



# Product Specification

Product Name: Multi-protocol RFID Reader Module

Product Model: HW58R12-WBDB/HW59R12-XYLS

Product Code: 5824071101/5924071101

Preparation: Xu Xiaobing  
Date: 24/08/08

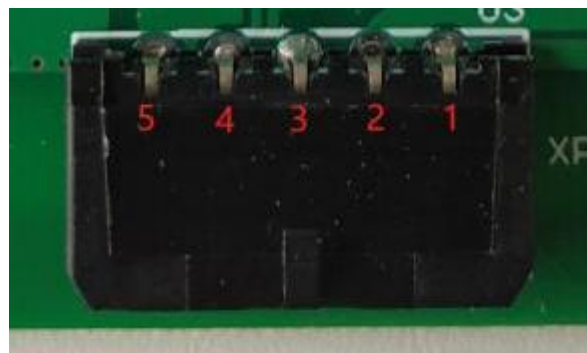
Checked: Wang Hanping  
Date: 24/08/08

Approved: Jiang Xulian  
Date: 24/08/08

## Change Log

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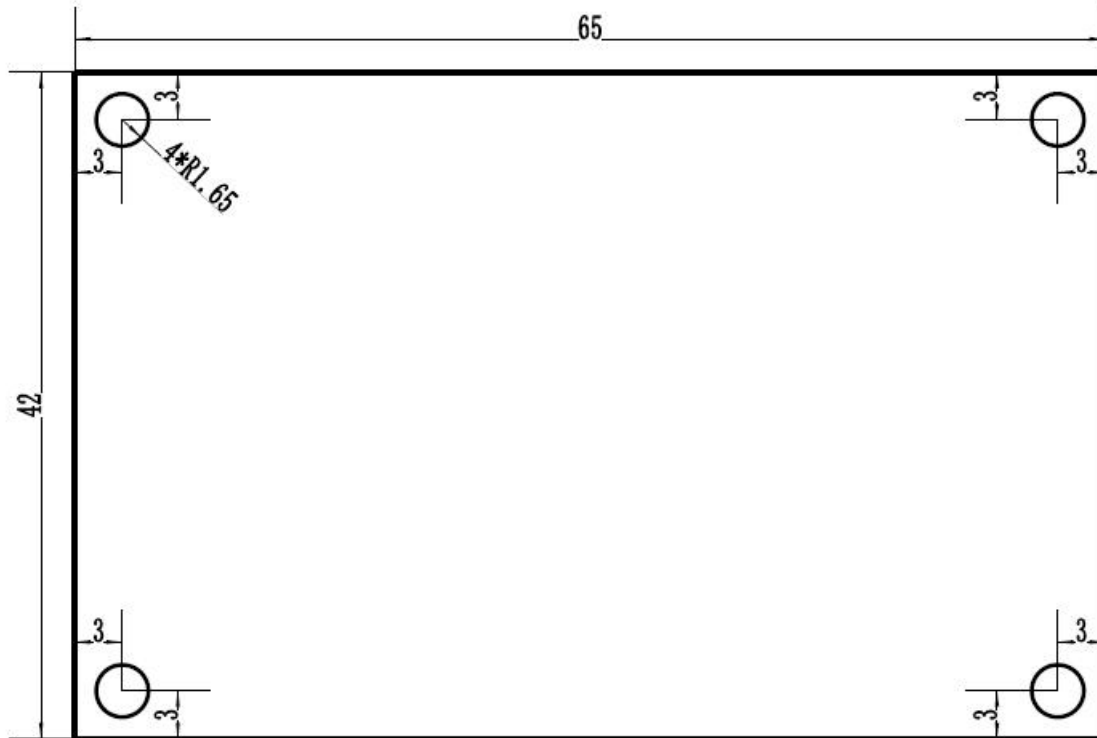
## 1.Product Image:



Interface Specification (C3030WR-5P , RS232) :

Pin1	Pin2	Pin3	Pin4	Pin5
VCC	GND	RXD	TXD	GND

## Card Reader Size (mm) :



## 2. Features and Functions

- This module is a 13.56MHz RFID read/write module developed based on a multi-protocol reader chip;  
The reader chip supports ISO/IEC 14443 Type A/Type B protocols.  
Supports mobile payment applications such as Apple Pay and Samsung Pay.  
Supports P2P passive initiator mode under ISO/IEC 18092.  
Supports ISO/IEC 15693 protocol.  
Complies with EMV 3.0/3.1 certification, including electrical, protocol, and mobile compatibility tests.  
The module comes pre-integrated with operational commands for reading Mifare1 S50/S70, Mifare UltraLight, Mifare DESFire, CPU cards, and second-generation Chinese resident ID cards.
- Wide operating voltage range: 5V–24V;
- Supports RS232 serial communication with adjustable baud rate;
- Automatically detects card presence and outputs data via serial port;
- Supports Low Power Card Detection (LPCD);
- LED Indicator Light Prompt.

### 3. Technical Specifications

Product Name	Multi-protocol RFID Reader Module
Product Model	HW58R12-WBDB/HW59R12-XYLS
Product Dimensions	65*42mm
Operating Environment	Operating Temperature: -40 to 85°C Maximum Humidity: 5%~95% RH, non-condensing and non-freezing
Operating frequency	13.56mHz
Contactless Card	Contactless smart cards supporting ISO/IEC 14443 Type A/Type B protocols Contactless smart cards compliant with ISO/IEC 15693 protocol
Card Reading Distance	≤4cm
Communication Method	RS232 serial communication, transmission rate: 19200 bps
Power Supply	DC 12V, supports input range of 5~ 24V
Power Consumption	Standby: <0.3W
Indicator	Power indicator light
Other Features	Provides interface functions or interface command sets, supports custom development.

### 4.Conformal coating follows the following standards:

- 4.1.Spray coating thickness: 0.1-0.3 mm, with a cured thickness of 40-60 μm.
- 4.2.Conformal coating bubble standards: Bubbles are allowed on the plastic body or insulating parts of components, and small bubbles within the coating are acceptable. Only a single bubble enclosing a single part of a conductor is acceptable; bubbles between the component leads are not acceptable.
- 4.3.Exposed copper with tin plating, connectors, and power components should not be coated with conformal coating.
- 4.4.Components within 3 mm around the connectors do not require conformal coating, but a clear isolation strip of conformal coating must be present around the connectors.
- 4.5.No conformal coating is allowed within a 5 mm diameter of positioning holes, and holes should not be filled.
- 4.6.All IC component leads must be coated with conformal coating, and there should be visible traces of conformal coating on the body.

### 5.Salt Spray Testing is conducted in accordance with the following standards:

GB/T 2423. 17-2008 《Environmental Testing for Electrical and Electronic Products, Part 2: Test Methods, Test Ka: Salt Spray》

## FCC 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.

Note: 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 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.

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

## FCC Radiation Exposure Statement

This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device must operate with a minimum distance of 20 cm between the radiator and user body.