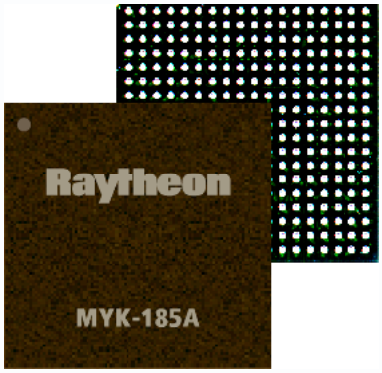
Raytheon

MYK-185A

NSA-Certified Root of Trust Cryptographic Processor for Embedded Applications



Advanced cryptographic technology ideal for embedded applications that require minimal size, weight, power, and cost.

Applications

- Handheld Radios
- Manpack Link Devices
- Unmanned Platforms
- Embedded Wireless
- Remote Sensing
- Key Management
- Personal Authentication

Benefits

Minimal Footprint
- 19 mm² 324-BGA
- Minimal External Logic

Exceptionally Low Power
- <0.5mA Hold-Up
- <700mW Peak Operation

Proven Low Risk Technology for Easy Integration
- Over 400,000 MYK-185/A units fielded
- Field upgradeable

Simplified Key Management for Easy Operation
- Red and Black Fill
- Interfaces for DS-101, DS-102, and RS-232

Hardware and Design Features

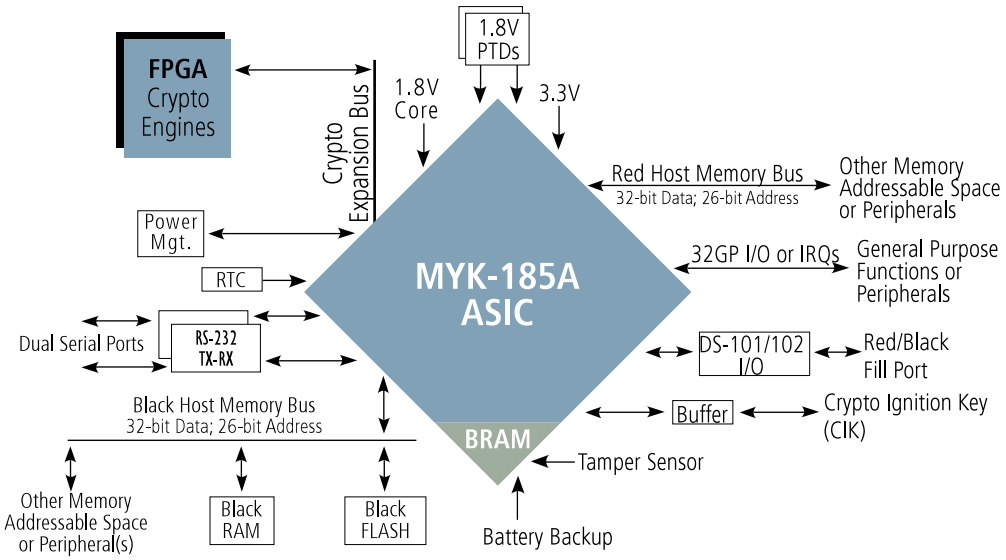
The MYK-185's design features fully redundant ARM processors with real-time alarm and integrity checking.

Hardware-assisted cryptographic algorithms support U.S. Government, NATO, and coalition operations.

Integrated Key Management

To simplify key management, internal battery-backed RAM (BRAM) supports the MYK-185A's integral, secure, and authenticated boot-loading process.

When programmed for Crypto Ignition Key (CIK) operation, the system can be locked when the CIK is not present.



Designed for…

Demanding handheld voice and data applications

End cryptographic Unit (ECU) embedments

Tactical manpack and handheld communications

Features and Capabilities

Voice and data protection Operation in Suite A or Suite B modes supports wide-ranging applications encompassing government, civil and foreign interoperable markets
Usable as a coprocessor, I/O processor, key manager or a stand-alone application processor
32-bit general purpose I/O with interrupt control
Separate Red and Black CPU host busses for system interfaces
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Separate Red and Black CPU host busses for system interfaces
Dynamic RAM controller, both Red and Black memory bus, with 64 Mbyte space each
Software field-upgradeable using an authenticated process
Capable of running user-defined software to support system operations
Specialized interface for loading external cryptographic assist processors embodied in FPGAs
Hardware randomizer ensures random number generation
Easy to embed; Minimal external circuitry required
Software Developer's Kit (SDK) available with NSA-approved modules to accelerate development

Technical Details

Hardware Accelerated Suite A and Suite B Encryption/ Decryption AES Algorithm	
DSA Modulus Bootloader Trust Anchor Program	
Cache Software:	
	ECDSA
	ECDH
	SHA-256, 384, 512
Symmetric Algorithms	
	AES
	MEDLEY
Hardware Acceleration for Public Key Operations:	
	SHA-1
	256 bit Multiplier
	Randomizer
Physical/Electrical	
	0.18 micron design
	Voltage: I/O, 3.3V; Core, 1.8V
	19 mm^2 324-pin BGA package
	< 0.5uA BRAM current
	~ 630 mw max at 80MHz
	1Hz to 80 MHz

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www.raytheon.com/capabilities/cybersecurity/sis

Specifications subject to change.

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