Pro Patria Electronics

INTEGRATED RECONNAISSANCE PLATFORM

The 'IFP' Integrated Reconnaissance Platform is a complex sensor system combined with a unique single mast solution for limitless operation. The sensor system consists of a dual camera system with built in LRF (Laser Range Finder) and a Ground Surveillance Radar, as well as a heavy duty Leveling Unit for compensating the slope of the carrier vehicle. The entire platform is designed to withstand harsh environmental conditions in the operational area. The Leveling Unit has high payload capacity and built-in sensor for automatically perform the slope compensation within the range of +/- 15 degree.

BENEFITS

- Single mast solution
- Independent control of sensors
- Free LoS for both sensor in 360 degree
- Rugged design
- Integrated INS and LRF
- Third party C2/C4i integration

SYSTEM DESCRIPTION

The PGSR-3i 'Beagle' Mk II. radar is mounted on the Leveling Unit with a special Rotator Unit which supports sectorial and continuous 360° scanning. This solution provides solid and stable platform for the dual camera system on the top without blocking the full range of scan. The radar can be easily removed from the mast and deployed on a tripod up to 100 meters away from the carrier vehicle if the operational scenario requires. The system has a special artillery mode. In the artillery mode the system can detect and determine the coordinates of artillery shell impacts and forward the data to fire control systems.

The high resolution dual camera system provides a secondary surveillance layer, and the ability to accurately measure target distances. The high precision Pan and Tilt Unit of the dual camera system combined with the LRF provides another measurement capability for the operator, ensuring high reliability performance in multiple operational scenarios.

The Integrated Reconnaissance Platform is integrated into the ADAMS software suit, which gives the operator full control of all sensors with an ergonomic and user friendly interface. The ADAMS software is already integrated in different C2 and C4i systems, in order to support the commanders with reliable information.

TECHNICAL PARAMETERS

CAMERA SPECIFICATION

Daylight		
Resolution	2464 x 2056	
Zoom	20x optical (+12x digital)	
Vertical FOV	38.6 - 2.05°	
Detection ranges:	1.8x0.6m HUMAN	2.3x2.3m NATO
Identification	10400m	13300m
Recognition	21000m	26600m
Detection	>30000m	>30000m

Uncooled Thermal		
Resolution	1280 x 1024	
Zoom	9x optical + 4x digital	
Vertical FOV	34.82 - 3.85°	
Pixel size	12 um	
Detection ranges:	1.8x0.6m HUMAN	2.3x2.3m NATO
Identification	2800m	3600m
Recognition	5600m	7200m
Detection	11300m	21600m

Camera LRF Specification	
Maximum range	8000m / 30000m*
Accuracy	±1 m
Deviation	0.45 mrad
Security	Class 1 (Eyesafe)
Infra pointer	830 nm

*optional

RADAR SPECIFICATION

Operation principle	FMCW	
Frequency pand	X-Band (NATO I/J Band)	
Transmitted power	3.5 W	
Power requirement	28 VDC (22- 33 VDC)	
MTBF	> 15000 hrs	
Detection ranges		
Soldier	RCS 1 m²	10 km
Road vehicle	RCS 5 m²	15 km
Helicopter	RCS 10 m²	18 km
Large vehicle (e.g.: tank)	RCS 50 m²	25 km
Convoy	RCS 300 m²	40 km

CAMERA PTU SPECIFICATION

Horizontal range of motion	N x 360°
Vertical range of motion	±45°
Horizontal positioning accuracy	<0.25 mrad
Vertical positioning accuracy	<0.25 mrad

OTHER CAPABILITIES

Integrated INS
+/- 15° tilt compensation
Power supply independency
Dismountable antenna unit
Integrated into C4i and C2 systems
Idependent camera and radar movement

Note: Distances are calculated based on geometrical values and do not take into account atmospheric conditions
The actual pictures on this brochure are only illustration.

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