

Overview

The HP 20/40-GB DAT 8 Cassette Autoloader includes an integrated DDS-4 DAT Drive and changer mechanism with convenient access to an eight cassette magazine, allowing you to develop a media management tape rotation scheme for scheduled backups of servers 40 GB or less.

Models	20/40-GB DAT DDS-4 8 Cassette Autoloader (Internal)	166504-B21
	20/40-GB DAT DDS-4 8 Cassette Autoloader (External)	166505-001

Product Highlights

Industry Standard DDS-4	The DDS-4 technology has a drum rotation speed of 8,503 rpm while the tape moves at 11.6 mm/s. Features of the format allow a linear bit density greater than DDS-3, which increases transfer rate and capacity.	
Investment Protection	The 20/40-GB DAT autoloader uses a compatibility mode to read and write DDS-1, DDS-2, DDS-3 and DDS-4 tapes. This offers investment protection for users who have standardized with the DAT technology. Users will also have the ability to restore archived media from previous backups and interchange with previously shipping DDS-3 6 and 8 cassette Autoloader drives.	
Lowers TCO with Automation	Automated DAT backup systems offer lower total cost of ownership with a higher storage capacity and performance than a stand alone tape backup drive and is targeted at the price sensitive environments.	
Operating Environment Support	Microsoft® Windows® NT®/2000	Supported on NT v4.0 with VERITAS Backup Exec v7.3 for NT and CA ARCserveIT v6.61 for NT. Both software packages require optional autoloader modules. Dantz Retrospect v5.6 for NT/2000 (Server Version).
	Novell NetWare v4.x & 5.x	Supported on NetWare v4.x and 5.x with VERITAS Backup Exec v8.5 for NetWare and CA ARCserveIT v6.61 for NetWare. Both software packages require optional autoloader modules.
Software Support	VERITAS Backup Exec v8.6 for NT VERITAS Backup Exec v8.5 for NetWare Computer Associates ARCserve v7.0 for NT Computer Associates ARCserve v7.0 for NetWare Computer Associates ARCserve 2000 for 2000 Dantz Retrospect Backup v5.x	
Option Kit Contents	20/40-GB DAT DDS-4 8 Cassette Autoloader Internal	20/40-GB DAT drive with loader mechanism Documentation 8 Cassette Magazine 1 Data Cassette and 1 Cleaning Cassette
	20/40-GB DAT DDS-4 8 Cassette Autoloader External	20/40-GB DAT drive with loader mechanism in an enclosure Documentation 8 Cassette Magazine 1 Data Cassette and 1 Cleaning Cassette Power Cord External LVD SCSI Cable
Rackmount Tape Options	Supported on StorageWorks 3U Rackmount Kit by Compaq. Allows customer to install up to 2 internal DAT AutoLoaders in a 3U rackmount space. Standard configuration provides two internal SCSI buses (channels) supporting 1 DAT AutoLoader per bus. Please refer to "Rackmount Tape Drive Kits" QuickSpec for further information.	
Qualified with HP's Data Protection Suite for Tape Utilities	Complete set of Data Protection Tools focused on simplifying the process of configuring, implementing, and maintaining a data protection strategy. Includes software applications such as Tape Storage Management Console and Insight Manager, as well as product information tools including technology White Papers, Service Advisories, and the Storage Products CD. For information on the Data Protection Software Suite, please check the "Related Options" section of this QuickSpec or visit the Web site at: http://h18000.www1.hp.com/storage/software.html . NOTE: This Web site is available in English only.	

Compatibility

Server and Tape Compatibility

ProLiant Servers	Internal	External
DL320		X
DL360G2		X
DL380	X	X
DL380G2		X
DL580		X
PL8500		X
ML 330G2	X	X
ML350G2	X	X
ML370G2	X	X
ML530G2	X	X
ML570	X	X
PL8000	X	X
CL380	X	X
CL1850	X	X

NOTE: When upgrading a Non-Hot Plug Model to Hot Plug, the purchase of the Hot Plug Cage Upgrade Option Kit (161275-B21) is required.

Host Bus Adapters and Controllers for Intel Based Servers	64-Bit/66-MHz Single Channel Wide Ultra3 SCSI Adapter	154457-B21, -291
	64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter	129803-B21, -291

AlphaServer and Tape Compatibility

AlphaServers	Internal	External
Alpha Server 4100	X	X
AlphaServer DS10	X	X
DS10L		X
AlphaServer DS20E	X	X
AlphaServer ES40	X	X
AlphaServer ES45	X	X
GS60E	X	X
GS80/160/320	X	X

* **NOTE:** These platforms also have internal disk enclosures support of the hot plug option, in addition to support in external LVD enclosures.

Host Bus Adapters and Controllers Compatibility for AlphaServers	32-bit Single Channel UltraWide HBA	KZPBA-CA
	*not supported with hot plug	
	32-bit Single Channel LVD LSI SYM 8952Uia HBA	SN-KZPCA-AA
	32-bit Single Channel LVD SCSI LSI SYM 8952Uia HBA	3X-KZPCA-AA
	32-bit Single Channel LSI SYM 8951Uia	30-56041-01
	Comb SCSI/Ether Dual Channel	KZPCM-DA
	*not supported with hot plug	
64-bit Dual Channel Ultra 3 LVD HBA	3X-KZPEA-DB	
Combo Ultra2 SCSI/2D Video/10-100 Ethernet	3X-DEPVZ-AA	

Configuration Information

Base Configuration

Select one:

	Model Description	Part Number
20/40-GB DAT Autoloader, Internal	Contains one 8 Cassette 20/40-GB DAT autoloader, US English hard copy manual and translation CD, Warranty card, 1 DDS-2 data cassette, 1 DAT cleaning cassette, 2-internal cables.	166504-B21
20/40-GB DAT Autoloader, External	Contains one 8 Cassette 20/40-GB DAT autoloader enclosed in an external housing, power cord, SCSI terminator, 1 DDS-4 data cassette, 1 DAT cleaning cassette, external 3¢ cable, warranty card, US English documentation with translations CD.	166505-001

Related Options

Media		
	HP DDS-2 8GB 120m Data Cartridge	C5707A
	HP DDS-3 24GB 125m Data Cartridge	C5708A
	HP DDS-4 40GB 150m Data Cartridge	C5718A
	NOTE: HP DDS-4 Data Cartridge is recommended.	
	HP DDS Cleaning Cartridge	C5709A

Tape Storage Software	Data Protection Software Suite	259596-B21
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Rackmount Tape Options & Cable Kits	3U Rackmount Kit, All (Please refer to " Rackmount Tape Drive Kits " QuickSpec for further information)	274338-B21
	LVD Cable Kit, 68-pin HD/VHDCI (Internal & External Cables)	168048-B21
	LVD Cable Kit, 68-pin HD/68-pin HD (Internal & External Cables)	242381-B21
	68-pin HD/VHDCI, 12 ft/3.66 m (External Cable only)	341177-B21
	68-pin HD/68-Pin HD, 16.40 ft/ 5 m (External Cable only)	328215-001
	68-pin HD/68-Pin HD, 32.81 ft/10 m (External Cable only)	328215-002

Technical Specifications

Warranty	Maximum	The remaining warranty of the server product in or onto which it is installed to a maximum three-year limited warranty. (Certain restrictions and exclusions apply. Consult the Customer Support Center for details.)	
	Minimum	Three year parts, one year next-business day exchange	
Liquid Crystal Display (LCD)	The dot matrix front panel information display provides user-friendly information on the autoloader's operating status, potential error conditions, current cassette and magazine status.		
Recommended Maximum Server Size	40 GB		
Performance Specification	Native	Maximum	8.4 GB/hour
		Typical	6.0 GB/hour
	2:1 Compression	Maximum	16.8 GB/hour
		Typical	15 GB/hour
NOTE: Typically, users will be able to compress their data at a 2 to 1 ratio; however, compression ratios will vary based on the type of data being compressed.			
	Cartridge Swap Time	50 seconds/average	
	Load Time	58 seconds/average	
	Unload Time (depending on tape type and position)	32 seconds to 160 seconds	
	Search Speed	45 seconds average file access for any part of a 150 meter tape	
Maximum Formatted Capacity (unattended)	8-Cassette Magazine		
	Without compression	160 GB	
	Based on typical 2:1 compression ratio	320 GB	
NOTE: Typically, users will be able to compress their data at a 2 to 1 ratio; however, compression ratios will vary based on the type of data being compressed.			
Mechanical Measurements	Tape Width	0.15 in (0.38 cm)	
	Tape Length	492 ft (150 m)	
	Dimensions (HxWxD)	3.25 x 5.75 x 9.51 in (8.26 x 14.61 x 24.16 cm)	
	Weight	5.258 lb (2.4 kg)	
Tape Speed	Read/Write	0.46 ips/11.6 mm/s	
	Head to Tape Speed	262 ips/6,670 mm/s	
	Rewind/Fast Forward	130 x Read/Write Speed	
Tape Format	Recording Method	Helical Scan	
	Bytes/Group	38,4296	
	Data Frame/Group	22	
	Density/Inch	122,000	
	Flux Reversal/Inch	1,524,000	
	Track Density/Inch	2,793	
	Data Encoding Method	PRML	
	Data Transfer Rate	2.3 MB/s	
	Error Detection/Correction	Reed-Solomon-3 levels	
	Reliability Cartridge Swaps	> 100,000	
MTBF	250,000 hours at 30% duty cycle		

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