

Addition of Type 1 iVDR Micro to iVDR Family and Adoption of New iVDR-Secure Specifications

The iVDR Hard Disk Drive Consortium (Representative, Toshiaki Hioki) (hereinafter called the iVDR Consortium) held its general meeting on April 12, at which they newly added an iVDR micro using a Type 1 hard disk to the present iVDR family with the aim of applying it to mobile equipment. Besides the addition of the new iVDR micro to the family, iVDR-Secure specifications for realizing content protection functions were introduced as new iVDR specifications.

iVDR: Information Versatile Disk for Removable usage

In the past, the iVDR Consortium prepared and adopted two types of specifications: Type 2.5 iVDR and Type 1.8 iVDR mini. Together with the present addition of the Type 1 iVDR micro to the iVDR family, security specifications based on public key infrastructure (*¹PKI) that realize the protection of recorded data information and digital copyrighted content have been prepared and adopted.

These security specifications, called iVDR-Secure, support super distribution for the realization of ubiquitous use and can also be mounted on all iVDR family drives. With the iVDR micro introduced into the family and with the adoption of the security specifications, a wide range of applications from AV equipment to PCs are now possible. An iVDR – featured by further enhanced compactness, light weight, and portability in a removable hard disk drive -- can now be offered as an iVDR family drive with support for various applications that require content protection.

| iVDR-Secure Specifications | |
|----------------------------|--|
| Encryption method | Symmetric and asymmetric key encryption method |
| Mounting specifications | -Mounting of symmetric and asymmetric key encryption engine -Recording and control function of content key with usage restriction -Tamper resistance structure of security related block |
| Command | Content protection feature set |

| iVDR micro hard disk drive hardware tentative specifications (Type 1) | |
|---|--|
| Size (W × H × D) | 50mm × 50mm × 8mm |
| Impact resistance | To secure 900G or more (When not operating) |
| Connector part specifications | [Form] 26 pin iVDR original (Shutter structure: Option) [Durability] Insertion/Ejection 10,000 times [Pin arrangement] Signal section: According to serial ATA |
| Command | ATA* ² conformity + Secure expansion (Option) |

Although the Type 2.5 iVDR is removable, it has a large recording capacity with the high speed random access available only with hard disk drives, and an increase in capacity from the present 80 GB to 200 ~ 400 GB may be expected in 2 to 3 years. By using a multiple number of the Type 2.5 iVDR, users may easily structure large capacity servers with capacity on the order of terabytes.

On the other hand, the capacity of the Type 1.8 iVDR mini is presently around 20 GB, but an increase in volume to 30 GB may be expected during this business year, which will make application to large volume mobile equipment possible. The Type 1 iVDR micro that was newly added to the iVDR family has a capacity of around 4 GB at present, but a capacity of 10 GB may be expected within several years. Application to small capacity mobile equipment is targeted.

By standardizing the iVDR series, the series can obviously be positioned as a common compatible recording medium for the AV equipment industry and PC industry. It will also become possible to upgrade and expand new hard disk application infrastructure using the iVDR.

[The objective of the iVDR Consortium]

The iVDR Consortium consists of 38 companies that produce home electrical appliances, automobiles, PCs, peripheral equipment, HDDs, etc. The Consortium is working to prepare iVDR specifications and to spread iVDR so as to standardize the next generation large capacity data platform for widespread use from AV equipment to PCs, centering around the new concept of a removable hard disk drive.

In concrete terms, the Consortium is studying technical specifications to realize high compatibility and portability of equipment from AV devices to PCs using a small type of hard disk drive such as the Type 2.5 iVDR, Type 1.8 iVDR mini and Type 1 iVDR micro. Up till now, studies have been promoted not only into technical specifications for interface applications, file systems and audio-video, but also into the technical specifications of content protection security functions that are extremely important in realizing digital content protection of recorded data information and copyrights.

Also, the Consortium is offering a business environment for ensuring compatibility between equipment by offering certification of iVDR equipment and providing an iVDR logo.

[Technical features of iVDR]

Not only hardware specifications, interface specifications and file system specifications, but application data specifications and content protection securing specifications are being standardized for the next iVDR generation large capacity data platform to be commonly used for AV equipment and PCs.

iVDR will make the most of compact large capacity, high speed access hard disk drives and play a central role as a data platform for handling all kinds of data including image content used in AV equipment. It will be a new media that offers common possession of data over a wide range, such as in home servers, video recorders, vehicle mounted AV equipment and PCs. Depending on whether content protection security is provided or not, the iVDR family are available in a security type and non-security type.

[iVDR Consortium website]

URL : <http://www.ivdr.org>

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*¹ PKI: Public Key infrastructure

*² ATA: AT attachment Transmitting method of commands and data of hard disk drives, interface specifications of electrical specifications, etc., standardized by the American National Standards Institute.

List of members 38 companies

* In alphabetical order

1. ACARD TECHNOLOGY CORPORATION
2. AISIN AW CO., LTD
3. ALPINE ELECTRONICS, INC
4. ALPS ELECTRIC Co., Ltd.
5. BUFFALO INC.
6. Canon Inc.
7. Clarion
8. DDK Ltd.
9. DENSO CORPORATION
10. FCI Japan K.K.
11. Fujitsu Limited
12. FUJITSU TEN LIMITED
13. Funai Electric Co., Ltd.
14. Freecom Technologies BV
15. Hitachi, Ltd.
16. Hitachi Global Storage Technologies Japan, Ltd.
17. Hitachi High-Technologies Corporation
18. I-O DATA DEVICE, INC.
19. Iriso Electronics Co., Ltd.
20. J.S.T. Mfg.Co., Ltd.
21. KITAGAWA INDUSTRIES CO., LTD.
22. LaCie
23. MAXELL SEIKI, LTD.
24. MAXTOR
25. Merodies & Memories Global Limited
26. MITSUMI ELECTRIC CO., LTD.

27. MOLEX SINGAPORE PTE. LTD.
28. Phoenix Technologies K.K.
29. PIONEER CORPORATION
30. Renesas Technology Corp
31. Sangikyo Corporation
32. SANYO Electric Co., Ltd.
33. Seagate Technology LLC
34. SHARP Corporation
35. Taiko Denki Co., Ltd
36. TOYOTA MOTOR CORPORATION
37. VICTOR COMPANY OF JAPAN, LIMITED
38. YAZAKI SYSCOMPLUS CO., LTD.