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## Panasonic Unveils Enhanced "freeze-ray" Series Data Archiver System, Using 300 GB Optical Discs

- Safe, Long-Term Storage of Large-Volume Data at Lower Costs for Data Centers -

**OSAKA, JAPAN, March 10, 2016** - Panasonic Corporation today unveiled its enhanced "freeze-ray" series Data Archiver, using 300GB Optical Discs (scheduled for release in the 2nd half of 2016) at the OCP U.S. Summit 2016 being held March 9-10, 2016, in San Jose, California. Panasonic is proposing a data archiving system based on large-capacity optical discs to complement conventional recording media, such as HDDs and magnetic tape, for use in the high-efficiency, next-generation data centers.

Panasonic's Optical Disc-Based Data Archive System<sup>\*1</sup> has already been adopted in corporations and public institutions that require long-term data storage. "freeze-ray," which was developed through extensive validation and testing to be deployed in the data centers of a large-scale Cloud Service Provider in the US, was announced in January at CES 2016 in Las Vegas, as an Optical Disc-Based Data Archive System based on 100GB Blu-ray Disc.

\* See the Development Background of the freeze-ray Series below.

In order to provide at-scale data storage, the enhanced freeze-ray system adopts Archival Disc<sup>\*2</sup> with a recording capacity of 300GB per disc. Use of the 300GB Archival Disc will enable a maximum of 1.9 petabytes (1 petabyte = 1,000 terabytes) of data to be stored in a standard 19-inch data center rack.

Data centers require safe and secure data storage for decades. Panasonic's Archival Disc meets that requirement as a WORM (Write Once Read Many) media that prevents data overwrite or data falsification along with providing an estimated lifetime of 100 years or more.<sup>\*3</sup> Using the long-life Archival Disc eliminates the cost of having to migrate data periodically as is necessary with conventional media. Additionally, as Panasonic's Archival Disc can be operated at room temperature, the energy cost to control data center facilities' temperature is significantly reduced.

In the future, Panasonic plans to increase the capacity of the Archival Disc to 500GB and eventually 1TB per disc, which will enable an even larger-scale freeze-ray system, including petabyte capacity increases. With freeze-ray, Panasonic will continuously work on shaping the next-generation data center and meeting industry requirements by helping to reduce data center costs.

\*1 Optical Disc-Based Data Archive System: A large-capacity storage solution using multiple optical discs as recording media.

\*2 Archival Disc: Panasonic Corporation and Sony Corporation have announced that they have formulated "Archival Disc", a new standard for professional-use, next-generation optical discs. Both companies started co-development in July 2013 and completed a standard with recording capacity of 300GB per disc by the end of 2015.

\*3 the lifetime of Panasonic Archival Disc is estimated to be 100 years or more at temperatures of 30°C and humidity of 70% RH according to accelerated tests now being conducted.

## Development Background of the freeze-ray Series

Panasonic has developed "freeze-ray" in collaboration with Facebook. Panasonic has contributed by providing its high-density optical technology, key devices and library software to control the system easily in the data center. Facebook collaborated by providing its unmatched expertise in designing, deploying, managing and servicing storage systems in data centers. In addition, Facebook provided extensive technical and real-world data center feedback at every stage of the development. Both companies plan to contribute to collaborate in order to provide even greater benefits to the data center industry.

<http://news.panasonic.com/global/press/data/2016/01/en160106-5/en160106-5.html>

## freeze-ray Product Website

<http://panasonic.net/avc/archiver/freeze-ray/>

## About Panasonic

Panasonic Corporation is a worldwide leader in the development of diverse electronics technologies and solutions for customers in the consumer electronics, housing, automotive, enterprise solutions and device industries. Since its founding in 1918, the company has expanded globally and now operates 468 subsidiaries and 94 associated companies worldwide, recording consolidated net sales of 7.715 trillion yen for the year ended March 31, 2015.

Committed to pursuing new value through innovation across divisional lines, the company uses its technologies to create a better life and a better world for its customers. To learn more about Panasonic:

<http://www.panasonic.com/global>.

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