taken entirely offline. This means that the capacity of the archive effectively becomes infinite. It also means that operator intervention is required to move ODA cartridges from the shelf to the library when there is a need to restore an offline file.

When a file is taken offline by exporting the ODA cartridge that contains that file, it continues to be shown in the archive file/folder structure. However, this is not the complete file; it is a file representation which has the same attributes as the complete file, such as reported size, modification date, etc. When an offline file is accessed by a program, a message is returned immediately that identifies that the file is not available. Also, the XenData software puts a message in the Windows Event Log and optionally sends an e-mail and/or on-screen message that identifies which ODA cartridge contains the requested file. This notification allows the correct cartridge to be easily identified and then imported back into the library.



Third party applications that use a XenData API may also access information about offline cartridges and display barcode information within the application user interface.

Cloud File Gateway

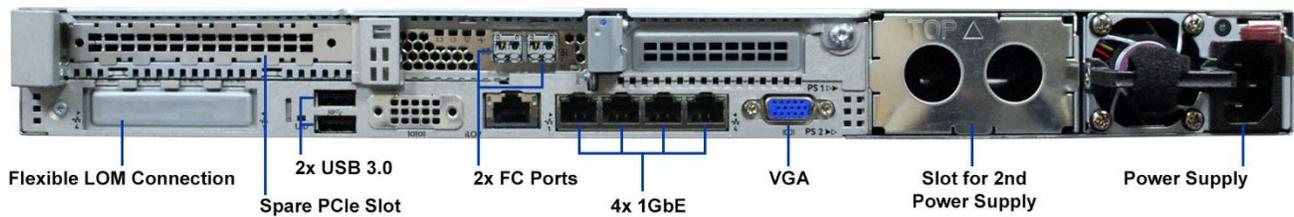
The SX-255 allows files to be stored on Azure Blob storage as an alternative to ODA. This complements the on-premises ODA storage and may be used for the following:

- ❖ Sharing files with remote sites. The files may be accessed remotely using another XenData Cloud File Gateway or Microsoft applications such as Azure Storage Explorer running on a Mac or a PC.
- ❖ Instantly move files to an offsite cloud location for data protection purposes.
- ❖ Copying files to Azure to allow them to be accessed from a DR site.

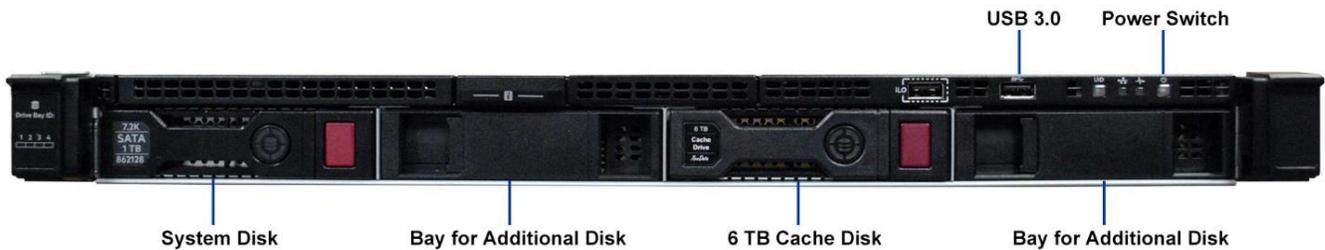
The Cloud File Gateway and a 100 GB Azure Blob Storage account are available as a free of charge option. The Gateway license may be upgraded to support petabytes of cloud storage.

Connections

Rear



Front (with Bezel Removed)



Base Models

XenData SKU	Description
222075	SX-255 Archive Server to support an ODS-L30M library with 30 slots and up to two Optical Disc Archive internal drives. Also supports up to two external Optical Disc Archive Drives type ODS-D55U, ODS-D77U or ODS-D280U. Includes Cloud File Gateway and free Azure Blob Storage account up to 100 GB.
222076	SX-255 Archive Server to support up to two external Optical Disc Archive Drives type ODS-D55U, ODS-D77U or ODS-D280U. Includes Cloud File Gateway and free Azure Blob Storage account up to 100 GB.

Specifications

Management software:	XenData Archive Series, LTO Edition and ODA Extension
Operating system:	Microsoft Windows Server 2012 R2 Standard Edition
Processor:	Intel® Xeon® 6-core processor
RAM:	32 GB
System disk:	1 TB SATA 7,200 rpm
Cache disk:	6 TB SATA 7,200 rpm
Network connections:	4 x RJ45 connectors; 1000BASE-T, 100-BASE-TX, 10BASE-T,
USB connections:	2 x USB 3.0 (rear mounted); 1 USB 3.0 (front mounted)
FC connections to library:	2 x LC type connectors; 8 Gb/s
Spare PCIe slots:	1
Number of power supplies:	1 (Optional 2 nd available)
Power:	100-240V; 50-60 Hz; 6.2-4.1 Amp max
Operation temperature / humidity:	50-95°F (10-35°C) / 8-90% non-condensing
Form factor / Dimensions (HxWxD):	1U / 1.69" x 17.11" x 29.5" (4.29 cm x 43.46 x 74.98 cm)
Weight:	30.36 lbs. (13.77 Kg) – 37 lbs. (16.78 Kg)
Rack rails:	Included

Upgrade Options

XenData SKU	Description
	Library Upgrade Support
XAS-UPG-SX255-ODA101	Upgrade of a XenData Archive Series software license on an SX-255 to support a single Sony ODS-L100E Optical Disc Archive expansion unit with 101 slots.
XAS-UPG-SX255-ODA61	Upgrade of a XenData Archive Series software license on an SX-255 to support a single Sony ODS-L60E Optical Disc Archive expansion unit with 61 slots and up to four additional drives.
	Connectivity Options
101092	Dual port 10 GbE SFP+ Flexible LOM network adapter pre-installed in SX-255. Optical transceivers (SKU 101081) not included.
101093	Dual port 10 GbE Flexible LOM network adapter for use with CAT6 or UTP cabling pre-installed in SX-255.
101081	SFP+ 10 Gb/s LC Short Range Transceiver for insertion in SKU 101092. Quantity 2 required to use both ports in the adapter.
101023	Dual port Fibre Channel adapter pre-installed in SX-255. Provides two additional 8 Gb/s FC ports with LC type connectors and uses the spare PCIe slot. Adds support for an additional two ODA drives that are internal to the ODS-L30M library.
101140	Quad port Fibre Channel adapter pre-installed in SX-255. Provides four additional 8 Gb/s FC ports with LC type connectors and uses the spare PCIe slot. Adds support for an additional four ODA drives that are internal to the ODS-L30M library.
	Redundancy Options
107320	Additional power supply for SX-255, providing redundancy.
222850	Disk Redundancy Upgrade. Includes an additional 6TB cache disk and system disk which are pre-installed and configured as mirror disks.
	Performance Options
222056	SX-255 Disk Cache Upgrade. Includes an additional 6TB cache disk pre-installed and configured in RAID 0 (striped), taking the cache capacity to 12 TB.
222057	SX-255 Disk Cache Upgrade. Includes two additional 6TB cache disks pre-installed and configured in RAID 0 (striped), taking the cache capacity to 18 TB.
222077	SX-255 Disk Cache Upgrade. Replaces the 6 TB disk with three high endurance 800 GB SSDs in a RAID 0 configuration.

Contact Us

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