CubePilot Cube ID Remote ID for Broadcasting Information UAVs Flight User Manual

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Overview

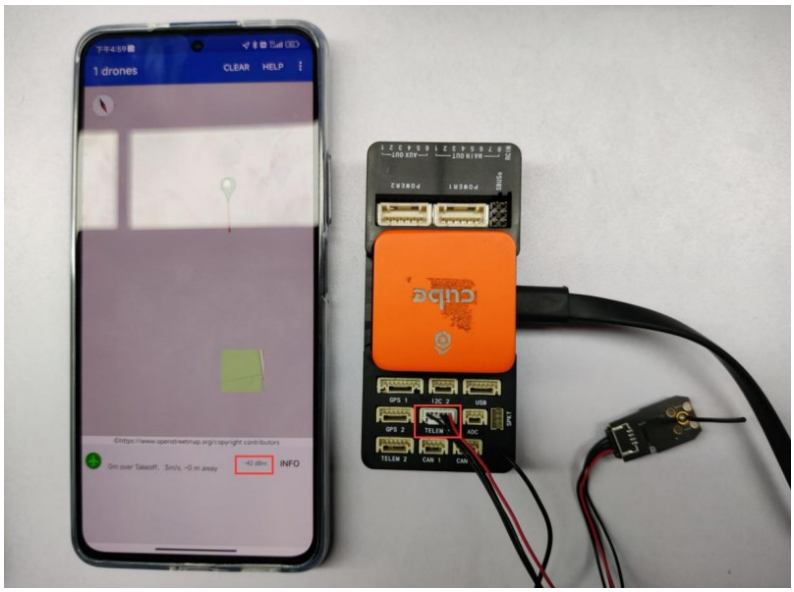
Cube ID is small size (25mm * 13.75mm * 3.5mm) Remote ID which broadcasting information about UAVs in flight through a Bluetooth 5.2 dual-mode unit, supports serial protocol. Use rscan write different codes with one Cube ID only, to adapt to multiple UAVs based on their needs.

Hardware Specification

Type	Parameter
Bluetooth chip	Nordic NRF52840 Bluetooth5.2
Frequency	2402MHz-2480MHz
LDO	MIC5353-3.3
Antenna Name	Wire Antenna
Antenna Model	UL1007-26AWG
Operation Temperature	-40°C-85°C
Dimension	25*13.75*3.5mm
Weight	10g(with cable and antenna)
Protocol	Serial

Operation instruction

Connect the Cube ID to the TELEM1 Connector of flight control, and view the transmission data in the mobile phone software Drones.



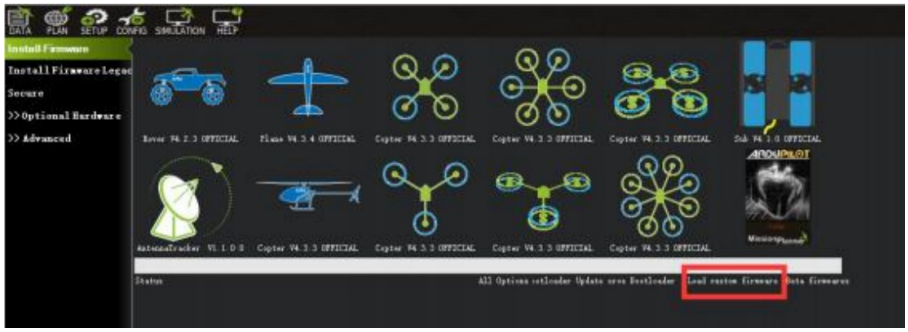
Installation

Connect the CAN or Serial port on module and flight controller with the sutible cable(weprovide 4 Pin CAN cable,6 Pin and 8 pin Serial cable) . Stick the module to UAV by regular sticker or soft sticker (with slightly vibration isolation). Keep the antenna away from the propeller.

Settings

Remark: Cube ID has not been ready on standard APM firmware . Must create OpenDroneIDfirmware.Please check following web for build the firmware :
https://ardupilot.org/dev/docs/opendroneid.html#opendroneid
https://www.youtube.com/watch?v=Az8v4Kx4hS0

1. Connect the flight controller to computer via USB cable. Open Mission Planner latest version . Install the OpenDroneID firmware firmware by “Load custom firmware”.

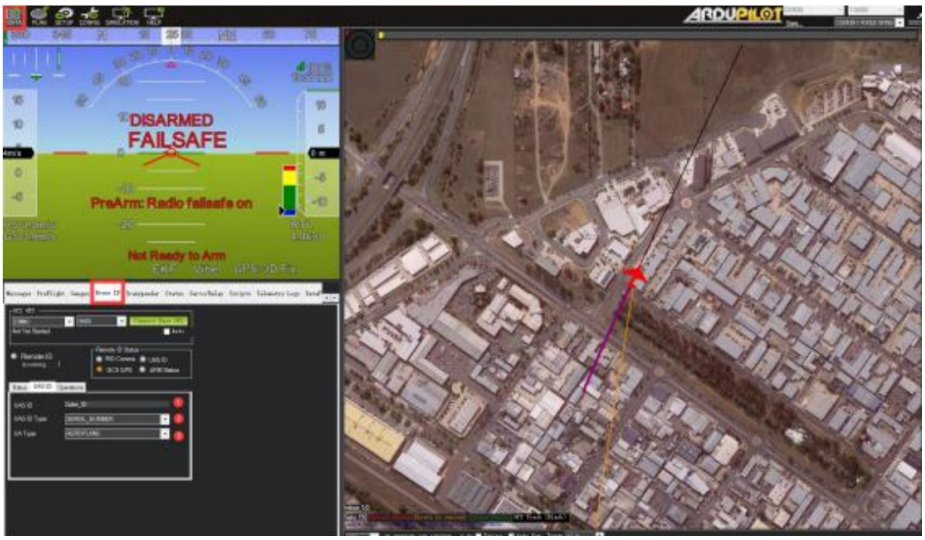


2. Go to “Full Parameter List” and find “DID_ENABLE”. Change it to “1” to enableODID.

3. Go to “Full Parameter List” and find “CAN_P1_DRIVER”. Change it to “1” toenable CAN.

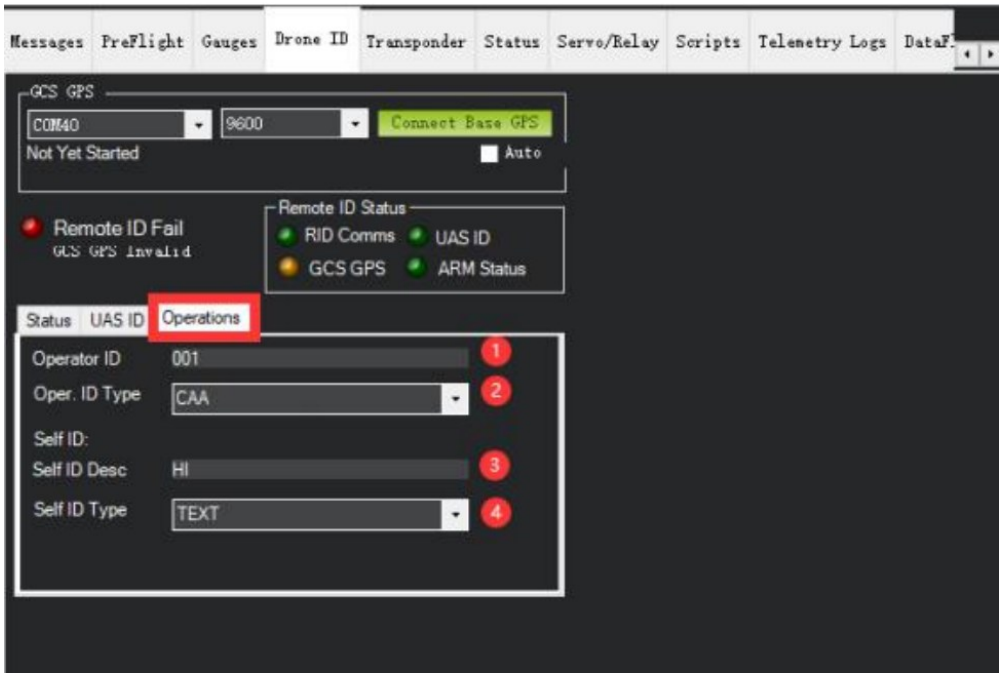
or if you use serial port ,find Serialx_PROTOCAL and change it to mavlink

4. Go to MissionPlanner homepage select Drone ID to set (1)UAS ID* (2)UADIDType and (3)UA Type



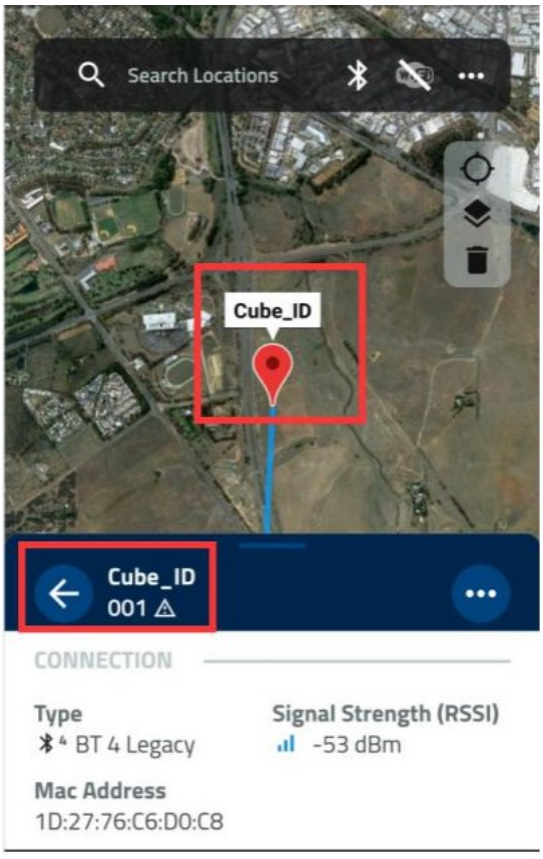
to set (1)UAS ID (2)UAD ID Type and (3)UA Type

Go to Operation to set (1)Operator ID , (2)Oper ID Type , (3)Self IDDESCand(4)Self ID Type



Testing

Download DroneScanner for IOS OpenDroneID or DroneScanner for Android to detect andmonitor nearby UAVs.



Warning
Caution: The user is cautioned that changes or modifications not expressly approved by theparty responsible for compliance could void the user's authority to operate the equipmen.

Second label must be place on the outside of the final device that contains the following text:
"Contains FCC ID: 2A6CG-HX406252"
The FCC ID can be used only when all FCC compliance requirements are met.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Documents / Resources

 Cube ID Operation manual Overview Hardware Specification	CubePilot Cube ID Remote ID for Broadcasting Information UAVs Flight [pdf] User Manual HX406252, Cube ID Remote ID for Broadcasting Information UAVs Flight, Cube ID, Remote ID for Broadcasting Information UAVs Flight

References

- OpenDroneID — Dev documentation