



CRYPTO SIMULATOR

FULLY AUTONOMOUS CRYPTO SIMULATION

Self-contained simulator for lab, production test or ramp use.

The Crypto Simulator was developed to support all functional interface signals required for Modes 4 and 5 crypto-to-host inter-face as defined in DoD AIMS 04-900A for Option B crypto. The crypto fits in the host equipment's KIV-77 crypto appliqué slot in place of a KIV-77. The Simulator supports most of the AIMS 1101/1201 box-level test requirements as well as AIMS 1102/1202 platform test plan requirements, enabling dry runs for test plans in which KIV-77s or keys are not readily available. It is designed for lab or ground/ramp test environments.

The Crypto Simulator is designed for autonomous operation; no external

computer or power connections are needed to support host equipment functional checkout. Power is provided by host equipment.

After the time of day is loaded by the host, the Crypto Simulator automatically performs a key fill sequence to simulate loading Mode 4 and Mode 5 keys. The Crypto Simulator is then ready for Mode 4 and 5 operations under the control of the host equipment.

A typical test scenario would involve two Crypto Simulators: one plugged into the host equipment (i.e., the interrogator or transponder), and one that is plugged into a test set (such as the Viavi IFF-45-TS, Tel-Instruments 4530A and ViaSat VRG-1000).

With optional custom shorting plug, Crypto Simulator is compatible with the "internal crypto" simulation in the IFF-45-TS.



KEY FEATURES & BENEFITS

- Form, Fit compatible with KIV-77
- Provides KIV-77 interface functionality
- Easy functional checkout for basic Mode 4 and 5 functions
- 04-900A Option B interface compliant
- Fully autonomous operation
- Reduced operator workload
- No external power or interface equipment required
- Firmware-based design supports future upgrades and enhancements
- Future growth path to support extended temperature, shock, and vibration environments





TPX-57 installation



APX-119 installation



APX-114 installation

Specifications

OPERATIONAL MODES:

Mode 5:	Levels 1 and 2, all formats
	Code window
	Flight line test
Mode 4:	Supports time-based and legacy operation
	Code A/B select (in legacy mode)
	Verify bit 1
	Test word A/B (in legacy mode)

CONTROL INTERFACES:

Crypto-host serial interface (CHSI)
AIMS 04-900A option B compliant
USB 2.0 (growth capability/Raytheon use).

INDICATORS:

Power on LED
Operating status LED
Fault LED

WEIGHT:

7.4 ounces

SIZE:

3.5 x 4.25 x 1 inches

PRIME POWER:

+5 VDC 0.17A typical from the host equipment

OPERATING TEMPERATURE RANGE:

Ambient lab environments

OPERATING SHOCK AND VIBRATION RANGE:

Ambient lab environments

Specifications subject to change without notice.

Other Crypto type simulations:

Custom firmware can be developed for National Secure Mode implementations.

- KIV-114 (Mode 4 only interrogator crypto)
- KIV-119 (Mode 4 only transponder crypto)