

Overview

Models

VXA-1 33/66-GB SCSI Tape Drive (opal)

237108-B21

VXA-1 33/66-GB SCSI Tape Drive (carbon)

237108-B22

VXA-1 IDE Tape Drive (opal)

237109-B21

VXA-1 IDE Tape Drive (carbon)

237109-B22

VXAtape Media 33/66-GB (two-pack)

237111-B21

VXAtape Cleaning Cartridge

237110-B21

Introduction

Compaq VXA-1 Tape Drives with Retrospect Express Backup provide backup and restore solutions at speeds of up to 21.6 GB per hour. VXA-1 tape drives provide protection for Compaq commercial desktops and workstations while storing up to 66 GB of data on a single cartridge.

Features

- Easy to implement—the VXA-1 Tape Drive option kit includes all materials necessary for operation including recording media and full-function backup software, as well as a choice of SCSI LVD or IDE/ATAPI interface.
- Easy to use—VXA-1 Tape Drives with Retrospect Express Backup include tools and drivers and intuitive interfaces for automating installation and scheduling backups.
- Easy to manage—VXA-1 Tape Drives offer a selection of cartridges with capacities from 12 GB native to 66 GB with 2:1 compression. VXA-1 drives with non-legacy packet technology are designed for exceptional reliability.
- High capacity to meet increasing storage demands—VXA-1 Tape Drives hold 33 GB native data, making them ideal solutions for burgeoning hard drives and increasing digital media requirements.

Key Benefits

- The first high-performance, high-capacity drive with a choice of IDE/ATAPI or SCSI LVD connectivity
- VXAtape cartridge capacities from 12/24 GB, 20/40 GB, to 33/66 GB (native/compressed)
- 3/6-Mbps (native/compressed) data transfer rates
- Internet-like data packets comprise the VXA-1 tape drives, designed for 100% data recovery every time
- Host speed matching optimizes throughput and eliminates backhitching inefficiency and deterioration
- Easy-to-install, easy-to-use, and quiet
- Reliable, one-step restores, even after multiple incremental backups
- Intelligent file selection saves time and media wear while ensuring the integrity of backed-up files
- Integrated disaster recovery protects against total hard drive failure
- Multiple, independent, backup copies offer increased data protection
- EasyScript™ wizard creates a complete backup strategy (including media rotation) geared to the user's preference

Product Highlights

VXA Technology

VXA-1 Tape Drives are the first and only drives to use Discrete Packet Format™ (DPF) technology, which is similar to the already proven technology used in networking and Internet markets. DPF writes and reads uniquely addressed packets that can be read in any sequence, eliminating the need for conventional head and track alignment mechanisms. The ability of VXA-1 tape drives to randomly read these data packets increases reliability and reduces costs.

Variable Speed Operation™ (VSO) enables VXA-1 Tape Drives to:

- Match the tape speed to the host's data rate
- Reduce wear caused by mid-read/write repositioning (known as "back-hitching" or "shoe-shining") to the data cartridge and mechanism
- Enter "Ready Mode" whenever data transfer is interrupted
- Work 80 times faster than backhitching using Archive Ready Mode
- Maintain an optimal data transfer rate

OverScan Operation™ (OSO) is a technique that enables VXA-1 Tape Drives to perform single pass error checking and correction. When reading data at normal speeds, the VXA-1 Tape drive uses both the leading and trailing heads. OSO enables each channel to scan greater than 100 percent of the tape's recorded area to ensure that each packet is read at least once. When reading data at slower speeds, the VXA-1 Tape Drive can scan a recorded area multiple times in a single pass.

Retrospect Technology

Retrospect Express Backup does not sacrifice reliability for increased performance. By combining intelligent media management with IncrementalPLUS backups and snapshot restores, Retrospect can quickly restore any file, folder, or hard drive to its exact previous state in a single operation. Retrospect employs several technologies to deliver high backup performance at 100% reliability.

Backup sets are the focus of all backup operations. A backup set is a group of one or more tapes that contain all the files necessary to completely restore computer data. Each backup set is maintained independently so that any one set can be used to restore data. Retrospect keeps track of all the files copied to each backup set, allowing the user to search through backup sets to locate files, even though the tapes may not be present. Retrospect's backup sets allow dynamic media rotation and free the user from the need to follow complex backup strategies, such as Grandfather, Father, Son (GFS), or Tower of Hanoi.

IncrementalPLUS technology gives Retrospect the ability to back up one copy of every new or changed file and still restore an entire hard drive in a single operation. Because Retrospect does not rely on the archive attribute to determine if a file is new or different, file selection is always precise and reliable. Each time Retrospect backs up a disk, it saves a list of all the files, folders, and registry information with the backup. At restore time, this "snapshot" tells Retrospect exactly which files need to be restored. The necessary files are read from the tape, and Retrospect skips over files that don't need to be restored. Backups take less time and save media wear. Restores are exact and 100% reliable.

High Reliability

Each VXA-1 Tape Drive is rated for a mean time between failure (MTBF) of 300,000 hours.

VXA Packet Technology Reliability

Because VXA technology reads each packet individually and assembles them in order in memory, it is immune to head-to-track alignment sensitivities and problems related to the issues of skewed or curved data tracks. The result is a drive capable of restoring data from even seriously mishandled media.

Extreme Tests

VXA tape recording media has been subjected to a battery of extreme tests during development and by third parties testing for reliability and durability. These tests include boiling, freezing, and immersing tapes in hot coffee. In every test the data on the VXA tape drives was 100% restored.

Retrospect IncrementalPLUS Reliability

IncrementalPLUS, Retrospect's normal mode of operation, compares file name, size, creation date and time, and modification date and time with those already backed up to the current backup set. Any file that does not match exactly is added. Files already copied do not need to be copied again. This method ensures that one copy of every unique file is added to the backup set. No files are missed.

Because Retrospect's snapshots keep track of the files and folders that were present on the hard drive, restores are simple and always 100% precise. Every document, preference, and system file is restored perfectly, no matter how many IncrementalPLUS backups have been performed.

Emergency Disaster Recovery

Retrospect Express Backup for Compaq includes a bootable Disaster Recovery (DR) feature that allows the computer to be restored completely, even when it has been damaged to the point where it will not boot from the hard drive.

Retrospect Express Backup creates a bootable DR CD image and saves it as an ISO 9660 image file. The image file allows the user to create the DR CD from the familiar interface of their favorite mastering software. This CD can boot the computer and automatically begin a complete emergency restore from the VXA-1 Tape Drive. Retrospect Express Backup's emergency restore CD may use any existing or new backup set. Retrospect's ability to perform exact, single-pass restores works in conjunction with the emergency restore feature.

QuickSpecs

VXA®-1 33/66-GB Tape Drive with Retrospect® Express Backup

Product Highlights

VXAtape Cartridges

VXAtape cartridges are available in capacities that meet virtually every storage need.

- The Compaq Part Number for the V17 tape is 237111-B21
- V10 tapes can be ordered directly from the VXA website (<http://www.vxa.com/compaqvxa>)
- V6 tapes can be ordered directly from the VXA website (<http://www.vxa.com/compaqvxa>)

Recording mode	V17	V10	V6
Native	33 GB	20 GB	12 GB
Compressed at 2:1	66 GB	40 GB	24 GB
DV @ 117 Kb per frame*	157 minutes	95 minutes	57 minutes
MPEG2 @ 75 Kb per frame*	244 minutes	148 minutes	89 minutes
MPEG1 @ 17 Kb per frame*	18 hours	11 hours	7 hours

Compression

VXA-1 Tape Drives feature hardware-implemented Advanced Lossless Data Compression (ALDC).

Cross Interface Compatible

Both SCSI and IDE versions of the VXA-1 Tape Drive offer capacities of up to 66 GB at 6 Mbps (2:1 compression). The VXA-1 IDE Tape Drive features an Ultra DMA Mode 2 interface that supports burst transfer rates up to 33 Mbps. The VXA-1 SCSI Tape Drive has a Fast and Wide SCSI Ultra 2 LVD interface. VXAtape media is interchangeable between drives having both interfaces. In a common platform and application software environment, tapes are fully interchangeable between VXA-1 Tape Drives with either interface.

Compatibility

VXA-1 33/66-GB Tape Drives are compatible with Compaq Deskpro™ Series computers, Compaq Evo™ Desktop computers, Compaq workstations, and Compaq Evo workstations.

Service and Support

VXA-1 33/66-GB Tape Drives have a one-year limited warranty or the remainder of the warranty of the Compaq product in which they are installed. Technical support is available seven days a week, 24 hours a day, as well as online support forums. Certain restrictions and exclusions apply.

QuickSpecs

VXA®-1 33/66-GB Tape Drive with Retrospect® Express Backup

Technical Specifications

Operating support	Microsoft® Windows® NT 4.0, Microsoft Windows 98, Microsoft Windows 2000		
Software support	Retrospect Express Backup for Compaq version 5.6 for Microsoft Windows NT 4.0 and Microsoft Windows 2000		
Drive specifications	Size (H x W x D)	VXA-1, IDE, internal	Fits standard 5.25-inch drive bay
		VXA-1, LVD, internal	Fits standard 5.25-inch drive bay
Drive LED Indicators	The VXA-1 Tape Drive contains four LEDs to indicate its operational status. Refer to the Front Bezel LED definitions table in Section 5 of the VXA-1 Compaq QuickStart Guide. (IDE/ATAPI Compaq Part Number 237127-001; SCSI/LVD Compaq Part Number 237125-001)		
Recommended maximum host size	Commercial desktops and workstations	66 GB or less for compressible data	
		33 GB or less for compressible data	
Drive type	VXA 8 mm tape drive		
Transfer rates	Native sustained	Host matching up to 10.8 GB per hour (the VXA-1 drive will typically compress data at a 2:1 ratio, but actual compression ratios will vary based on the type of data being compressed)	
	2:1 compression sustained	Host matching up to 21.6 GB per hour (the VXA-1 drive will typically compress data at a 2:1 ratio, but actual compression ratios will vary based on the type of data being compressed)	
Interface	VXA-1 IDE	Ultra DMA Mode 2 interface—supports burst transfer rates of up to 33 Mbps	
	VXA-1 SCSI	Fast and Wide SCSI Ultra 2 LVD	
Data access time	Average load time	20 seconds	
	Search speed	128 Mbps native	
		256 Mbps with 2:1 compression	
	Data buffer size	4 Mb	
Standards compliance	ECMA-316 (VXA-1 format)		
Packetized data	64 bytes of user data plus ECC		
Data compression	ALDC (Adaptive Lossless Data Compression)		
Error detection/correction	Four-layer Reed-Soloman ECC		
Hard error rate	Less than (1 x 10 ¹⁷) bits		
Tape format	Recording method	8 mm wide helical scan	
	Recording format	ECMA-316 VXA-1 format	
Media	62 m, 107 m, and 170 m Advanced Metal Evaporated (AME) VXA tape cartridges		
MTBF	300,000 hours		
MTTR	30 minutes		
Environmental	Operating temperature	50° to 104° F (+10° to 40° C)	
	Non-operating temperature	-40° to 140° F (-40° to 60° C)	
	Relative humidity	20% to 80% non-condensing	
	Power requirement	+ 5 VDC, + 12 VDC	
	Power consumption	8 watts, typical	
Retrospect Express Backup	Backup source	All local volumes (removable disks and cartridges, MO disks, and hard disks)	
	Restore	Restores in a single step, even after multiple incremental backups	
		Restores any hard disk to its last backed-up state	
		Disaster recovery feature completely restores data, even after total hard drive failure or replacement	
	Automatic operation	All backup, archiving, and duplicate operations can be automated	
		Routine rotation between multiple backup sets	
		Schedules scripts to run with any combination of days, times, and intervals	
EasyScript wizard	Automatic backup scripts are created based on responses to a few simple questions		
	Provides a complete strategy for data protection including frequency of backup, media rotation, and scheduling		
Security options	Backup set data can be encrypted		

Technical Specifications

	Restricted (password) access to backup files
	Backup sets provide resistance to virus contamination
Backup sets	Stores files from backups
	Supports unlimited backup sets
	Catalogs of stored files can be rebuilt for direct access to data
File selection	Backs up files, documents, preferences and the operating system
Kit contents	VXA-1 Tape Drive, Dantz Retrospect Express Backup software, VXA-1 tools, IDE cable (only opal kits), quick install guide
	NOTE: VXA tapes and VXA tape cleaning cartridges must be ordered separately—these are not included in the kit.

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