

## FUJIFILM BEGINS LTO ULTRIUM GENERATION 5 MEDIA PRODUCTION

*Industry Leader is One of the First to Begin Mass Manufacture of LTO Ultrium 5 Data Cartridges*

**London, March 19, 2010** — FUJIFILM UK Ltd, a division of Fujifilm Corporation the leading global manufacturer of data storage media<sup>1</sup>, today announced it will be one of the first manufacturers in the world to be certified by the Linear Tape-Open (LTO) Technology Provider Companies (TPCs) as successfully completing compliance testing. Fujifilm plans to immediately begin mass production of LTO Ultrium Generation 5 data cartridges. The Fujifilm LTO Ultrium Generation 5 cartridges will be available in Europe mid April, and will offer a native storage capacity of 1.5 terabytes and native transfer rates up to 140 megabytes per second.

“The advances that Fujifilm has made in its proprietary NANOCUBIC technology have enabled us to achieve a higher recording density with increased reliability,” said Shigeki Kobayashi, Managing Director, Fujifilm Recording Media GmbH. “As the need for more capacity continues to steadily increase this latest generation tape will handle more data while simultaneously reducing the risk of loss of information.”

Fujifilm LTO Ultrium Generation 5 data cartridges will incorporate Fujifilm’s advanced NANOCUBIC thin-film coating process with finer metal particles (78% of previous generation Ultrium data cartridges) and nano-dispersion technology with a new binder system, which allows Fujifilm to achieve higher recording density.

“The advances that we have made to our technology will go a long way toward meeting the rapidly increasing demands that our customers have for long term file storage and data management,” said Roger Moore, Strategic Business Unit Manager, Recording Media, FUJIFILM UK Ltd. “The escalating volume of data coupled with the rising concerns over security and need for rapid retrieval lead us to believe that this next generation technology will be very well received in the marketplace.”

In addition, Fujifilm has introduced a new reel design that has successfully achieved both running stability in the drive and high archival stability. This is a feature that is particularly important for users because as the tape length gets longer, the pressure on the hub can increase and there is a potential risk of hub deformation. The new design of the hub structure reduces unexpected deformation to the tape’s characteristics, such as tape edge damage while the smoother, more uniform magnetic layer results in a significant decrease in tape surface defects.

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<sup>1</sup>Santa Clara Consulting Group, “Back-Up Tape Tracker, 2009”

As part of Fujifilm's overall commitment to develop environmentally sustainable products, Fujifilm's LTO Ultrium 5 cartridge offers a reduction on its impact on the environment by eliminating brominated flame retardants (BFRs) from all the mechanical parts of Fujifilm LTO 5 cartridges. Tape is already viewed by many in the data storage industry to have less of an impact on the environment than other storage options because it consumes less energy.

LTO technology is a powerful, scalable, adaptable open tape format developed and enhanced by TPCs: HP, IBM and Quantum to help address the growing demands of data protection in the midrange to enterprise-class server environments.

"LTO Ultrium Generation 5 introduces a new dual partitioning functionality. This feature can enable capabilities to enhance file management on LTO tape and unlock LTO tape's potential for exciting new use cases for the growing storage needs of market segments with rich media such as media and entertainment, digital surveillance, and medical," said Ed Childers, Manager, Tape Development, IBM.

LTO Generation 5 hardware will be backward write compatible with LTO Ultrium 4 data cartridges and backward read compatible with LTO Ultrium 3 data cartridges. As with the previous generation, LTO Ultrium 5 hardware will incorporate the Advanced Encryption Standard (AES) 256-bit encryption algorithms to help keep data secure. This feature offers another level of security during storage and transporting of sensitive information and compliments the WORM (Write-Once, Read-Many) capability. WORM functionality first debuted in LTO Ultrium 3 data cartridges, providing a cost-effective means for storing data in a non-rewriteable format to help address compliance requirements.

The TPCs provide very stringent format specifications for both cartridge and drive manufacturers. This helps insure the consistency for maintaining tape format interchangeability. Compliance testing is completed through a unique format verification program which is independently administered and executed by a third party organization, and approved by the TPCs.

For more information on LTO tape technology, product roadmaps and for general information on the format, visit [www.ultrium.com](http://www.ultrium.com).

Fujifilm LTO Ultrium 5 data cartridges will be available through approved Fujifilm resellers.

## LTO Program Roadmap

	LTO Ultrium 1	LTO Ultrium 2	LTO Ultrium 3	LTO Ultrium 4	LTO Ultrium 5	LTO Ultrium 6
<b>Introduced</b>	2000	2002	2004	2007	2010	Future
<b>Capacity (Compressed 2:1)</b>	100 GB (200 GB)	200 GB (400 GB)	400 GB (800 GB)	800 GB (1.6 TB)	1.5 TB (3.0TB)	3.2 TB (6.4TB)
<b>Transfer Rate (Compressed 2:1)</b>	Up to 20 MB/sec (Up to 80 MB/sec)	Up to 40 MB/sec (Up to 80 MB/sec)	Up to 80 MB/sec (Up to 160 MB/sec)	Up to 120 MB/sec (Up to 240 MB/sec)	Up to 140 MB/sec (Up to 280 MB/sec)	Up to 270 MB/Sec (Up to 540 MB/sec)
<b>Data Tracks (on same ½ inch)</b>	384	512	704	896	1280	n/a
<b>Cartridge Memory</b>	32,768 bits (4,096 bytes) Internal EEPROM			65,280 bits (8,160 bytes) Internal EEPROM		-
<b>Tape Width</b>	12.65 mm					
<b>Tape Thickness</b>	8.9 µm		8.0 µm	6.6 µm	6.4 µm	-
<b>Tape Length</b>	609 m		680 m	820 m	846 m	-
<b>Cartridge Dimension (HxWxD)</b>	102.0 x 105.4 x 21.5 mm					

### About NANOCUBIC

Already recognised by the industry as an enterprise-class tape solution, Fujifilm NANOCUBIC technology combines nano-scale particles, a unique dual-coating process and advanced dispersion techniques to achieve an ultra-thin magnetic layer that produces higher resolution for recording digital data, ultra-low noise and high signal-to-noise ratios that are ideal for Magneto-Resistive and Giant Magneto-Resistive heads. Fujifilm's future-generation tape storage media will apply NANOCUBIC technology to barium-ferrite particles, a naturally stable crystalline particle that does not corrode or change chemically over time, making it an optimal particle for data storage applications. Due to the crystalline anisotropy, the ultra-fine barium-ferrite particles have high coercivity for superior performance high density recording. The unique Fujifilm NANOCUBIC technology coats the barium-ferrite particles in a very uniform manner (with thickness variation of less than 10 percent across the length of the tape), resulting in a much smoother magnetic surface to significantly enhance performance.

### About FUJIFILM

FUJIFILM UK Limited is the UK-based marketing and sales operations of professional broadcast video and data tape recording media for FUJIFILM Corporation. The company provides broadcast and data centre customers and industry partners with a wide range of unique data centre accessories, value-added services and programs. Based on a history of thin-film engineering and magnetic particle science such as Fujifilm NANOCUBIC technology, Fujifilm creates breakthrough data storage products. In 2009, Fujifilm announced it had surpassed the 50 million milestone for the number of LTO Ultrium data cartridges manufactured since introduction, highlighting the company's leadership and success as a manufacturer of mid-range and enterprise tape media. For more information on FUJIFILM Recording Media products go to [www.fujifilm.co.uk/recmedia](http://www.fujifilm.co.uk/recmedia)

FUJIFILM Corporation brings continuous innovation and leading-edge products to a broad spectrum of industries, including electronic imaging, photofinishing equipment, medical systems, life sciences, graphic arts, flat panel display materials, and office products, based on a vast portfolio of digital, optical, fine chemical and thin film coating technologies. The company was among the top 25 companies around the world granted U.S. patents in 2009, and in the year ended March 31, 2009, had global revenues of \$24 billion. Fujifilm is committed to environmental stewardship and good corporate citizenship. For more information, please visit [www.fujifilmholdings.com](http://www.fujifilmholdings.com).

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