

AN/APX-113(V), AN/APX-125(V), and AN/APX-126

Combined Interrogator/Transponders



The AN/APX-113(V), AN/APX-125(V), and AN/APX-126
CIT systems have identical form factors

The AN/APX-113(V), AN/APX-125(V), and AN/APX-126 combined interrogator/transponders (CIT) are versatile identification friend or foe systems specifically developed for the F-16 Fighting Falcon.

Description

The AN/APX-113(V), AN/APX-125(V), and AN/APX-126 CIT systems use Mode 5 and Mode S to prevent fratricide and positively identify coalition forces, helping determine targets in the immediate battlespace and well beyond a pilot's visual range. Currently fielded on multiple F-16 blocks and derivative aircraft, the AN/APX-113(V), AN/APX-125(V), and AN/APX-126 are operating on both U.S. and international platforms.

Features and/or benefits

- Complete Mark XII or Mark XIIA identification system in one unit
- DoD AIMS 03-1000 certified
- STANAG 4193-compliant
- Mode S, Level 3 (elementary and enhanced surveillance)
- Multiple antenna configurations (electronic or mechanical scan)
- Dual-redundant MIL-STD-1553 bus interface
- Monopulse receive
- Anti-jam protection
- Mode C altitude report
- Reply evaluation and degarbling
- AN/APX-125 and AN/APX-126 utilize the KIV-78 crypto
- Supports national secure modes

System	Selective identification feature	Mode 4	Mode 5	Mode S
AN/APX-113(V)	✓	✓	Upgradeable*	✓
AN/APX-125(V)	✓	✓	✓	✓
AN/APX-126	✓	✓	✓	✓

*-5X CIT LRU and up

Specifications

Unit	Combined interrogator/transponder (CIT) Beam-forming network (BFN) Fuselage-mounted antenna elements (FMA) Lower interrogator antenna (LIA)		
Interrogator subsystem	Detection range	>100 nautical miles	
	Sector coverage	±60 degrees AZ, ±60 degrees EL	
	Azimuth accuracy	±2 degrees	
	Range accuracy and resolution	<500 feet (152 meters)	
	In-beam targets	32	
	Modes 1, 2, 3/A, C, 4, 5 and national secure mode		
	Front-panel transmit	2.4 kilowatts minimum	
	Front-panel receive	-85 dBm typical	
Interrogator antenna	Number of antenna elements	4	
	Lower antenna	Conformal	
Dimensions and weight	CIT:	8.26 inches height x 6.00 inches width x 14.50 inches depth, 32 pounds	
	BFN:	6.50 inches height x 8.38 inches width x 4.00 inches depth, 10 pounds	
	FMA:	1.55 inches height x 3.25 inches width x 13.10 inches depth, 0.5 pounds	
	LIA:	0.60 inches H x 17.00 inches width x 14.00 inches length, 10 pounds	
Transponder subsystem	Front-panel transmit	500 watts	
	Front-panel receive	-76 dBm	
	Modes 1, 2, 3/A, C, S, 4, 5 and national secure mode		
System parameters	Mean time between failure		
	System	2,000 hours	
	CIT only	2,400 hours	
	Mean time to repair	0.25 hours	
	Fault detection	97 percent	
	Fault isolation	99 percent	
	Prime power		
	Voltage	28 volts direct current	
	Consumption	200 watts	
	Forced-air cooling	CIT unit only	
	Integral fan	Optional	

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