

Multi UAV / Drone Compatible X•SAR Equipment

Multi UAV / Drone Platform Compatible Easy Mountable

Wi-Fi, Bluetooth & Radio Signals Search and Rescue System

When every minute counts, the X•SAR system delivers rapid, reliable direction and localization of missing persons in even the most challenging environments.

The lightweight, multi UAV / Drone Platform – mountable kit combines Wi-Fi and Bluetooth Detection — and can easily be extended with Radio Direction Finding (Signal Scanning RDF) to pinpoint emergency beacons, trackers, push-to-talk, cell phones, and wearables — whether connected or broadcasting intermittently.

Housed in a rugged housing with interchangeable antennas, X•SAR operates for hours and integrates seamlessly with multiple drone platforms.

The X•SAR System eliminates camera blind spots by using Radio Direction Finding (RDF) to detect signals without requiring line of sight — working through obstacles like debris, vegetation, or rugged terrain.



Covering BLE - WIFI and Signals Radio Direction Finding

Drones are playing an increasingly vital role in search and rescue (SAR) operations.

X•Sensor Technologies has developed upon request the X•SAR, an intelligent, drone-mountable emergency response kit engineered for Wi-Fi Detection, Bluetooth Detection, with optionally Signal based Radio Direction Finding.

- Lightweight – 0.5 up to 1.5 kg for maximum drone compatibility
- Long Endurance – Several hours of operation with external powerbanks
- Hot-Swappable – Optionally change batteries without interrupting operations
- Plug-and-Play – Rapid drone interoperable deployment in the field

X•SAR System includes multiple antennas — both omnidirectional and high-gain directional — enabling rapid detection and localization of missing persons in rural, forest-dense, open-water, or other remote environments.



Minimizing Camera Blind Spots When Working With RF Technology

The X•SAR can be securely mounted beneath a drone using cables, screws, or other fixtures, offering high flexibility for different drone types and mission profiles. Compatible with many types of drones used by Search and Rescue operators: T-DRONES M, GAIA Hexacopter, DJI Matrice 300, DJI Fly Cart 30, and many others.

Working in synergy with optical and thermal sensors, X•SAR Systems narrow down search zones and accelerate survivor localization

X•SAR — Core Detection Capabilities

Wi-Fi Detection

- Supports 2.4 GHz and 5 GHz bands and all WIFI channels
- Configurable scanning per channel, switching every 0.2 seconds
- Detects both connected and idle devices with Wi-Fi enabled
- Captures device identification in combination with signal strength

Bluetooth Detection

- Supports all Bluetooth and BLE generations, including v1.x to v5.x
- Continuous frequency hopping for rapid, comprehensive scanning
- Passively identifies connected, scanning, and listening devices
- Captures device identification in combination with signal strength

Radio and Beacon Detection (Optional Extension)

- Operating within a frequency range of 100 KHz to 6,000 MHz (6 GHz)
- Scans multiple pre-set beacon and Radio frequency sets per second
- Radio Receiver can be additionally mounted to the UAV or drone
- With a minimum signal strength setting to minimize signal noise
- Real-time frequency recognition alerts are shown on the dashboard

This module is suitable for cases where the subject has only a wireless beacon or push-to-talk radio, with no cellular or smart device.

Cellular Radio Detection (Optional Extension)

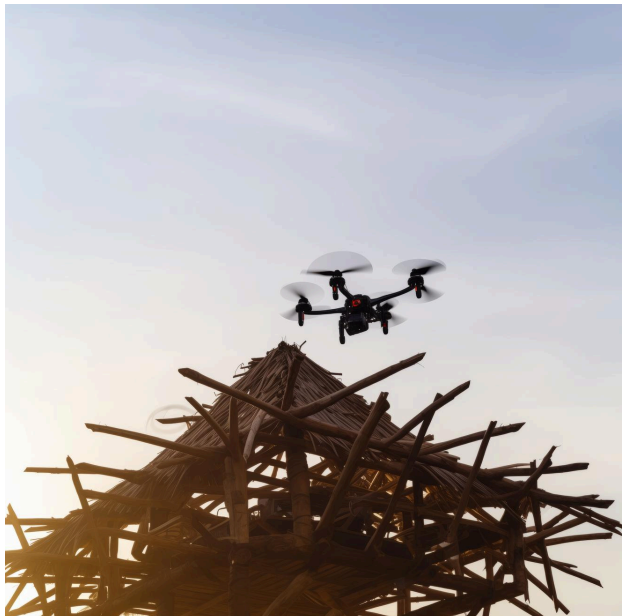
- Passive signal monitoring for 2G GSM, 4G LTE, and 5G
- Scans all available cellular frequency sets in under a second
- Detects all cellular devices, GPS trackers, and signal bursts in range
- Reports minimum, maximum, and average signal power levels
- Real-time cellular detection alerts are visible inside the dashboard

This module is essential when the missing person is carrying only a cell phone or GPS tracker, or when vehicles have a built-in eCall system.

X•SAR — Fast, Accurate Localization

When the X•SAR passively detects a device signal, it:

- Uses the drone's GPS to pinpoint the detection location.
- Allows the operator to approach while monitoring increasing signal strength.
- Enables visual confirmation via the drone's onboard camera.



X•SAR Key Benefits

- Ruggedized and weather-resistant
- Rapid, multi-signal detection (Wi-Fi, Bluetooth, Cellular, Radio)
- Works in poor visibility or camera-limited conditions
- Modular interoperable hardware and connectivity options
- Dramatically reduces Search and Rescue time and costs

Go beyond optical-only search methods with X•SAR — detecting Radio Signals even when terrain, foliage, or weather obscure visual contact, closing critical detection gaps.

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