

# AT PGSR Portable Ground Surveillance Radar

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### AT PGSR Features

- ✓ Lightweight Manportable
- ✓ Intercepting, Detecting and Following targets
- ✓ Classify and Differentiate targets
- ✓ Networkable sensors
- ✓ Local or remote control
- ✓ Rapid training to proficiency
- ✓ Rapid Setup
- ✓ Low probability of intercept
- ✓ Extremely reliable

### AT PGSR Applications

- ✓ Border Guard
- ✓ Battlefield Surveillance
- ✓ Civilian facilities perimeter security
- ✓ Military facilities perimeter security
- ✓ Combat Operations security

The AT PGSR is a unique lightweight man-portable radar, which is capable of intercepting, detecting and following targets moving on or close to the ground. It can also classify and differentiate targets based on their size and movement characteristics.



The radar is a versatile, cost-effective solution offering a multitude of advantages making it an ideal choice for border guard, battlefield surveillance, civilian and military installation security and combat operations duties.

As a result of its low weight and small dimensions, the AT PGRSR can be carried in backpacks by two-man teams. It is also mountable on vehicles and on fixed posts as needed. AT PGRSR can be used as a standalone unit or in network of 2-radars up to several dozen sensors, as required by the specifics of the surveillance scenario.



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The highly advanced DSP technologies integrated in AT PGRSR differentiate between moving and stationary targets, determine the exact parameters of the detected targets and control the adaptive detection during changing environmental conditions. The DSP algorithms provide information in 'ready to display' format for the operator unit or remote control centre.



The operation of the AT PGRSR is controlled from the operator unit or command centre. The radar's control software is capable of utilizing different map formats and displaying the detected targets over the map. The software is designed in a user friendly way. Small icons represent the different functions and make learning easy even for untrained users. The radar can be set up and made ready for operation in five minutes. It is easy to maintain and operate with minimal need for special training. The software supports the integration of this single radar into complex multi-sensor systems.

The radar is very durable, capable of withstanding a wide range of environmental factors and is also very reliable, with only a minimal chance of

malfunctioning (MTBF > 10000 hours).

Due to its operating principles AT PGSR has minimal possibility of being jammed or intercepted (LPI-Low Probability of Intercept).

### AT PGSR Portable Ground Surveillance - Specifications

<b>Surveillance and Data Processing</b>	
Typical Detection Range	Pedestrian: 6 km (RCS 0.5 m <sup>2</sup> ) Armed soldier: 8 km (RCS 1 m <sup>2</sup> ) Vehicle: 15 km (RCS 10 m <sup>2</sup> ) Large vehicle: 24 km (RCS 50 m <sup>2</sup> )
Scanning modes	Sector scan 6° – 346° and Continuous rotation (n x 360°)
Scan Rate	7°/sec and 14°/sec, operator selectable
Accuracy	Range: 3 m (at 3 km range) Azimuth: ≤ 0.3°
Minimum Detectable Radial Velocity	1.0 km/h
Target Capacity	10 plots/sec over 300 tracks over 1000 displayed plots
Spot Window	Yes
Target Classification	Automatic and Audio
Processing	STC, FFT, CFAR, PLOT EXT., TRACK EXT.
Data/Control Interface	RS-485, WIFI, Ethernet
<b>Technical Parameters</b>	
Operation principle	FMCW
Antenna	28 dBi, Patch, Horizontal Polarization
Frequency Band	I/J (X) Band, 32 Fixed channel and automatic hopping
Max. Transmitted Power	2W
Radar Power Supply	28V DC (22 – 33V DC), max. 50 Watts
Continuous Operation on One Set of Batteries	10 - 12 h.
Temperature Ranges	Operation: -32°C to +50°C Storage: -40°C to +60°C
System Weight	30 kg
Radar Unit Size	69 x 47 x 13 cm
MTBF	> 10 000 hrs
Deployment/Packing	< 5 min
Maintainability	2 level BIT to LRM

### AT PGSR Portable Ground Surveillance Radar - Border Protection