



The  
**SA GROUP**



Unique Tracking System

# COLLISION AVOIDANCE, TRACKING & ID SYSTEM

The system consists of transponders which are able to broadcast the position, speed, direction, height and identification of the UAV. The transponders can be configured to do that at a certain rate or only when it is interrogated by a predefined unit.

A large number of transponders can operate in the same area. An overload will never occur, as you will always “see” the transponders closest to you.

## Applications:

- Identification
- Tracking
- Detect and Aviod
- Situational Awareness
- C2, (Command and Control)



Size: 19mm x 23mm x 69mm  
Weight: Less than 50g

# UNIQUE TRACKING SYSTEM

The transponders can be configured for either airborne installation or ground station use:

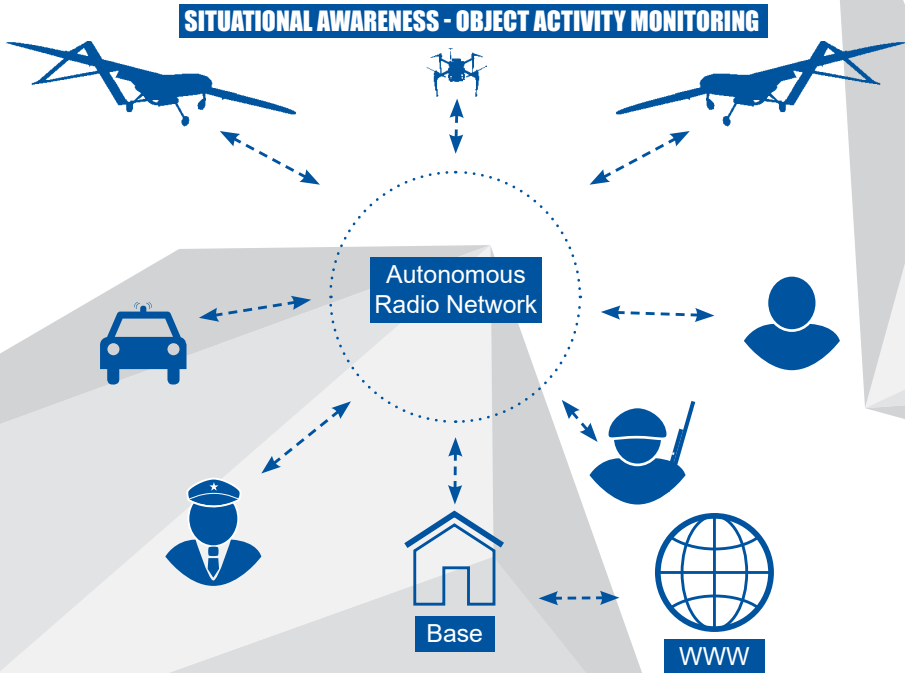
➤ **AIRBORNE CONFIGURATION:**

WiFi and bluetooth disabled, because power consumption is highly important

➤ **GROUND STATION CONFIGURATION:**

USB or bluetooth connection to windows laptop or tablet

The transponders are able to exchange information at a high rate between two units if necessary; alternatively it can broadcast to all units. Discrete I/O and analog inputs provide the possibility of communicating the environmental condition of each transponder. All communication can be encrypted, and performed on a single narrowband frequency.



## Features

- All transponders can operate on one single predefined frequency
- Air to air, air to ground and ground to air communication
- ADS-B functionality via system ground station
- Well proven VDL mode 4 aviation technology
- Handling 75 transponders within line of sight @ 1 sec. update rate
- Built-in GPS
- Built-in barometric sensor
- Optional bidirectional serial data port for interfacing to other systems
- Maintenance data port
- Range: Tested to 60 km beyond visual line of sight
- Transmits position, speed, direction, height and identification
- Minimum system requirements: mapviewer software for windows, two transponders, incl. setup software

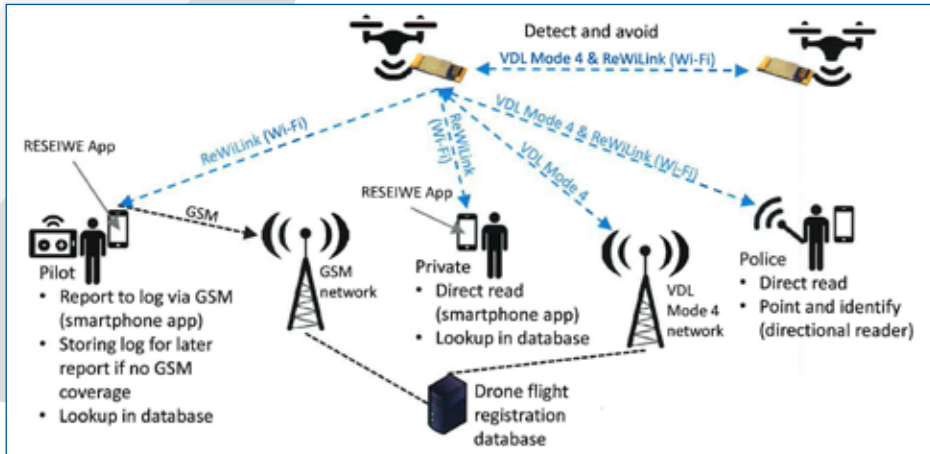
## Custom Specified Options

- Two discrete I/O
- WiFi / bluetooth interface
- Two A/D inputs
- Built-in SD card, for activity logging
- Built-in accelerometer and barometric sensor
- AES128 encryption
- Handling 4500 transponders within line of sight @ 1 min. update rate

## Technical Specifications

- Weight: less than 50g
- Size: 19mm x 23mm x 69mm
- Position accuracy based on GPS accuracy
- Altitude accuracy based on barometric sensor or GPS
- External power input 5-28 VDC
- Internal battery backup 3 hours
- Narrowband 25kHz channel
- Operating frequency (868 MHz)

The transponder has a bidirectional serial data port for interfacing to other systems like flight controllers, map systems etc. A list of nearby transponders will show information about unique identification, position, direction, elevation, velocity, and optional data based on installed sensors. The high power transponder version also provides Bluetooth interface, which makes it very easy to connect to tablets or smartphones.



The SA Group provides UAV services as assembly, MRO, upgrades etc. SA is part of UAV Test Center Denmark, and cooperate with other companies in regards to total UAV solutions. SA applies to UAV standards and regulations, all based on our expertise and knowledge of 39 years+, within avionics in the aviation industry.

Please feel free to contact us to discuss your specific requirements.

Scandinavian Avionics provides complete turn-key avionics solutions for civil and military aircraft, helicopters and UAS. Including sales, avionics maintenance (MRO), certification (STC), design & engineering, installation, product development, production, training and consultancy services.

The SA Group is represented in 9 countries, on 13 locations in Europe, the Middle East, India and Southeast Asia. The headquarters, which was established in 1978, is located in Billund, Denmark.

## Approvals

EASA Part-145 | EASA Part-21J | EASA Part-21G | EASA Part-147

FAA Part-145 | TCCA Part-145 | BCAA Part-145 | GAR Part-145 | DOT RIN N083