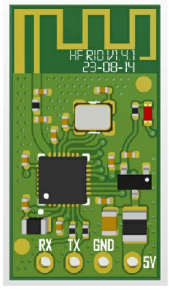
RUIKE
F11GIM2
Remote
ID Module



Ruike F11GIM2 Remote ID Module Instruction Manual

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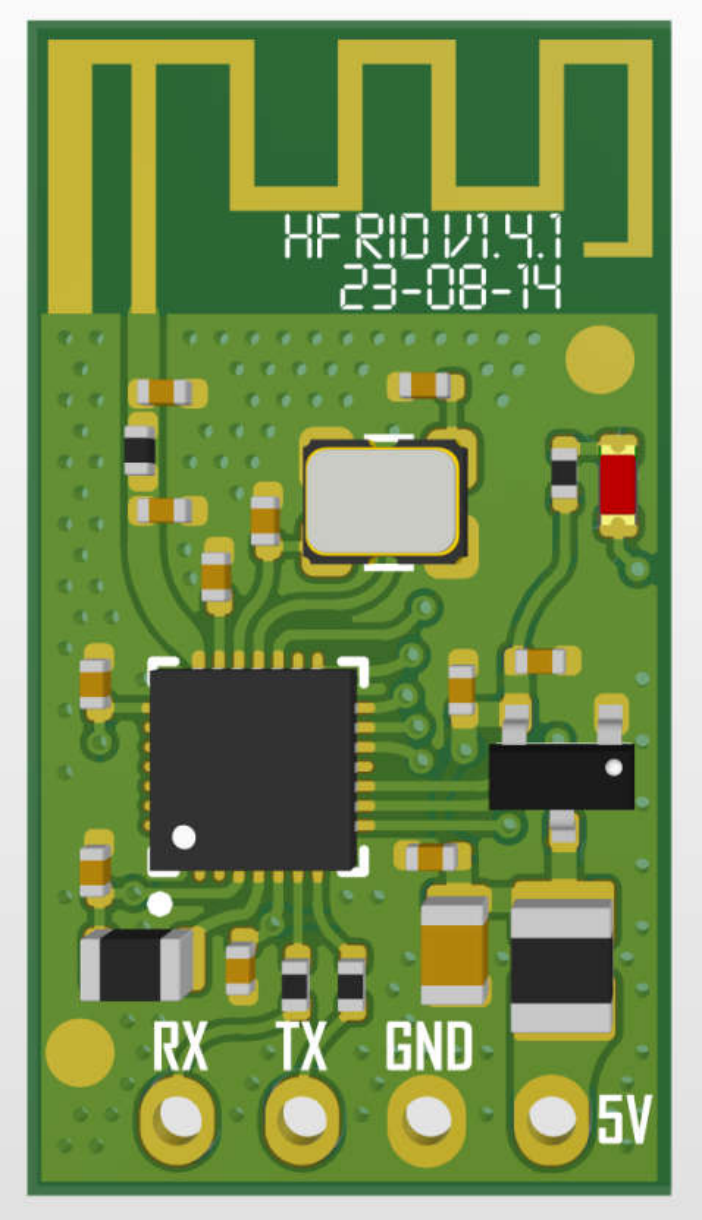
RUIKE

Ruike F11GIM2 Remote ID Module



Product Usage Instructions

- **Installation:**
  - Ensure the F11GIM2 module is powered off before installation. Connect the module to your device according to the pin allocation provided in the user manual.
- **Powering On:**
  - Apply a power supply of 5V to the VCC pin of the module. The supply current should be less than 4.0mA in an idle state.
- **Communication:**
  - Use the RX and TX pins for UART communication with the module. Ensure the baud rate is set to 115200 for proper communication.
- **Environmental Considerations:**
  - Avoid exposing the module to temperatures outside the specified operating range (-30~70°C) and storage range (-40~85°C) to prevent damage.

FAQs

- **Q: What is the maximum transmission distance of the F11GIM2 module?**
  - **A:** The maximum transmission distance is 150m under unobstructed, interference-free conditions.
- **Q: What is the power supply requirement for the module?**
  - **A:** The module operates within a supply voltage range of 3.6V to 5.5V, with a maximum supply current of 4.0mA at 5V in an idle state.
- **Q: How should I handle FCC compliance when integrating this module into my product?**
  - **A:** Follow the FCC guidelines provided in the user manual regarding operational use conditions, antenna design, labeling, and additional testing requirements to ensure compliance.

Revision Description

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

Introduction

The F11GIM2 series module is a remote ID module single board solution designed by Shenzhen Coolle Chaowan Technology Co., Ltd. for drones that meet the F3411-22a specification. Based on BLE 5.3 SOC, it has the.

Features

- **Based** on BLE 5.3 SOC
- **Size** 24x14x1mm

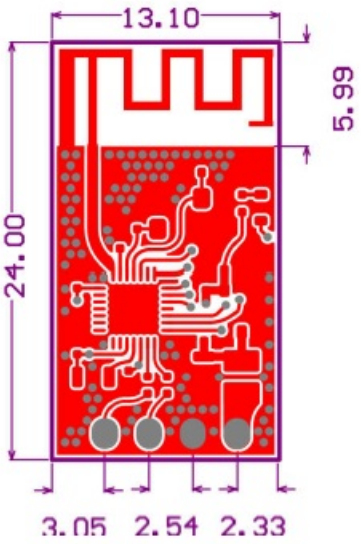
- **Weight** 0.8g
- **MaxTransmissionDistance** 150m unobstructed, free of interference
- **Supply current <** 4.0mA @ 5V (Idle state)

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 the 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

Mechanical specifications

- **Size** 24.0 * 13.1 * 1.0 mm



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

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

List of applicable FCC rules

- FCC Part 15.247

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.

Limited module procedures

- Not applicable

Trace antenna designs

- It is “not applicable” as a trace antenna which is not used on the module.

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.

Antennas

- PCB Antenna; 2.1dBi; 2.402 GHz 2.480GHz

Label and compliance information

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

Information on test modes and additional testing requirements

- For more information on testing, please contact the manufacturer.

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 the host product manufacturer is responsible for compliance with 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.
- (OEM) The integrator has to ensure 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.
- Further, 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.
- The integrator is reminded to ensure 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 for satisfying SAR/ RF Exposure requirements when the module is 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 comply with Part 15 requirements with any type of input signal.
3. The module contains power supply regulations 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 a Class B digital device, under part 15 of the FCC Rules. These limits aredesigned 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 under the instructions, may cause harmful interference to radio communications. However, there is noguarantee that interference will not occur in a particular installation. If this equipment 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 the 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.

Documents / Resources

	Ruike F11GIM2 Remote ID Module [pdf] Instruction Manual RUKO001, 2AXQL-RUKO001, F11GIM2 Remote ID Module, F11GIM2, Remote ID Module, ID Module, Module

References

- User Manual