

AN/APX-122A MKXIIA and Mode S Interrogator



The AN/APX-122A is the IFF interrogator system for the next-generation carrier-based airborne early warning system.

Description

The E-2D Advanced Hawkeye aircraft is designed to concentrate battle-management, theater-air-missile defense, and multiple sensor-fusion capabilities into one platform. The AN/APX-122A system operates in conjunction with the new radar and secondary antenna co-located in the rotodome. In addition to mechanical scan capabilities, the system uses an electronically controlled beam-forming network for E- scan sector operation. The system is suitable for all AEW, ASW, and SAR applications and can be integrated with a variety of radar systems on the host aircraft.

The AN/APX-122A incorporates state-of-the-art technology and is implemented using VME open-system architecture to ensure flexibility and growth. Extensive use of Power PC and FPGA technology allows configuration of system interfaces to a variety of platform applications.

Features and/or benefits

- Mark XIIA and Mode S interrogation and reply evaluation
- Modes 1,2,3/A,C,4, 5, S (Supermode)
- Monopulse reception processing
- ISLS and RSLs processing
- Includes beam former network with E-scan capability
- Operates in conjunction with next generation E-2D radar, mission computer, and displays
- Extensive BIT and loop test capability
- AIMS 03-1000B certification

The AN/APX-122A is capable of interrogating in Modes 1, 2, 3/A, C, 4, 5 and S. Any or all of these Modes may be enabled continuously or in the azimuthal sectors of choice. Interrogating two different modes on the same interpulse period, Supermode interrogations both maximize system performance and minimize data latency by extracting as much target data as possible within a fixed time frame. Embedded predictive tracker maintains a track database on all targets in the surveillance volume.

The system uses a dedicated fiber LAN interface with the mission computer and employs a dedicated fiber interface for video output data to operator displays.

BAE Systems, with decades of experience in IFF, has designed the AN/APX-122A based on a long legacy of IFF products. The design emphasizes performance, reliability, risk reduction, flexibility, and reduction of life-cycle costs. It places a high priority on standardization and commonality, with growth requirements carefully considered to ensure architecture that is compatible with future needs. The AN/APX-122A is well suited to provide IFF capabilities on a wide variety of platforms.

Specifications

Unit, dimensions, and weight

Cabinet, electrical CY-8913A/APX-122

19.63" height x 23.81" width x 16.33" depth, 128.25 pounds

Phase shifter, electronic CV-4415/APX-122

9.75" height x 16.5" width x 12.12" depth, 91.7 pounds

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