

SECURE THE SIGNAL CHAIN: ADI SECURITY CAPABILITIES

Analog Devices works with customers at every level to enable system-wide security that meets the most exacting mission requirements. Our integrated solutions protect the entire signal chain—from antenna to bits—securing radio communications, providing robust system hardware- and software-based cryptographic technologies, and delivering cybersecurity software and services.



#ADahead

SEE HOW WE ADD SECURITY ACROSS THE SIGNAL CHAIN.

analog.com/SECURITYSOLUTIONS

Analog Devices Delivers a New Approach to Security

Historically, ASICs have been the sole provider of cryptographic services within MILCOM radios. That architecture includes two FPGA/DSP pairs—the first to manage the waveform and the second to handle data marshalling of inputs, whether they be sensors or audio/video. Through ADI's innovations in FPGA-based cryptographic IP cores, the cryptographic ASIC can be removed and the FPGA/DSP pairs are reduced to a single FPGA or SoC.



Sypher Encryption and Security Capabilities

Sypher™ is a scalable/flexible high assurance cryptographic processing platform capable of running on various FPGAs. Through Sypher, ADI offers flexible integration opportunities for embedded encryption based on customer need. All components are interoperable and utilize the same underlying technology, meaning different levels of integration can be used within a family of products without changing logical security interfaces.

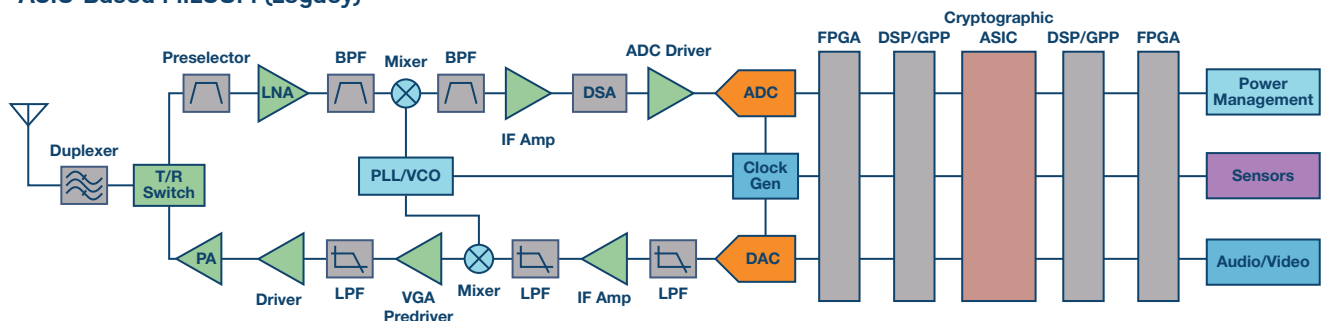




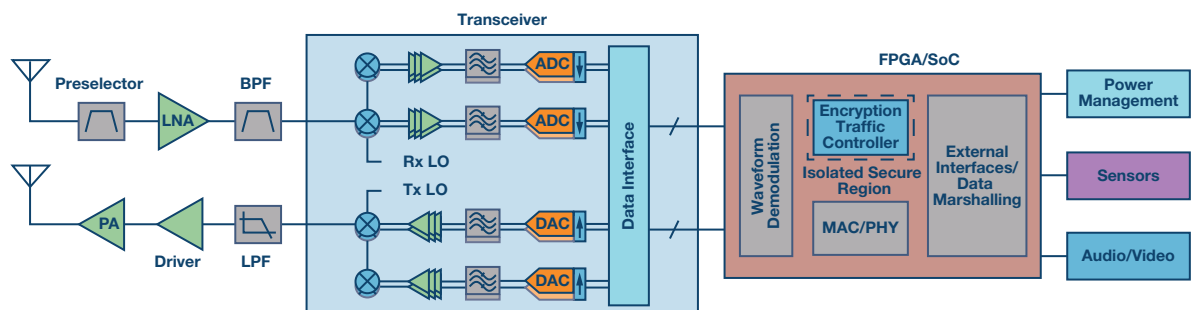
FPGA-Based Security Redefines the MILCOM Signal Chain

- ▶ Eliminates the SWaP consumption of custom security ASICs and supporting components
- ▶ The FPGA core allows for feature and algorithm upgrades without hardware modifications
- ▶ Flexible interoperability allows for common module to be used across a full family of radios
- ▶ Waveform and data interface modifications without security boundary modifications

ASIC-Based MILCOM (Legacy)



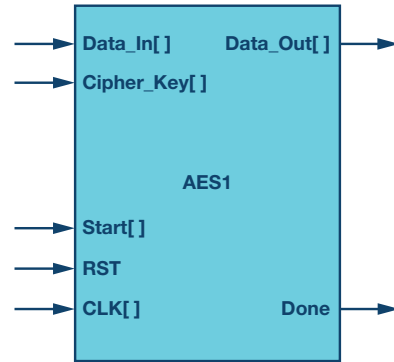
MILCOM with Sypher Embedded Encryption



Licensable Software IP

ADI provides cryptographic IP cores for security services through an embedment within an FPGA or SoC:

- ▶ FPGA agnostic VHDL IP cores
- ▶ FIPS, NSA Type 1 Suite A and Suite B capable
- ▶ SWaP efficient design



Standard and Custom Encryption CCAs

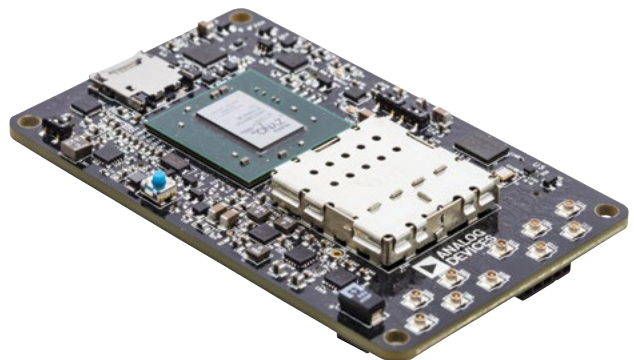
ADI provides certified CCAs that are integrated through standard board-to-board connectors:

- ▶ FIPS, NSA Type 1 Suite A and Suite B capable
- ▶ SWaP efficient design
- ▶ AES 256 FIPS/Type 1 CCA
- ▶ Cryptographic modernization compliant
- ▶ Standard fill interface support

Integrated RF Signal Chain

ADI provides the capability to integrate the entire RF chain (signal to bits) with encryption in a single deliverable package:

- ▶ FIPS, NSA Type 1 Suite A and Suite B
- ▶ Extremely SWaP efficient when combined with ADI advanced packaging technology
- ▶ Cryptographic modernization compliant
- ▶ Standard fill interface support
- ▶ Complete RF-to-bits solutions
- ▶ GaN power amplifiers, LNAs, and fully integrated RF transceivers





Security History

Over 50 years' experience developing SWaP efficient NSA Type 1, NIST/FIPS, and cryptographic high value product (CHVP) products that are used to load cryptographic key data, mission planning data, encryption of data-in-transit, and general cryptographic key management.

AN/CYZ-10 DTD



2000

Medium Sized
Key Loader

KIK-20 SDS



2003

Advanced
Crypto Core

2007

Handheld
Key Loader

Next Generation



2009

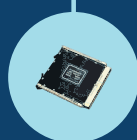
Small Tactical
Key Loader



2013

Family of New Key Loaders with
Android Operating Systems

Present



KOV-21



RASKL

For more information about security solutions, contact us at secure-products@analog.com.

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