



Is it time you moved up to HP DAT 160?



HP StorageWorks DAT 160 drives and tape media

"HP data cartridges have lived up to our quality expectations. We use 20 HP tapes day to day, day after day, plus the end-of-the-month tapes. Over the years since we started using HP tapes, we have had zero failures related to tape media."

Ali Shah, IT Manager, United Biochemicals.

"Cheaper is not always better. We've tried other brands of storage media and we've been disappointed in the reliability of some of the tape cartridges. Netbank's experience is that HP's technology actually does work better together. It provides superior quality and reliability across the entire disk and tape storage line. We are comfortable that HP tape media has a strong future for many years to come."

**Todd Warnock,
Director of Technology
Services, NetBank**

"The exceptional quality of HP storage media provides the confidence we need to guarantee us that our data is safe"

**Mark Haley,
Galderma Productions**

With an installed base of more than 6 million drives DDS/DAT is by far the world's most popular tape storage format. HP is committed to developing the technology through to at least 2010.

And that's great news if you depend on this format for simple, affordable and reliable tape backup and data protection. It means, that as a DAT user, you can easily manage the growing demand for data storage in spite of shrinking backup windows, without having to find room for extra hardware or switch to a more expensive format.

The latest generation of this brilliantly simple and successful format is delivered by the new HP StorageWorks DAT160 tape storage solution, providing a 12MB/sec transfer rate and up to 160GB capacity on a single cartridge.

HP StorageWorks DAT 160: designed and built to fit the 21st century data storage and security model

In the new collaborative business environment, data is constantly being created, modified and exchanged. Most organisations understand the potential for major catastrophes to wipe out precious information assets, and provide suitable protection – particularly in their data centres. The truth is that data is far more vulnerable to human error, hardware malfunctions, software bugs and viruses. In an organisation with busy offices, and perhaps many remote locations running small servers and workstations, these are relatively high risks. Just 3% of all data loss is caused by fire, flood and other catastrophes, while hardware or system malfunctions account for 44%, human error 32%, software corruption 14%, and viruses (7%).**



Optical disk, Ultrium LTO tape and other high capacity media are ideal for online data centre backup and large-scale, automated storage libraries and networks, but a more affordable, practical and simple solution is essential to deploy a responsible backup and archiving strategy and discipline in the workplace. And DAT does the job better than anything else.

The format may have been around for a long time but DAT drives and media are not the low-tech option. Far from it. New manufacturing and recording technologies have created a tough, lightweight, high capacity, high performance media that more than measures up to the uncompromising storage demands of today's dynamic, risk-aware businesses. And it's perfect for IT managers having to get to grips with new compliance demands, heightened security risks and shrinking backup windows, while providing economic, convenient backup for workgroups and remote offices running smaller servers and workstations.

HP StorageWorks DAT 160 tape is a precision-engineered product subject to rigorous quality control and an exhaustive test programme to provide backup and archival storage you can trust.

** BauroidiBloor Group 2004



	DDS-1	DDS-2	DDS-3	DDS-4	DAT 72 5th Gen	DAT 160 6th Gen	DAT 7th Gen	DAT 8th Gen
Compatibility	←	←	←	←	←	←	←	←
Media Type	50m Tape DCL7	120m Tape MP+ media Thinner Tracks	120m Tape MP+ media Increased bpi Format efficiency	150m Tape MP+++ media Thinner Tracks	170m Tape MP++++ media Thinner Tracks	150m Tape wide MP+++ media DDS-4 Track Pitch Increased bpi	Longer wide tape MP++++ Reduced Track Pitch Increased bpi	Longer wide tape MP++++ Reduced Track Pitch Increased bpi Format efficiency
Native Capacity	2 GB	4 GB	12 GB	20 GB	36 GB	80 GB	~150 GB	~300 GB
Native Transfer Rate	183 KB/s	720KB/s	≤1.5KB/s	1.3 MB/s	≥3MB/s	≥5MB/s	≥8MB/s	≥16MB/s
	1990	1993	1996	1999	2003	2007	approx. 2 years	

Twice the capacity and performance for the same price per GB

HP StorageWorks DAT 160 is the fastest, highest capacity DAT drive available today, providing the perfect balance of price and performance for small to medium-sized businesses.

Upgrading to HP StorageWorks DAT 160 gives you:

- **Faster backup performance**
 - Up to 50GB an hour; complete a full tape backup in under three hours
 - More data per tape and fewer tape swaps during backup = a smaller footprint for backup and archiving and less downtime and operator intervention
 - Double the capacity of DAT72 and a lower total cost of ownership (TCO)
 - Choice of USB 2.0 plug-and-play and Ultra SCSI to connect legacy systems
- **Backup at a price to fit your budget**
 - Twice the transfer speed for the same price per GB
 - Lower TCO driven by low-cost media
 - Continued return on investment in earlier DAT versions
 - USB plug-and-play means there's no need to buy special adapters
- **A simple, practical solution straight out of the box**
 - Cartridge and backup software comes with the drive
 - Run your own diagnostics with HP StorageWorks Library and Tape Tools (LTT)
 - Works with most servers, operating systems and backup applications
 - USB model out of the box and ready to use in under 60 seconds

• The format you know and trust

- More relevant to your needs than any other technology and now better than ever
- Media compatibility and interchange with earlier DAT generations provides a painless upgrade path
- Fast, easy recovery from system crashes via one-button disaster recovery on HP servers
- Every HP DAT 160 data cartridge is exhaustively tested for use with HP StorageWorks DAT 160 drives.
- Proven, reliable format deployed in 12 million drives worldwide.
- 6th generation HP DAT product with a legacy of proven reliability and continued development

Why buy HP's DAT 160 tape backup solution?

- First to market and the best price performance of any DAT160 solution
- Proven design and market leadership in a tried and trusted technology: HP has 50% of the market and an installed base of more than 6 million drives
- HP is the only manufacturer to supply both drive and media – no other manufacturer has such a depth of experience and knowledge of how the drive and media perform together
- One-stop customer support for the complete DAT 160 solution
- Supports the full range of HP tools and software for smooth, effective backup and rapid fault diagnosis and resolution
- Limited lifetime warranty, backed by HP's renowned customer service and support

DAT160
Digital Data Storage

Technical Specifications

HP StorageWorks DAT 160 drives

Capacity	80GB native, 160GB* with hardware data compression on a DAT 160GB data cartridge
Recording format	(ANSI/ISO/ECMA) DDS-4, DAT 72 and DAT 160
Interface	SCSI-3 Ultra 160 LVD and USB 2.0
Sustained transfer rate	6.9 MB/s* native, 13.8 MB/s* with hardware data compression
Burst transfer rate	SCSI interface: 6.9 MB/s (asynchronous) 160 MB/s (synchronous) USB interface: 6.9 MB/s (asynchronous) 40 MB/s (synchronous)
MTBF	125,000 hours at 100% duty cycle
Dimensions (hxdwxwd)	DAT 160 SCSI internal: 4.0 x 14.5 x 17.7 cm DAT 160 USB internal: 4.0 x 14.5 x 18.3 cm DAT 160 SCSI & USB external: 6.7 x 18.1 x 23.6 cm
Weight	DAT 160 SCSI & USB internal: 1.2 kg DAT 160 SCSI & USB external: 2.25 kg
Form factor	Half-height, 13.3cm (internal and array module)
Power requirements	DAT 160 SCSI & USB internal: +5V $\pm$ 5% (100mV Max ripple) @1.1A +12V $\pm$ 10% (150mV Max ripple) @0.4A DAT 160 SCSI & USB external: 100 to 240 VAC, 50-60 Hz, auto-ranging
OS, platform, software compatibility	Provides broad connectivity and supports multiple brands of server, array controllers, backup software and operating systems; for more information visit www.hp.com/go/connect
Standard compliance	cCSAus Certification to C22.2, No. 60950, TÜV EN60950 (IEC 60950), FCC and CE Declaration of Conformity, C-TICK Approved (AS/NZS CISPR22), VCCI Approved, RRL
Supplies	HP DAT 160 data cartridge (160GB*) recommended for optimum performance – C8011A HP DAT 72 data cartridge (72GB*) – C8010A HP DDS-4 data cartridge (40GB*) – C5708A HP DAT cleaning cartridge II – C8015A

* All capacities and transfer rates quoted as typical use a 2:1 compression ratio; this may vary since compression is data dependent.

Technical specification HP DAT 160 data cartridge

Type	Metal Particle Media (MP4+ - new particles)
Total tape thickness	5.3 μ (DDS-4 = 5.9V μ)
Bit density	162kbpi DDS-4 + 122 kbpi)
Dimensions (Lxw)	170m x 4mm
Tape life – archival storage	20 years
Operating environment	Operating temperature; 15 - 55° C/59 - 131° F. Non-condensing relative humidity; 10 – 80% Maximum wet bulb temperature; 26° C/ 79° F
Storage environments	Ambient temperature; 5 - 32° C/41 - 90° F. Non-condensing relative humidity; 20 – 60% Maximum wet bulb temperature; 26° C/ 79° F

DAT 160 Ordering Information

Product No	Product Name	Description
C8011A	HP DAT 160 160GB Data Cartridge	150m, wide tape 160GB data cartridge
C8015A	HP DAT Cleaning Cartridge II	Wide tape cleaning cartridge
Q1580A	HP StorageWorks DAT 160 USB	Internal tape drive
Q1580A #OD1	HP StorageWorks DAT 160 USB	Internal tape drive (factory integrated)
Q1581A	HP StorageWorks DAT 160 USB	External tape drive
Q1583A	HP StorageWorks DAT 160 USB	Trade-ready tape drive
Q1573A	HP StorageWorks DAT 160 SCSI	Internal tape drive
Q1573A#OD1	HP StorageWorks DAT 160 SCSI	Internal tape drive (factory integrated)
Q1574A	HP StorageWorks DAT 160 SCSI	External tape drive
Q1576A	HP StorageWorks DAT 160 SCSI	Trade ready tape drive
Q1575A	HP StorageWorks DAT 160 SCSI	Array module tape drive
AG703A	HP StorageWorks 1U USB	Rack-Mount Kit w/DAT 160 USB drive
AG703A#OD1	HP StorageWorks 1U USB	Rack-Mount Kit w/DAT 160 USB drive (factory integrated)

To learn more, visit www.hpdat160.com

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