WAVENET
RF ENGINEERING

The main function is to solve any conflict situation of collisions between aircrafts and/or between aircrafts and other objects.

With the Sense & Avoid **DRAGON-FLY**, we present a combined collaborative and non-collaborative solution that we believe resolves any conflicting situation of collisions between aircrafts and between aircrafts and other objects.

One of the requirements of **DRAGON-FLY**, is to deliver the proper information to the autopilot so that it will be the one that adopts the opportune decisions. In each case, the format and quantity of the data delivered must be adapted.

The challenge that has been pursued has been to equip the UAS with the necessary technologies to avoid collisions during flight operations and ensure that this technology is compatible and complies with all national and international certification standards.

In the civil airspace, normally, work is done with hierarchical procedures established at levels to avoid collisions between aircraft or aircraft and diverse objects such as terrain protuberances, high voltage towers, antennas, etc. For a collision to occur, several things must fail.

Due to the lack of pilot on board, this system addresses and solves the problem that would be faced with an interruption of the C2 link (the UAS are controlled remotely via radio-link type C2, which keeps them in contact with a station in ground or may be found in fully autonomous flight) that would result in loss of control of the aircraft.

SERVICIOS DE RADIO WAVENET, S.L. Polígono Industrial Requena, Nave 79 – 45214 Cedillo del Condado (Toledo) - España
Teléfono: (+34) 925 508 791 E-mail: wavenet@wavenetradio.com www.wavenetradio.com

INNOVATE SME

TECHNICAL SPECIFICATIONS:

Collaborative part:

UHF transceiver

Characteristics:

Frequency of work:	**433.05 MHz**
Transmission power:	**10 dBm (10 mW)**
Sensitivity:	**-109dBm**
Modulation:	**GFSK**
Binary speed:	**19200 bps**

Non-collaborative part:

Rotating radar

Distance measurement through this radar

Characteristics:

Antenna gain	**≥25dB**
Polarization	**Vertical**
TX / RX insulation:	**≥60dB**
Total sensitivity:	**<-160 dBm**
Beam aperture:	**<30 ° in elevation, <15 ° in azimuth.**

Specifications subject changes without notice.