

MC-R102-232

v 1.0

2024-04-23

Power By MettaX

1. Product pictures:



2. Product parameters

Type	ID card reader	Use the card	ID block
Service frequency	125khz,13.56Mhz,15693,Desfire	Sensing distance	5-15cm
Working voltage	DC5~16V	Working current	< 50mA
Read the card speed	<0.2 Seconds	Read the card interval	<05 Seconds
Working temperature	-25°C~85°C	Working humidity	10%~90%
Size	48×80×12.5(mm)	Pigment	black

3. Product features:

This series of 125KHz,13.56MHz,15693,Desfire non-76×115×16 (mm) contact RFID card and M1 card reader, using advanced RF receiving line design and industrial-grade embedded microcontroller, combined with efficient decoding algorithm, to complete the 64bits Read-Only uem4100 compatible ID card.

This series of card readers has the characteristics of high reception sensitivity, low working current, single DC power supply, low price, high performance stability and the following characteristics:

- Strong resistance to metal shield and card reader mutual interference ability.
- Advanced circuit design, surge protection, misconnection protection.
- Use of pure digital imported radio frequency base station chip, no-error code design.
- Intelligent sound and light control mode.
- The buzzer sound is clear and loud, and will not be disturbed.
- Transmission distance is long RS232 (10 m).

- The use of imported resin sealing, sealing type, indoor and outdoor use are appropriate.
- The output adopts glass discharge tube and semiconductor discharge circuit, using multi-stage lightning protection, resistant to 15KV electrostatic impact.
- According with the GB/T17626.4/IEC61000-4-4 electric fast transient pulse group.
- Shell material using PVC and spray plastic its inside can be filled with black resin glue (effective waterproof)
- Built-in 125 KHz copper winding antenna, buzzer, red (blue) green two-color LED.
- Transfer mode RS232 real-time transmission mode.

4. Definition of the card reader wiring harness:

Red	Black	Green	White
DC12V	GND	TX	RX

5. Working principle of the card reader:

- (1) The card reader will send the carrier signal outward through the antenna;
- (2) After the card enters the working area of the card reader, the resonant loop composed of the inductor coil and the capacitor in the card receives the carrier signal emitted by the card reader. From this signal, the RF interface module of the chip in the card generates the power supply voltage and the reset signal system clock, so that the chip "activates" the chip;
- (3) The chip reading control module encodes the data in the memory on the carrier, and sends it back to the card reader by the antenna in the card;
- (4) The card reader demodems and decodes the received card return signal, and then sends it to the background computer or controller;
- (5) The background computer or controller according to the legitimacy of the card number, for the corresponding processing and control of different applications.

6. Notes for the installation of the card reader:

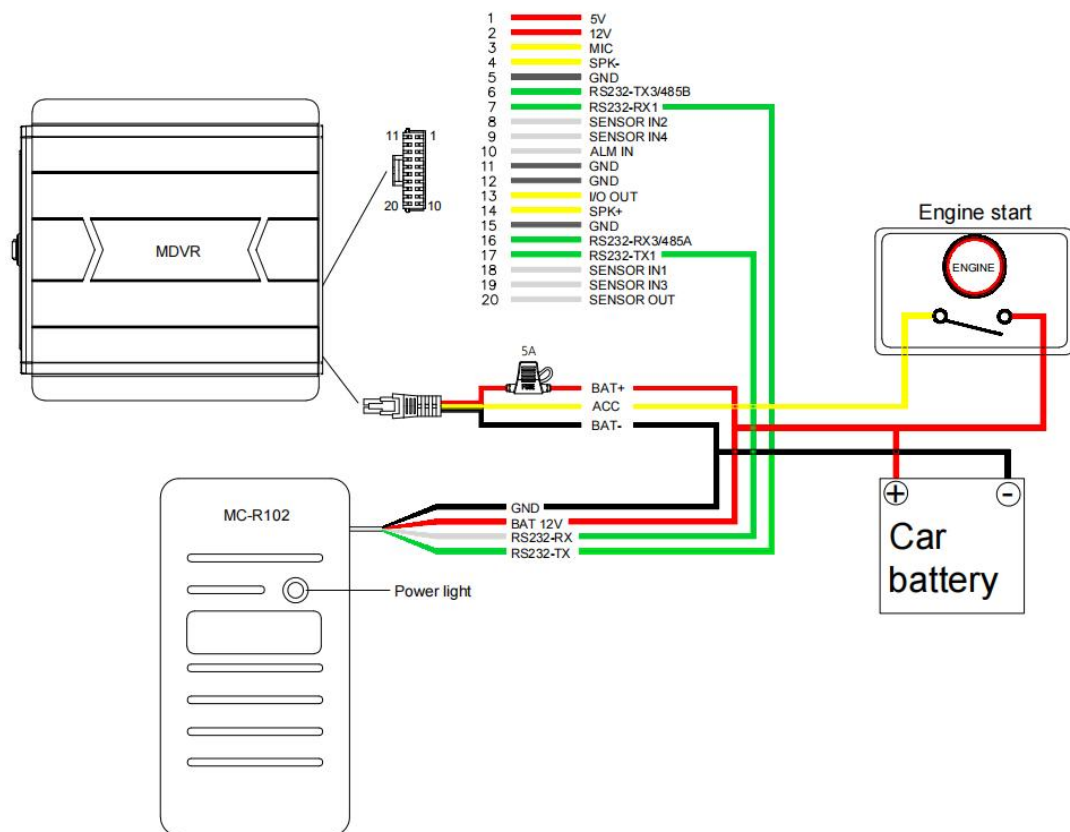
The standard card distance of the card reader is 5-15cm, and the reading distance is affected by different card forms and materials. The way of reading the card, it is recommended to use the card to read the card naturally close, with the card from the side of the card reading method is not desirable, does not guarantee the success of the card.

The card reader is not recommended to be installed on the metal surface, because the card reader is an RF product, whether the front or the rear metal pair will absorb its RF signal, if the metal surface is very large, it will even affect the card reader to read the card, or the reading card distance attenuation.

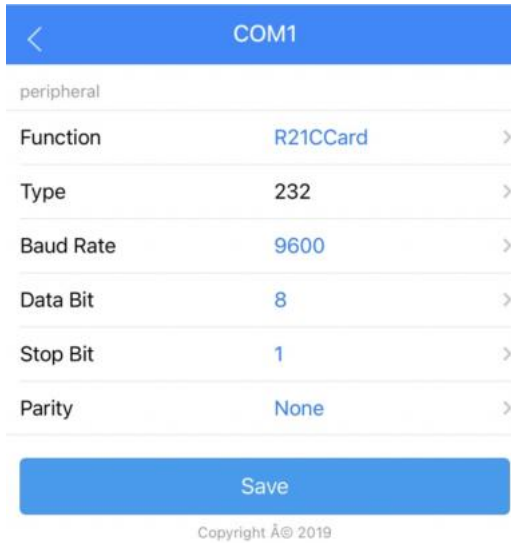
Too close distance between the two card readers will also affect the card reader, some will make the card distance shorter, some will become longer to cause the two readers to read the card at the same time or the reader can not read the card. The distance between the two card readers was kept above 25cm

7. Installation process of card reader and Dashcam host:

- (1) Corresponding access device 232-RX / 232-TX line, 12V power line and GND line;



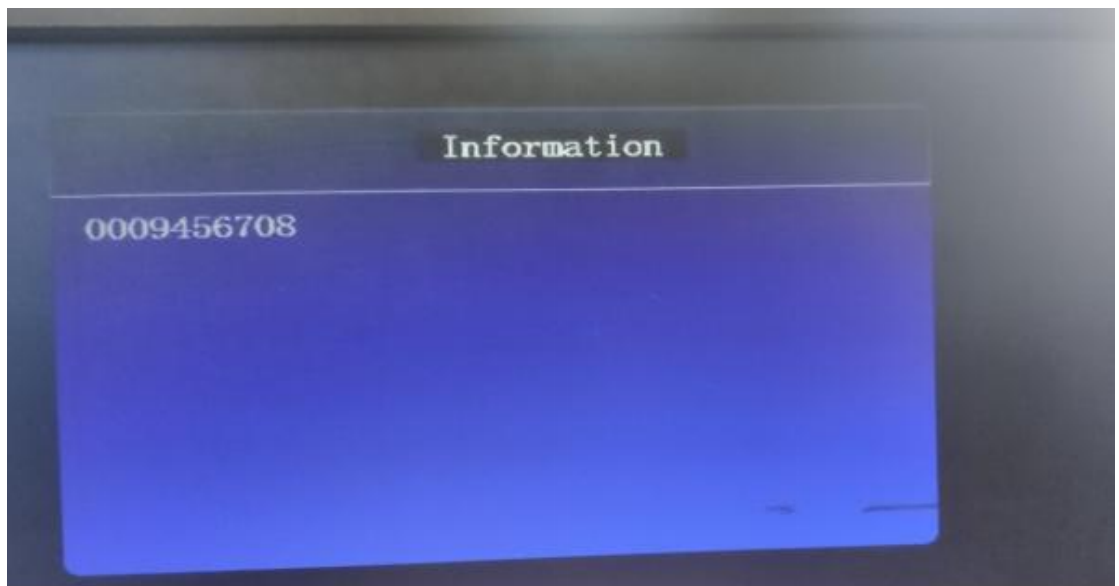
- (2) In peripheral management-serial port management, select card reader R21C, port rate: 9600, data bit: 8, stop bit: 1, check bit: no.



COM1	
peripheral	
Function	R21CCard >
Type	232 >
Baud Rate	9600 >
Data Bit	8 >
Stop Bit	1 >
Parity	None >
Save	
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(3) Card card test

- ① Device display: when the pop-up message (card number) appears in the preview screen, it represents the success of the card swiping;



- ② Platform display: the card number information of the current device can be read in the platform, which represents the success of the card.