Low Power Lab ADS-B Transmitter

ADSBMiNi

AvionixTech

1. Introduction

When we do ADS-B lab tests, such as test our own developed ADS-B receivers or do some ADS-B demo, we always need an ADS-B transmitter. However, all the ADS-B transmitters on market are essentially Mode-S transponders with ADS-B OUT function. These ADS-B transponders are designed to be installed on aircrafts. So, it needs some very complicated configurations. It's OK when you really install these ADS-B transponders on aircraft, because you already have all the wires and systems in place to support these ADS-B transponders' operation. But it's a challenge when you want to make these ADS-B transponders work in lab. It essentially requires recreating an aircraft's comprehensive environment to ensure these ADS-B transponders operates as they would in flight.

Furthermore, these standard ADS-B transponders emit at a high power of around 250W. Such intense power levels are not only harmful to health but also pose a risk of damaging your ADS-B receivers, when persons and ADS-B receivers exposed at close range to these ADS-B transponders in lab.

ADSBMiNi is a low power, simple plug&play operation, 1090MHz ADS-B transmitter specifically designed for lab test applications. Integrated with a high-quality multi-GNSS receiver, ADSBMiNi can work independently without any other external devices.

ADSBMiNi can also be utilized for airport surface movement surveillance demonstrations by putting it on a car (please refer to our Vehicle ADS-B Transmitter ADSBVT for professional airport vehicle surveillance applications). Additionally, ADSBMiNi can be deployed on a drone for drone surveillance demonstrations (please also refer to our Portable ADS-B Transmitter ADSBPGA, designed for ADS-B transmitters used on general aviation aircrafts or UAV/drones).

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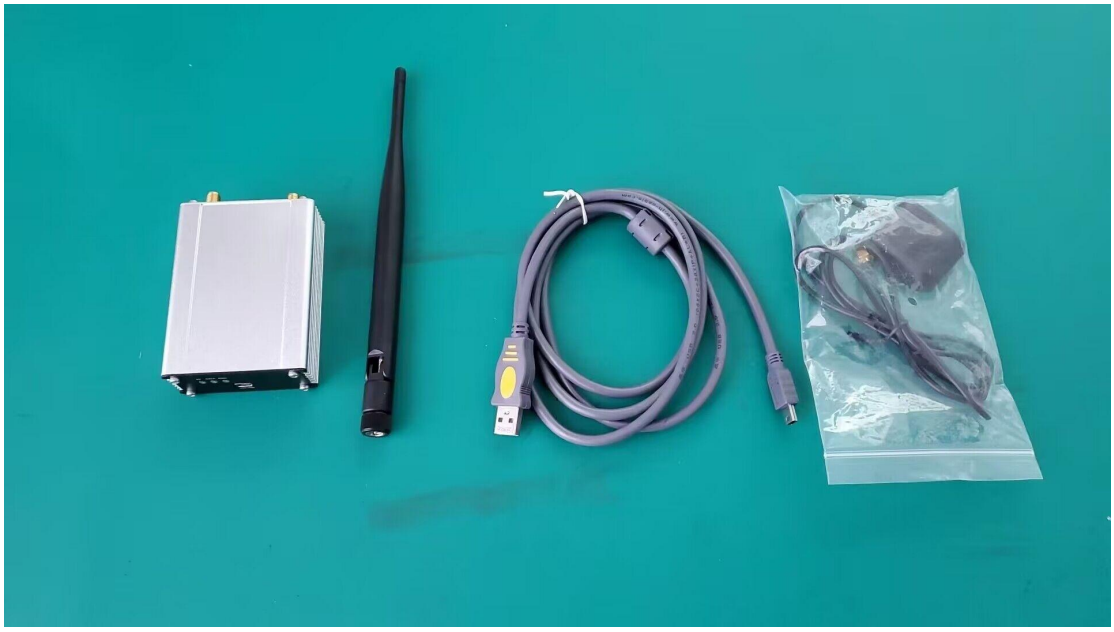


2. Specification

- Transmitter frequency: 1090MHz
- Comply with DO-260B and ED-120B (except the output power)
- Transmitter power: 0.5W
- Transmitter message format: DF17 or DF18 (select DF17 or DF18 when order)
- Power supply: 5V USB, can use Charge Pal (portable charger)
- Size: 95*65*27mm
- Antenna connector: SMA
- Working temperature: -10℃ ~ +50℃
- Storage temperature: -55℃ ~ +70℃
- Application: lab ADS-B test or ADS-B demo, airport surface movement surveillance demo or airport vehicle tracking test, small drones tracking.

3. Box contains

- ADSBMiNi Transmitter
- ADS-B antenna
- GPS antenna
- USB cable

4. Operation

There're two antenna connectors to connect with ADS-B antenna and GPS antenna. Power supply via USB. Very easy to operate.

There're several indicator lights.

White light: Indicate power. Light is on when power on.

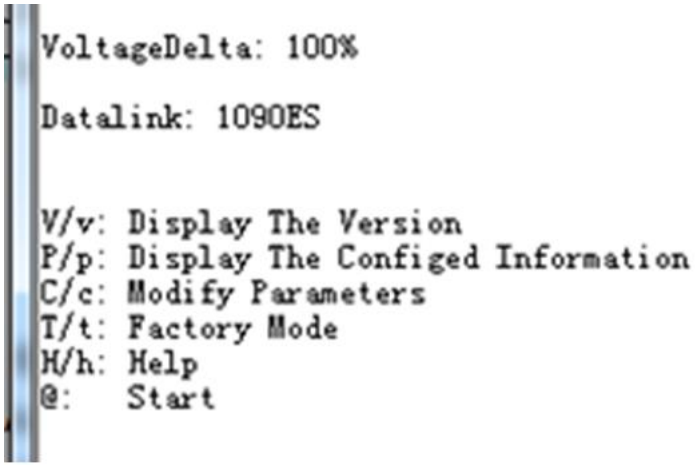
Green light: Indicate GPS. Light is on when GPS is OK. Blinking means no GPS.

Blue light: Indicate transmitting ADS-B signal. Blinking means ADSBMiNi is transmitting ADS-B signal. At this time, the green light should be on without blinking.

Other lights: Reserved for future use.

5. Configuration

- Connect ADSBMiNi with your computer via USB. The system on computer has to be win7 or above.
- ADSBMiNi should show up in the Device Manager under "Ports (COM & LPT)", note the assigned COM port number.
- Use a serial tool to connect the COM port assigned to ADSBMiNi. Open your serial COM tool, input H, then the below configuration options would show up.



- Input c, and then you can modify the parameters, following the instructions.

6. Customization

We're willing to do customization for you. Please don't hesitate to contact us and provide your requirement. We'd be glad to hear from you.