ASTM F3411-22a Standardized Remote ID Module Board User Manual

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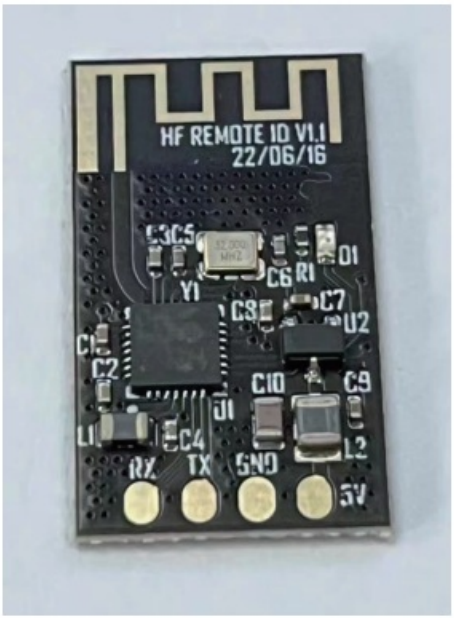
ASTM F3411-22a Standardized Remote ID Module Board



Product Information

The BLE module is a product launched by our company specifically designed for drones. It meets the requirements of the F-a Standardized Remote ID Module Board Solution Case. This module is based on the Bluetooth Low Energy (BLE) SOC solution and offers
several advantages such as small size, light weight, low cost, and easy usability. It can transmit data through UART and SPI interfaces, making it convenient to use, flexible to install, and easy to expand.

Product Features

- Based on Bluetooth BLE SOC solution
- Small size: xxmm
- Lightweight: .g
- Transmission distance: m (open without interference)
- Low power consumption

Product Usage Instructions

1. Connect the BLE module to the drone’s control system using the UART or SPI interface.
2. Ensure that the BLE module is securely installed on the drone.
3. If using UART interface, connect the TX and RX pins of the module to the corresponding pins on the drone’s control system.
4. If using SPI interface, connect the SCK, MOSI, MISO, and SS pins of the module to the corresponding pins on the drone’s control system.
5. Power on the drone and verify that the BLE module is receiving power.
6. Configure the BLE module’s settings according to your requirements. Refer to the user manual for detailed instructions on configuration.
7. Once configured, the BLE module will start transmitting data wirelessly.
8. If desired, you can connect a compatible device (e.g., smartphone, tablet) to receive and analyze the transmitted data using Bluetooth technology.

Brief introduction

BLE module is a product launched by our company for drones that meets the requirements of F3411-22a Standardized remote ID module board solution Case.
Based on the BLE 5.3 SOC solution, it has the advantages of small size, lightweight, low cost, and easy to use. This product can transmit data through UART and SPI interfaces, making it easy to use, flexible to install, and easy to expand.

Feature

Based on Bluetooth BLE 5.3 SOC solution

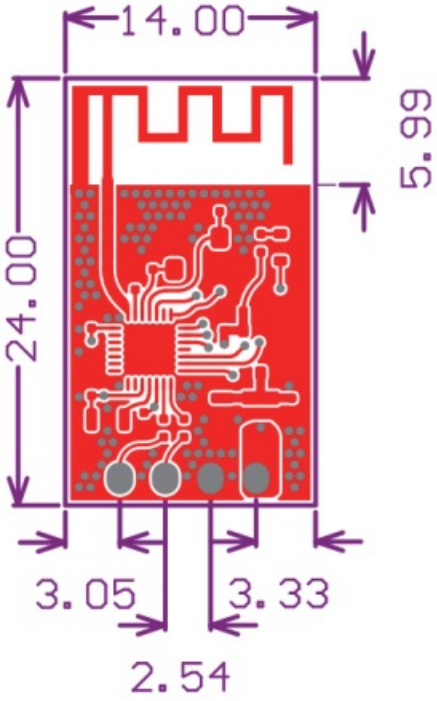
- **Small size:** 24×14x1mm
- **Lightweight**: 0.8g
- **Transmission distance:** 150m (open without interference)
- **Low power consumption:** <4.0mA @ 5V (not broadcasted)

Product specifications

Types	Parameter
Distance Delay	150m 10 ms
Voltage	6.6-5.5V
consumption	TBD
	-30-70℃ (theoretical data, specific based on actual environment)
operation temperature	
storage temperature	-40~70 ℃(theoretical data, specific based on actual environment)
Size	24 x14 x 1 mm
Weight	0.9g
communication interface	UART 115200

Mechanical specifications

Size: 24 x 14 x 1 mm



Pin Assignment

Pin	Name	Describe
1	RX	UART receiverrx
2	TX	UART transmit
3	GND	Ground
4	VCC	Power 5V

FCC Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) thi s

device may not cause harmful interference, and (2) this device must accept any interference received, incl uding interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user' s authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursua nt to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful inte rference in a residential installation. This equipment generates uses and can radiate radio frequency energy a nd, if not installed and used in accordance with the instructions, may cause harmful interference to radio com munications. 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 turn ing 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 important announcement Important Note:

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 minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Country Code selection feature to be disabled for products marketed to the US/Canada.
This device is intended only for OEM integrators under the following conditions:

1. The antenna must be installed such that 20cm is maintained between the antenna and users, and
2. The transmitter module may not be co-located with any other transmitter or antenna,

   As long as the three conditions above are met, further transmitter testing will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

Important Note:
In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling
The final end product must be labeled in a visible area with the following" Contains FCC ID: 2AR7Q-DF-BLE-A"

Manual Information to the End User
The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.
The end user manual shall include all required regulatory information/warning as show in this manual.

Integration instructions for host product manufacturers according to KDB 996369 D03 OEM
Manual v01

List of applicable FCC rules
CFR 47 FCC PART 15 SUBPART C has been investigated. It is applicable to the modular transmitter

Specific operational use conditions
This module is stand-alone modular. If the end product will involve the Multiple simultaneously transmitting condition or different operational conditions for a stand-alone modular transmitter in a host, host manufacturer have to consult with module manufacturer for the installation method in end system.

Limited module procedures
Not applicable

Trace antenna designs
Not applicable

RF exposure considerations
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Antennas
This radio transmitter FCC ID:2AR7Q-DF-BLE-A has been approved by Federal Communications Commission to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

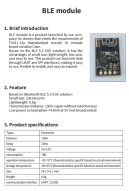
Antenna No.	Model No. of antenna:	Type of antenna:	Gain of the antenna (Max.)	Frequency range:
Bluetooth	/	PCB Antenna	0.92dBi for 2402-2480MHz;	

Label and compliance information
The final end product must be labeled in a visible area with the following" Contains FCC ID: 2AR7Q-DF-BLE-A".

Information on test modes and additional testing requirements
Host manufacturer is strongly recommended to confirm compliance with FCC requirements for the transmitter when the module is installed in the host.

Additional testing, Part 15 Subpart B disclaimer
Host manufacturer is responsible for compliance of the host system with module installed with all other applicable requirements for the system such as Part 15 B.

Documents / Resources

	ASTM F3411-22a Standardized Remote ID Module Board [pdf] User Manual F3411-22a Standardized Remote ID Module Board, F3411-22a, Standardized Remote ID Module Board, Remote ID Module Board, ID Module Board, Module Board, Board

References

- User Manual