

# Drone Guard COMJAM

## RF Drone Detection and Mitigation System ELI-4030

## SYSTEM CONFIGURATIONS

Drone Guard COMJAM features a highly modular design, offering multi-layer C-UAS solutions ranging from highly compact units to powerful, long-range systems. It is provided in several configurations: Mobile Force Protection (vehicular and backpack), Local C-UAS Defense and Regional C-UAS Defense.

## MOBILE FORCE PROTECTION

Drone Guard Mobile Force Protection is a low Size, Weight and Power (SWaP) system that defends mobile platforms such as armored vehicles using a vehicular configuration, as well as for maneuvering troops with a backpack configuration.

The RF sensor detects hostile drones approaching the protected vehicle or troops. It alerts the force, and triggers the jamming unit, creating a 360° protective dome. The system operates while on the move and is effective against drone swarms.



## LOCAL DEFENSE

The Drone Guard COMJAM local defense configuration enables RF detection, Direction Finding (DF) and jamming of drones at intermediate ranges.

This configuration exhibits modular and low SWaP design, offering a powerful yet cost-effective C-UAS solution. It can be installed in fixed locations such as masts or buildings, providing 360° coverage, as well as on vehicles, providing On-The-Move (OTM) drone protection.

The modular design allows for highly flexible installation in vehicles or other constrained platforms.



## REGIONAL DEFENSE

Drone Guard COMJAM Regional Defense configuration enables RF detection, Direction Finding (DF) and jamming of drones at long ranges. The solution is ideal for strategic site defense, for border protection and for the defense of large maneuvering forces.
It provides wide defensive coverage, creating a large drone-free zone both in open spaces and in congested urban environments. Multiple regional-defense systems can be deployed in networked operation, allowing for the triangulation and precise geolocation of targets.



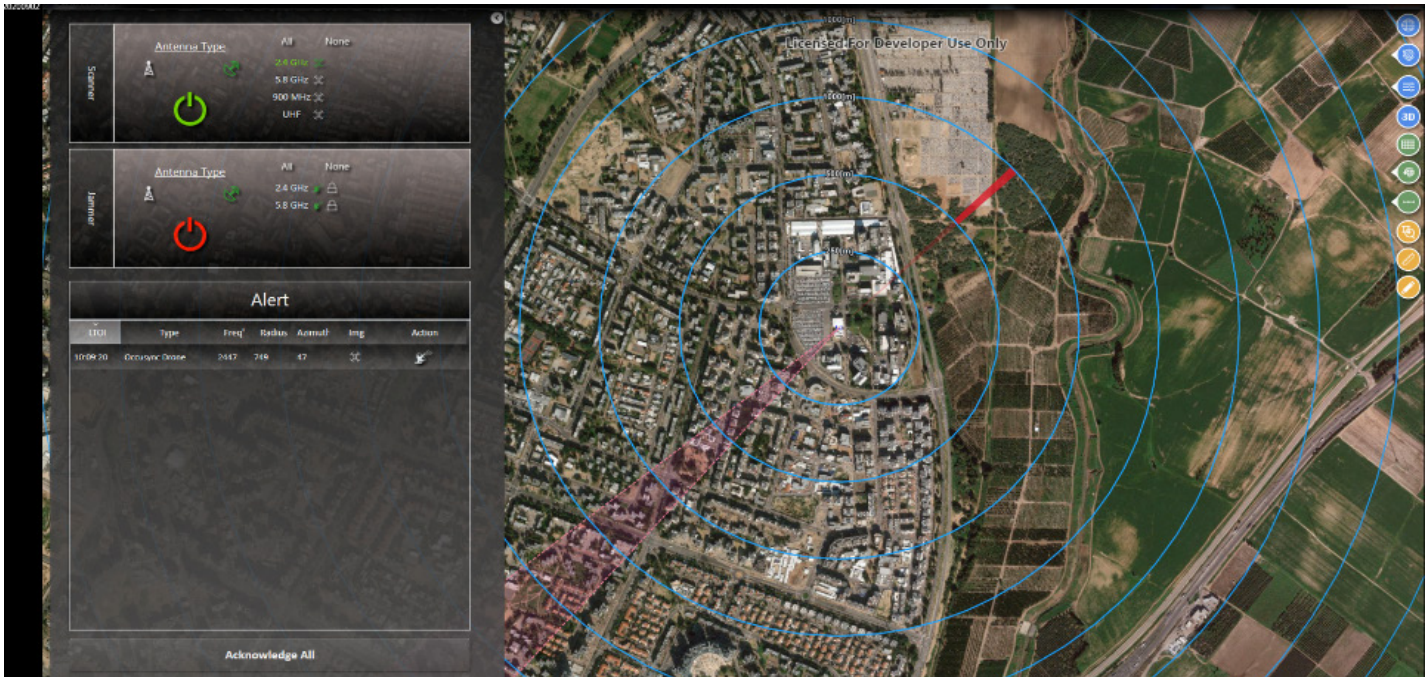
## FUTURE-PROOF UPDATES

As new and increasingly complex drones enter the field, Drone Guard COMJAM is ready to handle them. The system is delivered with a comprehensive library of UAS communications protocols, allowing accurate identification and classification of the UAS and providing appropriate jamming countermeasures. The library is constantly updated using data retrieved from hundreds of Drone Guard units installed worldwide, and is provided to customers as part of ELTA's extended maintenance contract.

## INTELLIGENT COMMAND AND CONTROL

Drone Guard COMJAM is provided with a user-friendly Command and Control (C2) system. Alternatively, it can be interfaced and operated with third-party C2 systems.

The C2 collects data from the sensors, and automatically identifies and classifies threats, forming a unified situation awareness picture in concert with other networked sensors. With intelligent analysis of the threat parameters, as well as automatic decision-making algorithms, the system defines jamming priorities and optimal timing to effectively mitigate all threats.



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## RF Drone Detection and Mitigation System

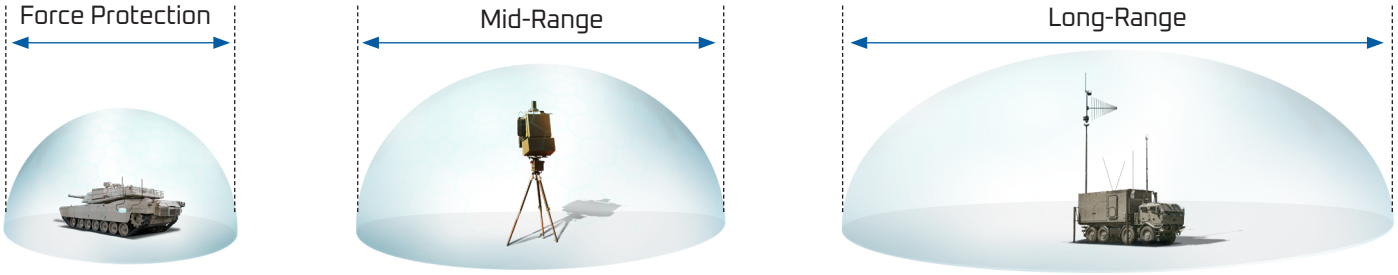
## ELI-4030

## INTRODUCTION

Drone Guard COMJAM (ELI-4030) is a multi-layer Counter Unmanned Aerial System (C-UAS) solution that offers RF-based drone protection. It is part of the world-renowned Drone Guard system, with hundreds of units deployed worldwide. The solution exploits the drone's communications datalink to automatically detect, classify, and defeat threats by disrupting their datalinks and/or GNSS signals.

Drone Guard COMJAM comprises an RF Detection unit (ELK-7071) and a jammer (ELK-7009). The RF Detection unit detects the drone and finds its Direction of Arrival (DOA) based on the drone's communications signal, and the jammer jams the targeted frequencies. The system operates effectively even in congested electromagnetic environments, in urban areas, and without direct line-of-sight to the target. It can defeat multiple simultaneous drones as well as drone swarms.

The system employs advanced Machine Learning (ML) and Artificial Intelligence (AI) techniques to automatically learn and adapt to new threat types.




## HIGHLIGHTS

- RF-based passive drone detection and jamming with long-range, 360° coverage
- High-accuracy Direction Finding (DF)
- Multiple parallel jamming channels for effective UAS jamming
- Modular design allows flexible installation in a variety of configurations
- Very low false-positive detection rate; immune to distractions such as birds. Detection is not dependent on the drone's size
- Best-in-class Probability of Interception (POI) at long ranges, in all weather- and terrain conditions
- Open API for integration
- Embedded spectrum analyzer for recording datalink transmissions of unknown UAS
- Ruggedized and MIL-STD compliant



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