

13.56MHz RFID Reader

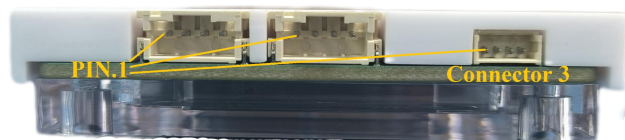
Model Name: LM-RFR01

LM-RFR01 is an RFID reader with integrated USB Hub and built-in USB to UART chip, which supports reading cards with ISO14443 and ISO15693 protocols. Once the card is successfully read, the data will be transmitted to the host via USB HID and UART.

Table 1 Specification:

| | |
|--------------------------------|-----------------------|
| Power | DC 5V @ ≤150mA |
| Operating temperature | -20℃~+60℃ |
| Operating humidity | 5%~95% |
| Interface | USB、UART 115200,N,8,1 |
| Read range | 2~10cm |
| Frequency | 13.56MHz |
| Audio/Visual Indication | LED |
| Air interface protocol | ISO 14443、ISO 15693 |
| Weight | 90g |
| Size | 112.5*65*16mm |

Wiring and Function



Product Picture

The module is connected to the host computer via connector 1. Once the card is detected, the red LED lights up and the data is sent to the host computer via USB.

Connector 2 can be connected to an external RGB indicator.

Connector 3 allows for external connection of other USB devices.

Table 2 connector 1 pin definition

| PIN | Definition | Description |
|------------|-------------------|--------------------|
| 1 | VCC | +5V |
| 2 | D- | Data- |
| 3 | D+ | Data+ |
| 4 | GND | Ground |

Table 3 connector 2 pin definition

| PIN | Definition | Description |
|------------|-------------------|--------------------|
| 1 | Blue | Blue LED Negative |
| 2 | Green | Green LED Negative |
| 3 | Red | Red LED Negative |
| 4 | VCC | LED Positive |

Table 4 connector 3 pin definition

| PIN | Definition | Description |
|------------|-------------------|--------------------|
| 1 | VCC | +5V |
| 2 | D- | Data- |
| 3 | D+ | Data+ |
| 4 | GND | Ground |

Applicable scope: The Lumicare RFID Module will be used in the Lumicare UVC Disinfection System for Ultrasound Probe

Notice to user

FCC Caution

FCC Part 15.19

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 Part 15.21

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

FCC Part 15.105

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Verification of harmful interference by this equipment to radio or television reception can be determined by turning it off and then 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 different circuit to that of the receiver's outlet.
- Consult the dealer or an experienced radio/TV technician for help.

FCC RF Radiation Exposure Statement

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment.
3. The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

User manuals for license-exempt radio apparatus shall contain the following or equivalent notice in a conspicuous location in the user manual or alternatively on the device or both.

Host product manufacturers that they need to provide a physical or e-label stating, "Contains FCC ID:2BM9Y0001" with their finished product.

Only those antennas with same type and lesser gain filed under this FCC ID can be used with this device.

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.

The final host integrator must ensure there is no instruction provided in the user manual or customer documentation indicating how to install or remove the transmitter module except such device has implemented two-ways authentication between module and the host system.

The final host manual shall include the following regulatory statement: This equipment has been tested and found to comply with the limits. 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.

This module has been tested and found to comply with part 15.225 requirements for Modular Approval. This module is intended for OEM integrator. The OEM integrator is responsible for the compliance to all the rules that apply to the product into which this certified RF module is integrated. Additional testing and certification may be necessary when multiple modules are used.