

**RFID Module**  
**<CRM-1356B>**  
**User Manual**

COMMAX Co., Ltd.

## 1. General Information

- CRM-1356B is RF Reader Module which can exchange UID(Serial Number) with 13.56MHz RF Card. The module consist of ANT board and Main board. Once the ANT board read the RF signal, it communicates with Main board which will uplink data to connected peripheral.

## 2. Operational Description

- 1) Please see Rating Power before you supply power to the module.
- 2) Approach the Card to the Ant board. Once the module properly read the information from the CARD, the LED will flickering inside the Main board. And it starts the UART communication with connected peripheral.
- 3) Please note that this module will only be compatible with Mifare and ISO 14443 A Type RF card.

## 3. Pin Specification

- CN1 Interface(Com Port)

Pin #	Function	I/O	Description
1	POWER	I	DC 5V
2	RXD	I	UART serial input
3	TXD	O	UART serial output
4	GND	-	Ground

- CN5 Interface(Engineer Port)

Pin #	Function	I/O	Description
1	GND	-	GROUND
2	TXD	I/O	SDA
3	POWER	I	DC 3.3V
4	RXD	-	NOT USED

## 4. Block Diagram

# Confidential

## 5. Specification

Item	Description	Note
Model Name	CRM-1356B	
Rated Power	DC 5V	
Max. current	90mA	
Frequency	13.56MHz	
Channel	1 channel	
Modulation Type	ASK	
Temperature and Humidity	-20 ~ 80 °C. 90%	

- Software Version: 1.0
- Hardware Version: 1.0

## 6. Federal Communication Commission Interference Statement

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 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 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 transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

#### OEM Responsibilities to comply with FCC

- The module is limited to OEM installation only.
- The OEM integrator is responsible for ensuring that the end-user has no manual instructions to remove or install module.
- The antenna(s) must be installed such that a minimum separation distance of at least 20 cm is maintained between the radiator (antenna) and all persons at all times.
- The module is limited to installation in mobile or fixed applications.
- The transmitter module must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.
- Separate approval will be required for all other operating configurations, including portable configurations with respect to Part 2.1093 and different antenna configurations other than supplied antennas.

As long as the condition above is 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 (for example, digital device emissions, PC peripheral requirements, etc.).

Also, the OEM integrator is responsible to provide to the host manufacturer for compliance with the Part 15B requirements.

#### Host User Manual

The host manual shall include the following regulatory statement:

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.

Part 15.21: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

#### RF exposure

This device is only authorized for use in a mobile application. This device should be installed and operated with minimum distance 20cm between the radiator & your body.

#### Host Product labeling

The module is labeled with its own FCC. If the FCC ID 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 a label referring to the enclosed module. In that case, the final end product must be labeled in a visible area with the following: "Contains FCC ID: CCECRM-1356B"