Technical specification document

Shenzhen Ruike Innovation Technology Co., Ltd.

F11GIM2 RemoteID Module Datasheet

DoNo.：F11GIM2

Version：V0.2

Revision Description

Version	Data	Description
V0.1	2023-08-04	Frist version
V0.2	2024-07-08	Update V1.4.1 Hardware

1. Introduction

The F11GIM2 series module is a remote ID module single board solutiondesignedby Shenzhen Coolle Chaowan Technology Co., Ltd. for drones that meets the F3411-22a specification.

Based on BLE 5.3 SOC, it has the

2. Features

Based on BLE 5.3 SOC

Size：24x14x1mm

Weight：0.8g

Max Transmission Distance：150m（unobstructed, free of interference）

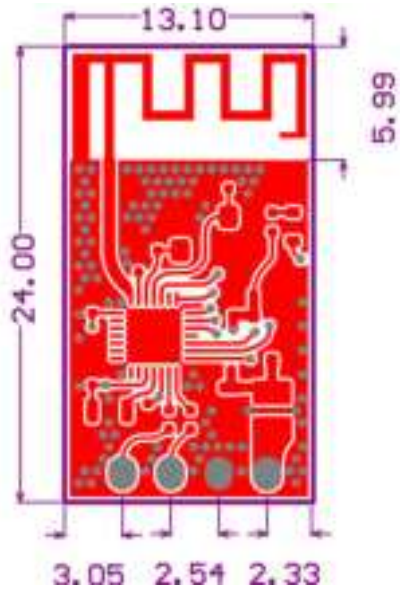
Supply current：< 4.0mA @ 5V (Idle state)

3. Specifications

Parameter	Value
Max transmission distance	150m
Message interval	10ms
Supply voltage	3.6-5.5 V
Power	TBD
Operatingtemperature range	-30~70 ℃（Theoretical data, specific to actual environment）
Storage temperature range	-40~85 ℃（Theoretical data, specific to actual environment）
Size	24 x 13.1x 1 mm
Weight	0.9 g
Communication interface	UART：115200

4. Mechanical specifications

Size： 24.0 * 13.1 * 1.0 mm



5. Pin allocation

Pin	Name	Description
1	RX	UART receive line
2	TX	UART transmit line
3	GND	Ground connect

4	VCC	Power supply 5V

FCC Warning

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

2.2 List of applicable FCC rules

FCC Part 15.247

2.3 Specific operational use conditions

This transmitter/module and its antenna(s) must not be co-located or operating in conjunction with any transmitter. This information also extends to the host manufacturer's instruction manual.

2.4 Limited module procedures

Not applicable

2.5 Trace antenna designs

It is "not applicable" as trace antenna which is not used on the module.

2.6 RF exposure considerations

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The host product manufacturer would provide the above information to end users in their end-product manuals.

2.7 Antennas

PCB Antenna; 2.1dBi; 2.402 GHz ~ 2.480GHz

2.8 Label and compliance information

The end product must carry a physical label or shall use e-labeling followed KDB784748D01 and KDB 784748 stating "Contains Transmitter Module FCC ID:2AXQL-RUKO001".

2.9 Information on test modes and additional testing requirements

For more information on testing, please contact the manufacturer.

2.10 Additional testing, Part 15 Subpart B disclaimer

The modular transmitter is only FCC authorized for the specific rule parts (FCC Part 15.247) listed on the grant, and that the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification. The final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed when contains digital circuity.

FCC Statements

(OEM) Integrator has to assure compliance of the entire end-product incl. the integrated RF Module. For 15 B (§15.107 and if applicable §15.109) compliance, the host manufacturer is required to show compliance with 15 while the module is installed and operating.
Furthermore the module should be transmitting and the evaluation should confirm that the module's intentional emissions (15C) are compliant (fundamental / out-of-band). Finally the integrator has to apply the appropriate equipment authorization (e.g. Verification) for the new host device per definition in §15.101.
Integrator is reminded to assure that these installation instructions will not be made available to the end-user of the final host device.
The final host device, into which this RF Module is integrated has to be labeled with an auxiliary label stating the FCC ID of the RF Module, such as "Contains FCC ID:2AXQL-RUKO001".

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.
Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.
The Integrator will be responsible to satisfy SAR/ RF Exposure requirements, when the module integrated into the host device.

Module statement

The single-modular transmitter is a self-contained, physically delineated, component for which compliance can be demonstrated independent of the host operating conditions, and

which complies with all eight requirements of § 15.212(a)(1) as summarized below.

1) The radio elements have the radio frequency circuitry shielded.
2) The module has buffered modulation/data inputs to ensure that the device will complywith Part 15 requirements with any type of input signal.
3) The module contains power supply regulation on the module.
4) The module contains a permanently attached antenna.
5) The module demonstrates compliance in a stand-alone configuration.
6) The module is labeled with its permanently affixed FCC ID label.
7) The module complies with all specific rules applicable to the transmitter, including all the conditions provided in the integration instructions by the grantee.
8) The module complies with RF exposure requirements.

NOTE: This equipment has been tested and found to comply with the limits for aClass B digital device, pursuant to part 15 of the FCC Rules. These limits aredesigned to provide reasonable protection against harmful interference in aresidential 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 noguarantee that interference will not occur in a particular installation. If thisequipment does cause harmful interference to radio or television reception, whichcan be determined by turning the equipment off and on, the user is encouraged totry 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 thereceiver is connected.
-Consult the dealer or an experienced radio/TV technician for help