



X-Wall[®] SE ASIC

Protect your data; Safeguard your privacy[™]



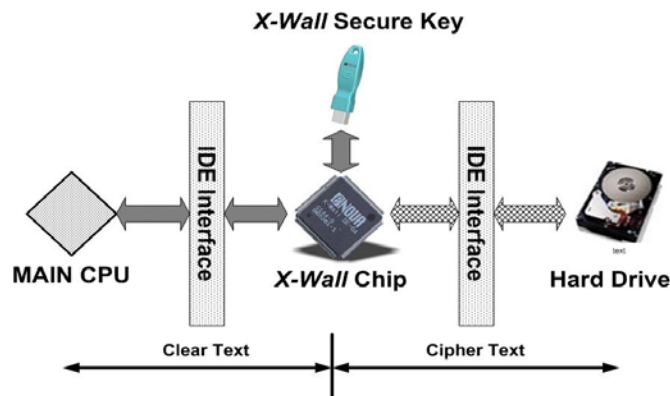
The X-Wall SE ASIC ensures privacy and confidentiality of data and credentials stored on PC hard drives without degrading system performance. A cryptographic system-controller ASIC operating at the physical layer, the X-Wall microchip performs bit-by-bit “real-time” encryption of the entire hard disk (including the boot sector and operating system) at 1.1 Giga bit per second using Federal Government certified DES/TDES algorithms. In contrast to software solutions, no password is ever stored on the hard drive or held in machine memory. X-Wall’s unique design also completely eliminates any dependency on operating systems or device drivers while functioning automatically and transparently, thereby eliminating user intervention.

Key Benefits

- Automatic transparent encryption guarantees user acceptance and enforces compliance with security policies
- Real-time encryption at 1.1Gbit/sec maintains full system performance
- Government-certified DES and TDES algorithms assure high level security
- Encryption key lengths from 40-bit to 192-bit
- Compatible with any IDE hard drive, regardless of operating system and requiring no additional device drivers
- Small form factor with low power consumption

Description

The X-Wall SE chip resides between the IDE host controller and the IDE hard drive. Incorporating both a host and target interface for IDE Ultra DMA drives, X-Wall SE acts as a host controller to the hard drive and as a hard drive to the controller. X-Wall SE intercepts and translates IDE commands and encrypts all data in real-time. All data written to the hard drive, including the boot sector, operating system, temp and swap files is automatically and transparently encrypted. Attempts to circumvent security by booting from a floppy disk or by removing the hard drive to be read on a different machine would prove futile since the entire content of the hard drive is encrypted.



Operation

The *X-Wall Secure Key* stores and protects the encryption key used by the *X-Wall* microchip to encrypt data. The correct *X-Wall Secure Key* must be inserted into the special key socket (present on *X-Wall* finished products) at system boot up to authenticate the user and authorize the operating system to load before granting access to data stored on the hard drive.



Product List

X-Wall	Encryption Strength	NIST¹ & CSE² Certified 100% hardware Cipher Engine	Maximum Throughput	Ultra ATA hard disk support	Ultra ATA hard disk compliance	Protocol & Transfer mode support up to	Package
SE-40NB	40-bit	DES	712 Mbit/sec	< 137GB	33, 66	ATA 5, Mode 4 transfer	128-pin LQFP
SE-64NB	64-bit	DES	712 Mbit/sec	< 137GB	33, 66	ATA 5, Mode 4 transfer	128-pin LQFP
SE-40A	40-bit	DES	1.1 Gbit/sec	< 137GB	33, 66, 100, 133	ATA 5, Mode 4 transfer	128-pin LQFP
SE-64A	64-bit	DES	1.1 Gbit/sec	< 137GB	33, 66, 100, 133	ATA 5, Mode 4 transfer	128-pin LQFP
SE-128A	128-bit	TDES	1.1 Gbit/sec	< 137GB	33, 66, 100, 133	ATA 5, Mode 4 transfer	128-pin LQFP
SE-192A	192-bit	TDES	1.1 Gbit/sec	< 137GB	33, 66, 100, 133	ATA 5, Mode 4 transfer	128-pin LQFP

Specifications

- Compatible with all operating systems including Mac OS, Linux, Unix, SCO Unix and Solaris
- 1.1 Giga bit per second throughput
- Encryption key lengths vary by chip model from 40-bit to 192-bit
- Compatible with all IDE DMA and Ultra DMA 33/66/100/133 hard drives
- Compatible with all motherboards with standard IDE interface
- 128-pin LQFP small form factor package
- Pin to pin compatible for all six chips
- Dimensions: 14x14mm, 1.4mm thickness
- Power requirement: +4.5V to +5.5V

¹ NIST – The National Institute of Standards and Technology of the United States of America

² CSE – The Communications Security Establishment of the Government of Canada



- Operating temperature: 0 degrees C to +70 degrees C
- Storage temperature: -55 degrees C to +125 degrees C

Enova Technology, a privately held company with its HQ in Hsin-Chu science based park, Taiwan, Republic of China, specializes in the design of advanced real-time cryptographic solutions. Enova's innovative encryption technology satisfies the needs of Corporations, Government Agencies, Consumers and security-conscious users worldwide who demand absolute privacy and confidentiality of stored data and network credentials.



Asia Operations

Enova Technology Corporation
Building 53, #195-57, Sec. 4, Chung Hsing Road
Chutung, Hsin Chu County, Taiwan 310
Republic of China
Tel. +886 3 591 0197
Fax +886 3 591 0204
<http://www.enovatech.net>
info@enovatech.net

North America Operations

Enovatech, Inc. (Enova Technology)
576 Valley Way
Milpitas, CA 95035
USA
Tel. +1 408 956 8100
Fax +1 408 956 8102
<http://www.enovatech.com>
info@enovatech.com