MODELS

Compaq SDLT 110/220GB Tape Drive

SDLT 110/220-GB, Internal
192106-B21, Worldwide (Opal)

SDLT 110/220-GB, External
192103-001, North America (Opal)
192103-B31, International (Opal)
192103-291, Japan (Opal)

SDLT 110/220-GB, 3U Rackmount
274331-B21, Worldwide (Carbon)
Single drive installed in 3U Rackmount Kit

SDLT 110/220-GB, Dual-Drive, 3U Rackmount
274334-B21, Worldwide (Carbon)
Two drives installed in 3U Rackmount Kit

SDLT 110/220-GB Tape Array III, 5U Rackmount
274336-B21, Worldwide (Carbon)
Four drives installed in 5U Rackmount Kit

Rackmount Kits:
    3U Rackmount Kit
    274338-B21, Worldwide
    Accommodates up to 2 <u>internal</u> SDLT drives

    5U Rackmount Kit
    274339-B21, Worldwide
    Accommodates up to 4 <u>internal</u> SDLT drives

Feature List

- SCSI LVD standard Interface
- Maximum native storage capacity of 110GB, up to 220GB with compression
- Maximum native data transfer rate of 39.6GB/hour, up to 79.2GB/hour with compression
- Backward-read compatibility with DLT Type IV tape cartridges
- Available in internal, external, and rackmount configurations
- Supported in multiple rackmount kit options including the 3U Rackmount Kit and 5U Rackmount Kit
- Tape Storage Software provided through *StorageWorks*™ Data Protection Software Suite by Compaq

OVERVIEW

Compaq's SDLT 110/220 is the first product in the SDLT family, offering increased capacity and performance over previous DLT tape drives and backward read compatibility with DLT Type IV media

Compaq SDLT 110/220-GB Tape Drive Customer benefits include:

- Industry leading native storage capacity with 110-GB capacity per data cartridge
- Native data transfer rate of 39.6GB/hr offers highest performance in DLT/SDLT product class
- Investment protection through backward-read compatibility with previously written DLT Type IV media
- Increased reliability and performance through technological advances in drive head and media design
- Reduces dependence on spares inventory with a 24 hour exchange
- SDLT technology roadmap offers future capacities beyond 1 TB per cartridge

COMPAQ

KEY FEATURES

- 110-GB native capacity, minimum 10% higher capacity advantage over competitive tape drives
- 11MB/s, 83% faster than Compaq's 40/80-GB DLT drive
- Utilizes new SDLT media with Advanced Metal Powder (AMP) Technology
- Backward-read compatible with DLT Type IV media
- Internal and external models, with multiple options for rackmount configurations
- Rackmount-ready models for quick installation into *ProLiant*™ and *AlphaServer*™ racks
- Standard industry interface, SCSI LVD
- DRTape-ready and supported by *StorageWorks* Data Protection Software Suite
- Supported with VERITAS Backup Exec, Computer Associates ARCserve, and Dantz Retrospect Backup
- Qualified behind Windows NT® 4.0, Windows 2000, Netware, *Tru64*™ Unix®, *OpenVMS*™, Linux, and SCO/Caldera Unix

PRODUCT HIGHLIGHTS

Super DLT Technology

Super DLTtape is an extension of the DLT platform, the industry's de-facto standard for tape backup and data protection. It is designed to meet the business critical demands of enterprise storage customers. The new SDLT platform extends the advantages of DLT technology by increasing capacity, performance, and reliability standards through technological advances in drive head and media design. With backward-read compatibility for DLT Type IV media, the new SDLT tape drive provides customers with an easy migration path to advanced technology for their data protection strategies.

Qualified with *StorageWorks* Data Protection Software Suite

Complete set of Compaq 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 Compaq *Insight Manager*™, as well as product information tools including technology White Papers, Service Advisories, and the Compaq Storage Products CD. An annual subscription service is also included providing up to three updates per year for Data Protection Tools that have been refreshed. For information on ordering the Data Protection Software Suite, please check the "Related Options" section of this QuickSpec or visit the Compaq.com website.

DRTape-Ready (Disaster Recovery Utility)

Compaq's DRTape Disaster Recovery Utility is a new data recovery tool which replaces the traditional recovery methods associated with manual downloads from floppy or CD-ROM. DRTape is a firmware driven software utility that provides a disaster recovery solution for Compaq ProLiant servers. Embedded in the firmware of each supported tape device, DRTape uses Compaq tape drives to emulate bootable drive devices, similar to floppy and CD-ROM drives. When implemented, DRTape can provide for the complete recovery of server software and data. The recovery process requires the use of only one tape cartridge, in conjunction with the Compaq SmartStart CD, and can typically be completed in less than an hour.

**Note: DRTape does not support Compaq Smart Array Controllers. Please see "Compaq DRTape Compatibility Matrix" at: http://www.compaq.com/products/storageworks/drtape/compatibility.html for further information regarding the minimum requirements for operating DRTape.

Rackmount Tape Options

Supported in *StorageWorks* 3U and 5U Rackmount Kits, allowing customer to install up to 2 internal DLT or SDLT drives in a 3U rackmount space or up to 4 internal DLT or SDLT drives in a 5U rackmount space, respectively. Standard configuration for 3U Rackmount Kit provides two internal SCSI buses (channels) supporting one DLT or SDLT drive per bus. Standard configuration for 5U Rackmount Kit provides two internal SCSI buses (channels) supporting up to 2 DLT or SDLT drives per bus. Optional cable kit permits user to extend from two to four internal SCSI buses in 5U Rackmount Kit, increasing the performance (data transfer rate) by allowing the customer to stream data to all four drives simultaneously. Please refer to "Rackmount Tape Drive Kits" QuickSpec for further information.

PRODUCT HIGHLIGHTS *(continued)*

Compatibility and Integration Testing

Compaq's SDLT 110/220-GB tape drives are fully supported and compatible with Compaq Servers, *StorageWorks* DLT Tape Enclosures & Array, and controllers. Compaq thoroughly tests products with leading software and operating systems, including VERITAS Backup Exec and CA ARCserve.

Software Supported

VERITAS Backup Exec v8.5 for Windows NT/2000

VERITAS Backup Exec v8.5 for NetWare

VERITAS Backup Exec Disaster Recovery Option

Computer Associates ARCserve 2000 for Windows NT/2000

Computer Associates ARCserveIT v6.6 for NetWare

Computer Associates ARCserve Disaster Recovery Option

Dantz Retrospect Backup v5.6 for Windows NT/2000 (Server & Workgroup version)

CarePaq™ Service & Support

Additional Warranty protection and/or Compaq Installation packages can be purchased.

Software Product Services
- Standalone telephone support
- Rights to a new license
- Media and documentation updates

Hardware Product Services
- Installation services
- On-site Maintenance (includes warranty support)
- Response time upgrades during the warranty period
- Post-warranty coverage
- RAID setup and performance consulting via statement of work

For additional hardware installation and maintenance information please refer to the URL's listed below:
http://www.compaq.com/services/carepaq/us/install/cp_storage.html

http://www.compaq.com/services/carepaq/us/hardware/cp_storage.html

Warranty Upgrade Options
- Response - Upgrade on-site response from next business day to same day 4-hours
- Coverage - Extend hours of coverage from 9 hours x 5 days to 24 hours x 7 days
- Duration - Select duration of coverage for a period of 1, 3, or 5 years

CarePaq Information
- CarePaq is defined as an upgrade to the product warranty attribute, available for a specific duration and hours of coverage.
- CarePaq is not available for less than the products warranty duration.
- CarePaq is available for sale anytime during the warranty period for most products, but the commencement date will be the same as the Warranty Start Date (delivery date to end user customer). Proof of purchase may be required.
- CarePaq services are prepaid.

For additional CarePaq (hardware & software) information, as well as, orderable part numbers please refer to the URL listed below:
http://www.compaq.com/services/carepaq/index.html

P RODUCT H IGHLIGHTS *(continued)*

CarePaq Service & Support *(continued)*

EMEA CarePaq Information

Information on EMEA CarePaqs is available at http://emea-inline.eur.compaq.com/csd/smb/.

Sample Part numbers

206959-022/021 provides 4 hour hardware response 9 x 5

206960-022/021 provides 4 hour hardware response 24 x 7

CS Support

Compaq Services provides a three-year, limited warranty, fully supported by a worldwide network of resellers and service providers and toll-free 7 x 24 hardware technical phone support during the warranty period. In addition, available service offerings include a full range of CarePaq packaged hardware and software services:

- Installation and start up
- Extended coverage hours and enhanced response times
- System management and performance services
- Availability and recovery services

Warranty

3-0-0 (Three year parts)

C OMPAQ SDLT 110/220-GB T APE D RIVE S PECIFICATIONS

Protocol Support	Ultra2 SCSI, SE/LVD interface (switchable)		
O/S Support	Windows NT v4.0, Windows 2000		
	Netware v4.12 & 5.0		
	OpenVMS (native) VMS7.1-2/7.2-1		
	Tru64 Unix (native) 4.0f/5.0a/5.1		
	Linux (native) – Red Hat 7.0/7.1, SuSE 7.0/7.1, Caldera 3.5		
	SCO/Caldera Unix (native) - OpenServer 5.0.6/OpenUnix 8 (Certified)		
Dimensions	Physical (HxWxD)	SDLT 110/220-GB, Internal	3.4 x 5.84 x 8.35 in/8.64 x 14.83 x 21.21 cm
		SDLT 110/220-GB, External	6.3 x 6.9 x 12.8 in/16 x 17.51 x 32.51 cm
		SDLT 110/220-GB, Rackmount (1 or 2-Drive)	5.2 x 16.8 x 23 in/13.2 x 42.7 x 58.4 cm
		SDLT 110/220-GB, Rackmount (4-Drive)	8.75 x 19 x 18.125 in / 22.2 x 48.26 x 46 cm
	Shipping (LxWxH)	SDLT 110/220-GB, Internal	14.5 x 13 x 11.85 in/36.83 x 33.02 x 30.1 cm
		SDLT 110/220-GB, External	17.13 x 19.75 x13.25 in/43.51 x 50.17 x 33.66 cm
		SDLT 110/220-GB, Rackmount (1 or 2-Drive)	15.75 x 23.75 x 33.50 in/40.005 x 60.325 x 85.09 cm
		SDLT 110/220-GB, Rackmount (4-Drive)	32.25 x 15.38 x 31 in / 81.92 x 39.07 x 78.74 cm

COMPAQ SDLT 110/220-GB TAPE DRIVE SPECIFICATIONS *(continued)*

Weight	Out of box	SDLT 110/220-GB, Internal	5.25 lb/2.4 kg
		SDLT 110/220-GB, External	14.0 lb/6.35 kg
		SDLT 110/220-GB, Rackmount (1-Drive)	32.4 lb/14.7 kg
		SDLT 110/220-GB, Rackmount (2-Drive)	37.6 lb/17.1 kg
		SDLT 110/220-GB, Rackmount (4-Drive)	52 lb/23.7 kg
	Shipping	SDLT 110/220-GB, Internal	13 lb/5.9 kg
		SDLT 110/220-GB, External	32 lb/14.5 kg
		SDLT 110/220-GB, Rackmount (1-Drive)	52.4 lb/23.8 kg
		SDLT 110/220-GB, Rackmount (2-Drive)	57.6 lb/26.2 kg
		SDLT 110/220-GB, Rackmount (4-Drive)	81 lb/36.8 kg
UPC/JAN Code	192106-B21	720591440848	4948382197047
	192103-001	720591440794	
	192103-B31	720591440800	
	192103-291	720591440817	4948382165862
	274331-B21	613326372722	4948382246790
	274334-B21	613326372784	4948382247322
	274336-B21	613326372548	4948382247346
Cables	Required/Supported Cables	Internal Options contain a 2-Device ribbon cable with switchable LVD/SE terminator	
		External Options contain 6 ft 68-pin HD to VHDCI External Cable, 6 ft 68-pin HD to 68-pin HD External Cable, and 3 FT 68-pin HD to 68-pin HD External Cable	
	Required/Supported Cables (Rackmount Models Only – must be ordered separately)	LVD Cable Kit, 68-Pin HD/VHDCI LVD Cable Kit, 68-Pin HD/68-Pin HD 68-Pin HD/VHDCI, 12ft 68-Pin HD/68-Pin HD, 5m 68-Pin HD/68-Pin HD, 10m	
Drive LED Indicators	Ready/Busy	When constantly illuminated, the drive is ready for next command	
		When blinking, drive is executing a command	
	Write Protected	When illuminated, the tape cartridge is write protected	
	Attention	An error has occurred and requires intervention	
Buffer	32-MB embedded within the tape drive		
Input Requirements	Nominal Line Voltage	100 to 264	
	Range Line Voltage	VAC	
	Line Frequency	47 to 63 Hz	
	Typical Input Current	46 W	
Interface	SE/LVD (switchable) LVD: Ultra2 SE: Ultra		
Maximum Number of Drives	2 or more drives per scsi bus * Depending on compressibility of data		
Maximum Transfer Rate	80MB/s (burst)		
Average Access Time from BOT	70 seconds		
Load/Unload Time	40 sec / 12 sec		
Media	SDLT		
Power	+5V±5% / +12V±10%		
Reliability Features	Head Life	30,000 Hours	
	MTBF	250,000 Hours @ 80% duty cycle	
Relative Humidity (non-condensing)	Operating	20% to 80%	
	Shipping	5% to 95%	
Temperature Range	Operating	50° to 104°F/10° to 40°C	
	Shipping	-32° to 150.8°F/-40° to 66°C	
Altitude	Operating	-500 ft/-152 m to 10,000 ft/3,048 m	

SDLT 110/220 RACKMOUNT MODELS SPECIFICATIONS

	Single/Dual-Drive Models	SDLT 110/220 Tape Array III
Protocol Support	Wide SCSI LVD/SE	Wide SCSI LVD/SE
Form Factor	3U, Rackmount	5U, Rackmount
LED Indicators (On Front Panel)	(1) Power Supply LED	(1) Power Supply LED, (1) Service Required LED
Cable Type (External)	Not Included (Please refer to section entitled "Related Options")	(2) 12ft. 68-Pin HD-to-VHDCI
External Connector Type/Quantity	68 Pin High-Density (HD) / 2 Wide SCSI Connectors	68 Pin High-Density (HD) / 2 Wide SCSI Connectors (Can increase to 4 connectors with Optional LVD Cable Kit)
Maximum Number of Devices/Ports	2 internal SCSI buses (channels) supporting 1 drive per SCSI bus	2 internal SCSI buses with up to 2 drives per SCSI bus; Optional LVD cable kit can increase unit to 4 internal SCSI buses with 1 drive per bus
Maximum Number of Drives	2 Full-Height (DLT & SDLT)	4 Full-Height (DLT & SDLT)
Tape Drive (Installed)	SDLT 110/220 (1 or 2 drives installed)	SDLT 10/220 (4 drives installed)
Capacity	Up to 220-GB Native Capacity	440-GB Native Capacity
Transfer Rate (maximum)	Up to 22MB/s	44MB/s

FAMILY COMPARISON

	DLT 20/40	DLT 40/80	SDLT 110/220
Announce Date	1996	2000	January 2001
Capacity (native)	20GB	40GB	110GB
SCSI Interface	Fast SE	Fast-Wide SE/LVD	Ultra2, LVD
Buffer	4MB	8MB	32MB
Firmware Upgradeable	Yes	Yes	Yes
Maximum Drives per bus	2	2	2 or more
MTBF	200,000 @ 80%	250,000 @ 80%	250,000 @ 80%
Transfer Rate	1.5MB/s	6MB/s	11MB/s

SERVER AND TAPE COMPATIBILITY

ProLiant Servers	Internal	External	Rackmount
DL320		X	X
DL360		X	X
DL380	X	X	X
DL580		X	X
PL8500		X	X
ML330	X	X	X
ML350	X	X	X
ML370	X	X	X
ML530	X	X	X
ML570	X	X	X
PL8000	X	X	X
CL380	X	X	X
CL1850	X	X	X

Host Bus Adapters and Controllers for Intel® Based Servers	SCSI-3	272514-001
	64-bit Dual Channel	348757-B21
	Dual Channel Ultra III	129803-B21, -291
	Dual Channel 64-bit Wide Ultra3	127693-001
	Single Channel 64-bit Wide Ultra3	154457-B21, -291

ALPHASERVER AND TAPE COMPATIBILITY

AlphaServers	Internal	External	Rackmount**
DS10	* X	X	X
XP900	* X	X	X
XP1000	* X	X	X
DS10L		X	X
AlphaStation™ DS20E	* X	X	X
ES40	* X	X	X
AlphaStation ES40	* X	X	X
GS60E		X	X
GS80/160/320		X	X
GS140	* X	X	X

* Internal Drive support for these platforms is limited to use in a Rack Mount enclosure

** Compatible with SDLT 110/220 Tape Array III and 5U Rackmount Kit only

Host Bus Adapters and Controllers Compatibility for AlphaServers	32-bit Single Channel	KZPBA-CA
	32-bit Single Channel LSI SYM 8952Uia	SN-KZPCA-AA
	32-bit to LVD SCSI LSI SYM 8952Uia	3X-KZPCA-AA
	32-bit Single Channel LSI SYM 8951Uia	30-56041-01
	Comb SCSI/Ether Dual Channel	KZPCM-DA

CONFIGURATION INFORMATION

STEP 1 – SDLT 110/220-GB TAPE DRIVE – BASE CONFIGURATION

Select one:

Model Number	Part Number	Model Description:
SDLT 110/220-GB Internal	192106-B21	Contains one SDLT 110/220-GB tape drive, 1 SDLT data cassette, 1 internal 2-Device Ribbon Cable w/switchable LVD/SE Terminator, Warranty Card, User's Guide on CD, and Native Drivers on CD.
SDLT 110/220-GB External	192103-001 192103-B31 192103-291	Contains one SDLT 110/220-GB tape drive enclosed in an external housing, power cord, SCSI terminator, 1 SDLT data cassette, 1 external 3' Wide to VHDCI cable, Warranty Card, User's Guide on CD, and Native Drivers on CD.
SDLT 110/220-GB, 3U Rackmount	274331-B21	Wide SCSI LVD rack-mountable enclosure (3U) with power supply and fan, one internal SDLT 110/220-GB tape drive, one SDLT data cartridge, Power Cord, Native Drivers on CD, User's Guide on CD, and Documentation.
SDLT 110/220-GB, Dual Drive, 3U Rackmount	274334-B21	Wide SCSI LVD rack-mountable enclosure (3U) with power supply and fan, two internal SDLT 110/220GB tape drives, two SDLT data cassettes, Power Cord, Native Drivers on CD, User's Guide on CD, and Documentation.
SDLT 110/220-GB Tape Array III, 5U Rackmount	274336-B21	Wide SCSI LVD rack-mountable enclosure (5U) with power supply and fan, four DLT 40/80-GB tape drives, four DLT IV data cassettes, one DLT cleaning cassette, two SCSI cables, Power Cord, Native Drivers on CD, User's Guide on CD, and Documentation.

RELATED OPTIONS

Media

SDLT Media, 20-Pack	188527-B26
SDLT Media, 10-Pack	188527-B22
SDLT Media, 5-Pack	188527-B21
SDLT 110/220 Maintenance Kit	270445-B21 (includes SDLT cleaning cartridge)

Rackmount Tape Options, Cable Kits, & Rail Kits

5U Rackmount Kit, All	274339-B21 (Please refer to "Rackmount Tape Drive Kits" QuickSpec for further information)
3U Rackmount Kit, All	274338-B21 (Please refer to "Rackmount Tape Drive Kits" QuickSpec for further information)
LVD Cable Kit, 68-Pin HD/VHDCI	168048-B21 (Internal & External Cables)
LVD Cable Kit, 68-Pin HD/68-Pin HD	242381-B21 (Internal & External Cables)
68-Pin HD/VHDCI, 12ft	341177-B21 (External Cable only)
68-Pin HD/68-Pin HD, 5m	328215-001 (External Cable only)
68-Pin HD/68-Pin HD, 10m	328215-002 (External Cable only)
Alpha Rail Kit	254795-001 (Rail Kit is required for installation of SDLT 110/220 Tape Array III into AlphaServer rack)

Tape Storage Software

Data Protection Software Suite	259596-B21