



Cypher-2 Erasure Appliance

Data Center disk erasure appliances for erasing failed drives, storage arrays, LUNs, and servers

Highlights

- Direct attach to disk subsystems to erase entire arrays
- Optional Fan-out Kit enables erasure of standalone drives.
- Dimensions: 11 1/2" x 9" x 14"
- Supports commonly used erasure standards NIST and DoD, plus many others like NAVSO and Infosec
- Generates a certified erasure report for each serial number or LUN ID erased
- Unlimited use—no per drive charges—for the lifetime of the product
- Erases a higher percentage of failed drives than any other product in the market—often erasing 90% of failed drives
- Erases any drive protocol—FC, SAS/SATA, SCSI, IDE—from any manufacturer using one

The Cypher-2 is an enterprise class erasure appliance built for erasing data center storage. Using the optional Fan-out Kit, standalone drives may be erased as well. All drive protocols can be erased, including Fibre Channel, SAS, SATA, and SCSI in both 3.5" and 2.5" form factors. Drives or LUNs from any manufacturer, any storage array, and any server/workstation can be erased using the Cypher-2. Users can choose to erase with the desired algorithm, including DoD, NIST, and many other available erasure algorithms. A log file is generated at the start of each drive erasure that contains information used to generate a certified erasure report after the completion of the erasure. Each log file contains a hash that prevents tampering with log file data. Individual drives are erased at their maximum write speed – the write speed varies based on the drive type/manufacturer as well as the general health of the drive. As a point of reference, a 146GB 15K FC drive might complete a single-pass NIST erasure in about 22 minutes, while a 1TB SATA generally takes about 3 hours to perform the same erasure. Performance advantages originate from special SCSI commands eliminating the need to constantly transfer erasure patterns over the BUS - enabling the Cypher-2 to concurrently erase a large number of drives without being limited by bus speed.



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Erasing Storage Arrays

The Cypher-2 is used to erase entire storage arrays by directly attaching to the disk drawers of the target array via a custom cable. An erasure report is generated post erasure which lists each serial number drive in the array (i.e. the erasure report for a 400 drive array will have 400 lines, one for each serial number drive). Most arrays can be erased via direct attach

The Cypher-2 is a Windows platform (Windows 7 or Windows Server) running a dedicated erasure application. It houses internal Host Bus Adapters (HBAs) for erasing FC, SAS, SATA, and SCSI drives. Custom cables are attached to these same HBAs and then directly connected to external disk drawers in storage arrays for direct attach external array erasure. The Cypher-2 uses a Xeon processor with 8GB of RAM, and can be used to erase 100's of drives simultaneously when erasing (via direct attach) storage arrays.

LUN Erasure

The Cypher-2 appliance can also perform LUN erasure of any LUN presented to the appliance. A log file is generated for each LUN ID erased. Performance of our LUN erasure has been measured to be faster than competing products like FDR Erase, sometimes up to 14x faster. Performance advantages originate from special SCSI commands that eliminate the need to constantly transfer erasure patterns over the BUS - enabling the Cypher-2 to concurrently erase a large number of drives or LUNs without being limited by bus speed.



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Custom Built

Each Cypher-2 is custom built to requested specifications. Optional Fan-out Kits enable direct attachment to standalone drives. A typical Fan-out includes 2 FC connectors, 4 SAS/SATA, and an external power supply. Dual & quad Port 8Gb FC HBA's, as well



as dual & quad port 6Gb SAS HBA's are available. The user supplies a required Keyboard, Display, and Mouse. PS/2, VGA, and USB ports are used for attaching the required keyboard, display, and mouse.

Software Features

There are advanced software features available – including the ability to print drive labels (post erasure), limit operator access to certain functions, choose whether to perform a health check on individual drives, and choose to automatically start a drive erasure once a drive has been assigned to a bay for erasure. The integrated software also enables users to view the contents of media before and after erasure, and choose what level of verification to perform (spot vs. full disk) for each erasure.



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