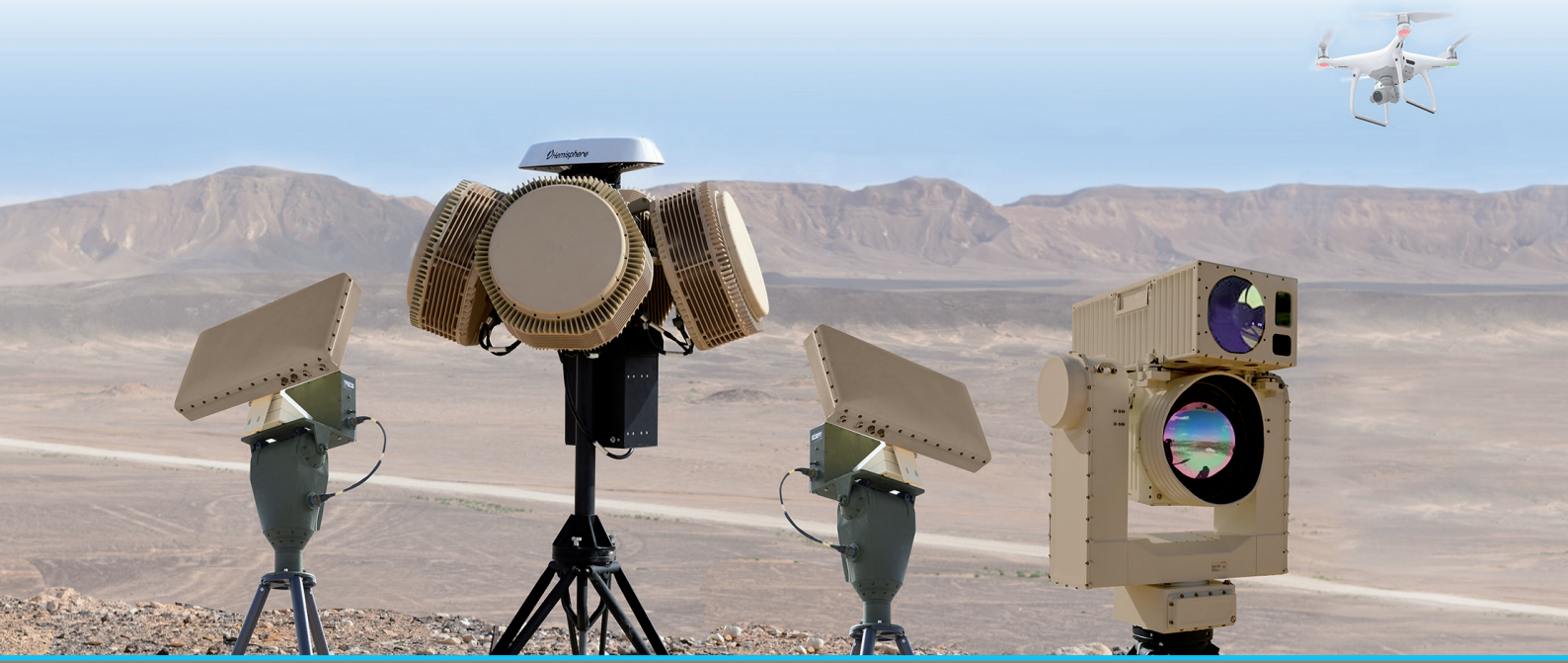
RAFAEL
SMART AND TO THE POINT

Drone Dome™

C-UAS, Drone Detection, Neutralization and Interception System



A Dynamic Defense Against Hostile Drones

Benefits

- End-to-End solution for securing airspace
- Off-the-shelf system
- Soft and hard-kill
- 360° circular coverage
- Quick response time
- Operates in all weather conditions
- High success rate
- Minimal collateral damage
- Modular configuration, tailored to customer's requirements
- Any sensor, any shooter, open architecture

Main Capabilities

- One system used by a single operator detects, tracks, identifies and neutralizes hostile drones
- Detects targets as small as 0.002 m^2 at a distance of 3.5km
- Identification distance of over 3km CCD/IR automatic Video Motion Detection (VMD) and Automatic Target Recognition (ATR)
- RF sensor detection of the drones and its operators
- Blocks VHF and UHF drone channels with Reactive Jamming (RJ technology), including Global Navigation Satellite System (GNSS)
- Open architecture enables integration with other effectors and sensors

The Challenge

Hostile drones are one of the fastest growing threats, posing serious security concerns. Incidents of terror, crime, swarm and autonomous drone attacks are dramatically increasing worldwide. These threats include drones flying near airports, endangering civilian flights and passengers' lives.

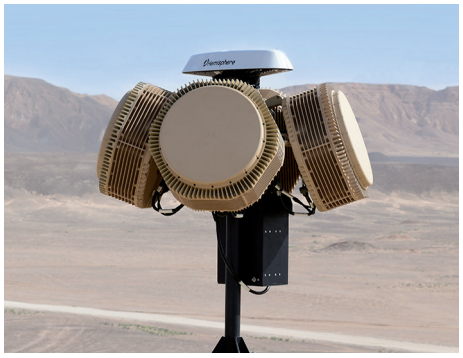
The Solution

RAFAEL's DRONE DOME is a powerful, end-to-end solution that secures airspace against hostile drones.

The DRONE DOME system includes three operational phases: detection, identification, neutralization. In the detection phase, a 360^0 radar and an RF sensor are used, either together or separately, providing both detection and accurate position of hostile drones. The system's EO sensor automatically initiates a drone classification and identification process, which provides the accurate position of the drone.

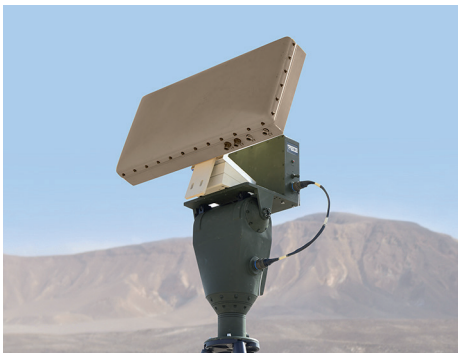
Drone Dome™

RADAR



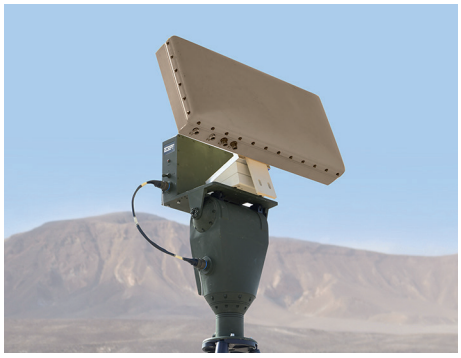
- All weather capabilities
- Multiple targets
- S band frequency Multi-Mission Hemispheric Radars (MHR)
- Up to four radars for full 360° azimuth coverage and 90° elevation
- Over 15,500 hours calculated MTBF
- Built-in Ethernet connectivity

JAMMER



- Blocks the signal and commands from the Remote Control (RC)
- Jam the video transmitted by the drone to the operator
- Jam the GNSS signal to destabilize the drone
- Multiple targets

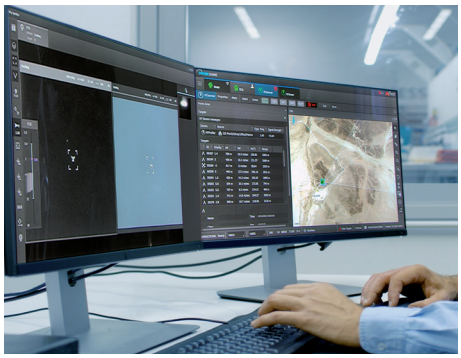
COMMINT/DF



The RF sensor rapidly scans the environment, detecting and identifying potential threats in the area of interest. Upon detection, the system classifies the threat, alerts the user and enables various mitigation actions to neutralize the threat.

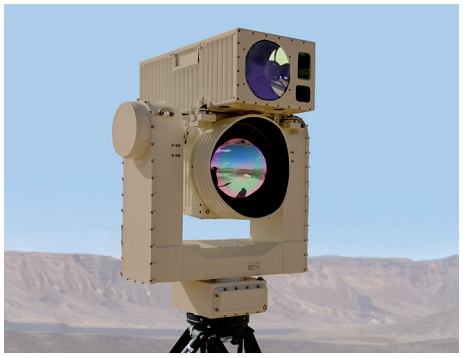
- Wideband receiver covers 70 MHz-6GHz
- High Dynamic Range (>60 dB)
- High Sensitivity (NF <10 dB)
- Intermediate bandwidth
- Fast switching

C⁴I CENTER



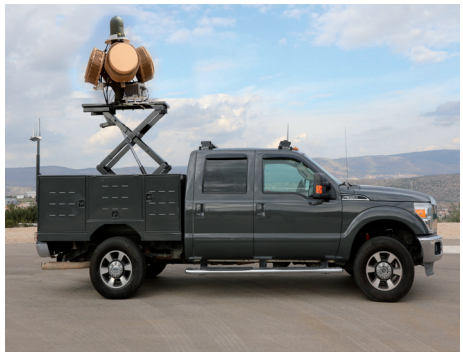
Automatic target prioritization algorithm that incorporates all the necessary equipment, software and accessories to enable the command and control of all the subsystems included in the C-UAS System.

E/O SPEED ER



- EO/IR sensor, installed on a gimbaled tripod
- Detection Unit (DU), and Video On Demand (VOD) element for video processing
- System Manager and Backend H/W elements for controlling video, data, status and commands among the various elements
- Video Motion Detection (VMD) enables automatic detection of low contrast moving targets
- Tracking – the EO video tracking enables the operator to track multiple targets automatically
- Automatic Target Recognition (ATR)
- Multi-sensor system - The system allows integration, operation and display of several EO sensors

MOBILE DEPLOYMENT



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