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## THE LTO PROGRAM ANNOUNCES UPCOMING GENERATION 7 SPECIFICATIONS FOR LICENSING

Specifications Include Up to 15TB Capacity\* and Up to 750MB/s Performance\*

**SILICON VALLEY, CALIF.** — (September 14, 2015) — The LTO Program Technology Provider Companies (TPCs), HP, IBM and Quantum, announced today that the LTO Ultrium format generation 7 specifications are now available for licensing by storage mechanism and media manufacturers.

The new LTO generation 7 specifications more than double the tape cartridge capacity from the previous generation, including capacities of up to 15TB\* per cartridge when compressed. Large files will also transfer more quickly with tape drive data transfer rates that are up to 750MB\* per second, which can translate to more than 2.7 terabytes of data an hour per drive.

"With the release of LTO generation 7 we are again changing the economics of long term data retention and archiving," said Chris Powers, Vice President Data Center Development, HP Storage. "High performance streaming and the demonstrated data integrity of LTO technology re-enforces the proof point that tape remains a very attractive match for long term storage requirements."

Unprecedented capacity and data transfer rates for LTO generation 7 are made possible by a broad range of technology advancements. The specifications include a doubling of read/write heads in an advanced servo format to help achieve higher track density, which means that more data may be written to the same amount of tape within the cartridge. New formulation advancements provide stronger magnetic properties, helping to increase capacity.

"LTO 7 further solidifies the modern use case for tape in storage environments," says Jason Buffington, Senior Analyst, Data Protection at ESG. "This new generation of tape technology will offer a high level of capacity at a low cost, and with LTFS capabilities, should be considered as a part of any tiered storage management plan."

LTO generation 7 will continue to include features that were introduced in previous generations, including a partitioning functionality that allows users to present a tape-based file system with the use of LTFS. LTO generation 7 provides continued support for hardware-based encryption and WORM (Write-Once, Read-Many) functionality. This helps ensure a balance of performance, capacity, compatibility and cost

control supporting a broad range of security-rich and portable data storage options for backup and archive that are easy to use and address a vast majority of storage needs.

More information on the LTO Ultrium generation 7 specifications will be available later this year. In addition, an <u>extended roadmap</u> released last year outlines performance expectations for generations 8, 9 and 10. The new generation guidelines call for compressed capacities of 32TB for generation 8, 62.5TB for generation 9 and 120TB for generation 10\*.

The current generation of LTO technology – LTO generation 6 – supports tape cartridge storage compressed capacity of up to 6.25TB\* and tape drive data transfer rates of up to 400MB\* per second for over 1.4 terabytes of storage performance an hour per drive. It continues to serve customers in the media and data storage businesses with strong feedback across the board.

The LTO Program will be providing further insight into LTO technology and roadmap plans for a broad range of data managers at Storage Decisions (New York) and Supercomputing (Austin) in November, and GVExpo (Washington, D.C.) in December. Find conference dates and other information at <u>www.lto.org</u>.

Learn more about LTO technology, LTFS, exciting user stories and a variety of compelling storage white papers at <u>www.lto.org/trustlto</u>, and follow The LTO Program on Twitter (<u>@TheLTOProgram</u>), <u>LinkedIn</u> or the <u>Blog</u>.

## How to License LTO Ultrium Technology

The LTO Program has historically offered several different license packages – from enhanced packages that provide the specifications and licenses to manufacture LTO Ultrium products, to basic packages providing LTO format specifications.

Buyers seeking LTO Ultrium format-compliant products should look for the LTO Ultrium format compliance verification trademarks on both tape drives and data cartridges. Storage and media manufacturers interested in licensing LTO formats may obtain information by contacting the LTO Program at <u>www.lto.org/contact-us</u>/

## About Linear Tape-Open (LTO)

The LTO Ultrium format is a powerful, scalable, adaptable open tape format developed and continuously enhanced by technology providers HP, IBM Corporation and Quantum Corporation (and their predecessors) to help address the growing demands of data protection in the midrange to enterprise-class server environments. This ultra-high capacity 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 has a well-defined roadmap for growth and scalability. The roadmap represents intentions and goals only and is subject to change or withdrawal. There is no guarantee that these goals

will be achieved. The roadmap is intended to outline a general direction of technology and should not be relied upon in making a purchasing decision. Format compliance verification is vital to meet the free-interchange objectives that are at the core of the LTO Program. Ultrium tape mechanism and tape cartridge interchange specifications are available on a licensed basis. For additional information on the LTO Program, visit <u>www.lto.org/trustlto</u> and the LTO Program Web site at <u>www.lto.org</u>.

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\*Assuming a 2.5:1 compression achieved with larger compression history buffer available beginning with LTO generation 6 drives.

Note: Linear Tape-Open, LTO, the LTO logo, Ultrium, and the Ultrium logo are trademarks of HP, IBM and Quantum in the US and other countries.