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

**Description**

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 and/or benefits**

- Open-architecture, VME-based modular design
- Extensive BIT, 98 percent fault detection
- Available options include Mode 5, Mode S, target data extractor, and Mode 4 evaluator
- 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 63-1000A and STANAG 4193
- DoD AIMS-certified versions available
Digital Interrogator Family

<table>
<thead>
<tr>
<th>Interrogator</th>
<th>SIF</th>
<th>Mode 4</th>
<th>Mode S</th>
<th>Mode S</th>
<th>Target Data Extractor</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN/UPX-37</td>
<td>✓</td>
<td>Option*</td>
<td>Option</td>
<td>Option</td>
<td></td>
<td>U.S. Navy replacement for AN/UPX-27</td>
</tr>
<tr>
<td>AN/UPX-41(C)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AN/UPX-42(C)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Growth</td>
<td></td>
</tr>
</tbody>
</table>

*Requires external crypto computer

Specifications

Characteristics

Peak power output at antenna ports
- One transmitter module: 33 dBm
- Two transmitter modules: 36 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:

BAE Systems

Bill Banfi
450 Pulaski Road, M/S GNY010118
Greenlawn, NY 11740

T: 631 262 8220
E: william.banfi@baesystems.com
W: www.baesystems.com/IFF

Cleared for open publication on 03/13

Disclaimer and copyright

This document gives only a general description of the product(s) and service(s) and, except where expressly provided otherwise, shall not form any part of any contract. From time to time, changes may be made in the products or the conditions of supply.

BAE SYSTEMS is a registered trademark of BAE Systems plc.
©2016 BAE Systems. All rights reserved.
CS-16-899