

Miniature Adaptable Crypto (KIV-80)

Low SWaP Multi-Function Crypto



Dramatically Smaller than Legacy Crypto at 4.25 oz.

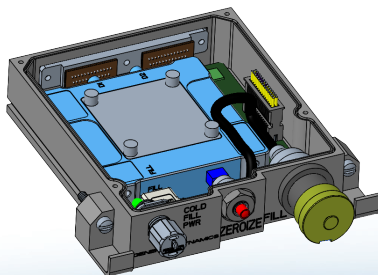
Mode 5 IFF Option B Crypto Appliqué

Unclassified Handling with Field Replaceable Battery

Supports Re-programmable Algorithms

Designed to Meet Crypto Modernization 2.0 (CM2)

Adapter for Legacy Crypto Replacement



KIV-80 in Legacy Adapter

Overview

As a leading supplier of cryptography for avionics systems, General Dynamics Mission Systems has nearly 50 years of High Assurance system development experience. Our Avionics Systems include some of the most advanced hardware, software and mechanical designs, integrated to meet the community's high standards for security in lightweight, low power, ruggedized form factors.

Miniature Adaptable Crypto (MAC)

Our Miniature Adaptable Crypto (MAC) appliqué brings legacy Identification Friend or Foe (IFF) crypto capability forward in a smaller, crypto modernized package. The MAC is small enough to enable Group 2+ unmanned aerial vehicles (UAV) and SWaP-constrained platforms with critical security. Under NSA certification evaluation as the KIV-80, MAC supports Mark XIIA Mode 5 IFF Option B AIMS 04-900 Option B Transpond and Interrogate, upgradeable with our Advanced INFOSEC Machine (AIM) III crypto processor. We can add strategic waveforms for SATCOM (MUOS, AEHF), data links (Link 16, IFDL, MADL, JPALS), and to protect data at rest. KIV-80 enables quantum resistant Crypto Modernization 2.0 (CM2) security, per NSA requirements for software protection and algorithms.

KIV-80's Mode 5 IFF capability enhances situational awareness of small UAVs to deconflict battle space planning. The IFF profile supports three months of black keys with key recovery, and fills keys via DS-101, with an SKL or similar key fill device. KIV-80 manages Time Of Day. The electrical interface is specified in Department of Defense AIMS 04-900 Option B.

Miniature Adaptable Cryptographic (KIV-80)

Features

- Small appliqué design
 - Removal leaves host unclassified
 - Unclassified shipping and storage
- Adapter
 - Readily available adapter interfaces to legacy equipment

Modes

- Mode 5 IFF: Option B Transpond + Interrogate

Size

- 2.5" W x 2.55" D x 0.8" H
(0.65" H without thumbscrews)

Weight

- 4.25 ounces

Interfaces

- Mode 5: AIMS 04-900B Option B, USB-C
- Key Fill: EKMS 308/608, DS-101
(USB micro type B receptacle, use with NSA-approved SKL connector cable)

Power

- Operational: 1100 mW nominal
- Battery Life: 8 years nominal

Characteristics	Specifications
Environmental Requirements	
Operational	
Temperature	-40°C to +85°C
Altitude	60,000 feet
Relative Humidity	95%
Shock	20 g's
Chassis	Sealed, Ruggedized
Storage	
Temperature	-54°C to +85°C

Programmable Capabilities from Certified Library

- MUOS
 - Data, SCIP, Key Exchange
- AEHF
 - Data, TRANSEC
- Secure Voice
 - Legacy, TSVCIS (Suite A, Suite B), SINGARS, HAVEQUICK
- Link-16
 - Legacy, Suite A, Suite B
- LPI Data Links
 - MADL, IFDL
- Navigation
 - MADL UDB
- Data at Rest
 - AES GCM, SHA-384
- Signature
 - NSA Quantum Resistant Compliant
- Data at Rest: AES GCM
 - Throughout: >500 Mbps
 - Modes: Encrypt/Decrypt/Authenticate

Specifications

- IFF Mode 5 Standards
 - AIMS 04-900 Option B Electrical
 - AIMS 03-1000B Communications Security
- Environmental
 - MIL-STD-810G

Certifications

- KIV-80 is expected to be submitted to NSA for certification 2Q 2025

GENERAL DYNAMICS

Mission Systems

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