



# retinar

PTR

“Zone Under Control”

#### Retinar PTR®: The best solution for perimeter and area security

Retinar PTR® is a medium range area surveillance & security radar, optimized for human detection and identification. Designed for portability and ease of use; it has small size, low weight, low power consumption, and an intuitive user interface. It is the ideal choice for security applications.

#### Operational radar: Retinar PTR®

- Man transportable usage with a few minutes of setup time
- Mast-top configuration for static or vehicle integration
- Built-in GPS, magnetic compass and monocular
- WiFi remote operation (option)
- Slew-to-cue camera integration (option)

#### Retinar PTR® Applications:

- Base protection
- Force protection
- Critical infrastructure security
- Airport security
- Border and customs area security
- Patrolling personel security

#### User-Friendly radar: Retinar PTR®

Retinar PTR® reports all activity on the ground in real time. Retinar® family of products offer Critical Infrastructure Protection (CIP) for air and sea ports, energy plants, pipelines, refineries, borders, military bases, and patrolling personel security.

- Versatile Human Machine Interface
- Rugged laptop HMI
- 2D - 3D digital maps
- Human identification analysis
- Tablet and smart phone applications
- 3D radar display (option)
- WiFi remote operation (option)



## System Overview

The system incorporates special algorithms for human and animal detection, and can detect, track, and classify moving objects up to 4 km. Depending on the RCS value, the range extends up to 10 km for vehicles. A special pulse compression pulse doppler waveform is used; made possible by the innovative RF design and superior signal processing capacity of the system.

## Operation

Since Retinar PTR® has been designed for high mobility; it can be carried and installed by a two men crew and operated by a single personnel. The system is composed of a small form factor slim antenna-transmitter-receiver plate, and an integrated signal processing unit, which are carried by a mechanically steered pan&tilt pedestal and sit on a tripod. For mobile operations 2 to 6 battery packs can be carried according to the operational duration needs. The system has also a transportable battery&charger unit and an external power supply for line inputs for stationary or vehicle usage.

A built in GPS and magnetic compass helps to position the system precisely on a digital map background. A special monocular included in the accessories is used for azimuth alignment and also for target observation.

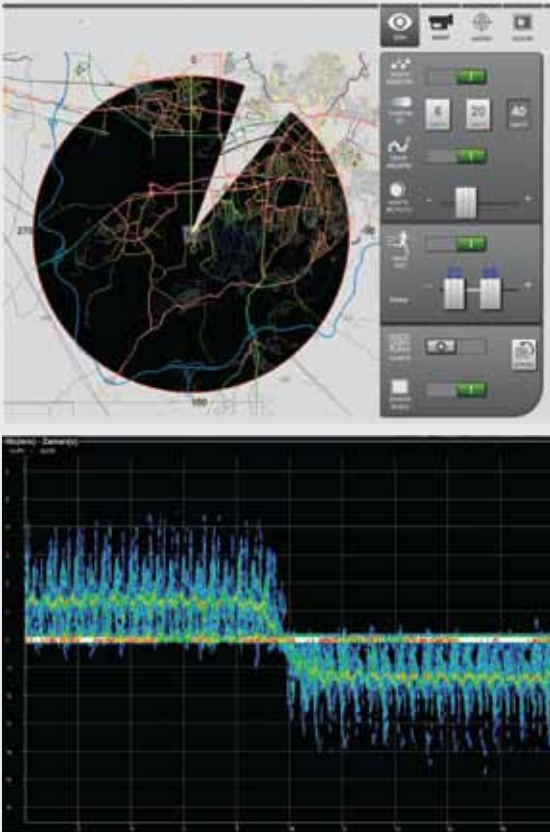
## Special Radar Operator Not Needed

Retinar PTR® user interface was designed to minimize training requirement for the operator and to enable any security personnel to efficiently in a very short time. The system is operated with the associated rugged notebook computer. Wireles connection option and enables the system to be deployed 1 km away from the operator.

In addition, the system communicates with smart phones and tablets wirelessly. This mobile mode enables the operators to receive plots, tracks and alerts, even when they are not actively engaged with the system interface.

## Benefits

- Spot and track all moving targets from long distances in large areas.
- Integration with existing or new camera systems in security systems
- Slew-to-cue functionality for any type of pan-tilt camera
- Minimize false alarms and human errors



## Technical Specifications

Operating Frequency: Ka Band

Architecture: Pulse doppler, pulse compressed

Detection range:

Walking person: 4 km (RCS <math><1\text{ m}^2</math>)

Small vehicle: 8 km (RCS  $10\text{ m}^2$ )

Large vehicle: 10 km (RCS  $30\text{ m}^2$ )

Instrumental: 12 km

Range resolution: 3 m

Angular resolution:  $2^\circ$

Angular accuracy:  $0.2^\circ$  (analysis mode)

Min detectable radial speed: 0.2 km/h (0.05 m/s)

Transmit power: ~1.5 watts

Azimuth coverage:  $360^\circ$  continuous

Elevation coverage:  $\pm 25^\circ$  automatic

Operating temp:  $-30^\circ\text{ C}$  to  $+50^\circ\text{ C}$

Storage temp:  $-40^\circ\text{ C}$  to  $+60^\circ\text{ C}$

Environmental design: MIL-STD-810F, IP66

Electromagnetic: MIL-STD-461E

Connectivity: 10/100 Ethernet. WiFi optional.

BB-2590 (2 packs)

Line input or vehicle power with external battery charger unit

### Weight:

Radar: 15 kg

With Tripod: 18 kg

Whole pack: <math><20\text{ kg}</math>