FC8130 Barcode Scanner Integration Manual

Version v1.0

Disclaimer

Please be sure to carefully read all the contents of this "FC8130 Product Manual" before using the product to ensure the safe and effective use of the product. Do not disassemble the product or tear off the seal on the device by yourself, otherwise Beijing Weiguang Interconnect Technology Co., Ltd. will not be responsible for warranty or replacement of the product.

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Revision History

Change Date	Version	Version Description	responsibility appoint people
2020.11.2	V1.0	Initial release	Liu Guohua
2024.12.13	V2.0	Revisions	Song Jian

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1. Preface

Thank you for using the FC8130 barcode scanning device provided by Weiguang Interconnect. Carefully reading this document can help you understand the functions and features of this device, and quickly master the use and installation methods of the device.
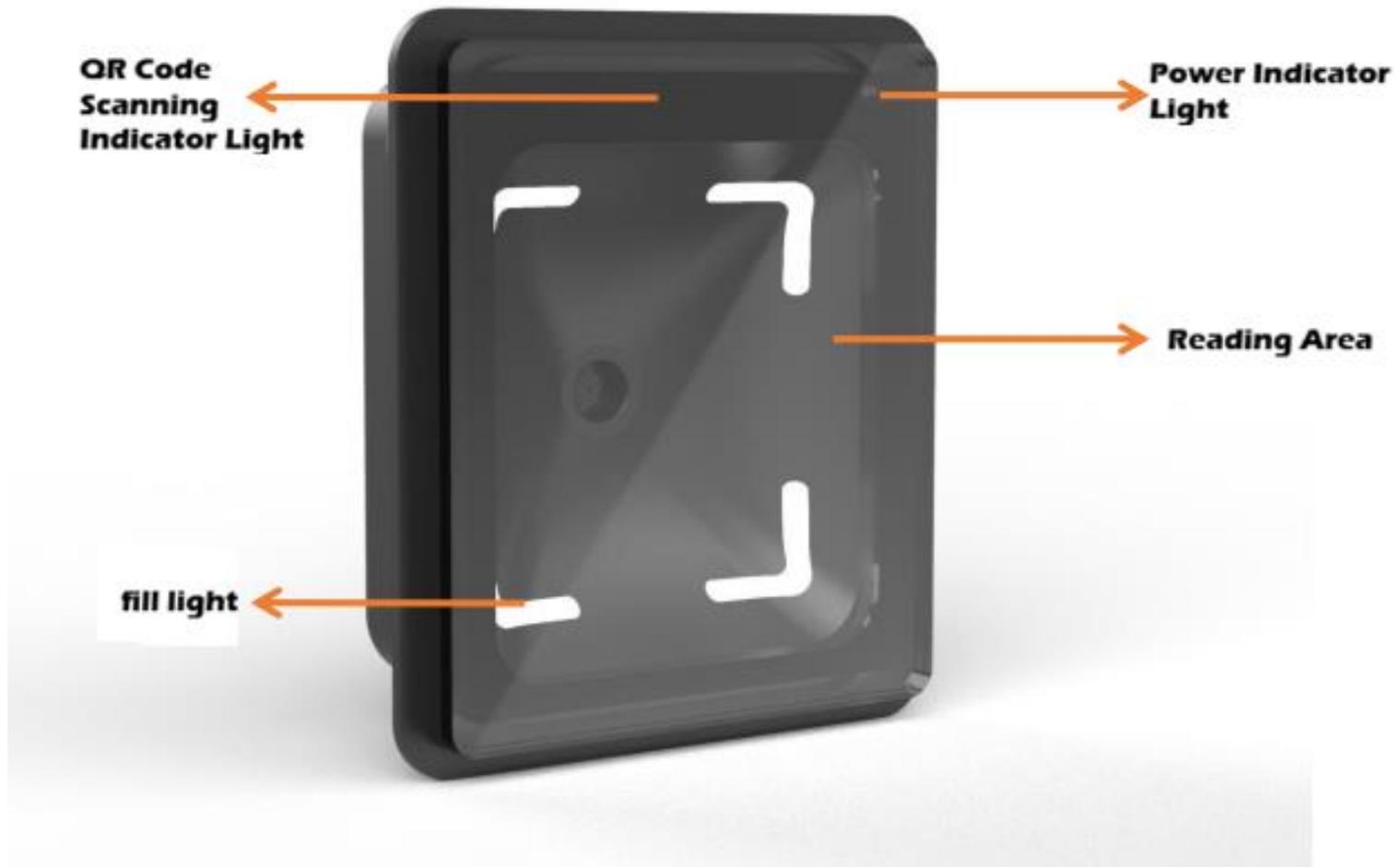
1.1. Product Introduction

The FC8130 barcode scanning device is a product specially developed for the field of access control barcode scanning. It has multiple output interfaces and supports USB, Wiegand, TTL, RS232 and RS485 output modes. It is suitable for gate machines, access control and other scenarios.
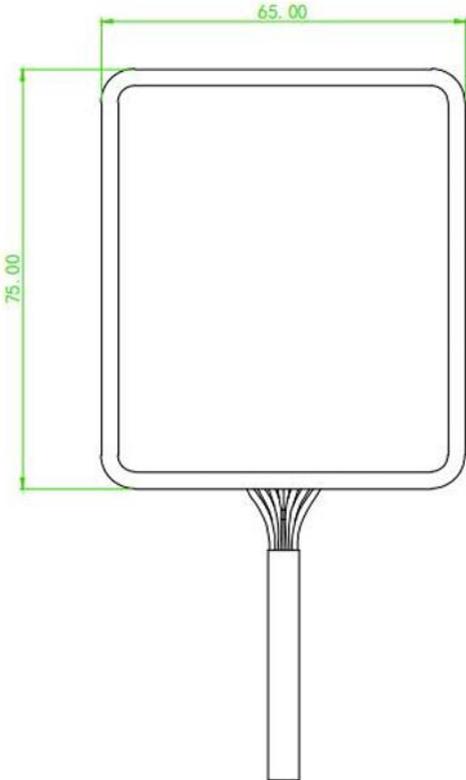
1.2. Features

1，FC8130 barcode scanning device supports barcode scanning and card swiping two-in-one.

2，The reading speed is fast and the accuracy is high. The fastest reading speed can reach 0.1 second.

3，Simple operation and user-friendly tools make equipment debugging more convenient.
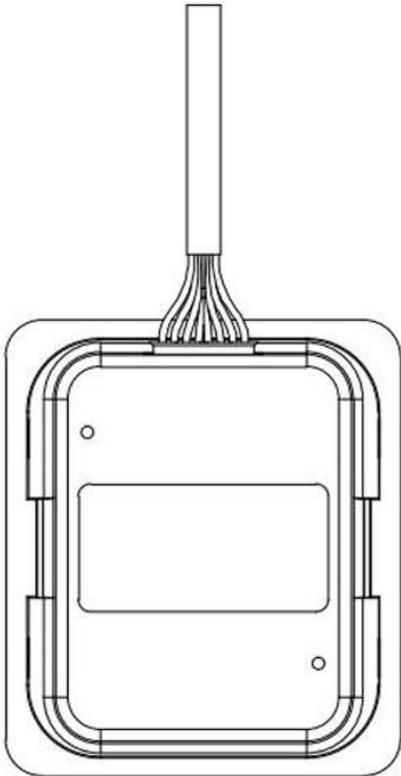
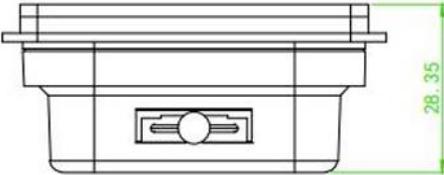# 2.Product Appearance

2.1.1. OVERALL INTRODUCTION

QR Code Scanning Indicator Light

Power Indicator Light

Reading Area

fill light

2.1.2. PRODUCT DIMENSIONS

65.00

75.00

front view

underside view

28.35

lateral view

3.   Product Parameters

3.1. General parameters

General parameters	
Supported interfaces	USB, RS232, RS485, TTL, Wiegand
Instruction method	Red, green and white indicator lights buzzer
Image Sensor	300,000-pixel CMOS sensor
Maximum resolution	640*480
Installation	Flush Mount
Product size	88.30mm*88.30mm*28.35mm
Reading window size	56mm*51mm

3.2. Reading parameters

QR code reading parameters	
Identification code system	QR, PDF417, CODE39, CODE93, CODE128, ISBN10, ITF, EAN13, DATABAR, aztec, etc.
Decoding support	Mobile screen\paper
Reading Depth of Field	0mm~62.4mm(QRCODE 15mil)
Reading accuracy	≥8mil
Read speed	100ms each time (average), supports continuous reading
Reading direction	Tilt ±56.3° Rotation ±360° Yaw ±55.7° (15milQR)
Field of view	Horizontal 72.1° Vertical 56.6° Field of view 84.3° (15milQR)
RFID card reading parameters	
Identification card type	ISO 14443A protocol card, ISO 14443B protocol card, ID card (only reads physical card number)
Operation card mode	Read UID/Read and write M1 card sectors

RF operating frequency	13.56MHz
Reading effective distance	＜5cm

3.3. Electrical parameters

Power input is only allowed after the device is connected. If the device is plugged in or unplugged when the cable is powered (hot plugging), its electronic components will be damaged. Please make sure that the power is turned off when plugging or unplugging the cable.

A bad power connection, or a short power-off and power-on operation, or an excessive voltage drop pulse may cause the device to not be in a stable and normal working state, so the power input must be kept stable. After turning off the power input, it takes more than 2 seconds to turn it on again.

Electrical parameters	
Operating voltage	DC 5V-24V
Working current	280mA (typical 5V power supply)
Rated power consumption	1400mW(Typical 5V power supply)

3.4. Work Environment

Working environment parameters	
Electrostatic protection	±8kV (air discharge), ±4kV (contact discharge)
Operating	-20° C-65° C

temperature	
Storage temperature	-40°C-80°C
Relative humidity	5%-95% (no condensation) (Ambient temperature 30°C)
Ambient illumination	0-100000Lux (not in direct sunlight)

4.Interface Definition

PIN8   PIN1

Pin#	definition	illustrate
Pin 1	TTL_RX	TTL Receiver
	D0	Wiegand 0
Pin 2	TTL_TX	TTL transmitter
	D1	Wiegand 1
Pin 3	GND	Power Ground
Pin 4	VCC	Positive power supply
Pin 5	232_RX	232 Receiver
	485A	485 Pinout
Pin 6	232_TX	232 sender
	485B	485 Pinout
Pin 7	DM	USB_data －
Pin 8	DP	USB_data+

5.Device Configuration

5.1. Usb configuration instructions

1. There are two ways to use USB devices:

(1) USB simulated keyboard mode: When configured in this working mode, its working principle is similar to that of a computer's English keyboard, and content is output at the desktop cursor.

(2) USB development mode: When configured in this working mode, you need to refer to the official SDK and call the interface to obtain data.

2. Device connection: There is a USB interface on the USB device connection cable, which can be connected to the USB port of the computer.

3. Equipment configuration:

Configure normal mode:

(1) Open the configuration tool. Without clicking to connect a device, select the corresponding device model and click Next:
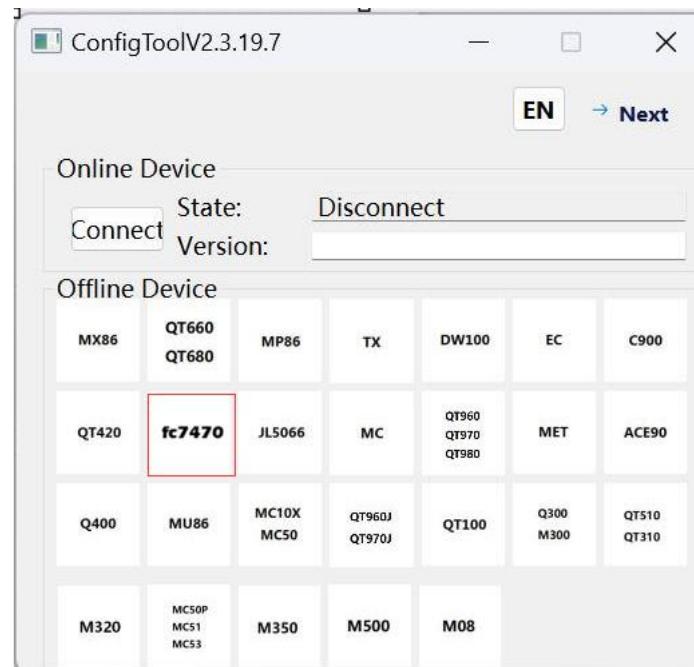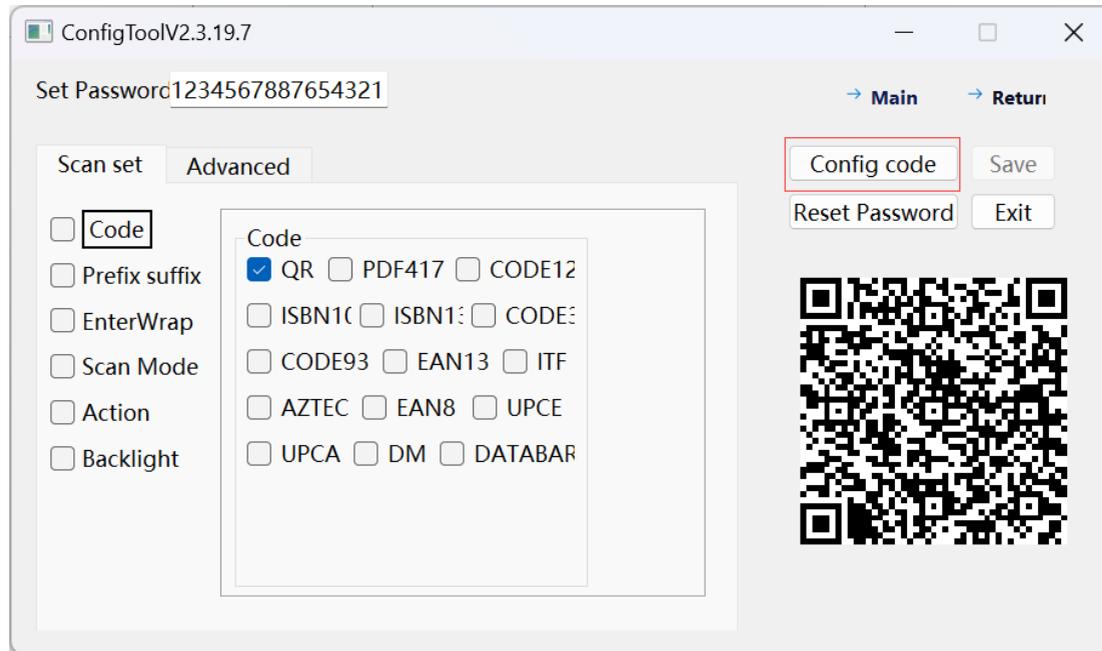

(2) Output mode, normal mode can select "Normal----USB keyboard, select and click next:
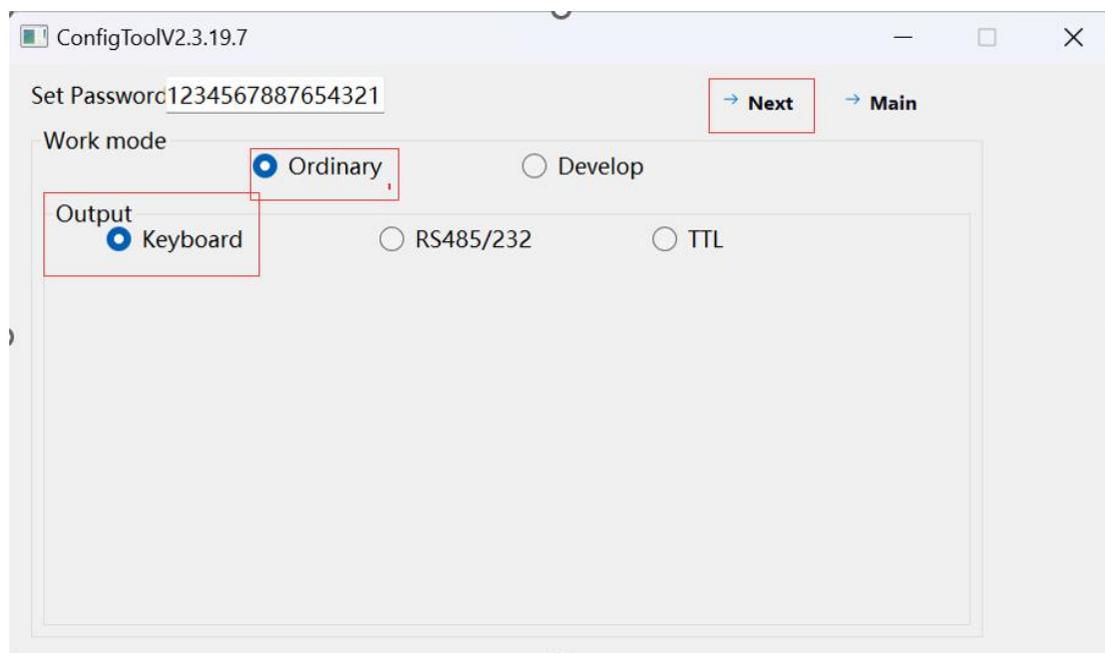
(3) Enter the configuration pageClick on the right to generate the configuration code, and a QR code will be generated below,Use a

barcode scanner to scan this QR code. The barcode scanner will beep twice and then power off and restart the barcode scanner. The configuration is successful.:

(4)After restarting, you can test the USB keyboard output,Create a new txt document on the desktop and place the cursor inside it:

Then you can scan your own QR code\swipe the card to view the data. For example, the QR code below has the content "123":
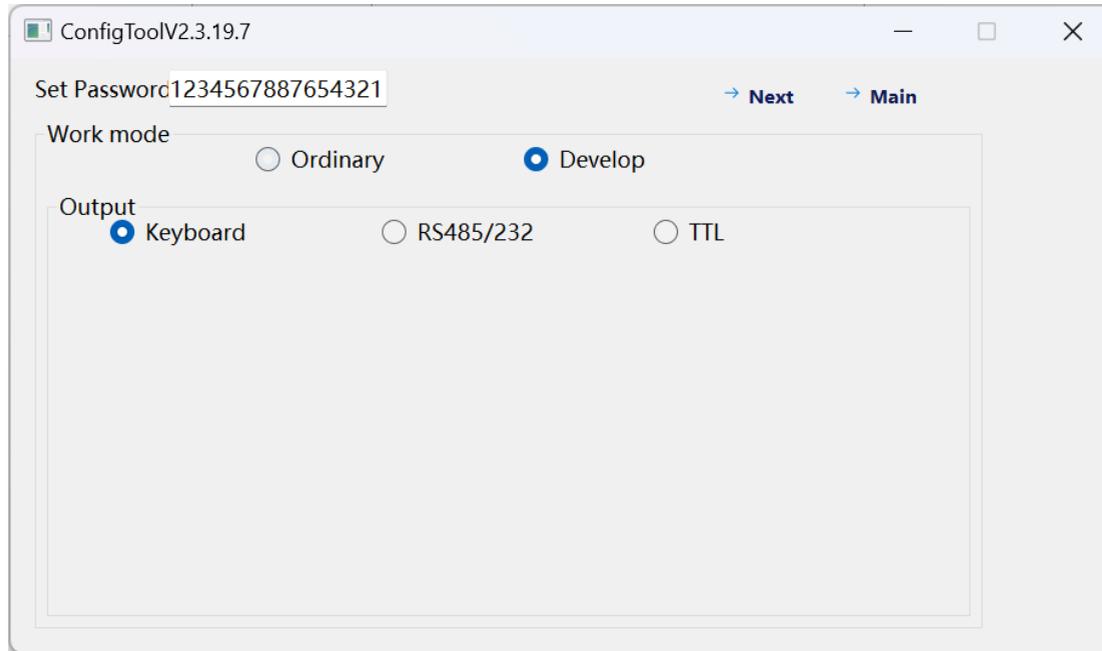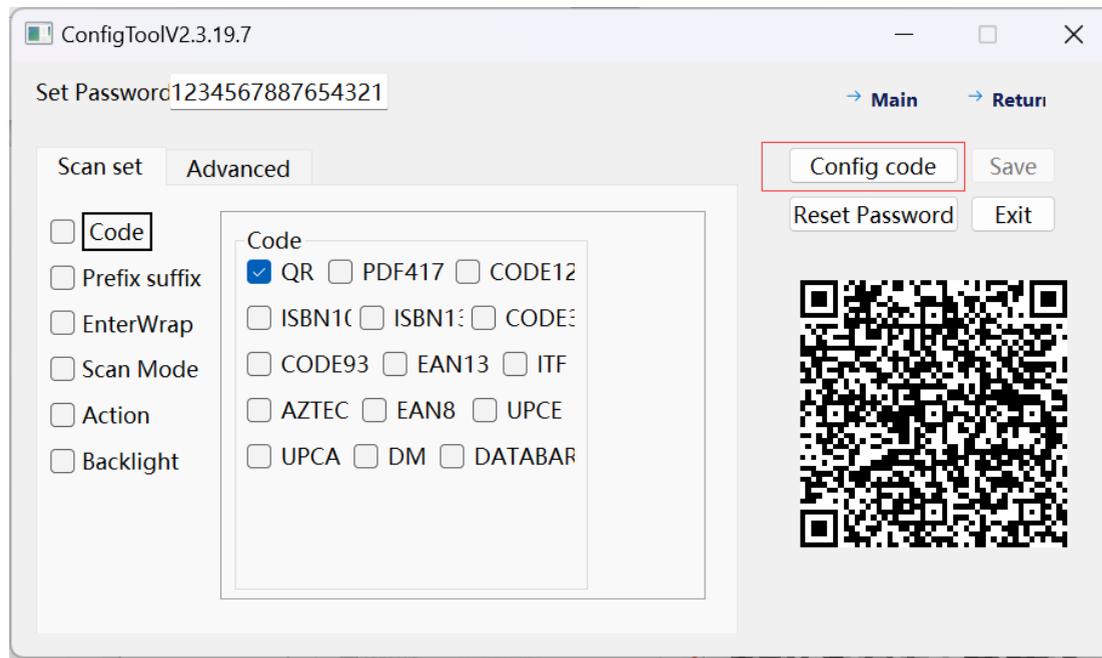

The text shows the following:

```
123
123
```

Configure development mode:

(1)   Configure the working mode to development mode. The configuration options are as follows: Development --- USB keyplate:

(2)Generate a configuration code, scan the generated configuration code with the scanner, and then power off and restart the scanner to configure it into development mode.:

（2） The development mode needs to be used with the SDK we provide, and cannot output directly at the cursor.

5.2. 232/485 Configuration Instructions

1. Equipment Introduction

232/485 output model devices output serial port data, which can only be viewed in the serial port debugging tool. Data cannot be viewed in text.

2. Equipment wiring

（1） Connect one end of the serial cable to the barcode scanner;
（2） The other end is connected to the host computer according to the line sequence. The 232 device is connected to the tx, rx, gnd and vcc pins, and the 485 device is connected to the 485a, 485b, vcc and gnd pins.
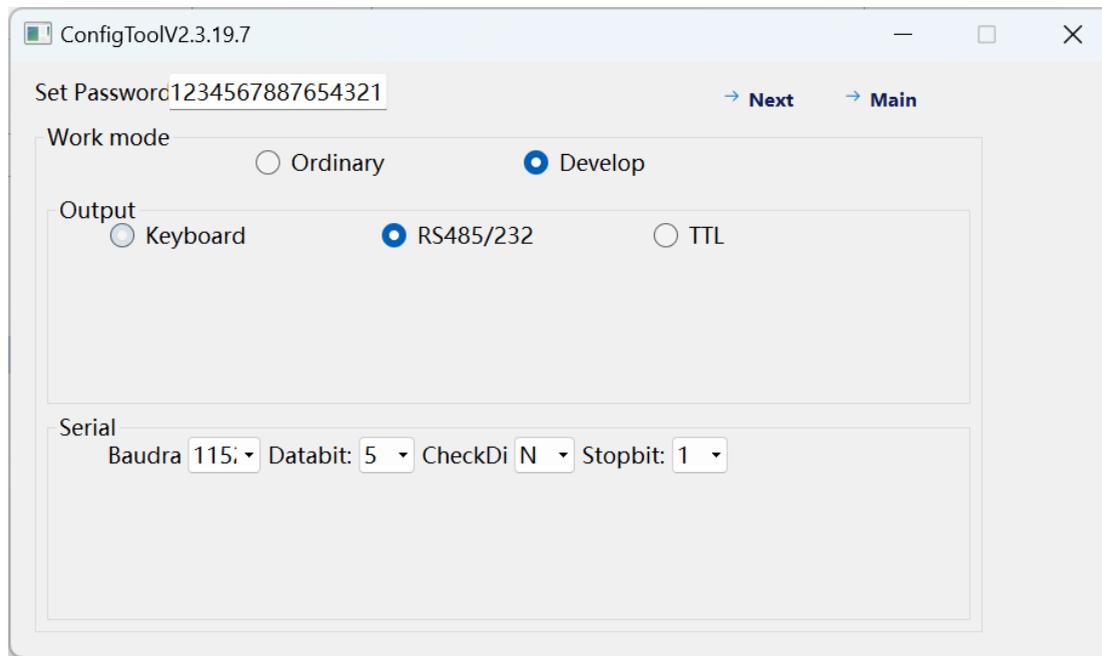
485 control panel
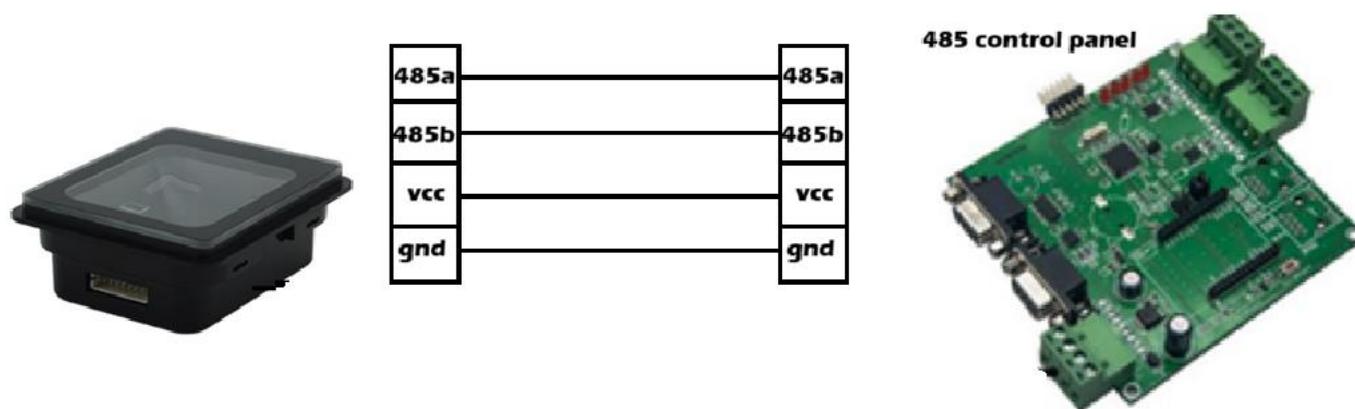
（3）

3. Equipment Configuration

(1) Open the configuration tool. Without clicking to connect a device, select the corresponding device model and click Next:
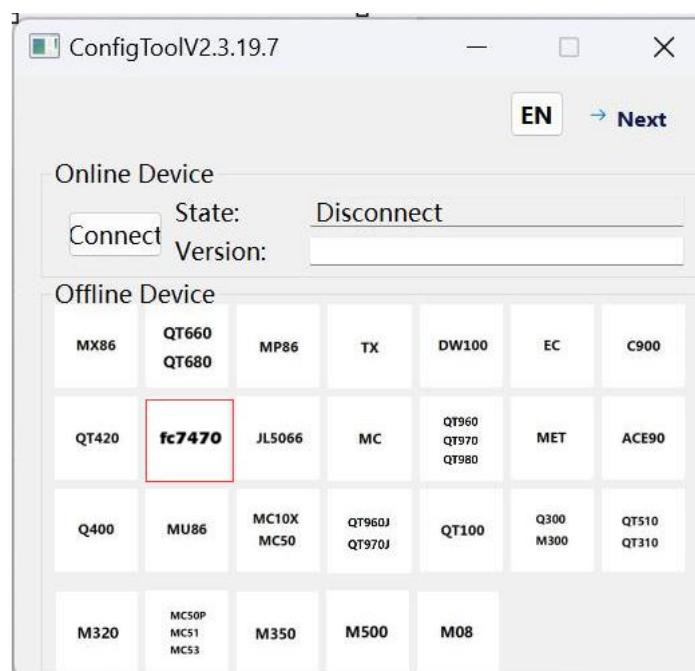
(2)Output mode, normal mode can choose "normal----RS232----select serial port parametersAfter selecting, click next to go to the next page:

(3) Enter the configuration pageClick on the right to generate the configuration code, and a QR code will be generated below,Use a barcode scanner to scan this QR code. The barcode scanner will beep twice and then power off and restart the barcode scanner. The configuration is successful.:
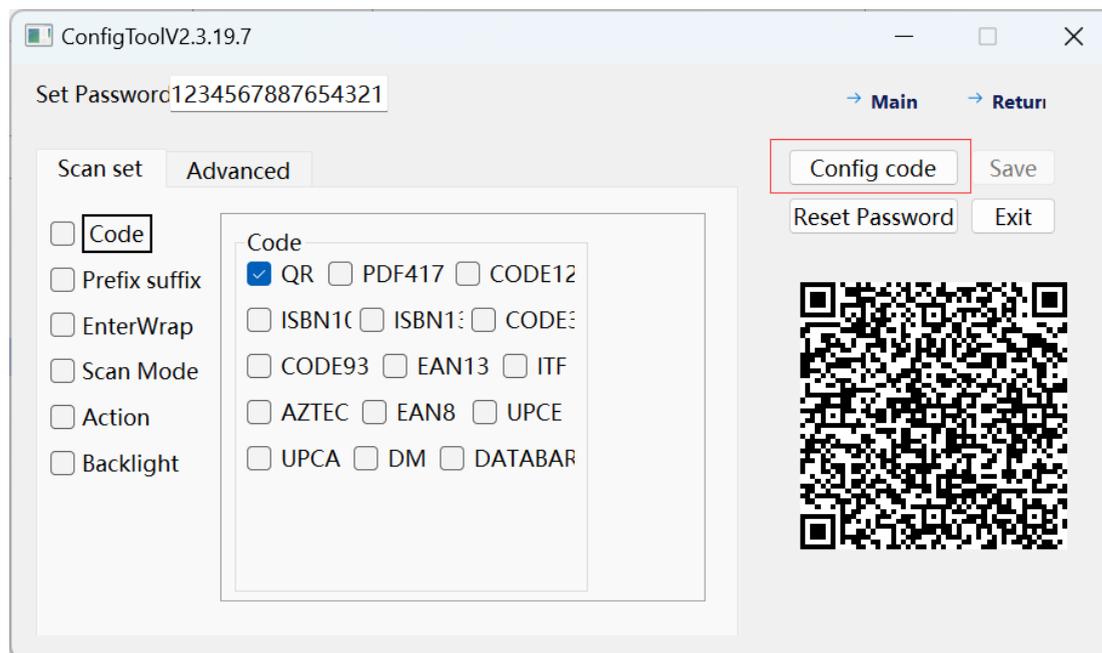
After restarting, you can test the serial portOutput.

(3) You can use the serial port debugging tool to test the serial port output."Serial Port Utility", open the tool as shown below:
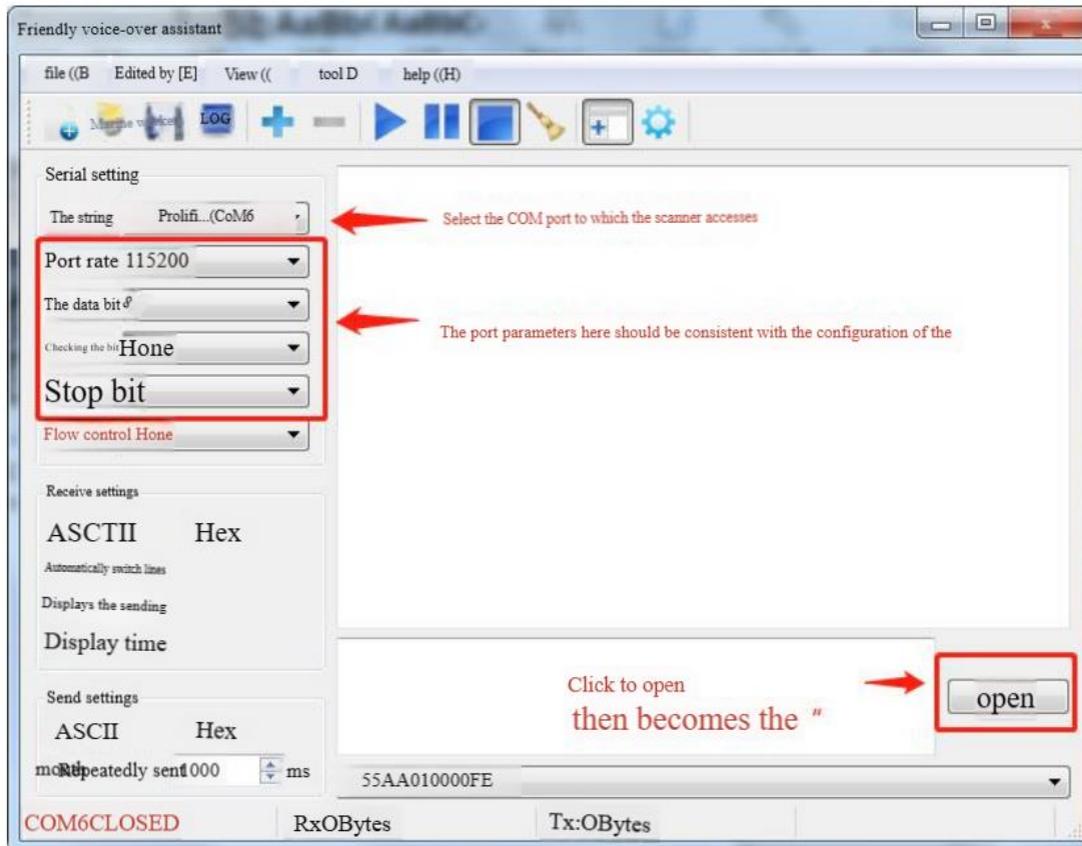
Then you can scan your own QR code\swipe the card to view the data.

5.3 Wiegand Configuration Instructions

1. Equipment Introduction

Devices with Wiegand output models output Wiegand data and generally need to be connected to a Wiegand control board for use.
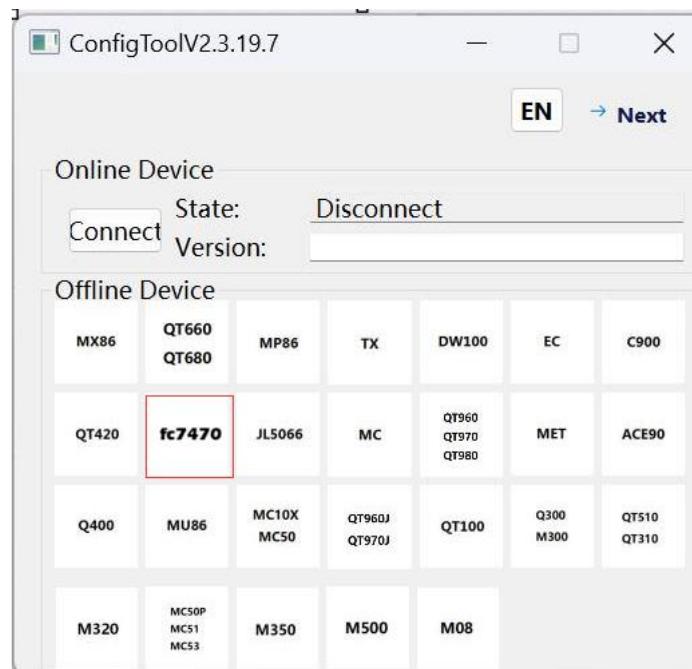
2, Equipment wiring
（1） Use a 6-pin cable, connect one end of the cable to the barcode scanner, and the other end to the Wiegand control board;
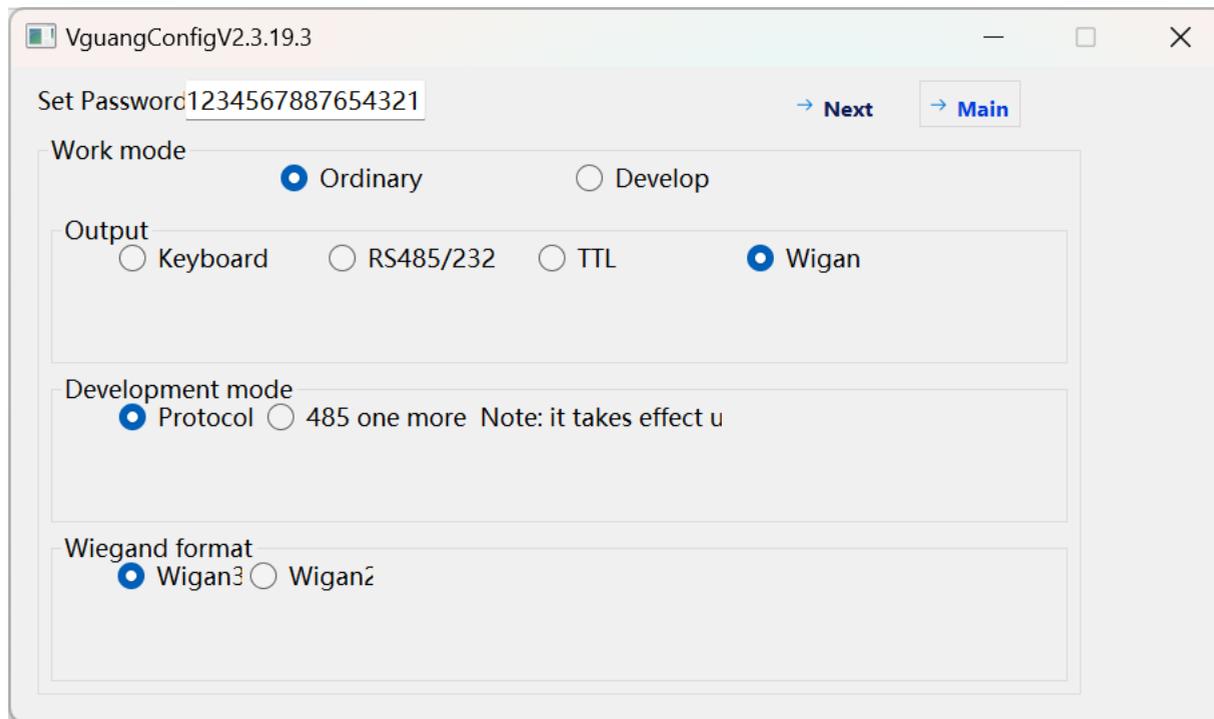
Wiegand control panel
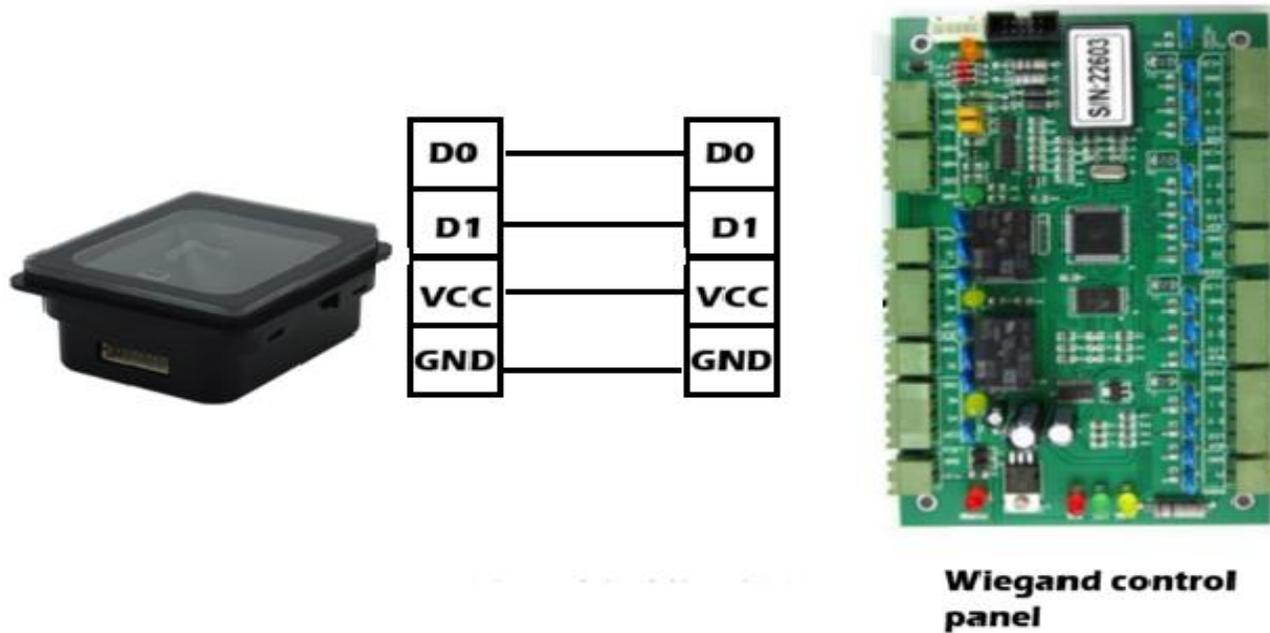
2. Wiegand uses four pins: d0, d1, gnd and vcc.

3. Equipment Configuration

(1) Open the configuration tool. Without clicking to connect a device, select the corresponding device model and click Next:

(2)Output mode, normal mode can choose "normal----Wiegand----chooseWiegand 34 or Wiegand 26, select and click next to enter the next page:

(3) Enter the configuration pageClick on the right to generate the configuration code, and a QR code will be generated below,Use a barcode scanner to scan this QR code. The barcode scanner will beep twice and then power off and restart the barcode scanner. The configuration is successful.:
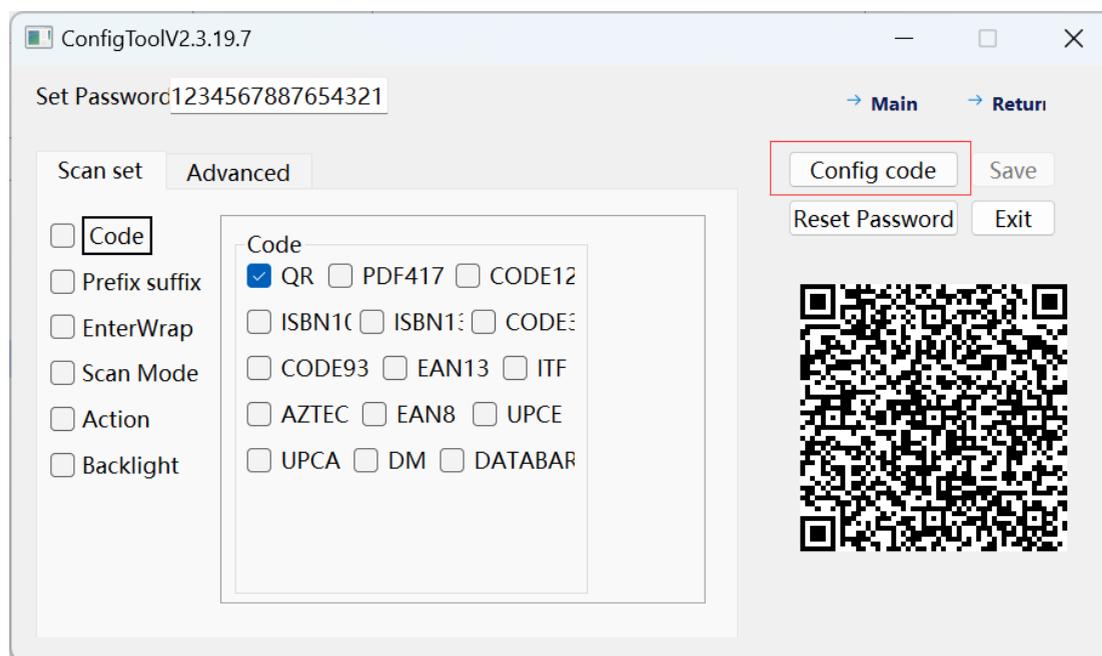

After restarting, you can test the serial portOutput.

6.Installation Method

The product uses a CMOS image sensor. When installing, avoid placing the reading window directly facing the sun, high-power lamps and other strong light sources. Strong light sources will cause the contrast between the QR code and the background in the image to be too large and unable to be decoded. Long-term exposure will also damage the image sensor and cause equipment failure.

The reading window is made of tempered glass, which has good light transmittance, pressure resistance and impact resistance. However, it is still necessary to avoid objects with higher hardness scratching the tempered glass, which will reduce the QR code recognition performance.

The RFID card reader antenna is located at the bottom of the reader window. When installing it, avoid metal and magnetic materials within 10 cm, otherwise the card swiping performance will be seriously reduced.
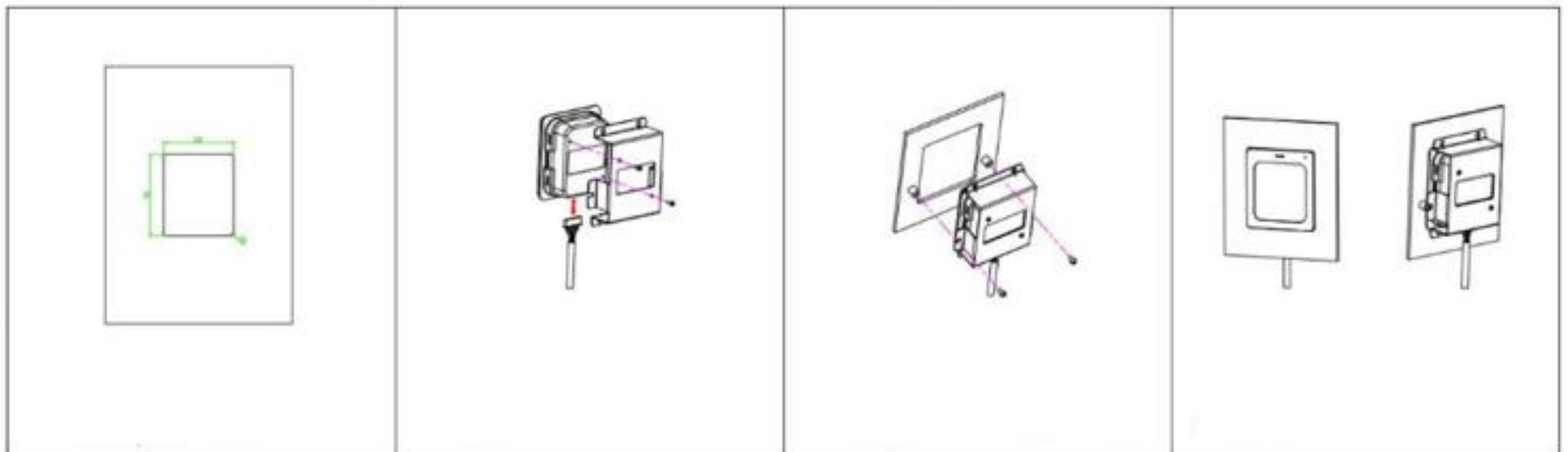
1. Insert the accessory into the white terminal.

2. Install the bracket on the 86-type junction box.

3. Mount the product on the bracket.

4. The assembly is completed.

7.Precautions

1，The device is powered by 5-24V. It can be powered by the access control power supply or by a separate power supply. Excessive voltage may cause the device to malfunction or even damage it.

2，Do not disassemble the barcode scanner device without permission, otherwise the device may be damaged.

3，The access control barcode scanner should be installed in a location that avoids direct sunlight. Otherwise, it may affect the scanning effect. The barcode scanner reading panel must be clean, otherwise it may affect the normal image acquisition of the barcode scanner. The metal around the barcode scanner may interfere withNFCMagnetic field affects card swiping.

4，The wiring of the access control barcode scanner equipment must be firm and reliable. And the wires must be insulated to prevent short circuits and burnout of the equipment.

8. Contact Details

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