

TAPE Saves YOUR FUTURE

Advanced magnetic tape protecting the future of big data



Barium Ferrite

Reliable Technology and Performance



New generation of LTO tape

FUJIFILM LTO Ultrium 7

N E W

For smarter data protection

Ultra-high capacity. High performance transfer rate. The seventh generation of LTO tape enhances the efficiency of data storage and use.

LTO tape has been attracting attention as a highly reliable storage medium and has now evolved to the seventh generation. Based on Barium Ferrite (BaFe) magnetic particles that have already demonstrated recording stability in LTO Ultrium 6, LTO Ultrium 7 has now increased the recording capacity to "15.0 TB compressed capacity (6.0 TB native capacity), 2.4 times that of LTO Ultrium 6, by using Fujifilm's advanced technology to enhance the density. The new LTO 7 is also capable of a high transfer rate of "750 MB/second" (300 MB/second native), 1.9 times the conventional speed. These dramatic increases in capacity and speed make it possible to store data with higher efficiency and at a lower cost.

Evolution of "LTO Ultrium 7" to be noted

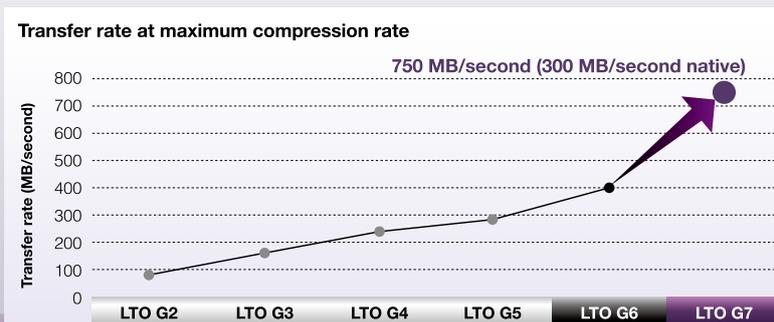
Capacity as high as 15 TB saves space

Like its predecessor, LTO 6, LTO Ultrium 7 employs BaFe magnetic particles that Fujifilm successfully put into commercial use for the first time. In addition, a capacity as high as 15.0 TB (6.0 TB native capacity) or 2.4 times larger than before has been achieved through optimization of material design through measures such as an "even application of magnetic particles". A huge amount of data can be stored with less media than hard disks or previous generations of LTO, making it possible to create space-saving storage.



Transfer rate as high as "750 MB/second" contributes to enhanced work efficiency.

As the recording density has improved, the transfer rate has risen to "750 MB/second" (300 MB/second native), almost two times that of the media in the past. Data can be efficiently managed because it can be written or read more quickly than before. The transfer rate of LTO tapes can be expected to increase in the future.

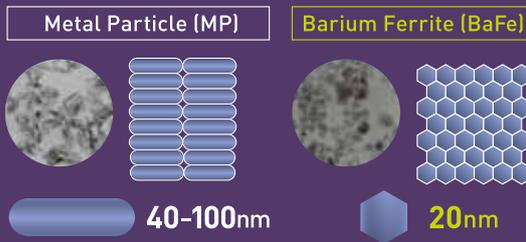


Barium Ferrite

Barium Ferrite (BaFe) magnetic particles back-up the evolution of LTO tape

● High-density recording

BaFe magnetic particles are as tiny as about 20 nm. Therefore, these magnetic particles can be laid down on the same surface in higher quantity than conventional magnetic particles. As a result, the surface recording density can be much higher than conventional magnetic particles. This means that the capacity of the tape can be dramatically increased.



Comparison with Fujifilm's other products

● Long-term storage

The BaFe magnetic particle, whose main ingredient is iron oxide, is free from "oxidation" which is the main cause of degradation of tape. This makes BaFe tape suitable for long-term storage. An accelerated life test conducted by Fujifilm indicated that BaFe tape can stably store data for 30 years or more.



TAPE Saves YOUR FUTURE

FUJIFILM LTO Ultrium 7



Three big advantages of LTO tape

Save COST Economical

The new LTO tape can save data over 30 years or longer with its high capacity. Tape storage excels in cost-effectiveness in that its per-capacity price is low and that it hardly consumes power to save data. The total cost of backing up 28 TB a year or 140 TB over 5 years can be kept to about 1/4 compared to hard disk. Both capacity and transfer rate contribute to saving cost from less hardware investment.

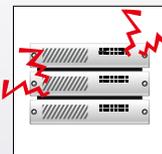


Save DATA Safety

Tape media that can be managed offline and is portable is ideal for storage at a remote location. It has little risk of being damaged or losing data due to a system failure or virus, meaning important data can be saved safely and securely.



Damage to system or data by virus



Sudden shutdown or crash



Save FUTURE Future road map

Magnetic tapes are expected to increase in capacity in the future as high-density recording is pursued. At present, a road map toward 120 TB (LTO 10) is planned for LTO tapes.

Technological evolution and future of LTO tapes

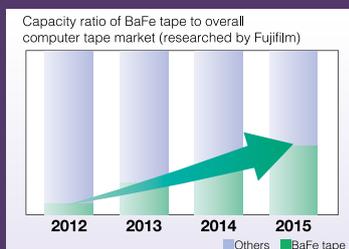


Barium Ferrite

Performance and future of Fujifilm's BaFe tape

Market performance of BaFe tape

Magnetic tapes employing BaFe magnetic particles have been increasing their share of computer tapes in recent years in terms of capacity.

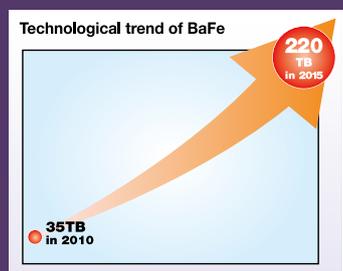


BaFe tape: LTO6 and enterprise system tape
2015: January to June

All of these are Fujifilm's BaFe tapes.

Technology for recording 220 TB established

Fujifilm in conjunction with IBM demonstrated the ability to store 220 TB native capacity on a standard size data cartridge in April of 2015 proving the long term viability of BaFe tape.



General specifications of LTO cartridge

		LTO G2	LTO G3/G3 WORM	LTO G4/G4 WORM	LTO G5/G5 WORM	LTO G6/G6 WORM	LTO G7/G7 WORM	LTO CL
Basic specifications	Capacity (at maximum compression)	200GB(400GB)	400GB(800GB)	800GB(1.6TB)	1.5TB(3.0TB)	2.5TB(6.25TB)	6.0TB(15.0TB)	
	Transfer rate (at maximum compression)	40 MB/s (80 MB/s)	80 MB/s (160 MB/s)	120 MB/s (240 MB/s)	140 MB/s (280 MB/s)	160 MB/s (400 MB/s)	300 MB/s (750 MB/s)	
	Number of tracks	512 (8 track head serpentine)	704 (16 track head serpentine)	896(16 track head serpentine)	1,280(16 track head serpentine)	2,176(16 track head serpentine)	3,584(16 track head serpentine)	
	Servo method	Timing-based servo						
	Cartridge memory	32,786 bits (4,096 bytes); internal EEPROM with electromagnetic induction antenna		65,280 bits (8,160 bytes); internal EEPROM with electromagnetic induction antenna		130,816 bits (16,352 bytes); internal EEPROM with electromagnetic induction antenna		32,768 bits 4,096 bytes; internal EEPROM with electromagnetic induction antenna
Durability	Archival life	30 years						
Physical specifications	Tape width	12.65mm						
	Tape thickness	8.9µm	8.0µm	6.6µm	6.4µm	6.1µm	5.6µm	
	Tape length	609m	680m	820m	846m		960m	319m
	Cartridge dimensions	H102.0 × W105.4 × D 21.5 mm						
Operating conditions	Temperature	10-45°C						
	Humidity	10-80% RH (no dew condensation)						
	Maximum wet-bulb temperature	26°C						
Storage conditions	Temperature(short-term/long-term)	16-35°C/16-25°C						
	Humidity(short-term/long-term)	20-80% RH / 20-50% RH (no dew condensation)						
	Maximum wet-bulb temperature	26°C						
Supported system	Encryption support	x	x	o	o	o	o	x
	LTF5 support	x	x	x	o	o	o	x

*The cleaning cartridge is universally usable for all G1/2/3/4/5/6/7 drives. (Some exceptions may apply.)

Line-up of LTO data cartridge

	LTO G2	LTO G3	LTO G4	LTO G5	LTO G6	LTO G7
Model No.	LTO FB UL-2 200GB	LTO FB UL-3 400GB	LTO FB UL-4 800GB	LTO FB UL-5 1.5TB	LTO FB UL-6 2.5TB	LTO FB UL-7 6.0TB
Article Code	45087	47022	48185	4003276	16310732	16456574

Line-up of WORM type cartridge and cleaning cartridge

	LTO G3 WORM	LTO G4 WORM	LTO G5 WORM	LTO G6 WORM	LTO G7 WORM	LTO CL
Model No.	LTO FB UL-3 WORM 400GB	LTO FB UL-4 WORM 800GB	LTO FB UL-5 WORM 1.5TB	LTO FB UL-6 WORM 2.5TB	LTO FB UL-7 WORM 6.0TB	LTO FB UL-1 CL UCC
Article Code	47141	48361	4003277	16310756	16495661	42965

Unique services to support the effective use of LTO tape

Media Health Check Service

This is a service to check the condition of a customer's LTO tapes using a cartridge analyzer and Fujifilm's original diagnostic software. The system analyzes cartridge memory information and helps to identify the main cause for any problems that are occurring. It also contributes to the prevention of major problems that may occur



*Supports LTO G1 to G6. LTO G7 to be released soon.

LTO Barcode Label Printing Service

We provide a service to print adhesive barcode labels for identifying LTO tapes. The printed labels can be attached to the product before shipping. Please contact us for more



LTO Library Pack

Efficient packaging of 20 tape cartridges per pack, without individual packaging of tapes (no hard case or shrinkwrap). Contributes to improved work efficiency, space saving, and reduced waste.



LTO tape



× 20
cartridges

FUJIFILM

• Linear Tape-Open, LTO, LTO logo, Ultrium and Ultrium logo are trademarks of Hewlett Packard Enterprise, IBM and Quantum registered in the US and/or other countries.

• Specifications are subject to change without notice. • This product catalogue is correct and accurate as of November 2015.

For any inquiries, please contact us:

TAPE Saves 
YOUR FUTURE 

Tape Saves your Future Industries Co LTD
Taperoad 1 47533 Fujitown
Test line Country

