

# MERCAT

RF sensor for drone detection

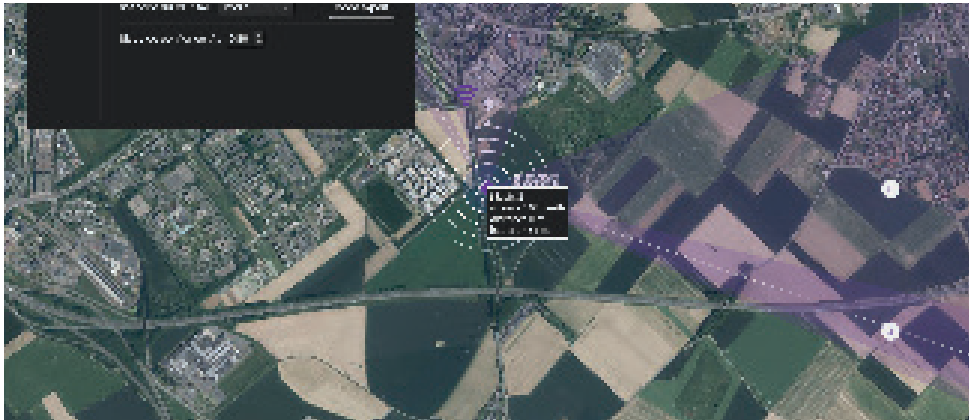


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# MERCAT

## RF sensor for drone detection



### — Description

**MERCAT** is a drone detection system using radio frequency analysis:

- Detection, identification and tracking of long-range UAVs (up to 20 km)
- Detection capability in electromagnetically saturated environments
- Wideband 400 MHz – 7 200 MHz
- AI analysis to avoid false alarms
- Discrimination between friendly and enemy (friend or foe) drones
- Passive technology (no interference or danger to the environment)
- Outdoor use, waterproof (IP65)

### — Mission

**MERCAT** detects, identifies and tracks drones at 360° in real time.

It provides informations about drones, enabling neutralization action to be triggered by jamming adapted to the threat.

### — Technology

**MERCAT** detects drones by intercepting radio frequency (RF) communications between the drone and the pilot's remote control.

The remote control transmits flight commands to the drone, while the drone transmits video images and telemetry measurements to the pilot.

These communications take place via RF signals, which are intercepted and analyzed by **MERCAT**.

Thanks to its specific artificial intelligence (AI) algorithms, **MERCAT** is able to identify the type of drone, and precisely determine directions in which the drone and pilot are flying from. It identifies the communication protocol used and retrieves telemetry informations via the DRI - Direct Remote Identification - system.

### — Use case

**MERCAT** protects sensitive infrastructures (airports, prisons, stadiums, military bases, administrative buildings) and events (festivals, sports events, public meetings) at any time and in any place.

Thanks to its long-range detection and identification capabilities, it provides comprehensive real-time information on all drones within its range.

**MERCAT** provides precise direction-finding information across its entire frequency band.

It is easily deployable and can be integrated on a vehicle to provide on-the-move detection capability. **MERCAT** is designed to work in symbiosis with jamming equipment.

### — Technical data

Frequency bands (MHz)	400 MHz to 7 200 MHz
Detection range	Up to 20 km depending on environment
Angular accuracy	5°
Antennas	sectorial antennas converging 360°
Communication protocols	Constantly evolving database (OccuSync, LightBride, HereLink, Evo, etc.)
Beacons	Infodrone, Direct Remote ID, etc.
Deployment time	Less than 5 minutes
Response time	1 to 2 seconds
Dimensions (l x h)	86 x 48 cm (34 x 19 inches)
Weight (without accessories)	30 Kg (66 lbs)
Operating temperature	-10°C / 50°C (14°F / 122°F)
Ingress protection	IP65
Connectivity	Ethernet or wireless
Integration	C2 proprietary or PLC for external integration
Power supply	9-36V / 110-230V 50-60Hz (main or external power supply)
Color	Any color
Warranty	1 year



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