SCALABLE. RELIABLE. FOREVER.

Sony Optical Archive, Inc. Fundamentally Redefines Archive With Optical Technology

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Agenda

• Everspan Technology
  • Media
  • Drive

• Everspan Library
  • Row level design

• Connectivity Options
  • S3 Object store
  • Tape interface
Optical technology for professional archiving


780nm  650nm  400nm

650MB  4.7GB  50/100GB

Professional Archival Disc (2015)

300GB
Archival Disc

Disc structure
• 3 layers /side & Double-sided structure
• Inorganic recording layer structure
• Protective cover layer

Drive

Key technologies
• Simultaneous recording on both sides
• 45MB/s Head
Performance

- Array head drive
- Restore 1.3PB/day (64 drives)
- Multi row options

Reliability

- Non contact recording technology
- Erasure coding option
  - Within library
  - Across 1, 2 or 4 libraries
- 100 year media warranty
High performance drive

- The world’s 1st 8-CH dual-side drive for highly efficient operation
- Drive transfer rate:
  - Average write 140MB/s (with verification)
  - Average read 280MB/s (peak 315MB/s)
- SATA interface
- High reliability laser

Read transfer rate

Optical head with 2 CH laser
Optical Technology is Optimized for Data Archival

Scalable library for lowest cost / GB
Scalable library architecture

High performance
High-speed rotation, Multiple channel

Reliable media
Environmental durability, long life

Enterprise-class drive
Designed for enterprise use

High data density
Land & groove technology

Scalable Reliable Forever
Everspan brings Optical to Archiving

- **Scalability** across expansion units: 13PB increments
- **Reliability** independent of read frequency
- **Performance:** 18GB/s restore
- **Compatibility** through drive/media generations
- **Lowest cost/GB** acquisition cost
- **Lowest power consumption** (typical 9kW/183PB)
Everspan Base Unit

- Configurable system components
  - Up to 64 drives
  - Highly efficient 4 drive loading mechanism
  - Up to 14 expansion units
- Complies with OCP standard dimensions
Everspan System

- Expansion units are media racks
  - 64 drives, total bandwidth 18GB/s
  - Each tray has 64x 300GB media (19.2TB per tray)
  - Each Expansion Unit holds 680 trays (13PB capacity)
- Expansion units require nominal power only
  - Scale storage capacity without scaling operational cost
- Scalable to 14 expansion units = 183PB
Connectivity Options & Software Integration

Library interfaces

- Robotic = SMC
- Optical drive = MMC-6 (iSCSI target)
- Optical drive with Tape Interface = T10 (iSCSI target)

Storage Interface Support at GA July/2016

S3 Object Store (>80% market share)
- Erasure code implementation
- Active/Passive Gateway- and Metadata Servers

HPSS implementation
- Utilizing HPSS connectivity options

HDS HCP implementation (Hitachi Content Platform)
- will be supported in 2016
Availability and Roadmap

• Product launch on March 8, 2016
  • Customers in beta now

• Production units ship in July 2016

• Everspan has a roadmap for both media and system enhancements
  • 500GB and 1000GB media announcements in line with previous Sony statements
Visit us at
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