

The Elusive "Promise" of Holographic Data Storage



AKONIA
HOLOGRAPHICS
BRINGING DATA STORAGE SOLUTIONS TO LIGHT

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Holographic Archive Storage Benefits

High capacity and performance

- Capacities from 10 TB to 40TB per cartridge (LTO size)
- 5 to 7 disks per cartridge
- Transfer rates >200MB/s (multiple heads can give > 1 GB/s)
- 1 to 5 PB in 14U rack mount library

Media Robustness

- >50+ year archive life
- No special handling required
- Large temperature and humidity robustness

Data Access

- Random access (<100ms) once loaded
- Low latency (<10 seconds) compared to tape (> minutes)

Excellent Total Cost of Ownership (TCO)

- Low cost media (its plastic)
- Reduced migration frequency

Technology Comparisons

	Component Density	Cost
HDD	126 GB/in ³	\$0.10/GB
NAND (2.5")	121 GB/in ³	\$1.00/GB
Tape (LTO6)	177 GB/in ³	\$0.04/GB
Holographic (**2017)	905 GB/in ³	\$0.01/GB

Roadmap to a Competitive Drive

	Akonia 2013 and beyond		
Bit Density	Gen 1: 2.5 Tb/in ²	Gen 2: 5 Tb/in ²	Gen 3: 9 Tb/in ²
Cartridge Capacity*	10TB	20TB	40TB
Product Speed	150 MB/s	250 MB/s Wr 304 MB/s Rd	300MB/s Wr 420 MB/s Rd

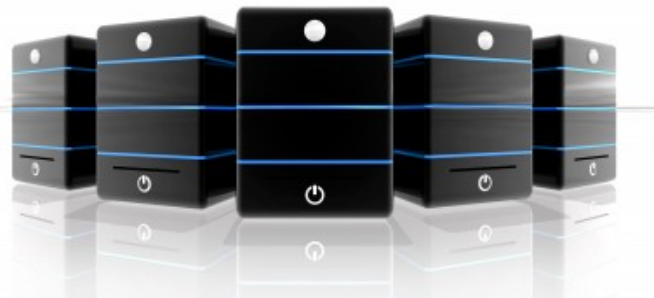
*Cartridge size: 102.0 × 105.4 × 21.5 mm (LTO slot compatible)

~2017 Availability



(Initial Estimated Specifications)

- 14U rack 17.5 x 36.5 x 24.5h
- >1.0 PB of data storage
- Storage life >50 years with wide temp. range
- 10-15 seconds average access time
- 180 - 350 MBytes/sec transfer rate



Multiple head technology possible with > 1GB/s transfer rate per drive

Thank You



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