

GASR-3D 'Terrier'

COUNTER-UAS GROUND & AIR SURVEILLANCE RADAR



The GASR-3D 'Terrier' is the next generation of drone detection.

BENEFITS

- ✔ Unique capability: Simultaneous aerial and ground target detection
- ✔ Designed for C-UAS & V-SHORAD applications
- ✔ No moving parts, fully solid state
- ✔ Continuous real time detection, tracking & classification
- ✔ Compact and light weight
- ✔ Improved and ergonomic UI

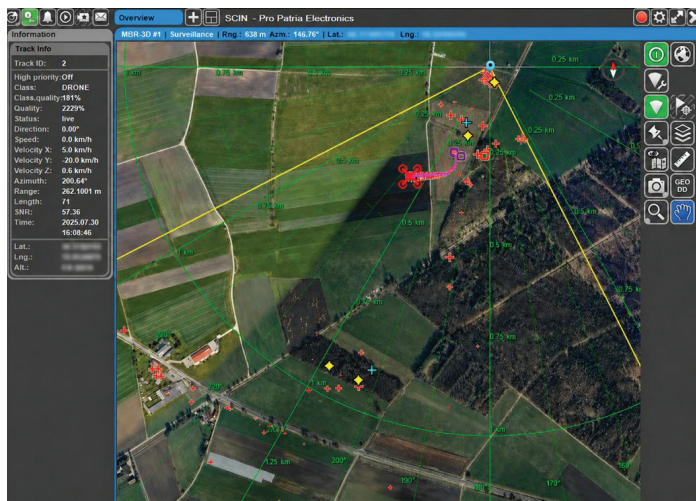
SYSTEM DESCRIPTION

The Radar is capable to simultaneously detect, track and classify UAS/Drone, Helicopter, Aircraft and ground targets (humans, vehicles, tanks, etc..). In C-UAS and V-SHORAD configuration, the system detects and recognizes aerial threats and provides target information for the fire control system.

The principle of operation is Frequency Modulated Continuous Wave (FMCW) with digital beamforming (DBF), providing fast update rate and high MTBF. For maximum performance the system is equipped with a unique AESA transmitter. The Radar utilizes multiple frequency channels in a wide frequency range to overcome the potential disturbances, interferences and to adapt to the operating environment.

Differential GPS ensures precise positioning and heading data. The Radar can be used as fixed deployed or quick-deployable due to its low weight and provides easy installation in hardly accessible locations. It has the capability to withstand and operate in harsh environmental conditions and is suited for off-road vehicle transportation conditions.

The GASR-3D 'Terrier' is designed for easy integration with Command and Control Systems and can be interfaced via 1G Ethernet. Pro Patria Electronics' C2 system supports ASTERIX and SAPIENT protocols.



User Interface (ADAMS)



Terrier in Operation

TECHNICAL PARAMETERS

DETECTION CAPABILITIES			
Detection Ranges	Micro UAS	(RCS 0.01 - 0.05 m ²)	2,5-3 km
	Soldier	(RCS 1 m ²)	6 km
	(Road) Vehicle	(RCS 5 m ²)	9 km
	Helicopter	(RCS 10 m ²)	11 km
	Tank	(RCS 50 m ²)	15 km
Azimuth Coverage	90° with DBF staring beams (single plate unit)		
Elevation Coverage	80° with AESA Tx		
Instrumented Range	4, 8, 12, 16 km		
Accuracy	Range: 4m Azimuth: 0.4° Elevation: 0.5°		
Minimum Detectable Radial Velocity	1.0 m/s		
Minimum Detectable Range	50 m		
Track Update Rate	0.25 sec		

ACCESSORIES	
Operator unit	
Power adapter	
Tripod (optional)	
Transportation cases	

SYSTEM PARAMETERS	
Operation principle	FMCW
Frequency Band	X Band
Transmitted Power	20 W
Input Voltage	28V DC
Cooling Method	Passive only
Interface	Ethernet
Interface Protocol	ASTERIX, SAPIENT, Customer-tailored
Operating Temperature	-40°C to +55°C
Export Control Restrictions	no ITAR components
Power Requirement	350 W
Antenna Unit	
Size	73 x 42 x 25 cm (single plate unit)
Weight	23 kg
Processing Unit	
Size	43 x 13 x 38 cm
Weight	12 kg

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