WINDGUARD
ACTIVE PROTECTION RADAR
ELM-2133

General

The ELM-2133 WindGuard Radar is a four-facet distributed phased-array Pulse Doppler radar designed to detect and automatically track Anti-Tank Rockets (ATRs), Anti-Tank Guided Missiles (ATGMs) and Tank Rounds.

The radar is installed on Armored Fighting Vehicles (AFVs) such as Tanks and Armored Personnel Carriers (APCs), and other surveillance and reconnaissance vehicles, including trucks and jeeps.
Upon detection and identification of a potential threat, the radar delivers early warning to the AFV crew, indicating the accurate 3D direction of the threat, calculating the Time-To-Impact (TTI) and automatically activating reaction systems for protection of the AFV.

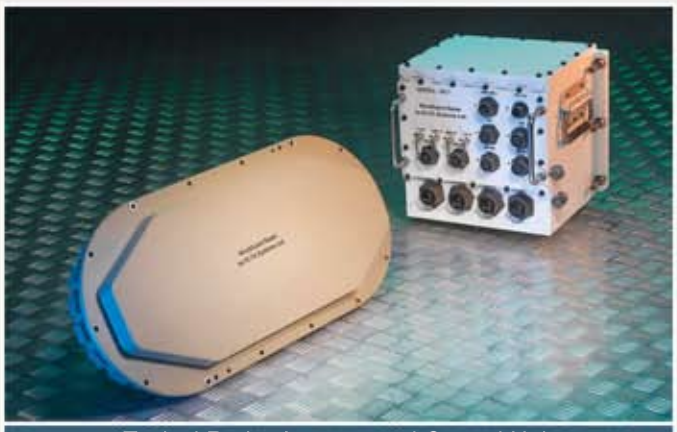
ELTA's ELM-2133 WindGuard Radar can be integrated with any soft-kill and hard-kill countermeasures which protect the AFVs.

The Pulse Doppler AESA (Active Electronic Steering Array) radar continuously searches for incoming threats in the upper hemisphere around the protected vehicle.
Upon detection of a flying object, the radar tracks and continuously measures all its parameters: azimuth angle, elevation angle, velocity and range and as a by-product, calculates estimated impact point, time to impact and launching point.

Upon detection of a direct threat attack to the vehicle, the radar automatically initiates an alert to the crew and can activate smoke, IR jammer and hard-kill sub-systems.
In addition, critical data such as the firing point is provided to the crew and to onboard weapon systems to enable counter fire operations.

Features

- Operationally proven mature system
- Distributed full phased-array radar
- High detection probability of all flying anti-tank munitions
- High accuracy 3D direction measurement by electronic scanning
- Automatic threat tracking, identification and verification
- 360° upper hemisphere coverage
- Rejection of interferences from ground reflections and mutual operations
- Extremely low false alarm rate
- Initializes warning and reaction only to direct threats
- Very short reaction time
- Time-To-Impact calculation for optimal reaction activation
- Easy integration with external countermeasures for threat mitigation
- Optional integration with electro-optical sensor
- Calculates location of threat launching point
- Facilitates vehicle weapon system aiming at launching point
- Bullet-proof and fragment-proof antennas



Typical Radar Antenna and Central Unit

WindGuard on an APC

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