



**Table of Selection
of
X-Wall Hardware Real-time Cryptographic Processor**

Available Product SKU	X-Wall CO-128 X-Wall CO-192	X-Wall FX-128 X-Wall FX-192 X-Wall FX-256 X-Wall FX-128C X-Wall FX-192C X-Wall FX-256C	X-Wall LX-64 X-Wall LX-128 X-Wall LX-192	X-Wall XO-64 X-Wall XO-128 X-Wall XO-192	X-Wall MX-128 X-Wall MX-192 X-Wall MX-256 X-Wall MX-128C X-Wall MX-192C X-Wall MX-256C
Categories					
Year Introduced	2006	2008	2004	2005	2007
Built-in Interface Controller	ATA to ATA	USB2.0 to SATA Integrated	ATA to ATA	ATA to ATA	SATA to SATA
Production Units Availability	Yes	Yes	Yes	Yes	Yes
Product Warranty 3 Years	Yes		Yes	Yes	
Product Warranty 5 years		Yes			Yes
Operating Temperature	-40C to +90C	-45 to +90C	Standard	Standard	-45 - +90C
High Temperature Operating Life (HTOL)	1,000 hours @125C	1,000 hours @125C	Yes	Yes	1,000 hours @125C
NIST & CSE certified 100% hardware Cryptographic Engine	TDES 128/192-bit	AES ECB 128/192/256-bit AES CBC 128/192/256-bit	DES 64-bit; TDES 128/192-bit	DES 64-bit; TDES 128/192-bit	AES ECB 128/192/256-bit AES CBC 128/192/256-bit
FIPS 140-2 Candidate		Yes			Yes
Design Guide version	Version 1.0	Version 1.3	Version 0.4	Version 0.4	Version 1.6
Reference Schematics & Layout (OrCAD)	Yes	Yes	Yes	Yes	Yes
Development Board Availability	Yes, on order	Yes, on order	Yes, on order	Yes, on order	Yes, on order
Authentication is a matter of deciding when the secret key is released by: • Smartcard, Fingerprint, Password, Key Escrow, or Key Token All the designers need to do is to decide when the secret key is released to enable the real-time crypto mode of the X-Wall crypto engine.	Single or Multi-Factor Authentication, which is design dependent.	Host Password authentication for Windows XP; Vista, 2000, & 2003 server.	Single or Multi-Factor Authentication, which is design dependent.	Single or Multi-Factor Authentication, which is design dependent.	Pre-boot password authentication software as part of a BIOS code is available.
Interface for secret key load	<ul style="list-style-type: none"> • 2-wire SEEPROM; • Built-in API 	<ul style="list-style-type: none"> • Host password; • SDK for developers 	93C46	<ul style="list-style-type: none"> • 2-wire SEEPROM • Built-in API 	<ul style="list-style-type: none"> • 2-wire SEEPROM • Built-in API
Volatile Type Key Registers	Yes. Loss secret key at power off.	Yes. Loss secret key at power off.	Yes. Loss secret key at power off.	Yes. Loss secret key at power off.	Yes. Loss secret key at power off.
API software availability	Yes, Linux & x86 versions	SDK for software developers		Yes, Linux & x86 versions	Yes, Linux & x86 versions
Burst (Max.) Current Consumption		~ 212mA @1.8V ~ 63mA @3.3V			~ 219mA @1.8V ~ 12mA @3.3V
IC Package	128-pin LQFP	64-pin QFP	128-pin LQFP	128-pin TQFP	80-pin TQFP
Core Voltage	+3.3V	1.8V	+3.3V	+3.3V	1.8V
Hard Drive & SSD support	> 137GB	SATA > 2TB	> 137GB	> 137GB	SATA > 2TB



Ultra DMA Protocol support	ATA 6, Mode 6	Yes	ATA 6, Mode 6	ATA 6, Mode 6	All
PIO support	Mode 4	Yes	Mode 4	Mode 4	Yes
Sustained Real-time Crypto Engine Throughput	> 1.2 Mbit/sec	> 150MB/sec	> 1.6 Gbit/sec	> 1.1 Gbit/sec	> 150MB/sec
RoHS & Lead-free compliance	Yes	Yes	Yes	Yes	Yes
Pin Compatibility?	All CO & XO share the same pin definition	All FX series share the same pin definition	All LX series share the same pin definition.	All XO series share the same pin definition.	All MX series share the same pin definition.

Product Implementations					
External Storage Solutions					
Secure USB2.0 2.5" Storage Enclosure?	Yes, no constraints	Yes, no constraints	Yes, no constraints	Yes, no constraints	Yes, no constraints
Secure USB2.0 3.5" Storage Enclosure?	Yes, no constraints	Yes, no constraints.	Yes, no constraints	Yes, no constraints	Yes, no constraints
Secure 1394a,b to 3.5" Storage Enclosure?	Yes, no constraints	No.	Yes, no constraints	Yes, no constraints	Yes, no constraints
Secure 1" Storage Enclosure	Yes	Yes	No	Yes	NO
Secure Biometrics 2.5/3.5" Storage	Yes	Yes	Yes	Yes	Yes
Desktop Storage Solutions					Yes
Secure 5.25" Bay?	Yes, no constraints				
Secure 3.5" Bay?	Yes, no constraints	USB applications	Yes, no constraints	Yes, no constraints	Yes, no constraints
Secure PCI Adapter 3.5" disk drive?	Yes, no constraints	USB applications	Yes, no constraints	Yes, no constraints	Yes, no constraints
SecureIDE	Yes, no constraints	USB applications	Yes, no constraints	Yes, no constraints	Yes, no constraints
Secure Motherboard?	Yes, no constraints	USB applications	Yes	Yes	Yes, no constraints
Secure Mobile Rack 5.25" Enclosure?	Yes, no constraints	USB applications	Yes, no constraints	Yes, no constraints	Yes, no constraints
Server Storage Solutions					
Secure RAID Server?	Yes, recommended	No	Yes	Yes, recommended	YES. Highly Recommended
Notebook Storage Solution					
Secure Notebook?	Yes, highly recommended	No	Yes	Yes, recommended	YES. Highly Recommended
DiskCrypt	Yes	Yes	Yes	Yes	Yes
Others					
SSD Drives	Yes	Yes	Yes	Yes	Yes