R11C IC-RS232 Reader



Introduction:

R11C series it's a 13.56Mhz a Desktop Universal MF card Reader (Read only type) with a standard serial port, can read the card serial number and send to computer. Reader distance up to 80mm, it's not only simple aspect, but also stable and reliable data. Widely used for RFID Radio Frequency Identification system and project, Such as Automated parking management system, Personal identification, Access controller, Production Access control, etc

Basic parameters:

Item	Parameters
Model	R11C (HF-IC Reader)
Frequency	13.56Mhz
Support cards	MF\S50\S70\NTAG203\NTAG213 etc.
Output format	10-digit dec (Defoult output format) (Allow user to customize the output format)
Size	110mm×80mm×26mm
Colour	Black
Interface	RS232
Power Supply	DC 5V
Operating Distance	0mm-100mm (related to the card & the environment)
Service Temperature	-10℃ ~ +70℃
Store Temperature	-20℃ ~ +80℃
Working humidity	<90%
Read time	<200ms
Read interval	＜0.5S
Weight	About 175G
Cable length	1450mm
Material of reader	ABS
Operating System	Win XP\Win CE\Win 7\Win 10\LIUNX\Vista\Android
Indicators	Double Color LED (Red & Green) and Buzzer

Usage and precautions：

1. How to use/install

Method of installation and use

1. Connect with computer through a serial cable directly. When the buzzer sounded, reader into the self-inspection. And the same time, LED turn into red means standby.

2. Open the output of computer software, such as Serial debugging assistant.

3. Put tag on the top of reader, the software will output a data (card number) of the tag. When reading the tag, LED light change from red to green.

Detecting device is connected

Open the Device Manager of computer, if appears Device and “COM” port is OK that means Reader has successfully into computer.

2. Communication Format

RS232 Communication

9600 bps, none parity, 8 data bits, 1 stop bit

Data Format

STX	Length	CardType	SNR [0..N]	BCC	ETX

The following table describes the packet fields

Field	Length	Description
STX	1	0x02, the starting of a data packet.
Length	1	Length of the data bytes in the packet (except STX).
CardType	1	0x01: Mifare; 0x02: EM4100
SNR [0..N]	5	SNR [0]: batch number, SNR [1..4]:serial numbers
BCC	1	BCC = Length xor CardType xor SNR [0..N]
STX	1	0x03, the ending of a data packet.

Example: 02 0A 01 06 00 8E 6D 5D B0 03

STX: **02**

Length: **0A**, 9 bytes

CardType: **01, MF**

SNR: **06 00 8E 6D 5D, 06 = batch number, 00 8E 6D 5D = 0009334109 (DEC)**

BCC: **B0, B0 = 0A xor 02 xor 06 xor 00 xor 8E xor 6D xor 5D**

EXT: **03**

3. Precautions

- Do not install the reader on the magnetic objects and metal objects, they will seriously affect the RF signal.
- If after reading, the tag is still in the induction zone, the RF reader will not send data and without any hints.

4. Common problems

- Operation without feedback: Please check whether the interface plugged in, whether the tag is a valid or whether another RF tag is within the reading range.
- Data error: Please check Whether the mouse is moved, whether the reader is in a critical state and whether the cable length is too long.