

# AN/UPX-37

## Digital interrogator

The AN/UPX-37 digital IFF interrogator is the U.S. Navy's standard interrogator. It replaces all AN/UPX-27 IFF interrogators in the fleet and also has been selected by the U.S. Marines and U.S. Air Force for multiple applications. It will be used for Mark XII and next-generation IFF processing including mode S and mode 5. The unit conforms with U.S. DoD, NATO, ICAO, and U.S. 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, VME-based modular design
- Extensive BIT, 98% fault detection
- Growth provided for mode 5, mode S, and target data extractor
- Greater than 65% processing and memory reserves
- MTBF exceeds 5,000 hours
- MTRR less than 20 minutes
- MIL-STD-461D-compliant
- Fully compliant with DoD AIMS 65-1000 and STANAG 4193
- DoD AIMS-certified



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

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### SPECIFICATIONS

#### Characteristics

- Peak power output at antenna ports	
One transmitter module	33 dBW
Two transmitter modules	36 dBW
Adjustable by -9 dB in 1 dB steps	
- Duty cycle	2.0% maximum
- Receiver center frequency	1090 ±0.5 MHz
- Receiver bandwidth	-3 dB, 8 MHz nominal
- Sensitivity	-83 dBm minimum, 90% decode, measured at antenna port
- Extractor instrumented range	>300 nautical miles
- Power Input configuration	115 or 230 Vac, <1100 VA, 47 to 440 Hz
- Dimensions	14.75" wide 10.56" high 18" deep
- Weight	80 pounds maximum

#### Environmental

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

- Temperature	
Operating	-28°C to +65°C
Non-operating	-40°C to +75°C
- Shock	MIL-S-901C lightweight equipment
- Salt fog	48-hour exposure
- Humidity	90% relative
- EMC	MIL-STD-461D

#### Performance parameters

- Capacity	1,000 targets per scan 60 in-beam targets
- Reliability (naval sheltered)	
Basic system	>5,000 hours
Maintainability	19-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

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