

# AN/UPX-37

## Digital Interrogator



Mark XII IFF interrogator for naval, land-based air defense, airborne surveillance, and air traffic control applications

The AN/UPX-37 digital interrogator is the U.S. Navy's standard interrogator.

### Description

It replaces all AN/UPX-27 Identification Friend or Foe interrogators in the fleet and also has been selected by the U.S. Marines and U.S. Air Force for multiple applications. It is upgradeable for Mark XII and next-generation IFF processing, including Mode S and Mode 5. The unit conforms with U.S. DoD, NATO, International Civil Aviation Organization, and FAA requirements.

Its modular and digital architecture affords customized configurations and performance optimization for most applications: air defense, weapon systems, air traffic control, and range instrumentation. Digital target reports can be provided in addition to wideband video for subsequent passive and active decoding. The digital interrogator also provides amplitude monopulse for significant improvement in azimuth accuracy over conventional systems. The AN/UPX-37 digital interrogator operates autonomously or in conjunction with a host radar.

### Features

- Open-architecture, VERSA-Module Euro Card-based modular design
- Extensive BIT, 98 percent fault detection
- Available options include Mode 5, Mode S, and target data extractor
- Greater than 65 percent processing and memory reserves
- Mean time between failure exceeds 5,000 hours
- Mean time to repair less than 20 minutes
- Military standard-461D-compliant
- Fully compliant with DoD AIMS 03-1000A and STANAG 4193
- DoD AIMS-certified versions available

# Digital Interrogator Family

Interrogator	SIF	Mode 5	Mode S	Target Data Extractor	Comments
AN/UPX-37	✓	Option	Option	Option	U.S. Navy replacement for AN/UPX-27
AN/UPX-41(C)	✓	✓	Option	Option	
AN/UPX-42(C)	✓	✓	Growth	✓	

\*Requires external crypto computer

## Specifications

### Characteristics

Peak power output at antenna ports

Dual outputs	63 dBm
Single combined output	66 dBm
Adjustable by -9 dB in 1 dB steps	

Duty cycle 2.0 percent maximum

Receiver center frequency 1090 ±0.5 megahertz

Receiver bandwidth -3 dB, 8 megahertz nominal

Sensitivity -84 dBm minimum, 90 percent decode, measured at antenna port

Extractor instrumented range >300 nautical miles

Power input configuration 115 or 230 Vac, <1100 VA, 47 to 440 hertz

Dimensions 14.75" width, 10.56" height, 18" depth

Weight 85 pounds maximum

### Environmental

Altitude

Operating	Up to 12,000 feet
Non-operating	Up to 50,000 feet

Temperature

Operating	-28 degrees celsius to +65 degrees celsius
Non-operating	-40 degrees celsius to +75 degrees celsius

Shock MIL-S-901D lightweight equipment

Salt fog 48-hour exposure

Humidity 90 percent relative

EMC MIL-STD-461D

### Performance Parameters

Capacity	1,000 targets per scan 100 in-beam targets	
Reliability (naval sheltered)	Basic system	>5,000 hours
	Maintainability	<20 minute MTTR
Range accuracy	0.04 nautical mile	
Range resolution	0.06 nautical mile	
Azimuth resolution	Effective beamwidth plus seven PRPs (all modes responding)	

### Support Services Available

Full support to field units available, by contract, for life of system

Two-level performance based logistics support available

### Interfaces

Ethernet, RS-232, RS-422

Support services available

### For more information contact:

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