retinar
AESA

Retinar AESA Multi-Mission Radar

New Generation Radar with AESA / MIMO Structure

Retinar AESA is cutting edge, software defined multi-mission radar for anti-drone systems, point air defence weapon systems and surveillance systems.

It can simultaneously detect slow targets such as humans or mini/micro UAVs and fast targets such as loitering munitions or Tactical UAVs thanks to its MIMO structure. With its advanced detection and tracking features, it can be used to precisely que other systems such as cameras, weapons, and jammers to the target.

Detection of UAV Threats from Long Range

Retinar AESA is an advanced technology radar system that has been developed in a way that will not leave a blind zone in security systems with its high update rate, precise positioning features, high tracking and classification performance, operation while on the move, and dome-shaped hemispheric coverage.

Thanks to its design structure and low power consumption, this advanced radar system can be integrated on vehicles for on-the-move operations, as well as with fixed installation for the protection of critical facilities and borders. With its on-the-move operation capability, Retinar AESA can also take place as a critical security system in convoy and VIP protection missions.

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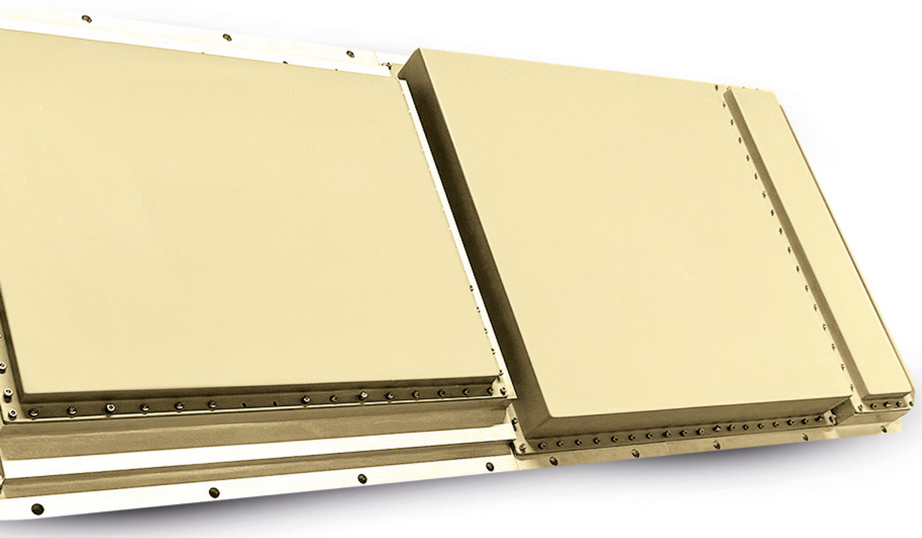


Target Detection & Classification in 3D

Retinar AESA precisely finds the three-dimensional position of the targets (range, azimuth angle and elevation angle) and classifies targets using Micro-Doppler based AI algorithms. Classified targets are presented to the user over background map. Situational awareness of the user is increased by marking the friendly zones and alarm zones on the map. The health status of the radar can be monitored and recorded constantly via the User Interface.

More than one Retinar AESA can be used in the same network and radar outputs are fused together. Even if the same target is detected by different radars, it is presented to the user as a single target throughout its entire movement.

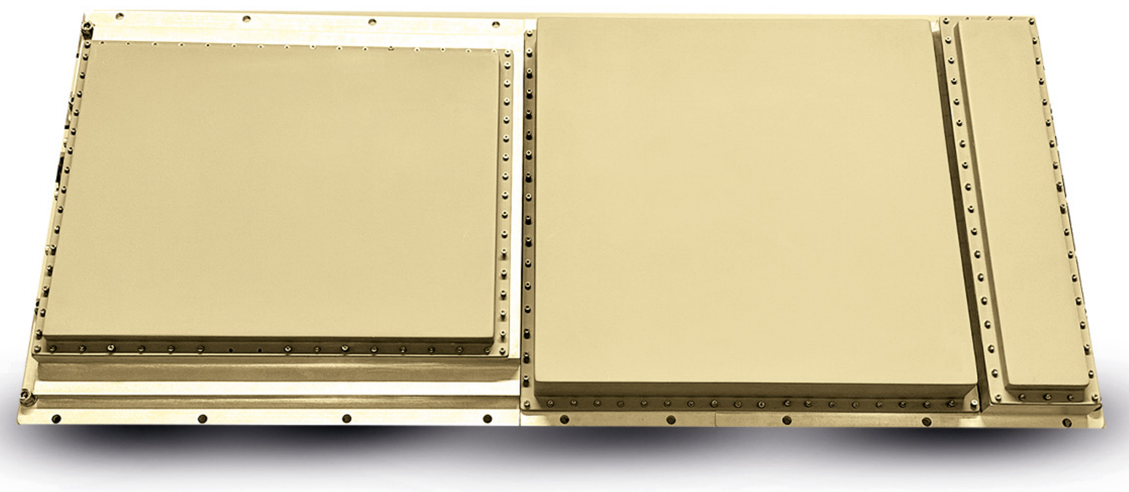
Key Features

- Active Electronic Scanned Array and MIMO architecture
- High accuracy classification using Micro-Doppler based AI algorithms
- Simultaneous detection and tracking of low speed and high speed targets
- Simultaneous detection and tracking of aerial and ground targets
- Hemispheric coverage with four radars
- On-the-move operation capability

• Operating Frequency	S Band
• Coverage	Single Radar: 90° (azimuth) x 90° (elevation) Four Radars: 360° (azimuth) x 90° (elevation)
• Update Period	Update rate 1 Hz
• Minimum Detectable Velocity	0.2 m/s (0.72 km/h)
• Stand-Off Range	< 100 meter
• Instrumental Range	24 km
• Weight	< 35 kg
• Interface	100/1000 Mbps Ethernet
• Power Consumption	< 600 Watt
• Environmental	MIL-STD-810
• EMC	MIL-STD-461

Detection Ranges

• Drone (0.01 m2)	4 km	• Helicopter, Small Vehicle (7 m2)	20 km
• Tactical UAV, Human (1 m2)	10 km	• Large Vehicle (20 m2)	24 km



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