

Retinar OPUS Perimeter Surveillance System

Radar and Camera Surveillance Suite

Retinar OPUS is a multifunctional surveillance system which is the deeply integration of Meteksan's innovative perimeter surveillance radar Retinar PTR-X and advanced day/thermal cameras.

Multifunctional Zone Security with Retinar OPUS

Retinar OPUS is a system which has radar and long range day/thermal camera placed on a mast, fixed to a stationary pole or on a vehicle. The camera system can be directed to radar targets and it supplies visual information about the targets detected by Retinar PTR-X radar (slew-to-cue), enhancing target recognition and identification.

The result is a synergic system that is more than the sum of its parts.

Critical Infrastructure Protection

- Airports and airbases
- Harbors and seaports
- Energy infrastructure (power plants, pipelines, refineries, etc.)
- Transportation infrastructure

Countering UAVs

- Improved small UAV detection and tracking with the radar + camera suite in field of view

Force Protection

- Vehicle integration made easy with compact single axis design
- Base perimeter security

Border Protection

- Fully integration of Radar + Camera is the perfect fit for complicated border protection problems





Advanced Radar and Camera Algorithms with User Friendly Interface

Retinar OPUS user interface is designed to provide easy and effective usage to the operator. It's user interface was designed to minimize training requirement for the operator and enable any security personnel to efficiently use the system with minimum training. In the user interface of Retinar OPUS, radar and camera work in harmony to achieve target recognition at unrivaled ranges. The digital raster image and 3D maps significantly increases the users' perception of surrounding activity and situational awareness. Retinar OPUS's working status can be monitored via advanced Build In Test (BIT) and the system is always under control of user via user interface. There is a record and replay features for radar and camera on user interface to analyze previous situations.

Key Features



High resolution and long range thermal & day cameras which can be selected according to needs of users



Single axis design and single mounting interface



Slew-to-cue auto tracking



Selectable rotation speed (2-16 rpm)



Human, vehicle, drone and animal classification



Drone detection and tracking capability



Built-in GPS and magnetic compass with digital map support



Record and replay capability



2D/3D Map Display

System Architecture: Pulse-Doppler radar

Operating Frequency: Ka Bant

Detectable minimum radial speed: 0.2 m/s

High range resolution (3 m) and angular resolution (2°)

Transmitting power: <4 Watt

360° continuous or sector scanning

±25° tilt angle limits, automatic tilt scanning mode

Electro Optic System (Thermal and Day Cameras)

- High resolution
- Advance optic zoom level with high range
- Hollow-shaft independent mobility system
- Scan Sector :360° horizontal and ±90° tilt
- Automatic zooming and focusing after guidance according to target's range

Detection Ranges

- Small Drones: 2 km
- Large Drones: 2,5 km
- Pedestrian: 6 km
- Standard vehicle: 12 km
- Instrumental range: 24 km

Communication options: 10/100 Ethernet and Optional WiFi

Operating temperature: -30° C / +55° C

Storage temperature: -40° C / +60° C

Environmental design: MIL-STD-810, IP66

Continuous optic zoom