XPress™ Crypto Module

NIST FIPS 140-2 Certified Cryptographic Module

Cryptographic hardware module provides high-level security to products requiring NIST certified FIPS 140-2 encryption.
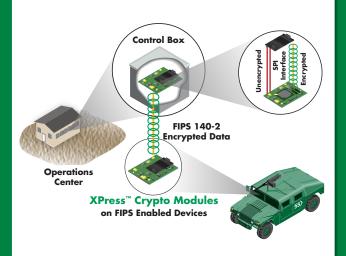
Overview

The XPress Crypto Module allows customers to design and build security products that can be fast-tracked for NIST FIPS 140-2 Level 2 certification. The module carries its own certification and provides data encryption in a secure hardware platform.

The module supports a Serial Peripheral Interface (SPI) and can be readily embedded in a host microcontroller circuit. A USB control interface allows passwords and encryption keys to be set from a PC, ensuring physical control over access to the configuration. The circuit board is treated with a government-approved, tamper-evident coating to protect encryption keys from being compromised.

The industrial temperature range (-40° C to +85° C) and small size (30 mm x 50 mm x 15 mm) ensure that the XPress Crypto Module can be placed in a wide variety of applications. The optional development kit allows new users to become familiar with the module and reduces product design time.

Related Products

Digi Passport® FIPS   XPress™ Ethernet Bridge   Support

Application Highlight

Control Box

Unencrypted / SPI Interface / Encrypted

FIPS 140-2 Encrypted Data

Operations Center

XPress™ Crypto Modules
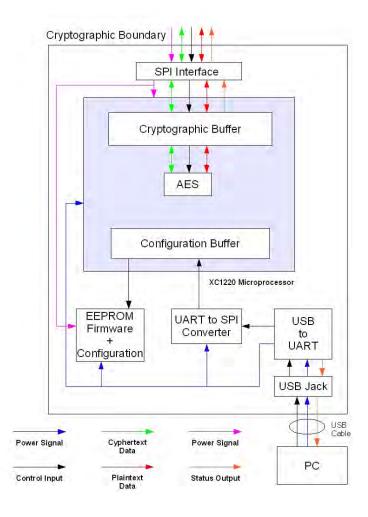on FIPS Enabled Devices

Features/Benefits

- **NIST certified FIPS 140-2 Level 2 encryption ensures secure communication**
- **Development kit and pre-certified modules enable fast-track FIPS 140-2 certification**
- **Mini USB Type B port allows easy configuration management with a PC or serial terminal**
- **AES 128-, 192- or 256-bit encryption up to 5 Mbps for user-specific applications**
- **2 separately password-protected user modes, Crypto Officer and User, ensure secure day-to-day operation**
- **Tunable for low latency or optimized throughput**

Features	
Encryption Throughput	5 Mbps
Certifications	NIST FIPS 140-2 Level 2, NIST FIPS 197
SPI Data Interface	2 x 5 pin header, 0.1" spacing plus 3 pin support header
SPI Clock Speed	Maximum 7 MHz; minimum 530 kHz
Command Interface	API Frames
Dimensions (L x W x H)	30 mm x 50 mm x 15 mm (including connectors)
Voltage Range	3.1 to 3.6 VDC
Power Consumption	45 mA @ 3.3 VDC (150 mW); 5 VDC from USB port of PC
Operating Temperature Range	-40° C to +85° C
Configuration interface	Mini USB Socket Type B

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Digi International Japan
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