



**FOR IMMEDIATE RELEASE**

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**LTO ULTRIUM FORMAT REACHES MILESTONE  
WITH MORE THAN 10 MILLION CARTRIDGES, 350,000 DRIVES SHIPPED**

*Ultrium Format Sees 20 Percent Quarter-over-Quarter Growth*

**SILICON VALLEY, CALIF. — (July 22, 2003) —** Certance (formerly Seagate Removable Storage Solutions), HP and IBM Corporation, the three technology provider companies (TPCs) for the LTO (Linear Tape-Open) Program, today announced that more than 10 million LTO Ultrium format tape cartridges – with a combined capacity of 2,000 petabytes – have shipped worldwide since September 2000 when products based on the format first became commercially available. The LTO Ultrium format is bucking the tape storage industry trend as shipments of cartridges continue growing up to 20 percent quarter over quarter since 2002. Additionally, the LTO Program announced that 350,000 LTO Ultrium tape drives have shipped since September 2000.

The 10 million cartridges largely represent shipments of the Ultrium format Generation 1 media, since products based on the Ultrium format Generation 2 have been available for less than six months. Even at the 100GB native capacity in the Ultrium first generation, 10 million cartridges represents 2,000 petabytes of data capacity (2:1 compressed) shipped in just 36 months. To put that in perspective, 2,000 petabytes is equivalent to about 50,000 years' worth of DVD movies.

A March 26, 2003 Gartner Dataquest report – Tape Drive Market Shares, 2002, by Fara Yale, research VP – found that the LTO Ultrium format held a nearly two-to-one tape drive shipment lead over Super DLT for the second straight year. In addition, more than twice as many LTO tape libraries were shipped in large automation solutions in 2002 as compared to libraries based on DLT/SDLT, according to a July 9, 2003 Gartner Dataquest report titled “2003 Tape Automation Systems Forecasts.”

“Based on the Gartner Dataquest reports, it appears that users prefer LTO to SDLT tape products in the open systems enterprise automation segment,” said Bob Wilson, Vice President and General Manager, Nearline Storage, HP Network Storage Solutions. “Even during these times of economic uncertainty, the LTO Ultrium tape format is dramatically out shipping competing formats, and the adoption rate is outpacing even our own expectations. Now that Ultrium format Generation 2 is shipping to customers, we expect the strong marketplace acceptance of the LTO Ultrium tape format to reinforce its overall leadership.”

The LTO Ultrium format Generation 2's storage capacity and data transfer speed are among the highest in the industry at 400GB (assuming 2:1 compressed) capacity, with data transfer speeds of up to 70MB/s (assuming 2:1 compression). High-end robotic tape libraries using second-generation LTO Ultrium drives have recently demonstrated backup and restore speeds from three to five TB an hour, exceeding the capabilities of certain fast disk-based solutions to transfer data. The second-generation Ultrium tape drives also offer full backwards-compatible read-and-write capability with the Ultrium format Generation 1, helping to protect the investment customers have made in LTO technology.

The LTO Ultrium format is the only super drive technology based on an open standards specification, providing the benefits of competition while supporting data interchange. This open standards specification, available to any manufacturer on a licensed basis, already has an impressive roster of over 30 licensees, allowing users to choose from a number of tape drive and data cartridge offerings. This pro-competitive environment fosters technological innovation, competitive pricing, and multiple sources for compatible products. As the shipment numbers show, the result has been a technology embraced by users as much for its open standard and solid roadmap as for its high capacity, performance, and reliability.

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#### **How to License LTO Ultrium Technology**

The LTO Program offers several different license packages – from enhanced packages that provide the specifications to manufacture Ultrium Generation 2 products, to basic license packages, providing Ultrium format specifications and guidelines for interchangeability.

Buyers seeking true Ultrium format-compliant products should look for the Ultrium format compliance verification marks on both tape drives and data cartridges. Storage and media manufacturers interested in licensing LTO technology may obtain information by contacting the Law Offices of Ladas & Parry at (323) 934-2300, or by e-mail at [LTO\\_INFO@ladasparry.com](mailto:LTO_INFO@ladasparry.com).

**About Linear Tape-Open (LTO) Technology**

LTO technology is a powerful, scaleable, open tape format created by technology providers Certance, HP, and IBM Corporation to meet the growing demands of data protection in the midrange to enterprise-class server environments. This new generation of tape storage products is designed to deliver outstanding performance, capacity and reliability combining the advantages of linear multi-channel, bi-directional formats with enhancements in servo technology, data compression, track layout, and error correction.

The LTO Ultrium format storage solution is a single-reel, high-performance tape cartridge suitable for backing up, restoring, and archiving applications. As a technology for ultra-high capacity storage, the LTO Ultrium format is the only tape storage technology with a well-defined four-generation roadmap for growth and scalability – a roadmap that projects a doubling of speed and capacity with each new generation, and the delivery of significant data integrity improvements over current tape storage formats.

While the LTO Program gives licensees wide latitude in implementing mechanical and electrical designs, strict adherence is required to format specifications impacting the ability to read and write Ultrium format tape cartridges. Independent compliance verification is vital to meet the free-interchange objectives that are at the core of the LTO Program. With numerous compliance checkpoints for each LTO technology product, end-users and OEMs can benefit from data interchangeability between LTO products regardless of the manufacturer.

Ultrium tape mechanism and tape cartridge interchange specifications are available on a licensee basis. For additional information on LTO Ultrium technology, visit the Ultrium Web site at [www.ultrium.com](http://www.ultrium.com).

Note: Linear Tape-Open, LTO, the LTO logo, Ultrium, and the Ultrium logo are U.S. trademarks of Certance, HP and IBM in the US, other countries, or both.