FUJIFILM
Value from Innovation

# LTO Ultrium 8

**Capacity : 12TB (30TB compressed)**
**Maximum transfer rate : 360MB/sec**
**(750MB/sec compressed)**

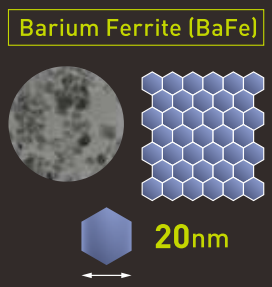
Internet of Things, Information and Communication Technology, and utilization of Artificial Intelligence for Big Data analysis, the amount of data generated globally continues to increase exponentially with the ongoing digital transformation and expansion of high resolution 4K / 8K video. There is also an acceleration to actively leverage Big Data while keeping it in secured and cost-effective storage for the long term. FUJIFILM LTO Ultrium 8 (LTO8) is a new-generation storage medium that meets such needs from the market. FUJIFILM's proprietary technology has achieved twice the recording capacity of LTO7, resulting in greater efficiency to store and utilize the data.




Barium Ferrite
Reliable Technology and Performance

## ■Large capacity

BaFe magnetic particles measuring only about 20nm, allowing a large number of particles to be laid on the same surface. This significantly increases an areal recording density, thereby dramatically boosting the tape's storage capacity.



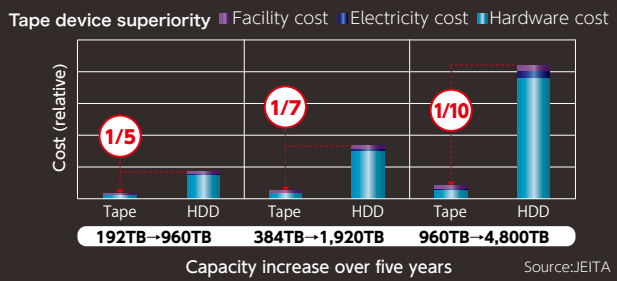

## ■Long-term storage

While the primary cause of magnetic degradation is oxidation, as BaFe magnetic particle is already a ferric oxide, it will not suffer oxidation. This is why BaFe tape offers superior archivability. FUJIFILM's accelerated test has shown that the tape offers stable data storage for more than 50 years.




## ■Economic performance

Compared to hard disk storage (HDD), LTO tape storage has superior cost performance as it provides lower cost per TB and requires almost no electricity in storing data.




## ■Safety

Tape can physically isolate data from the network to create an air gap, minimizing the risk of data loss due to cyberattacks, enabling to safely store your important data.



System or data damage by computer viruses

Sudden system shutdown or crash

# Evolution and future of LTO tape technology

Magnetic tapes are expected to achieve even greater capacity increase.
At present, a roadmap toward 192TB (LTO12) is planned for LTO tapes.

: Roadmap : On sale




## Media / drive compatibility

○: Read / write △: Read only (no writing) ×: No read / write

| | | G2 drive | G3 drive | G4 drive | G5 drive | G6 drive | G7 drive | G8 drive |
|---|---|---|---|---|---|---|---|---|
| Media | G2 | ○ | ○ | △ | × | × | × | × |
| | G3 | × | ○ | ○ | △ | × | × | × |
| | G4 | × | × | ○ | ○ | △ | × | × |
| | G5 | × | × | × | ○ | ○ | △ | × |
| | G6 | × | × | × | × | ○ | ○ | × |
| | G7 | × | × | × | × | × | ○ | ○ |
| | G8 | × | × | × | × | × | × | ○ |

## Main specifications of LTO cartridges

| | | LTO CL※ | LTO G2 | LTO G3/G3 WORM | LTO G4/G4 WORM | LTO G5/G5 WORM | LTO G6/G6 WORM | LTO G7/G7 WORM | LTO G8/G8 WORM |
|---|---|---|---|---|---|---|---|---|---|
| Basic specifications | Capacity (maximum compression) | — | 200GB (400GB) | 400GB (800GB) | 800GB (1.6TB) | 1.5TB (3.0TB) | 2.5TB (6.25TB) | 6TB (15TB) | 12TB (30TB) |
| | Maximum data transfer rate (compressed) | — | 40MB/s (80MB/s) | 80MB/s (160MB/s) | 120M/s (240MB/s) | 140MB/s (280MB/s) | 160MB/s (400MB/s) | 300MB/s (750MB/s) | 360MB/s (750MB/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 (32 track head serpentine) | 6,656 (32 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 | | |
| Physical specifications | Tape width | 12.65mm | | | | | | | |
| | Tape thickness | 8.9μm | 8.9μm | 8.0μm | 6.6μm | 6.4μm | 6.1μm | 5.6μm | |
| | Tape length | 319m | 609m | 680m | 820m | 846m | | 960m | |
| | Cartridge dimensions | H102.0 x W105.4 x D21.5mm | | | | | | | |
| Operating conditions | Temperature | 10~45°C | | | | | | | |
| | Humidity | 10~80%RH (No 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 condensation) | | | | | | | |
| | Maximum wet-bulb temperature | 26°C | | | | | | | |
| Supported system | Encryption support | × | × | × | ○ | ○ | ○ | ○ | ○ |
| | LTFS support | × | × | × | × | ○ | ○ | ○ | ○ |

The cleaning cartridge is universally usable for all 2/3/4/5/6/7/8 drives. (Some exceptions may apply.)

## Lineup of LTO data cartridges

| | LTO G2 | LTO G3 | LTO G4 | LTO G5 | LTO G6 | LTO G7 | LTO G8 |
|---|---|---|---|---|---|---|---|
| Model number | LTO FB UL-2 200G J | LTO FB UL-3 400G J | LTO FB UL-4 800G U | LTO FB UL-5 1.5T J | LTO FB UL-6 2.5T J | LTO FB UL-7 6.0T J | LTO FB UL-8 12.0T J |
| JAN code | 4902520 249975 | 4902520 273703 | 4547410 019100 | 4547410 119169 | 4547410 237061 | 4547410 316971 | 4547410 364828 |

## Lineup of WORM-type and cleaning cartridges

| | LTO CL | LTO G3 WORM | LTO G4 WORM | LTO G5 WORM | LTO G6 WORM | LTO G7 WORM | LTO G8 WORM |
|---|---|---|---|---|---|---|---|
| Model number | LTO FB UL-1 CL UCC J | LTO FB UL-3WORM 400G J | LTO FB UL-4WORM 800G U | LTO FB UL-5WORM 1.5T J | LTO FB UL-6WORM 2.5T J | LTO FB UL-7WORM 6.0T J | LTO FB UL-8WORM 12.0T J |
| JAN code | 4902520 241603 | 4902520 274465 | 4547410 019193 | 4547410 119183 | 4547410 237078 | 4547410 316995 | 4547410 364835 |

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Specifications are subject to change without notice. This product catalogue is correct and accurate as of September 2019.

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Portal website for information on tape storage http://tape-storage.net

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