

Product Brief

X20 V2 LTO Archive Appliance

The XenData logo is located in the top right corner of the page. It consists of the word "XenData" in a white, cursive-style font, set against a solid blue square background.

Core Functionality

- ✓ **Manages LTO libraries with up to 2 LTO SAS drives**
- ✓ **20 TB internal disk cache – ideal for cartridge replication with a one drive library**
- ✓ **Single File System interface**
- ✓ **Mounts as SMB network share**
- ✓ **Manages unlimited externalized LTO cartridges**
- ✓ **Automatic cartridge replication**
- ✓ **Ransomware Protection**
- ✓ **LTFS or TAR Formats**
- ✓ **Easy migration to later LTO generations**

When combined with an LTO library, the X20 Appliance creates a feature-rich LTO archive. It is a 1 RU rack mounted unit that connects to the LTO library via SAS cables and connects to the local network via 1 GbE, 10 GbE or 25 GbE ports.

The X20 supports LTO libraries from a wide range of manufacturers including HPE, IBM, Qualstar, Quantum and Spectra Logic. Please refer to the XenData web site for a list of supported models.

The X20 runs XenData Archive Series software on a Windows 11 Pro operating system. The managed files and folders are presented as a Windows logical drive letter. You can access the archive locally or as an SMB share. Archiving to and restoring files from the archive is like writing to and reading from disk.

Functionality

Standard File System Interface

The X20 accepts all file types and presents them in a single Windows file/folder structure. Files are written to and retrieved as though from a standard disk drive.

Standard Network Protocols

The solution is optimized for SMB, as well as local file transfers.

Private Cloud Option

Access the archive as object storage via an S3 interface.

LTFS and TAR

May be configured with tape pools using the LTFS or TAR format.

LTO Cartridge Replication

Automatically generates replica LTO cartridges that may be exported from the library for off-site retention.

Manages Unlimited Offline LTO

Manages LTO cartridges in a library and an unlimited number of externalized cartridges.

20 TB Disk Cache Enhances Performance

The user defines policies for disk caching that can be tailored for different file types and folders. The large 20 TB cache is ideal for cartridge replication when using a one-drive LTO library.

Easy LTO Migration

XenData archive software makes for easy system upgrades, going from an older to a later generation of LTO.

End-to-End Verification

Provides an automated check-sum operation for all data written to LTO.

Multiple Tape Pool Support

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

LTO Cartridge Spanning

Policies can be set to allow or prevent files being spanned across multiple LTO cartridges.

Auto-Expansion of LTO Pools

The system will dynamically expand LTO 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 tape movement.

File Version Control

The software provides comprehensive file version control. Deleted files and old file versions may be restored from LTO.

Partial File Restore

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

Supports WORM Tape

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

Metadata Backup and Restore

Provides rapid system restore in case of rebuild after RAID 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 LTO cartridge barcode locations that match a search term. The reports may be exported to Excel for further analysis.

Industry Standard File Security

The appliance runs a Windows 11 Pro operating system and integrates fully with the Microsoft Windows security model based on Active Directory.

Media Portal Interface Option

Access the archive via a web interface, view previews of video and image files and then download selected content.

Send to Cloud Option

Allows files to be stored on cloud object storage in addition to LTO. This may be used to share files with remote sites.

File Sync Option

FS Mirror utility provides file synchronization across your local network

XML API

The XML instructions include the ability to pull assets from a source location and push them back to that location.

Automated Tiered Storage Management

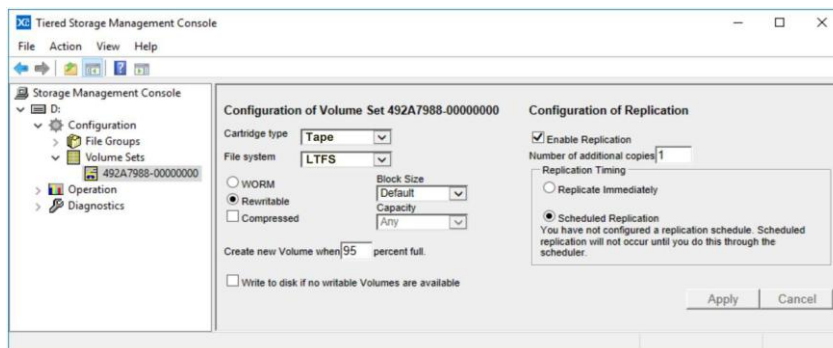
The user defines policies that automatically determine where files will be physically stored. These policies support tiered storage management and automatic LTO cartridge replication. The X20 supports three levels of storage hierarchy:

- ❖ **Online disk** with one instance of a file on the managed disk volume and, in addition, there will typically be one or more instances on LTO. In this case, the file will be retrieved from disk when accessed over the network.
- ❖ **Nearline LTO** with at least one instance of a file on an LTO cartridge within the library and no instances on disk. When a file on near-line LTO is accessed over the network, the XenData software automatically transfers the file over the network directly from LTO in response to the network read request.
- ❖ **Offline** with no instances on disk and instances of a file on one or more LTO cartridges, all of which have been exported from the tape library.

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 transitions from disk to nearline LTO and to offline LTO, the file path, file name and properties do not change, except the Microsoft offline attribute becomes enabled when the file is no longer on disk.

Automatic Cartridge Replication for Data Protection

The Archive Series software provides a Tiered Storage Management Console which is used to define storage policies. Using the console, automatic cartridge replication can be configured for any group of LTO cartridges. This is an easy way to create extra copies for export from the library. Exported replica cartridges may be held off-site retention which provides very cost-effective data protection.



File Version Management Provides Ransomware Protection

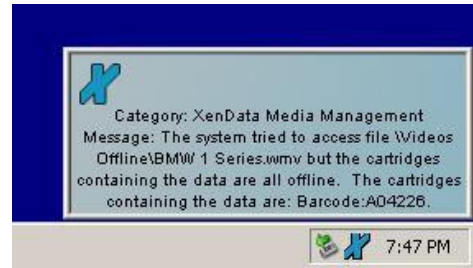
When an archived file is overwritten, the file system interface presents the latest version of the file and when a file is deleted, it is hidden from the file system interface. Unlike standard disk-based file systems, old versions of files and deleted files continue to be retained on LTO. The Archive Series software allows access to these deleted files and old file versions.

XenData file version management has saved many organizations from ransomware attacks because the original file versions are available for restore – without paying a ransom!

Manage Unlimited Externalized LTO Cartridges

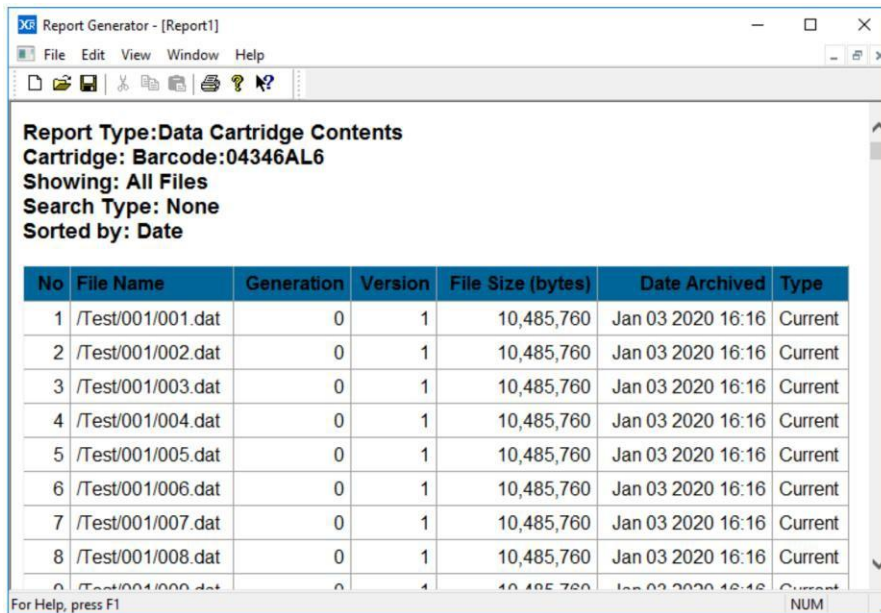
The X20 Archive Appliance manages an unlimited number of LTO cartridges that have been externalized by being exported from the library. The XenData software is licensed to support an unlimited number of externalized cartridges.

When a file moves from nearline LTO to being offline because the LTO cartridge(s) on which it is stored have been exported from the tape library, the file remains unchanged in the archive file system. 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, 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 LTO cartridges contain the requested file. This notification allows the correct cartridge to be easily identified and then imported back into the LTO library.



File Search and Cartridge Contents Reports

The XenData software allows the user to run reports including LTO cartridge contents and file search listings. Reports can be saved in different formats including tab delimited plain text (.txt) or XML. The text format is useful for exporting the results to Microsoft Excel or other applications.



No	File Name	Generation	Version	File Size (bytes)	Date Archived	Type
1	/Test/001/001.dat	0	1	10,485,760	Jan 03 2020 16:16	Current
2	/Test/001/002.dat	0	1	10,485,760	Jan 03 2020 16:16	Current
3	/Test/001/003.dat	0	1	10,485,760	Jan 03 2020 16:16	Current
4	/Test/001/004.dat	0	1	10,485,760	Jan 03 2020 16:16	Current
5	/Test/001/005.dat	0	1	10,485,760	Jan 03 2020 16:16	Current
6	/Test/001/006.dat	0	1	10,485,760	Jan 03 2020 16:16	Current
7	/Test/001/007.dat	0	1	10,485,760	Jan 03 2020 16:16	Current
8	/Test/001/008.dat	0	1	10,485,760	Jan 03 2020 16:16	Current

Easily Migrate to Later LTO Generations

The contents of cartridges and groups of cartridges can be automatically migrated from one generation of LTO to another, for example from LTO-6 to LTO-9. It is an operation that has zero downtime for the system. All the files stay in the same place in the file system but are moved from one generation of cartridges to another in background.

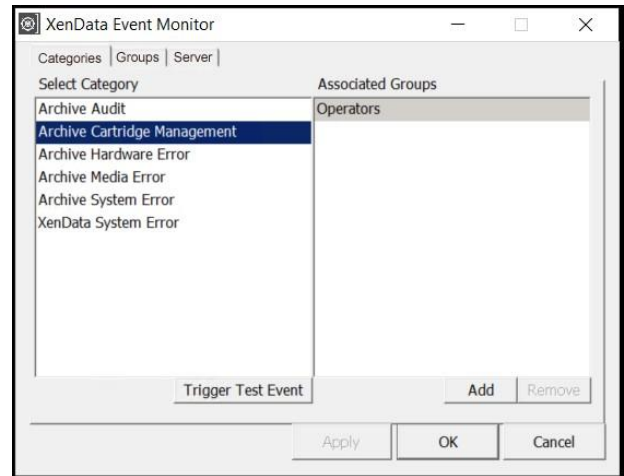
Other LTO archive solutions make the job of migrating to a later generation of LTO very difficult. But with XenData software, it is a seamless background task.

System Monitoring

The XenData software monitors error messages issued by the LTO drives and libraries, creating alerts and notifications which are logged in the Windows Event Log. The XenData software includes an Alert Module which characterizes these alerts and notifications into five categories:

- ❖ Archive Audit: This category of event messages describes the successful completion of routine operations.
- ❖ Archive Media Management: This category of event messages may require routine action from the archive operators.
- ❖ Archive Media Error: This event category consists of error messages associated with LTO cartridges.
- ❖ Archive Hardware Error: This event category consists of error messages associated with the LTO library and drives.
- ❖ Archive System Error: This event category consists of error messages associated with a system problem.

The XenData Alert Module provides email alerts to designated groups of recipients. The messages received by the different groups may be tailored to their specific needs. For example, operators may receive messages related to Archive Media Management, such as notifications related to management of externalized LTO cartridges. Whereas another group of support engineers may receive media, hardware and system error messages. In addition to sending email alerts, the system may be configured to provide on-screen notifications.

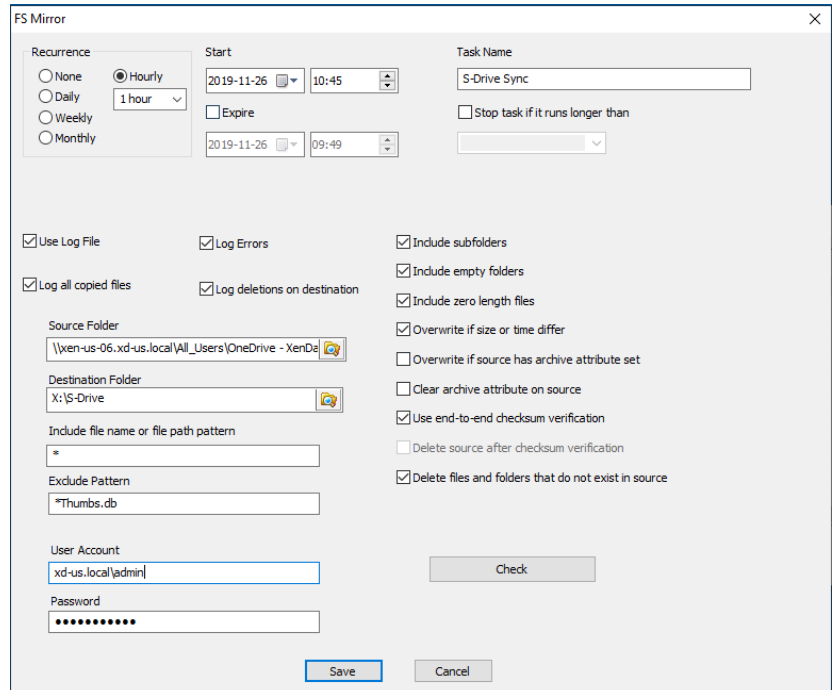


Option: FS Mirror Sync Utility

FS Mirror, a XenData utility that provides file-folder synchronization and mirroring of any local or network storage, is an optional upgrade.

FS Mirror tasks are easily configured using the User Interface illustrated opposite.

You can schedule tasks to sync any accessible file-folder structure to LTO. And when XenData Cloud File Gateway is installed, FS Mirror will sync your LTO archive to public cloud which is a good way to obtain an offsite backup of your content.

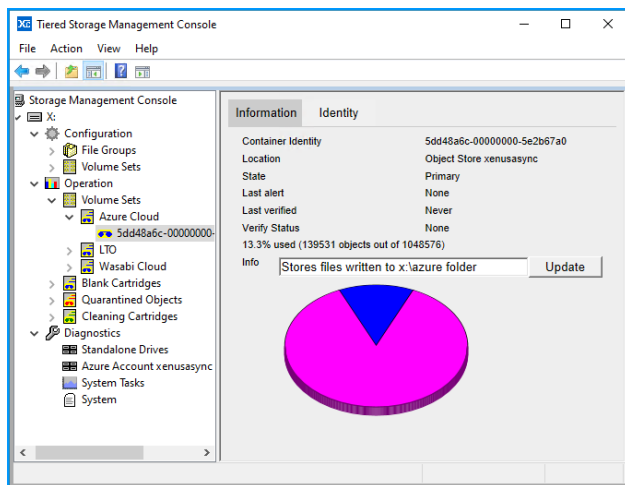


Option: Cloud File Gateway

The XenData software that runs on the X20 may be extended to manage cloud object storage in addition to an LTO library. The cloud connection is secure, using HTTPs, and fast, using multipart uploads and downloads. It is optimized for video files, supporting partial file restores and video streaming.

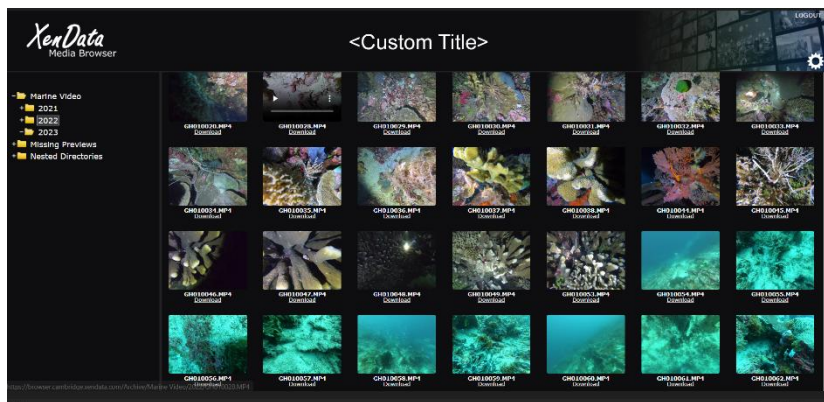
After installing and licensing the Cloud File Gateway Extension software, the tiered storage management policies support archiving to object storage or LTO.

Supported cloud storage includes AWS S3, Azure blob storage and Wasabi S3. The system is multi-cloud, simultaneously supporting multiple cloud object storage accounts from different providers. And by adding FS Mirror, selected files and folders may be replicated across local LTO and one or more cloud object storage accounts. This creates a cloud copy of the content stored locally on LTO. The content copied to the cloud may be part of your disaster recovery strategy or simply a way to share content with remote users.

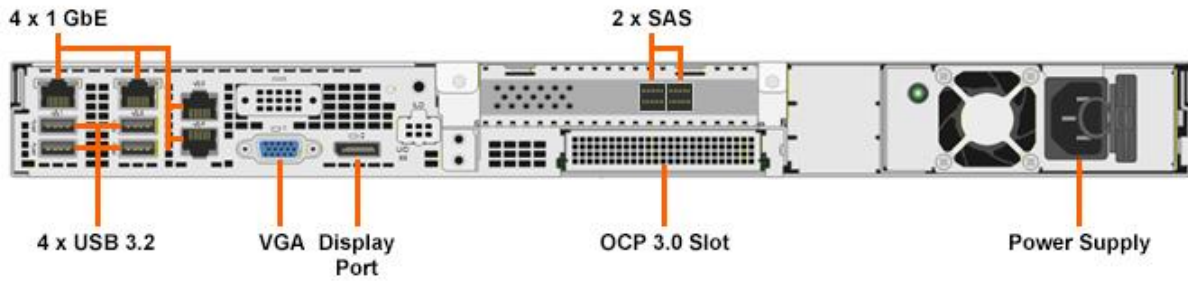


Option: Media Portal

The XenData Media Portal option adds a web interface that can be accessed remotely or on-premises. It is ideal for video and image archives as it allows a user to browse the archive file-folder structure and see previews of video and image files within the selected folder. An authorized user can also use the portal's web interface to download any selected file. By previewing files, users can be sure that they are selecting the correct content before restoring.



X20 Rear View



Base System Specification

XenData Part Number: 239170

Management Software:	XenData Archive Series software, LTO Server Edition including Alert Module
Supported LTO library configuration:	A single LTO library with up to 25 active slots and one LTO drive is licensed in the base system. May be upgraded to support additional slots and up to 2 LTO drives.
Operating System:	Microsoft Windows 11 Pro
Processor:	4-core Xeon
RAM:	16 GB
System Volume:	960 GB SSD
Managed Local Disk:	20 TB 7,200 rpm HDD
Connections to SAS library:	2 x SFF-8644 12 Gb/s SAS ports for connection to SAS LTO drives in the library.
Base Model Network Ports:	4 x 1 GbE ports
Network expansion slots:	OCP 3 at rear. See hardware upgrade options.
Network Protocols:	CIFS/SMB
USB Connections:	Four USB 3.2 in rear One USB 3.2 in front
Video Interfaces:	VGA and Display Port on rear
Spare PCIe slots.	None.
Power Supply	Single 290W power supply 100-240V; 50-60 Hz
19 Inch Rack Form Factor:	1U
Depth	387 mm (15.25 inches)
Weight:	9.5 Kg (20.95 lbs)
Rack Rails:	Included

Upgrade Options

Software Upgrades

XenData Part Number	Description
X20-25/50-LM	Perpetual software license upgrade for the X20 to increase the number of LTO library slots from 25 to 50. Includes 12 months support for the upgrade.
X20-UPG-20-LM	Perpetual software license upgrade for the X20 to support an additional 20 LTO library slots. Applicable above 50 slots. Includes 12m support for the upgrade.
X20-DRIVE-LM	Perpetual software license upgrade for the X20 increasing the number of supported LTO drives by one. Includes 12 months support for the upgrade.
X20-FSM-LM	Perpetual software license for FS Mirror on an X20 Archive Appliance. Includes 12m support
XD-MP1-12M	Media Portal: 12m subscription software license. Includes support for the subscription period.

Hardware Upgrades

XenData Part Number	Description
239017	Dual port 10 GbE Base-T network adapter for use with CAT6 or UTP cabling. Uses the OCP 3 slot.
239016	Dual port 10/25GbE SFP+ Adapter. Uses the OCP 3 slot. Does not include transceivers. (SKU 101081 or 101172) not included.
101081	SFP+ 10 GbE Transceiver. Quantity 2 required to use both ports in a dual port adapter. Suitable for use with item 239016.
101172	SFP28 25 GbE Transceiver (JL484A Compatible). Quantity 2 required to use both ports in a dual port adapter. Suitable for use with item 239016.

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