

AN/UPX-37

Digital interrogator

The AN/UPX-37 digital 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 is upgradeable for Mark XII and next-generation IFF processing, including Mode S and Mode 5. The unit conforms with U.S. DoD, NATO, ICAO, 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, VME-based modular design

Extensive BIT, 98 percent fault detection

Available options include Mode 5, target data extractor, and Mode 4 evaluator

Growth to Mode S

Greater than 65 percent processing and memory reserves

MTBF exceeds 5,000 hours

MTTR 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

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 -84 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 85 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-STD-901D 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 <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

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