1. Product Overview

The **TrackBox_DLW02mini** module is designed for detecting, identifying, and locating drones, providing drone surveillance within a 3 km radius. It features broad coverage of drone models, low false alarm rates, and ease of integration.
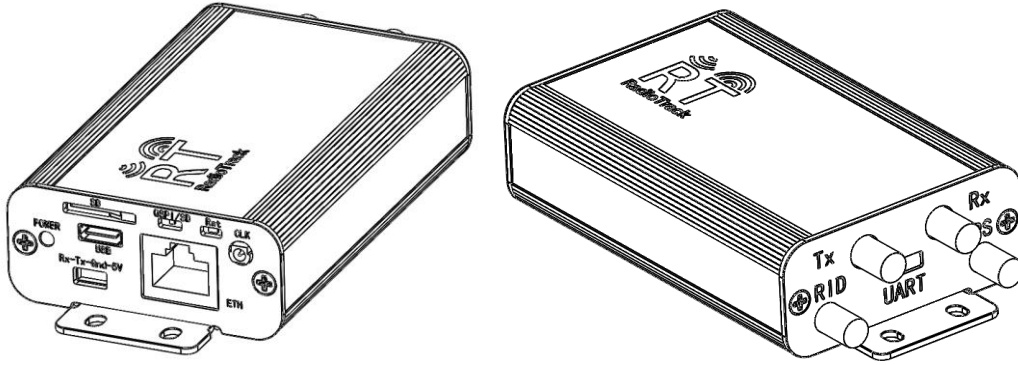

Figure 1: Module Appearance

2. Features and Performance Parameters

(1) Drone Detection

- Supports common drone models such as DJI, Autel, FIMI, Hubsan, Parrot, and FPV analog video transmission.

- Covers frequency bands from 70MHz to 6GHz, with a focus on mainstream bands such as 2.4GHz, 5.2GHz, and 5.8GHz.
- Detection range up to 3km (varies by drone model and electromagnetic environment; can be extended to over 5km with LNA).
- Fast detection: drones can be detected immediately upon powering on. High refresh rate of 2 seconds per cycle.
- Capable of detecting multiple drones simultaneously (>10).
- Spectrum detection ensures extremely low false alarm rates.

(2) DJI Model Positioning and Tracking

- Analyzes DJI protocols to obtain drone ID (consistent with the body ID), GPS coordinates of the pilot and drone, altitude, and other information. Positioning accuracy is

approximately 10 meters, suitable for generating drone trajectories. Supports detection and positioning of the latest models such as AIR3 and Mini4 Pro.

(3) Remote ID Broadcast Model Positioning and Tracking

Detects models equipped with Remote ID, providing real-time serial numbers, GPS positions, altitude, speed, and other information. Covers most of the latest models on the market, including DJI and Autel drones compliant with the standard ASTM F3411-22. Positioning range: 600-1000m (can be extended to 1.5km in suburban areas).
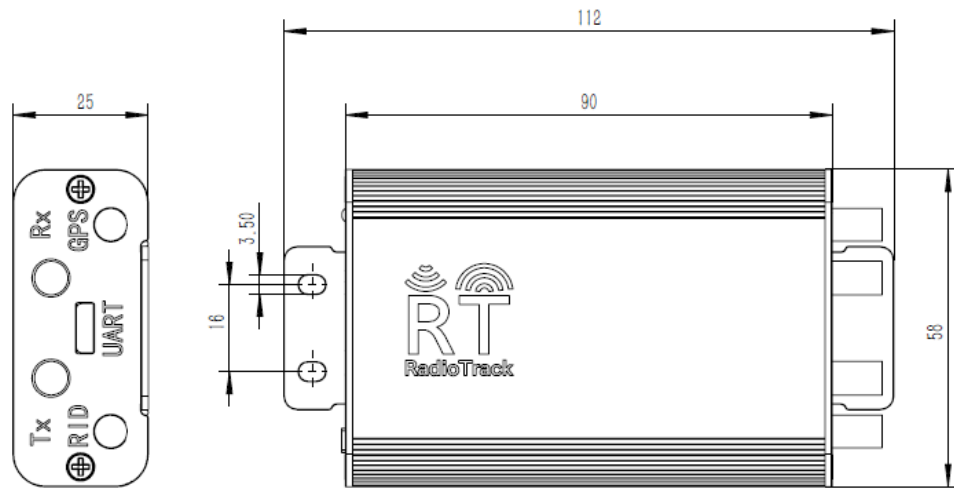
(4) Wifi and Enhanced Wifi Model Detection, MAC Identification

Detects WiFi video transmission models such as Beast, Walkera, SYMA, PowerEgg, and Hover. Also detects enhanced WiFi video transmission models like DJI Mini SE and Parrot Anafi, resolving MAC addresses.

(5) Other Parameters

- Power consumption: approximately 5W. Powered via Type-C or DC 5V (DC5.5mmx2.5mm).
- Dimensions: 112x58x25mm. Weight: 130g.
- Interfaces: Serial output (baud rate 115200). Supports Ethernet output and spectrum data refresh.

3. Dimensions

4. Appearance