

AT LR Ground Surveillance Radar

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AT LR Features

- ✓ Detecting Land, Sea and Aerial moving targets
- ✓ Detection range up to 45Km
- ✓ Automatic detection, tracking and classification of targets
- ✓ Proven FMCW technology
- ✓ Low probability of detection and interception
- ✓ Light weight vehicular portability
- ✓ Rugged 'designed for mobility' construction
- ✓ Rapid Deployment
- ✓ Solid state electronics with high MTBF
- ✓ Independent or networked operation
- ✓ Integrated with existing sensors
- ✓ Graphical User Interface
- ✓ Scalar architecture for multiple clients

AT LR Applications

- ✓ Military Bases
- ✓ Border Crossings
- ✓ Secure Industrial facilities
- ✓ Strategic Depots
- ✓ Airports
- ✓ Refineries
- ✓ Power Stations
- ✓ Ports & Harbours
- ✓ Mine Sites
- ✓ Secure storage facilities



The AT LR is a long-range Ground Surveillance Radar capable of detecting land, sea and aerial moving targets at ranges up to 45 km. The radar provides automatic detection, automatic tracking and classification of the targets. Target classification can be manual or automatic set by the operator from the console.

The radar technology is based on Frequency Modulated Continuous Wave technology (FMCW). This provides a very low probability of detection and interception (LPI) due to the low level of transmitted power and continuously changing frequencies. The radar utilizes 32 frequency channels in a wide operating

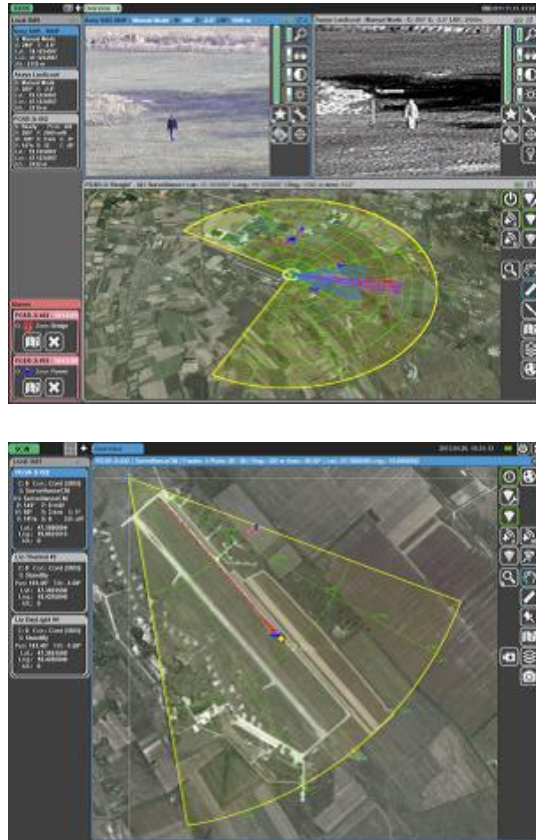
Frequency range minimising interferences and adapting to the operating environment. The radar uses random hopping frequency channels sets pre-selected by the operator. This allows up to 7 neighbouring channels to be grouped in frequency hopping domains with lower and upper boundaries selected by the operator.

The AT LR is portable and easily deployed by a light vehicle due to its light weight and easy installation. The AT LR can be used in stationary or vehicle-mounted operations and if required can be installed on a tripod for man portable applications. The AT LR is certified to withstand harsh environmental conditions and compatible with all-terrain vehicle transportation requirements.

An Embedded GPS and magnetic compass unit are standard allowing rapid deployment and configuration. AT LR is engineered using solid-state components with low power consumption and low heat dissipation providing for very high MTBF and ultimately high reliability.

The AT LR is recommended for military and paramilitary organisations for applications such as border protection forces, intrusion detection, protection of military bases, strategic infrastructure sites where ambush/raid is a risk from hostile forces. Early detection using AT LR provides facilitates readiness for military and police to provide appropriate support against illegal activities.

The AT LR can be operated either independently or as a part of an integrated network of units via Ethernet or WLAN. The system can easily be configured to integrate with existing systems and sensors in use by customers.



AT LR Ground Surveillance Radar – Specifications

Surveillance and Data Processing	
Typical Detection Range	Crawling Person: 3 km (RCS 0.3 m ²) Pedestrian: 14 km (RCS 0.5 m ²) Armed soldier: 17 km (RCS 1.0 m ²) Helicopter: 24 km (RCS 5.0 m ²) Vehicle: 30 km (RCS 10 m ²) Large vehicle: 45 km (RCS 50 m ²)
Scanning modes	Sector scan 6° – 346° and Continuous rotation (n x 360°)
Scan Rate	5°/sec, 6°/sec and 7°/sec, operator selectable
Accuracy	Range: 10 m (at 15 km range) Azimuth: ≤ 0.3°
Minimum Detectable Radial Velocity	1.2 km/h
Target Capacity	10 plots/sec over 500 tracks over 1000 displayed plots
Target Classification	Automatic and Audio
Processing	STC, FFT, CFAR, PLOT EXT., TRACK EXT.
Data/Control Interface	RS-485, WIFI, Ethernet

Technical Parameters	
Operation principle	FMCW (Frequency Modulated Continuous Wave)
Antenna	31 dBi, Planar, Horizontal Polarization
Frequency Band	I/J (X) Band, 32 Fixed channel and automatic hopping
Max. Transmitted Power	10W
Radar Power Supply	28V DC (12– 32V DC), max. 120 Watts
Temperature Ranges	Operation: -32°C to +50°C Storage: -40°C to +60°C
System Weight	55-80 kg
MTBF	> 10 000 hrs (MIL-HDBK-217F)
Maintainability	Comprehensive BITE
MIL-STD	MIL-STD-810F, MIL-STD-461F

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