High Density Devices AS

is providing

POWERFUL, PATENTED, VERIFIED and CERTIFIED

HARDWARE ENCRYPTION

PRODUCTS & TECHNOLOGY

The Norwegian privately owned company High Density Devices AS, the sole owner of the patented technology behind its products (US Patent No. 7,434,069) was established by a team of computer-industry veterans who saw a growing need to protect valuable data where it is most vulnerable – at rest on storage media like hard disk drives. HDD spent the initial phase dedicated to developing and enhancing leading edge encryption technologies, and in line with market maturity and the dramatic increase in data breaches, the commercial **[hiddn]™** product portfolio was completed.

The Highest Certifications in the Marketplace Today

A detailed and thorough validation process was completed in late 2005 making **[hiddn]™** one of very few commercially available technologies for encryption of data at rest that is validated at both FIPS 140-2 level 3 and Common Criteria EAL 4+. In addition, the **[hiddn]™** Laptop and **[hiddn]™** Desktop products are approved by the Norwegian National Security Agency for protection of data classified NATO RESTRICTED. The **[hiddn]™** portfolio is today one of the highest certified and most user-friendly technologies for encryption of data in the marketplace, and with solutions for protection of data stored in laptops, desktops, memory sticks, servers, copiers, workstations, and any other storage media, **[hiddn]™** distinguishes itself as a total data protection solution.

Investments & Venture Funding

To secure further commercialization and industrialization of the patented and HDD-owned technology, additional equity was raised September 2009. HDD went through a process with new external investors, securing 24 MNOK in new equity, and the investment included 14 MNOK from Incitia Ventures II AS, 3 MNOK from HDD's Management Team and 7 MNOK from existing owners. In addition, a previous debt of 3 MNOK was converted into shares, and the participants in this capitalization secured an option (subscription right / warranties) to raise an additional 10 MNOK in future equity. Following this capitalization, Incitia Ventures II AS is now the largest single shareholder, with more than 34 % of HDD's overall shares.

Marketing Strategies

Our customer value proposition is that **[hiddn]™** ***makes unattended, lost or stolen computer storage units of no value to other than the authorized user in any given situation, guaranteed by the unique patented and certified technology*** – through extreme ease of use and cost-effective solutions!

Target markets stretch from the high-end military and governmental to the lower consumer segments, all catered for by different products in the extensive **[hiddn]™** portfolio.

An integral part of the HDD marketing strategy is to engage with users and increase the visibility of **[hiddn]™** at strategically selected events. Combining this with a strong web presence at www.hiddn.com and actively engaging with users, partners and the data protection community through social media (Twitter *@hiddn.hdd)*, enforces perception of **[hiddn]™** as visible, pro-active and respected!

Through integrated and well-directed marketing communication, HDD Marketing promotes the **[hiddn]™** brand on globally, and by interacting with partners and customers we aim to provide the market with the most cost-effective, user-friendly and secure data protection solutions.

The HDD Sales Channel

With financial backing, HDD Sales & Marketing are building a global sales network and market presence, and through its channel network the **[hiddn]™** portfolio will be marketed and sold.

HDD	Distributors	Regional Partners	Partners
Sales and business Development Director Defence/Security/Government	Sales and marketing Warehouse and distribution	Covers several countries thru Partners	Own customer base
Sales and business Development Director Corporate/Health/Finance	Sales and marketing Warehouse and distribution	Covers several countries thru Partners	Own customer base
CSO OEM	Sales and marketing Warehouse and distribution	Own set up	Own customer base

The HDD Sales Channel caters for all customers' needs, whether that is procurement from larger, global, organizations or getting support from local representatives, or both. We strive to enter into strategic alliances at all tiers in the network, and are continuously searching for new and motivated partners.

[hiddn]™ - Patented Hardware Encryption

The **[hiddn]™** Crypto Module sits in the data path between the hard drive controller and the storage media, encrypting all data at rest, including boot-up information, swap space and temporary files (the Crypto Module has well defined red and black interfaces and the data interfaces obey the ATA specification). As users work, real-time encryption is performed on all user data as it is written to the hard disk.

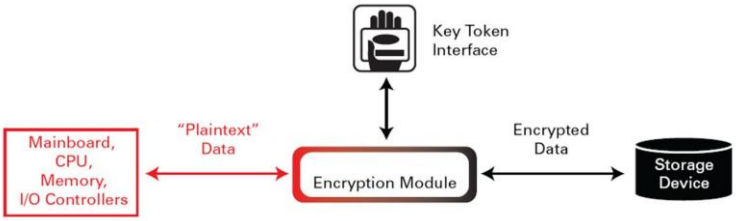


Figure 1 - [hiddn]™ Architecture

User authorization is performed using a hardware key token, typically a smartcard. The key and storage media pairing feature implies that each **[hiddn]™** encrypted storage media can be unlocked by a specific key only, and users must use the correct smartcard in order to decrypt and access any data stored. All encryption keys are in addition stored in encrypted form on the separate smartcard.

[hiddn]™ protects data at rest on any storage media by implementing encryption of all data through the certified and approved AES 256-bit encryption engine. **[hiddn]™** is completely independent of operating system, type of computer and/or storage media, there is no need for drivers or additional software, and all products encrypt transparent to the user. All encryption keys are stored on a separate, physical, smartcard, and for management of users, products, smartcards, PIN-codes, and encryption keys, HDD has developed the secure, proprietary and intuitive **[hiddn]™** Key Management System.

Features

- Transparent operation at full ATA speed
- ALL data on the storage media is encrypted - providing true Full Disk Encryption
- No additional software or drivers required
- Operating System independent (No transition cost for introduction of new OS)
- Integrated card reader for Smart-card
- Up to 32 different encryption keys per user
- Flexible key policies – multiple keys, lifetime setting, split key
- Keys stored in controlled environment and zeroized at power-off by validated mechanisms
- Supports multiple clearance levels on the same drive
- Support for shadowed Master Boot Record
- Periodic self-tests of all cryptographic functions

Key Differentiators

- The only FIPS Level 3 module for protection of data at rest on PCs
- No Encryption keys stored on module after power off
- Completely transparent use with no need for user intervention
- 256 bits AES encryption
- Certified by US certification authorities (NIST/NSA) & laboratories (SAIC/InfoGard)
- Unparalleled user flexibility enforced by encryption key attributes
- KMS allows Crypto Officer to set and change all the attributes and consequently enable all features and capabilities embedded within the **[hiddn]**™ Crypto Module
- Operating System, Platform, and Hardware manufacturer independent
- **[hiddn]**™ does not use PC resources such as CPU and memory compared to software

The [hiddn]™ Portfolio – Catering for Your Data Protection Needs

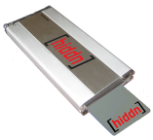
The **[hiddn]™ Crypto Module** is implemented in all **[hiddn]™** products, and offers an unprecedented flexibility and security – protecting servers, thin clients, CCTV-cameras, UAVs, copy machines, personal computers, memory sticks, and any other storage media. The highly qualified team at HDD has great experience in implementing encryption solutions based on users' requirement specifications. With its independence of software, users or hardware, **[hiddn]™** complements the organizations' infrastructure and security solutions to offer **cost effective, user-friendly and robust protection of all data at rest**!

The **[hiddn]™ Crypto Adapter** - a unique product for encryption of any USB-connected storage media. Why buy expensive encryption memory sticks when you can use existing and cheaper memory stick? The **Crypto Adapter** is the ideal solution to secure the mobile workforce and its memory sticks, backup drives, and transportable media!

[hiddn]™ Laptop - transparent full disk encryption independent of hardware, operating system and without the need for additional software. All keys are stored on a smartcard with optional two-factor authentication (PIN-code) for added security. **[hiddn]™ Contactless** key transfer opens up for greater flexibility, simply power on, swipe the smartcard over the drive to authenticate, and start operating the laptop as normal – ***efficient, cost effective, and user friendly!***

[hiddn]™ Desktop - a PCI/PCIe card for full disk encryption of up to two internal SATA drives, implementing all security features and advantages of other **[hiddn]™** products, including the unique smartcard storing all keys and the pre-boot PIN-code authentication for added security. **[hiddn]™ Desktop** – affordable and easy to use data protection!

[hiddn]™ SATA Adapter - protecting data stored in external hard drives, workstations, office copiers, faxes and printing stations. The **SATA Adapter** is protected through the certified and validated **[hiddn]™** Crypto Module, and inaccessible to anyone not holding the unique smartcard- At end of life of the equipment, simply keep possession of the smartcard and discard of the drive – cost effective and secure protection of data!



[hiddn]™ USB - encrypted external hard drive providing easily implemented and secure protection of data, perfect for sharing sensitive data between two parties. Data is inaccessible to anyone not holding the unique smartcard, and the organization is provided with an efficient and cheap alternative to expensive and time consuming couriers.

The **[hiddn]™** KMS utilizes the following functionality:

- Create, manage, and retire encryption keys
- Create and manage encryption key attributes
- Key escrow
- Management of roles and services
- Management of users, units, smartcards and their correlation

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