



# DETECT DRONES WITHOUT EMITTING A SIGNAL

Wideband passive RF sensors to hunt and geolocate signals from COTS, modified, and military drones

FORCE PROTECTION

BASE PROTECTION

BORDER SECURITY MONITORING

ISR

BATTLEFIELD SURVEILLANCE

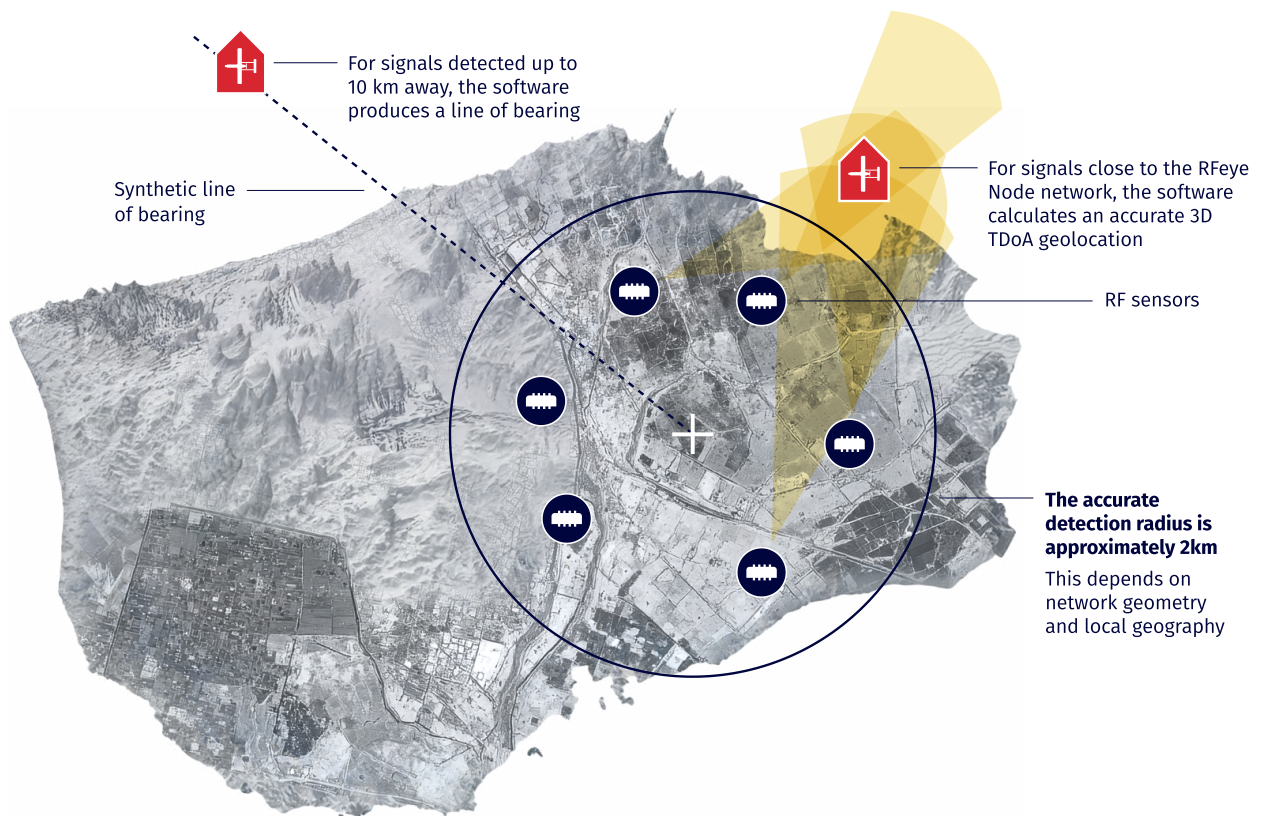
LARGE EVENTS

CRITICAL INFRASTRUCTURE PROTECTION

Passive RF sensors can form scalable networks that monitor the spectrum persistently across wide areas. Unlike library-based systems, they detect any RF emission from drones or their operators—without emitting signals or interfering with other systems. Using COTS hardware and advanced software, the system geolocates threats in real time with high accuracy using 3D TDoA and line-of-bearing techniques. This TRL-9 technology integrates seamlessly into existing c-UAS architectures via open APIs, enabling multi-sensor fusion and enhanced situational awareness.

## Benefits of integrating RFeye Nodes into a c-UAS

- Gain early warnings & real-time alerts
- Operate under EMCON
- Complement radar & EO/IR sensors
- Detect objects with a low RCS
- Reduce rate of false positives
- Non-library-based—detect the signal, not the drone
- Receive automated geolocations for signals of interest



## Operational workflow

1. Monitor the spectrum continuously and passively from 10MHz to 40GHz using RFeye Nodes.
2. Detect known drone signals, such as telemetry, control links, and video downlinks using custom-built RFeye detectors.
3. Discover unknown, low-power, or frequency-hopping emissions from modified or non-standard drones using Signal Discovery in RFeye DeepView.
4. Geolocate signals of interest in real time with high precision using 3D TDoA, or obtain a line-of-bearing when signals are detected at greater distances.
5. Cue other sensors or effectors, such as EO/IR or electronic countermeasures for confirmation, tracking, or interdiction.

## Key RFeye differentiators

RFeye COTS sensors offer a scalable solution, enabling users to gradually expand their network and extend the sensor baseline from c-UAS to SHORAD and MRAD over time.

Sensor networks can be monitored from remote Command and Control posts located anywhere on the planet, and troops on the ground can view geolocations in real-time using a Tactical Awareness Kit (TAK).

| RF SIGNAL         | WHAT DETECTION ENABLES                                                      | DETECTION DIFFICULTY                                                          |
|-------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| C2 link           | Identifies and tracks the operator or ground control station (GCS) location | Many modern drones employ Frequency Hopping Spread Spectrum (FHSS) technology |
| Telemetry link    | Identifies and geolocates the operator or ground control station location   | Smaller drones often use lower power transmitters                             |
| Video downlink    | Verifies ISR activity; reveals drone targeting or surveillance intent       | Bands used by commercial drones are crowded                                   |
| Payload data link | May imply higher-threat drone                                               | Payload data links may operate in various unlicensed bands                    |