

PASR-17c 'Pointer'

PASSIVE COHERENT LOCATOR RADAR SYSTEM



PASR-17c 'Pointer' is a short-to-mid range Passive Coherent Locator (also known as passive radar) for air surveillance applications.

BENEFITS

- ✓ Fully passive and covert operation
- ✓ Multi-illuminator and multistatic network capability
- ✓ Single-illuminator target localization and tracking
- ✓ Advanced multipath mitigation for challenging environments
- ✓ Detection of low-flying drones, helicopters and aircrafts
- ✓ Cost-effective wide-area surveillance
- ✓ Easy integration with existing C2 (e.g. NATO CRC) systems and sensors

SYSTEM DESCRIPTION

PASR-17c is a next-generation passive radar system designed to detect, localize and track aerial targets ranging from small low-flying drones up to various aircraft types. By exploiting existing broadcast transmissions, the system operates without emitting radio-frequency energy, enabling fully covert surveillance without frequency licensing requirements.

Unlike conventional passive radar solutions, which rely on multiple illuminators or multi-node geometries to determine target position, PASR-17c employs an advanced sectorial antenna array, combined with adaptive signal processing techniques to localize and initiate tracks, using a single illuminator. This capability significantly improves detection and tracking performance against low-altitude targets, where only one transmitter may be available and multipath propagation is often dominant.

The system's scalable tracking architecture seamlessly combines single-illuminator localization, multistatic operation, multiple receiver nodes and the simultaneous exploitation of diverse illuminators such as DVB-T/T2 and FM broadcast signals. The result is a resilient passive radar network capable of generating a comprehensive and accurate Recognized Air Picture (RAP) over large areas.

Designed for rapid deployment and straightforward integration, PASR-17c interfaces directly with command-and-control systems, electro-optical sensors and existing surveillance infrastructure through standardized civilian and military protocols.

TECHNICAL PARAMETERS

DETECTION CAPABILITIES			
Illuminators of Opportunity		DVB-T/T2	FM
Detection Ranges	Mini UAS	8 km	-*
	Small UAS	15 km	-*
	Medium UAS	36 km	74 km
	Helicopter	48 km	92 km
	Aircraft	90 km	130 km
Detectable target velocity		≥ 5 km/h	≥ 30 km/h
Track update rate**		0.1-1 sec	0.6 -2 sec
Azimuth coverage***		90°	90°
Elevation coverage		90°	90°
Range resolution		40 m	1500 m

* With FM illumination it is not applicable

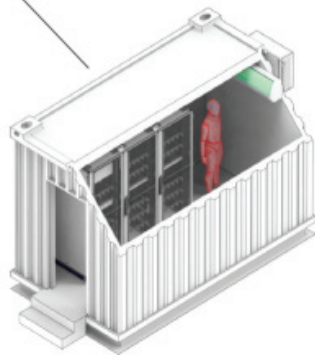
** Depends on signal processing configuration

*** 360° coverage with 4 antenna panels

ADVANCED SIGNAL PROCESSING CAPABILITIES
Single-Illuminator Localization and tracking
Multipath Mitigation
Multi-Illuminator Fusion
Multi-static, Multi-Hypothesis Tracking

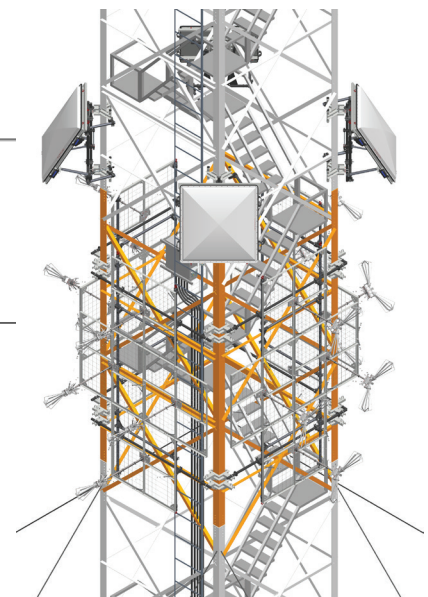
ADVANCED OPERATOR SOFTWARE
Integration with C2 systems
Automatic alarm zones (user settable)
Continuous recording of all events and radar measurements
Various target filtering settings

RECEIVER CABINET
- Data Acquisition Module
- Signal Processing Module
- Power Supply Module



UHF Antenna Array

VHF Antenna Array



Single node illustration with
360° FM and DVB-T

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Pro Patria Electronics
Konyves Kalman krt 12-14
H-1097 Budapest, Hungary
Tel +36 1 322 7010
Web: www.propatria-inc.com