Known as a benchmark innovator of Identification Friend or Foe (IFF) technology, Telephonics' Passive Detection and Reporting System (PDRS), the AN/UPR-4(V), is a small, yet rugged system that reduces 1030 MHz/1090 MHz radio frequency transmissions and interrogation rates. Its versatile design meets the military's situational awareness requirements for ground, shipboard and airborne applications.

The AN/UPR-4(V) Difference

Telephonics' AN/UPR-4(V) is designed to meet DoD, FAA and Eurocontrol regulations to reduce 1030 MHz/1090 MHz radio frequency transmissions and interrogation rates in air traffic and military domains. The AN/UPR-4(V) is a receive-only system that does not interfere with currently installed military IFF systems or civil secondary surveillance. The solution can be used as a passive cueing system, providing situational awareness to air defense and air traffic controllers with reports fed directly to mission systems and other active interrogator systems. As a cueing system, the target reports are sent to active interrogators so that they can reduce their active interrogations.

The system's receiver, processor and tracker are based on Telephonics' DoD AIMS certified SFF-44 IFF interrogator and leverages Circuit Card Assemblies (CCA) and a Commercial-Off-The-Shelf (COTS) chassis for a low-cost approach to passive detection and reporting while also providing data logging and full maintenance support capability.
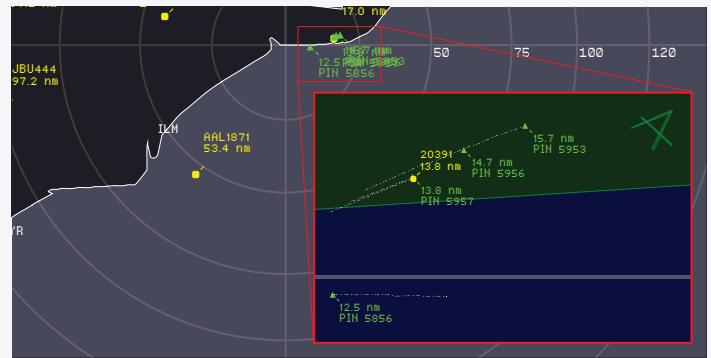
Passive reception of Mode S ADS-B, Mode 5 Level 2, Mode 5 Level 2-B and Universal Access Transceiver.

System Versatility

The AN/UPR-4(V) can be configured for operation with one to six channels, providing coverage for low to high density target environments, and offers a wide range of fixed-mount antenna configurations.

Multi-channel operation offers the distinct advantage of providing the AN/UPR-4(V) with information to perform both spoof detection and anti-jam capabilities. Spoofing systems and jammers alike can be detected, and their bearing identified.

AN/UPR-4(V)

Technical Specifications

The AN/UPR-4(V) interfaces to KIV-77 Crypto Appliqués. Target reports are output in Ethernet ASTERIX Cat 21, Cat 48 and Cat 33. The system is compliant to DoD AIMS 17-1000, ICAO 9871, RTCA/DO-260B and RTCA/DO-282B.

AN/UPR-4(V)		
Weight	29 lb.	
Dimensions (in.)	7.2 W x 9.65 H x 8.65 D	
Primary Power	24-28 VDC	
Receiver Sensitivity	Mode S:	<- 86 dBm (adjustable)
	Mode 5:	<- 92 dBm (adjustable)
	UAT:	<- 94 dBm (adjustable)
Range	>200 NM with 6-channel Antenna and LNA	
Temperature	-46 °C to +55 °C (Operating) -46 °C to +71 °C (Storage)	
MTBF	AN/UPR-4(V):	13,333 Hours (Ground Fixed at 49 °C per MIL-HDBK-217F)
	Antenna:	50,000 Hours (Ground Fixed at 49 °C per MIL-HDBK-217F)

6-Channel Antenna

Frequency band.. 978 MHz and 1,090 MHz
RF sectors 6 at 120° each; 360° total
Polarization... Vertical
Min. gain 978 MHz .... 22 dBiL (with LNA)
Min. gain 1090 MHz... 27.5 dBiL (with LNA)
Mast mount (Dia.).. 1.5 in. IPS
Weight .... 17 lb. max
Diameter .... 7.5 in. (19.05 cm)
Height... 24.69 in. (62.71 cm)
Temperature, low/high .... -55 to +85°C

Designed for Varied Enviroments

Understanding the critical importance of adaptable technology, Telephonics' design engineers included additional capabilities such as the 978 MHz Universal Access Transceiver (UAT) and embedded GPS with an SAASM option, increasing situational awareness coverage for general aviation aircraft with embedded security for military applications.

For additional information, contact Telephonics at 631.755.7000 or visit www.telephonics.com.

TELEPHONICS®