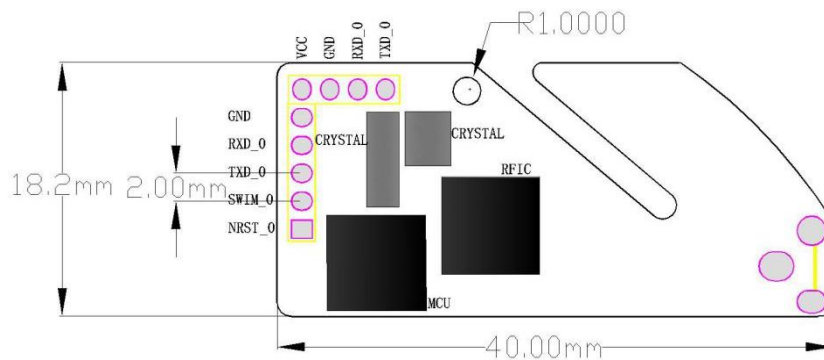


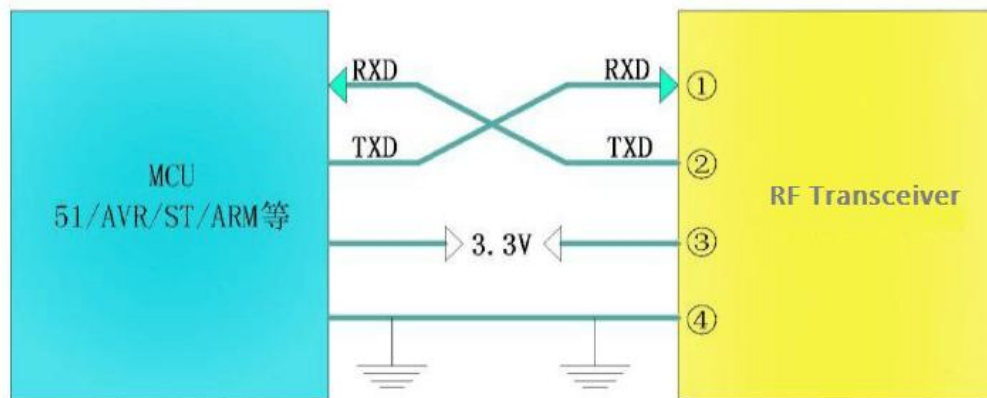
Product specification for 915 MHz RF modular

- GC - TS11-915 module is my company independent development of a based on the latest LoRa™ modulation technology of wireless module, the module using low power consumption MCU with the SENTECH company SX127X series high-performance rf chip, using advanced spread spectrum communication technology for data transmission, is easy to system access, long transmission distance, strong anti-interference ability, good communication effect, stable and reliable, etc.
- The module features:
 - → receiving sensitivity is high, the transmission distance. The maximum sensitivity can reach -148dbm, and the open distance is more than 3000 meters.
 - → the average power consumption is low. Standby current is only 3uA, only 12mA in the receiving state, and it has the function of dormancy.
 - → system access is simple. In the case of not modifying the hardware and software of the original equipment, the wireless module can be directly connected through UART serial port, so that the device has wireless capability.
 - → work patterns varied. The module can choose a variety of serial port and air communication rate, different sleep time to meet different customer needs.

- **Size chart**



Connection diagram



Pin description

Pin	Function	Note
RXD	Signal receiving end	
TXD	Signal transmitter	
VCC	Power	2.6V-3.6V
GND	Signal ground	
SWIM	programming	
NRST	reset	

Performance indicators

Performance index	Parameter	Note
Voltage	2.6V~3.6V	
Temperature	-20°C~+70°C	
Frequency	915MHz	
Stepped frequency	0.01KHz	
Bmnd rate	0.6Kbps	
Sleep cycle	0S-8S	
Modulation Mode	LORA	
Transmitted power	5dBm-20dBm	
Receiving sensitivity	-122dBm~-148dBm	
Emission current	120mA	

Receive current	12mA	
Standby current	3-5uA	
Antenna	PCB	
Antenna impedance	50Ω	

The software Settings

Wireless module with my company's GC - UT01 module connected to the computer, through the PC software, can modify the work frequency of the module, transmission power, a serial port rate, parity, wake up mode, air speed, send wake up, sleep cycle Settings, etc.

FCC Warning Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. 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 Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

FCC Radiation Exposure Statement

The modular can be installed or integrated in mobile or fix devices only. This modular be installed in any portable device, for example, USB dongle like transmitters is forbidden.

This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be collocated or operating in conjunction with antenna or transmitter.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display label referring to the enclosed module.

This exterior label can use wording such as the following:

“Contains Transmitter Module FCC ID: 2AQQ8161616888 Or Contains FCC ID: 2AQQ8161616888 when the module is installed inside another device, the user manual of this device must contain below warning statements;

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the follow two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may undesired operation.

2. Changes or modifications not expressly approved by the party responsible for complian could void the user's authority to operate the equipment.

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.

This device is intended only for OEM integrators under the following conditions:

1) The antenna must be installed such that 20 cm is maintained between the anten and user.

2) The transmitter module may not be collocated with any other transmitter antenna. Module

Antenna Type: PCB ANT, 0dBi gain.