

Sales guide

Planning your next move for backup and archiving?

A guide to HP removable disk and tape storage.



No-one likes to think about bad news, but it's a reasonable assumption that at some point your business will need to cope with an unexpected loss of data. It need not be a major disaster like a fire, flood or theft; it could just be a simple human error. Whatever the cause, you can't afford to take chances. Losing data could mean losing customers, revenue and hard earned profits. So you need to take very good care of it.



HP RDX removable disk cartridges

For more about HP RDX+ visit:
hp.com/go/rdx



HP LTO Ultrium tape cartridges

For more about HP LTO visit:
hp.com/go/storagemedia

Protecting your data is about more than just backup and recovery. You need to find fast, efficient ways to handle bigger files, such as databases, productivity documents, video and other rich media, email systems and other information that users access day in, day out.

In the event of any threat to your data – including that worst-case scenario when everything suddenly grinds to a halt – it's vital that you have an effective backup and recovery strategy ready to sort things out. If you're a longstanding DAT user, you may now be experiencing the squeeze of ever more data to backup and an ever narrower window in which to do it. With a choice of two faster, higher capacity removable storage options from HP – RDX+ and LTO Ultrium – you can benefit from HP quality and reliability and new technology that will grow to meet your business needs. If you're using DAT 320, this media will no longer be available after the summer of 2014, so HP is advising customers to begin planning a move to RDX+ or LTO Ultrium ready for when cartridges become difficult to source.

This guide explains how newer HP removable backup and recovery technologies minimize the risk and consequences of data loss, improve overall backup performance and provide automated solutions that are easy to set up, easy to use and extremely robust.

HP RDX+ and HP StoreEver LTO Ultrium

HP offers two different solutions for small and mid-sized companies: RDX+ Removable Disk technology and StoreEver LTO Ultrium tape. Either will safely secure your business against the unexpected and both offer a wide choice in capacity and performance to make the perfect fit for your business.

Whether you choose HP RDX+ or LTO Ultrium, you can count on the same outstanding quality, reliability and customer support that millions of businesses have come to trust from HP Storage solutions.

HP RDX removable disk cartridges

RDX+ is a removable hard disk drive (RHDD) storage technology. It looks and feels like a rugged, portable tape backup solution but gives you the high performance of a disk for reading and writing data.

RDX+ technology is ideal if your company requires fast access to large amounts of business-critical data using workstations or servers, but doesn't need or want to rotate and keep numerous cartridges for extra protection. With more than 90% of the RHDD market, RDX+ is the most popular RHDD solution for small to medium enterprises (SMEs). Here's why:

- **Versatile.** RDX+ is powered by USB, so it can be used anywhere.
- **Fast backup and restore performance.** RDX+ backs up data at hard drive speeds and restores critical files in seconds via USB 3.0. A full 1 TB restore takes around five hours to complete. You can save images, files, videos, entire design projects, drawings, plans, customer records, accounts or inventory databases, and get any of the data back in just a few clicks.
- **Very easy to use.** The simplicity of RDX+ means you don't need an IT specialist to manage and configure it. Every change made on your system can be captured and backed up as it happens using HP Continuous Data Protection (CDP) or scheduled routines. You can even just drag and drop files via Windows or Mac OS X Finder. RDX+ includes Windows backup mode to leverage the benefits of integrated applications on that operating system.
- **Room to grow within your budget.** With a choice of 320 GB, 500 GB, 1 TB and 2 TB HP RDX cartridges that are interchangeable on the full range of RDX+ docking stations.



• **Easy to use hardware.** A compact, plug and play, external, internal or rack mounted USB 3.0 dock makes it simple for you to switch from one cartridge to another and scale up to bigger capacities. Cartridges cannot be removed while backups are running or scheduled. Staff can safely run local backups and rotate media without specialist skills or training.

• **Portable, rugged and shockproof cartridges.** RDX can take the knocks of being swapped around in a busy office. The enhanced cartridge design features a sealed interface to make it dust and debris proof. Plus there's no drive or media wear during operation.

• **Compatibility with popular backup software applications** such as HP Data Protector Express, CA BrightStor ARCserve Backup and Symantec Backup Exec.

• **With HP RDX+ you can set up and run automated backup procedures** – so that you don't have to remember to do it. Everything's taken care of.

• **Long lasting, reliable media.** With a usage life of 5,000 load/unload insertions compared to 50 for DAT tapes) and a 10-year archival life, you can safely move data off site for disaster recovery, archive or data transfer.

HP LTO Ultrium

Many smaller organizations now have the means to generate huge data assets, particularly in online environments. So you may need the kind of performance that comes with RDX+, plus the media rotation and archive stability and efficiency that comes with a tape solution like DAT technology.

Switching from DAT to LTO Ultrium may look like a huge leap in terms of cost, capacity and performance – but now could be the right time to move to a more powerful solution.

Compare, for example, the cost of today's fuel-efficient cars to yesterday's models. Either will get you from A to B, but over time the greater power, performance and efficiency of the newer vehicle will soon reward your investment compared to continuing with the old model. And in a data storage setting, HP LTO-3, LTO-4, LTO-5 or LTO-6 will give you those efficiencies and deliver a much faster, longer lasting solution, however fast your business grows.

The HP StoreEver LTO Ultrium tape portfolio is HP's flagship range of tape backup devices.

Based on the LTO Ultrium format, an open standard with a well-defined eight generation roadmap, it delivers up to 6.25 TB compressed data on a single low-cost cartridge, fast performance and outstanding reliability. HP's rugged design builds on superior LTO technology and adds advanced features like Linear Tape File System (LTFS) and AES-256 encryption to create a new level of data protection.

An entry-level LTO-3 or even LTO-4 solution may be just right for your business needs today. But the most advanced HP LTO-6 solutions have over three times the capacity (6.25 TB compressed) of the largest RDX+ RHDDs at 2 TB and operate at a transfer rate many times greater than that of DAT (1.4 TB an hour). Remember, however, that tape drive technology should be matched to the server platform being protected. This ensures better, more reliable performance and reduced wear and tear.

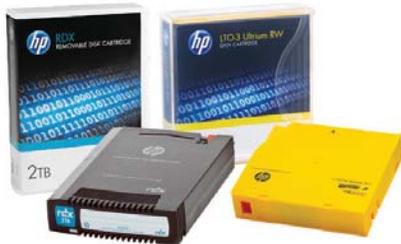
The HP ProLiant DL380p G8 server is the ideal Simply StoreIT server platform for small and medium sized businesses. This ProLiant server delivers a suitable hardware platform incorporating key features such as integrated management, configuration flexibility and industry leading performance, which best aligns with the Simply StoreIT maturity model recommendations in the technical white paper HP Simply StoreIT Data Protection for tape based backups.



The HP StoreEver LTO Ultrium tape portfolio is HP's flagship range of tape backup devices.

Table 1. Performance and capacity chart for 4 generations of half height HP LTO technologies

LTO Ultrium Tape Drive	Native transfer rate	Compressed transfer rate in GB/hour
HP LTO-3	60 MB/s	432 GB/hr (2:1)
HP LTO-4	80 MB/s	576 GB/hr (2:1)
HP LTO-5	140 MB/s	1 TB/hr (2:1)
HP LTO-6	160 MB/s	1.44 TB/hr (2.5:1)



Backup at a price to fit your budget.

Like DDS/DAT, LTO Ultrium tape cartridges are far less expensive in real terms than RDX. An HP LTO-5 GB cartridge offers 50% more capacity than an RDX 1 TB cartridge but for a much lower price.

Support for automation.

LTO is the starting point for HP's range of automated backup solutions. Tape libraries and autoloaders add many benefits, like the ability to run unattended backup activities, change tapes automatically and minimize the risk of operator error. You can also have several computers and servers backing up to the same tape autoloader or library, using different cartridges for each.

Although they cost more to buy than standalone devices, automation devices can save you money, not just in terms of the equipment but also by freeing up IT and personnel resources.

Compatibility with newer versions of LTO Ultrium.

LTO-3 data cartridges are read/write compatible with LTO-4 drives and read compatible with LTO-5 drives. LTO-4 data cartridges are read/write compatible with LTO-5 drives and read compatible with LTO-6 drives. So, as your backup needs grow, you can keep your old cartridges and migrate data to newer media formats as and when you need.

HP LTO or RDX+: Which is right for you?

Reasons to choose HP RDX+:

1. You have 2 TB or less of data to protect.
2. You need fast access to backed up and archived data.
3. One copy of your data meets your business operational needs.

Reasons to choose HP LTO Ultrium:

1. You need to protect more than 2 TB of data.
2. You require data encryption.
3. You need more than one copy of your data.

LTO Ultrium drives and automation products have the sophistication of SCSI, SAS or Fiber Channel interfaces, which means that they are more complicated to set up and configure.

While the level of complexity isn't that great, they are not as user friendly as plug-and-play USB peripherals like RDX+ or DAT drives.

Installing a tape autoloader or library to implement a multi-cartridge, backup rotation system also requires a little bit more technical knowledge and affinity for software. But it's worth remembering that once it's up and running, an automated system needs very little attention.

The price of LTO Tape cartridges compares well with older DAT media and is lower than the price of an RDX cartridge. However, LTO Ultrium tape drives and automated devices are more expensive than RDX+ docking units. So unless you need a more sophisticated media rotation strategy and higher tape performance, you'll be better off with RDX+.



The latest LTO Ultrium devices remain the most cost-effective option for archiving large datasets. Unlike spinning disk drives, tape drives do not need to be constantly powered on and will default into hibernation mode after short periods of inactivity bringing energy and power savings. When tape is used for long-term archiving, energy savings cut the total cost by 93 percent compared to spinning disk, which requires 238 times more energy than tape.

While RDX+ has a better cost per gigabyte (the price of the solution divided by the capacity of each cartridge), in real terms it can be relatively costly compared to tape media.



A tape drive is more expensive initially than RDX+, but the much lower cost of tape media compared with RDX media will balance out the higher purchase price of the hardware over a three-year ownership cycle.

The real cost of migration is not in the initial investment but rather what the solution costs during its working life. So consider this in the light of your rotation strategy (the number of cartridges you expect to have in use for daily, weekly and monthly backups) and the number of copies of your data that you think you will need (based on whether you will be using CDP, Full, Incremental or Differential Backup).

Migrating information to new media is a common-sense approach that leads to lower ownership costs. You'll use fewer tapes and be able to store more data in the same physical space. Innovative software also makes organizing and tracking your data a lot easier.



For more about HP RDX+ visit:
hp.com/go/rdx



For more about HP LTO visit:
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Conclusion

Since RDX+ and tape offer many of the same operational benefits, the usage model and cost will be the key factors in choosing between the two different technologies. Your reseller has all the know-how to help you make the right choice.

As an experienced long term leader in small and medium sized business data protection solutions, HP has equipped our resellers with all the information they need to help you make an informed choice about which of our HP RDX+ and LTO Ultrium products will work best for you. Either way, you'll have the peace of mind that, whatever happens, you can rely on HP to take very good care of your data.

Want more facts and figures?

HP RDX+ product info: hp.com/go/rdx

HP LTO Ultrium info: hp.com/go/storagemedia

Partner Portal for sales support:

hpsm.us



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