FUJIFILM

G4

LTO Ultrium Data Cartridge Generation 4

ULTRIUM LTO 4
800GB/1600GB
NATIVE/COMPRESSED

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LTO Ultrium 4
DATA CARTRIDGE

800 GB NATIVE

1600 GB COMPRESSED

ULTRIUM LTO 4

LTO Ultrium 4 Data Cartridge

High Capacity of 1.6TB. Amazing Transfer Rates of up to 240MB/sec.

FUJIFILM
LTO Ultrium 4
DATA CARTRIDGE
WORM
800 GB
1600 GB
ULTRIUM LTO 4

FUJIFILM
WORM
ULTRIUM LTO 4
800GB/1600GB

WORM is also available
WORM (Write Once Read Many)

The Linear Tape-Open Ultrium (LTO) data cartridge now reached to its latest generation 4.

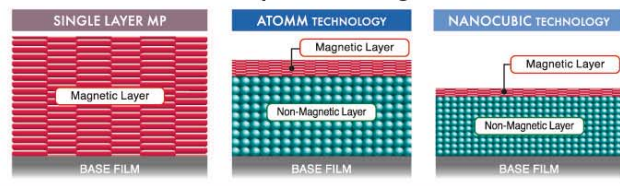## The high capacity of 1.6TB and transfer rates of up to 240MB/sec.

FUJIFILM LTO Ultrium Gen 4 data cartridge will be the first midrange product to use FUJIFILM NANOCUBIC thin-layer coating technology to reach the higher capacity and quality levels currently found in enterprise-class storage media.

NANOCUBIC Technology

Although the ATOMM technology made submicron metal coating possible, much thin magnetic layer was necessary in order to achieve high resolution for higher recording density. FUJIFILM's **NANOCUBIC technology** has made possible an ultra-thin magnetic layer, **nano-coating** technology, which is about a one tenth of the thickness of magnetic layers under the ATOMM technology. This new technology also incorporates **nano-particle** technology, an ultra-fine magnetic particles to reduce media noise, and **nano-dispersion** technology, uniform particle dispersion technology featuring newly developed polymer compound. Utilizing the NANOCUBIC technology as the basis of its next-generation data media production technology, FUJIFILM has succeeded in prototyping a high-resolution, low-noise ultra thin magnetic layer media coating that have nano-order microstructure.

Structural Comparison of Magnetic Media

SINGLE LAYER MP	ATOMM TECHNOLOGY	NANOCUBIC TECHNOLOGY
Magnetic Layer	Magnetic Layer / Non-Magnetic Layer	Magnetic Layer / Non-Magnetic Layer
BASE FILM	BASE FILM	BASE FILM

WORM is also available

WORM (Write Once Read Many) functionality provides a cost-effective means for storing data in non-rewriteable format to help address compliance requirements.

FUJIFILM Servo Technology

LTO Ultrium technology relies heavily on timing-based, high-precision servo control to achieve its remarkable performance levels. LTO Ultrium data cartridge uses dual servo tracks that have been precisely written along the entire length of each of its four data bands, for extremely fine placement control and redundancy in the event of tape damages.

High capacity and amazing transfer rates

FUJIFILM's NANOCUBIC technology realized LTO G4 data cartridge to have the capacity of 1.6TB (at 2:1 compression; 800GB native) by recording 896 tracks within 12.65mm tape width. Also with the utilization of multi-channel recording technology, LTO G4 data cartridge featured transfer rates of up to 240MB/sec. (at 2:1 compression; 120MB/sec. native).

Enhanced durability

NANOCUBIC technology improves the smoothness of tape-surface, which helps extend the head-lifetime and outputs high durability by the decrease of error even in rigorous use.

Encrypted For Security

LTO Gen 4 systems will introduce for the first time to midrange tape storage the Advanced Encryption Standard (AES) 256-bit encryption algorithms to keep data secure. The hardware-based AES 256-bit encryption capability of the new Gen 4 format offers higher level of security during storage and transporting of sensitive information.

Media ／ Drive Compatibility

		Drive			
		Ultrium 1	Ultrium 2	Ultrium 3	Ultrium 4
Media	Ultrium 1	○	○	△	×
	Ultrium 2	×	○	○	△
	Ultrium 3	×	×	○	○
	Ultrium 4	×	×	×	○

○：Able to Read / Write　△：Able to Read Only　×：Not Compatible

FB LTO G4 / G4 WORM –Specification–

	Tape Drive	LTO FB UL-1 100GB	LTO FB UL-2 200GB	LTO FB UL-3 400GB	LTO FB UL-4 800GB	LTO FB UL-4WORM 800GB	Universal Cleaning Cartridge*
Basic Specifications	Capacity (Native / Compressed)	100GB (200GB)	200GB (400GB)	400GB (800GB)	800GB (1,600GB)		–
	Transfer Rate (Native / Compressed)	Up to 20MB/sec. (Up to 40MB/sec.)	Up to 40MB/sec. (Up to 80MB/sec.)	Up to 80MB/sec. (Up to 160MB/sec.)	Up to 120MB/sec. (Up to 240MB/sec.)		–
	Number of Tracks	384	512	704	896		–
	Servo Method	Timing-based servo					–
	Cartridge Memory	32,768 bits (4,096 bytes) ; Internal EEPROM			65,280bits (8,160bytes) ; Internal EEPROM	32,768bits (4,096 bytes) ; Internal EEPROM	
	Encryption function	–			○		
	Media Durability (Nominal)	1,000,000 passes					–
	Estimated Archival Life	30 years					–
Physical Characteristics	Tape Width	12.65mm					
	Tape Thickness	8.9μm		8.0μm	6.6μm		–
	Tape Length	609m		680m	820m		319m
	Cartridge Dimensions (HxWxD)	102.0x105.4x21.5mm					
Operating Environmental Conditions	Temperature	10-45℃					
	Humidity	10-80% (No Dew Condensation)					
	Max. Wet Bulb Temperature	26℃					
Archival Environmental Conditions	Temperature	16-32℃					
	Humidity	20-80% (No Dew Condensation)					
	Max. Wet Bulb Temperature	26℃					

Note: Specifications are subjected to change without notice.
*The universal cleaning cartridge is capable of being used in all generation 1/2/3/4 Ultrium format tape drives. Specific revisions of firmware may be required for proper operation.

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http://www.fujifilm.com/products/storage/index.html