微光互联
二维码扫描专家

M350

User manual

Please read it carefully and keep it properly.

☑ Fast recognition

☑ Various output interface

☑ Suitable for access control scenario

Disclaimer

Before using the product, please read all the contents in this Product Manual carefully to ensure the safe and effective use of the product. Do not disassemble the product or tear up the seal on the device by yourself, or Beijing Vguang Internet Technology Co., Ltd. will not be responsible for the warranty or replacement of the product.

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Edit history

Change date	Version	Description	Responsible
2022.2.24	V1.0	Initial version	

Catalog

1. Preface

Thanks for using the M350 QR code reader, Reading this manual carefully can help you understand the function and features of this device, and quickly master the use and installation of the device.
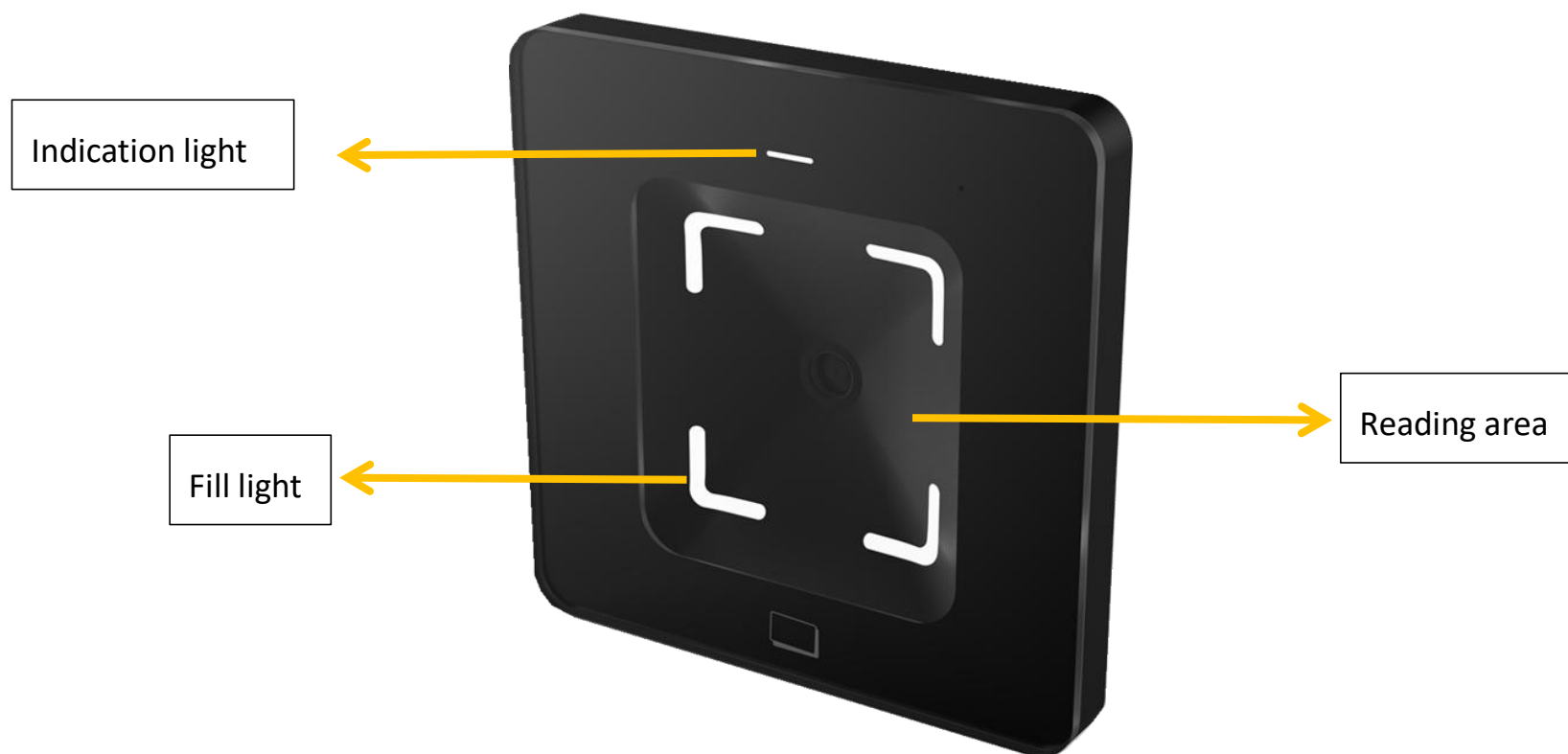
1.1. Product introduction

M350 QR code reader was specially designed for access control scenario, which has various output interface, including TTL, Wiegand, RS485, RS232, Ethernet and relay, suitable for gate, access control and other scenes.
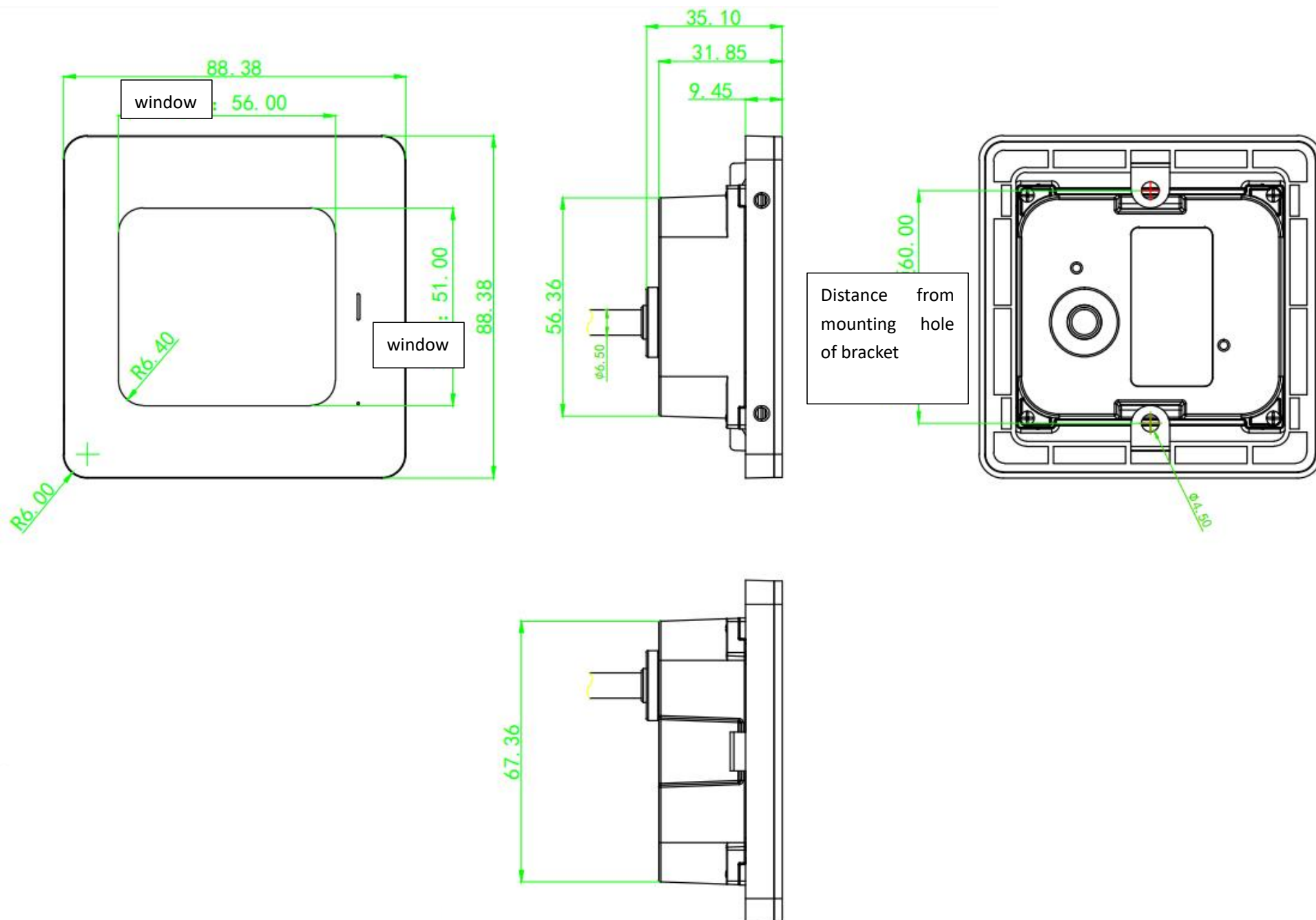
1.2. Product feature

1，1，Scan code& swipe card all in one.

2，Fast recognition speed, high accuracy, 0.1 second the fastest.

3，Easy to operate, humanized configuration tool, more convenient to config the reader.

2. Product appearance

2.1.1. OVERALL INTRODUCTION

Indication light

Fill light

Reading area

北京微光互联科技有限公司

2.1.2. PRODUCT SIZE

window

window

88.38

56.00

51.00

88.38

R6.40

R6.00

35.10

31.85

9.45

56.36

φ6.50

60.00

Distance from mounting hole of bracket

φ4.50

67.36

3. Product parameters

3.1. General parameters

General parameters	
Output interface	RS485, RS232, TTL, Wiegand, Ethernet
Indicating method	Red, green, white light indicator Buzzer
Imaging sensor	300,000 pixel CMOS sensor
Max resolution	640*480
Mounting method	Embedded mounting
Product size	88.38mm*88.38mm*35.10mm
Reading window size	56mm*51mm

3.2. Reading parameter

QR code recognition parameter	
Symbologies	QR, PDF417, CODE39, CODE93, CODE128, ISBN10, ITF, EAN13, DATABAR, aztec etc.
Supported decoding	Mobile QR code and paper QR code
DOF	0mm~62.4mm(QRCODE 15mil)
Reading accuracy	≥8mil
Reading speed	100ms per time(average), support reading continuously

Reading direction	Ethernet	Tilt±62.3° Rotation±360° Deflection±65.2°（15milQR）
	RS232, RS485, Wiegand, TTL	Tilt±52.6° Rotation±360° Deflection±48.6°（15milQR）

FOV	Ethernet	86.2°　（15milQR）
	RS232, RS485, Wiegand, TTL	73.5°　（15milQR）

RFID reading parameter	
Supported cards	ISO 14443A, ISO 14443B protocol cards, ID card（only physical card number）

Reading method	Read UID, read and write M1 card sector
Working frequency	13.56MHz
Distance	＜5cm

3.3. Electric parameters

The power input can be provided only when the device is connected properly. If the device is plugged or unplugged while the cable is live (hot plugging), its electronic components will be damaged. Make sure that the power is turned off when plugging and unplugging the cable.

Electric parameters		
Working voltage	RS232, RS485, Wiegand, TTL	DC 5-15V
	Ethernet	DC 12-24V
Working current	RS232, RS485, Wiegand, TTL	156.9mA（5V typical value）
	Ethernet	92mA（12V typical value）
Power consumption	RS232, RS485, Wiegand, TTL	784.5mW（5V typical value）
	Ethernet	1104mW（12V typical value）

3.4. Working environment parameters

| Working environment parameters	
ESD protection	±8kV（Air discharge），±4kV（Contact discharge）
Working temp	-20°C-70°C
Storage temp	-40°C-80°C
RH	5%-95%（No condensation）(environment temperature30℃)
Ambient light	0-80000Lux(Non direct sunlight)

# 4. Interface definition

4.1. RS232, RS485 Version
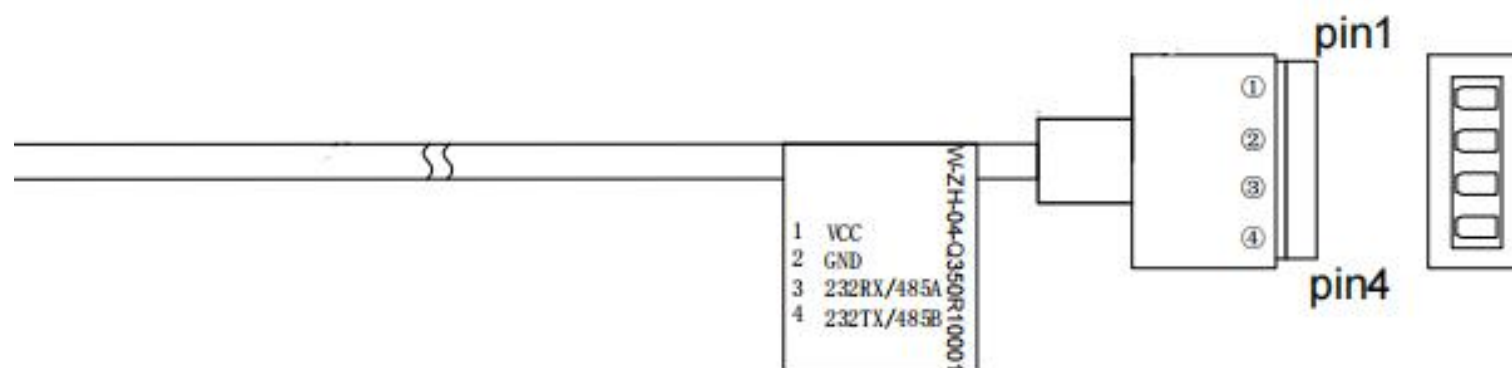
Serial number	Definition	Description	
1	VCC	Positive power supply	
2	GND	Negative power supply	
3	232RX/485A	232 Version	Data receiving end of code scanner
		485 Version	485 _A cable
4	232TX/485B	232 Version	Data sending end of code scanner
		485 Version	485 _B cable

4.2. Wiegand&TTL Version
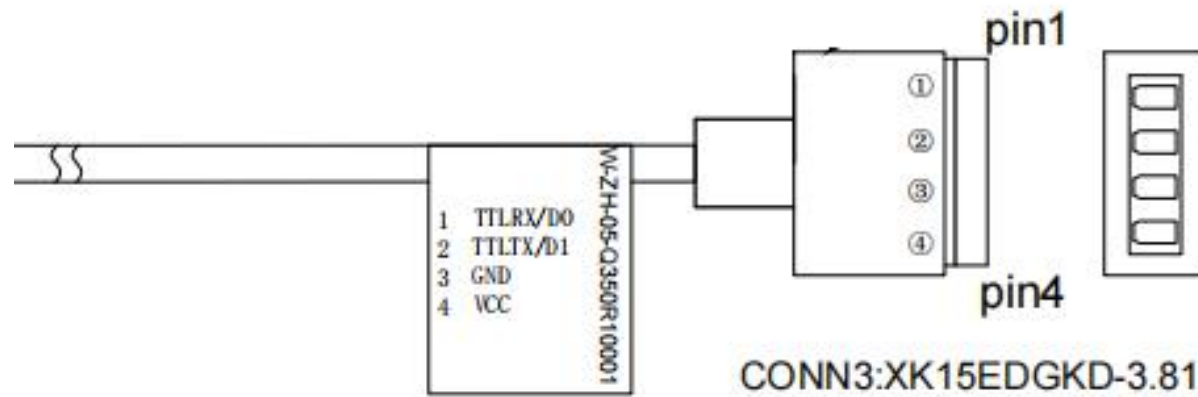
Serial number	Definition	Description	
4	VCC	Positive power supply	
3	GND	Negative power supply	
2	TTLTX/D1	TTL	Data sending end of code scanner
		Wiegand	Wiegand 1
1	TTLRX/D0	TTL	Data receiving end of code scanner
		Wiegand	Wiegand 0

4.3. Ethernet Version
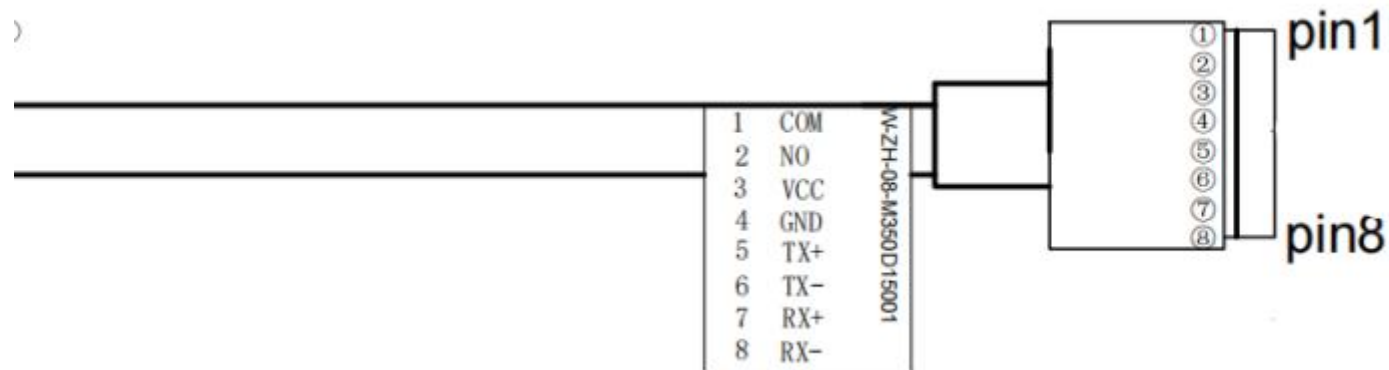
Serial number	Definition	Description
1	COM	Relay common terminal
2	NO	Relay normally open end
3	VCC	Positive power supply
4	GND	Negative power supply
5	TX+	Data transmission positive end (568B network cable pin1 orange and white)
6	TX−	Data transmission negative end（568B network cable pin2-orange）
7	RX+	Data receiving positive end (568B network cable pin3 green and white)

8	RX-	Data receiving negative end（568B network cable pin6-green）

4.4. Ethernet+Wiegand Version
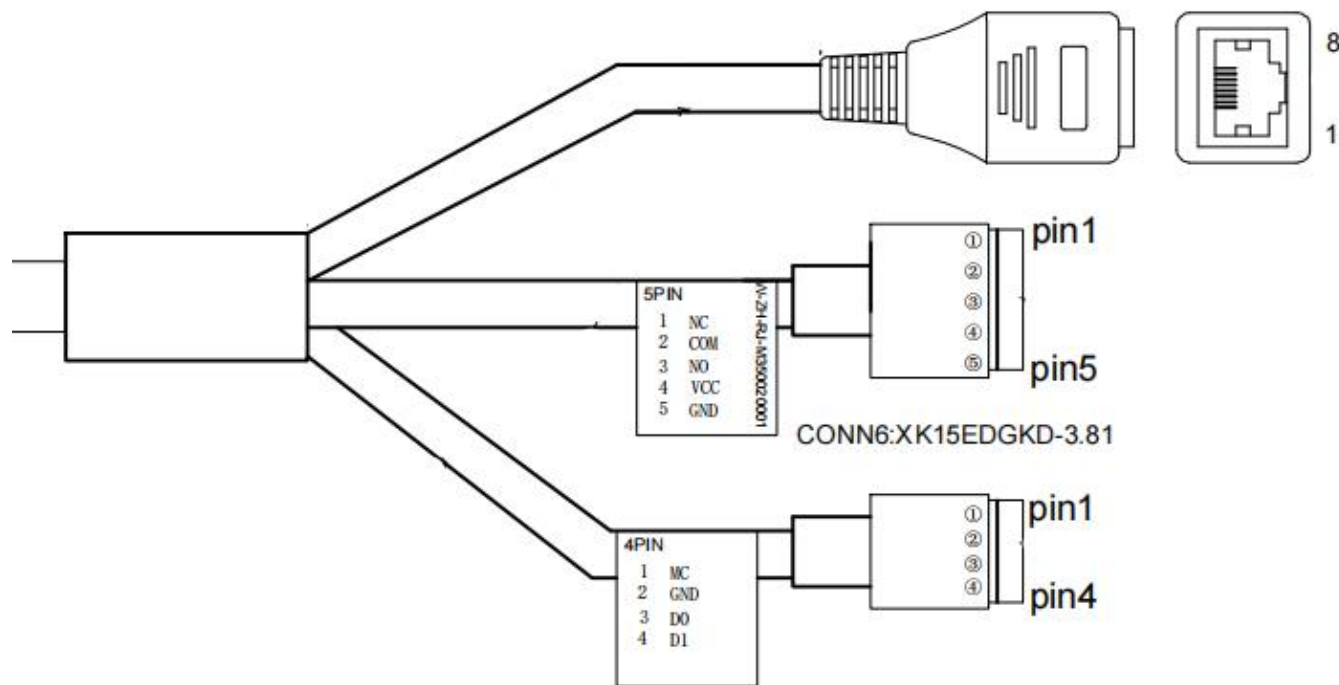
RJ45 port connect to the network cable, 5pin and 4Pin screws interface descriptions are as follows:

5PIN interface

Serial number	Definition	Description
1	NC	Normally closed end of relay
2	COM	Relay common terminal
3	NO	Relay normally open end
4	VCC	Positive power supply
5	GND	Negative power supply

4PIN interface

| Serial number	Definition	Description
1	MC	Door magnetic signal input terminal
2	GND	
3	D0	Wiegand 0
4	D1	Wiegand 1

5. Device configuration

Use the Vguang config tool to configure the device.Open the following configuration tools (available from the download center on the official website)
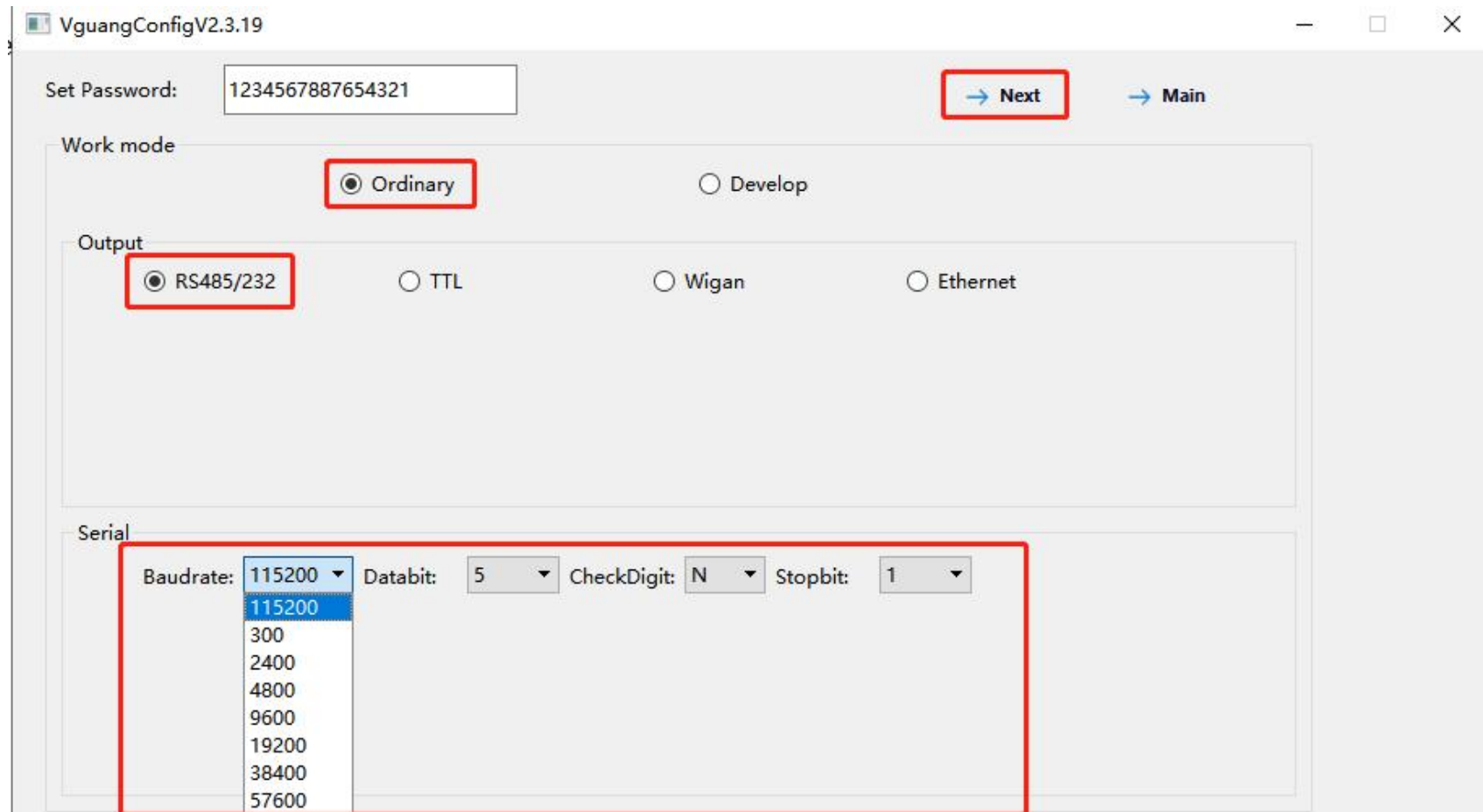

5.1 config tool

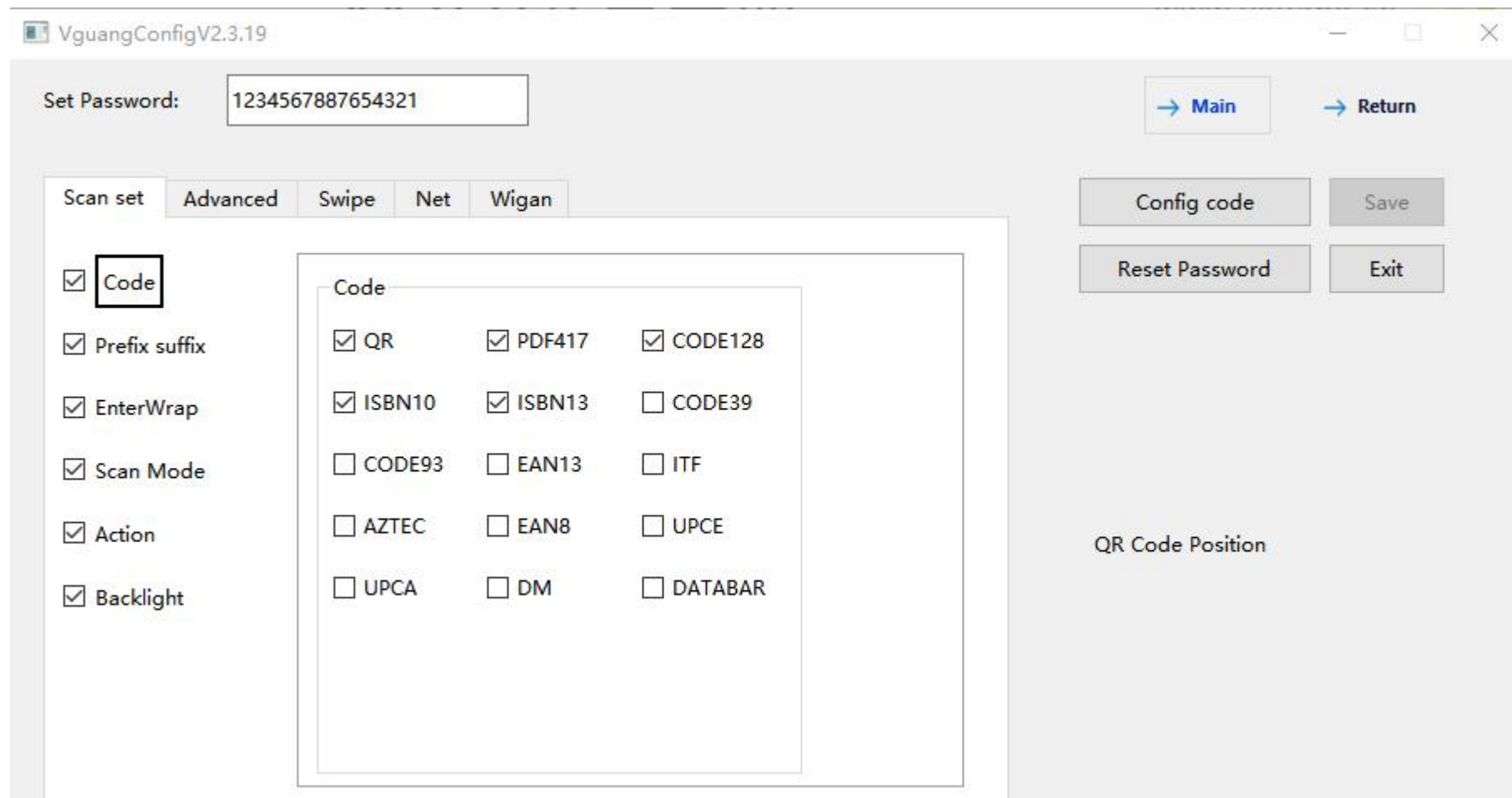Config the device as the step shows, the example are showing 485 version reader.
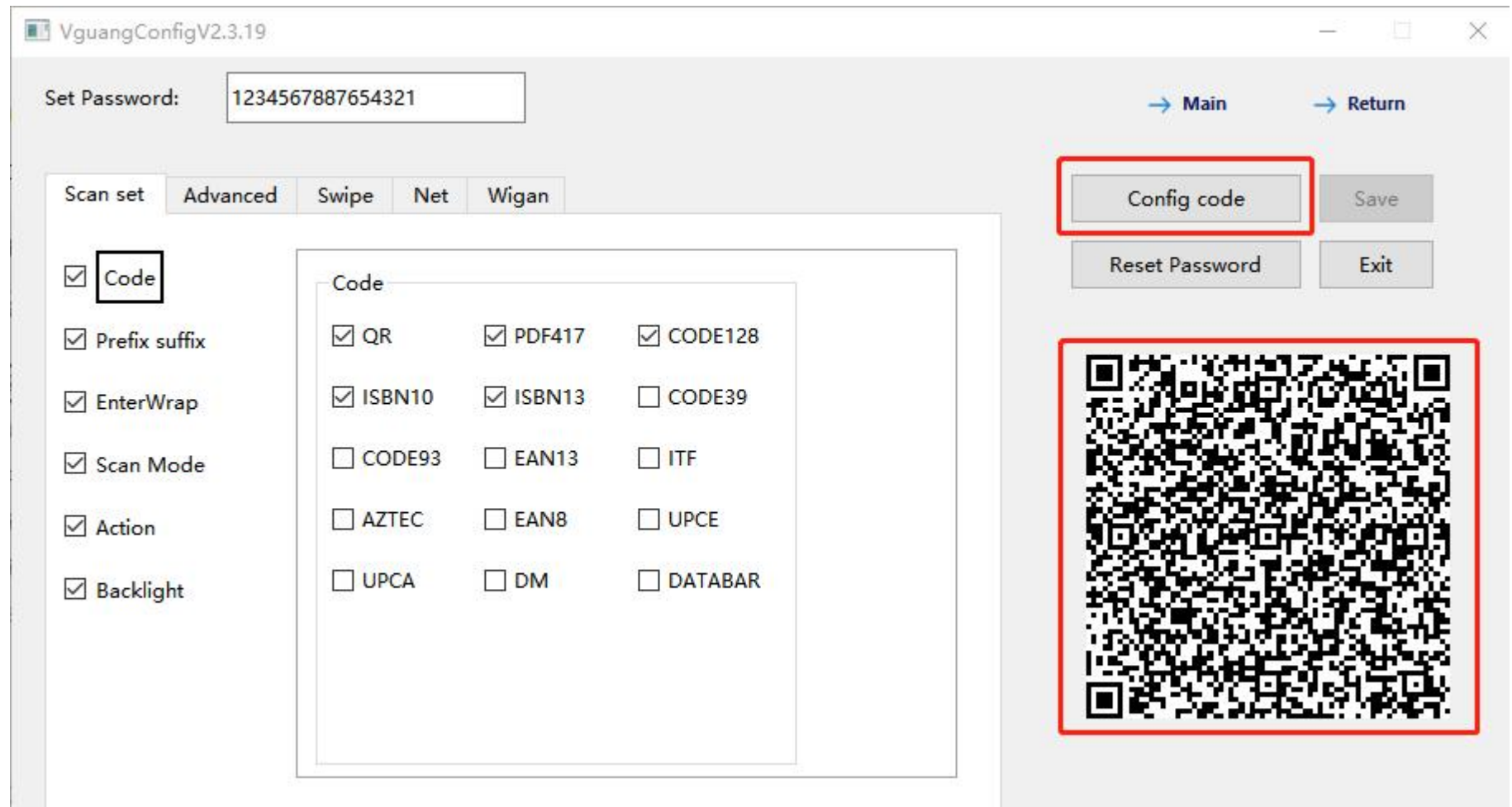
Step 1, Select the model number M350
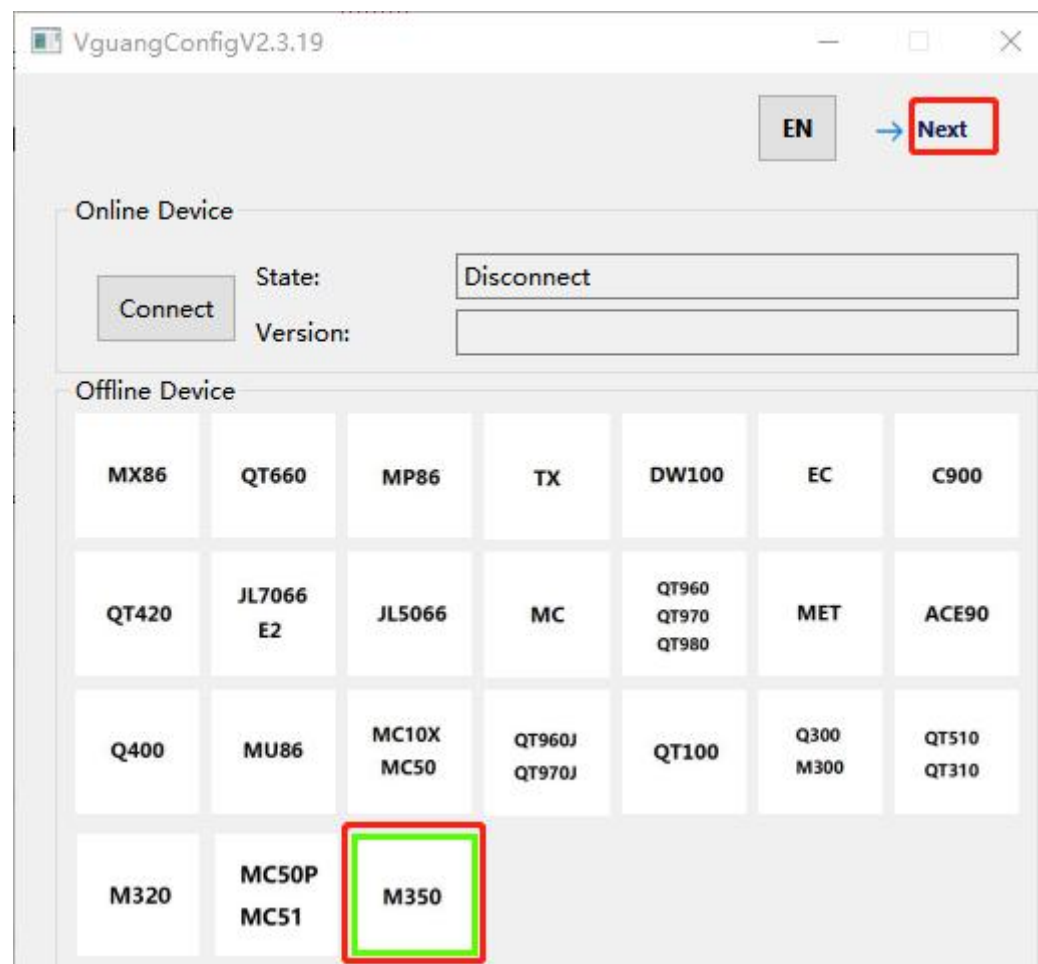
Step 2, Select the output interface, and config the corresponding serial parameters.

Step 3, select the required configuration. For configuration options, please refer to the user manual of Vguangconfig configuration tool on the official website.

Step4, After configing as your needs, click "config code".

Step 5, Use the scanner to scan the configurations QR code generated by the tool, then restart the reader to finish the new configurations.
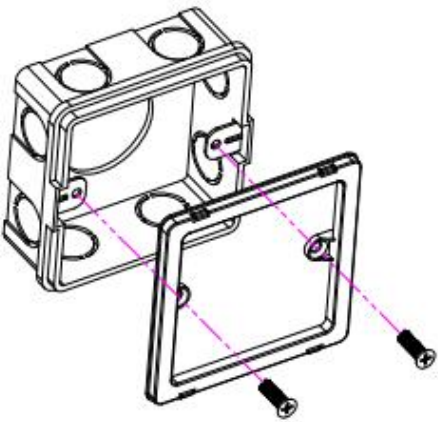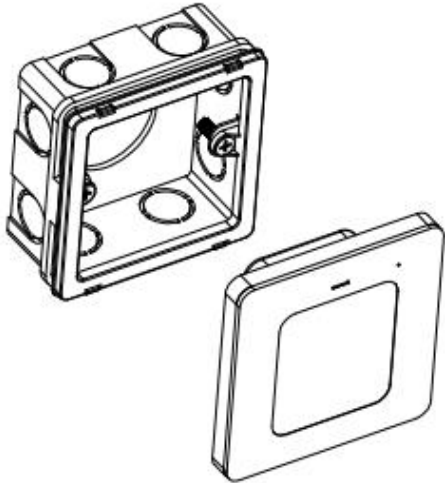
For more details about configurations, please refer to the "Vguang configuration tool user manual".

6. Mounting method

The product using CMOS image sensor, the recognition window should avoid direct sun or other strong light source when install the scanner. The strong light source will cause the contrast in the image too big to decoding, the long term exposure will damage the sensor and cause the device failure.

The recognition window are using tempered glass, which has good transmission of the light, and also a good pressure resistance, but still need to avoid scratching the glass by some hard object, it will affect the QR code recognition performance.

The RFID antenna was in the underside of the recognition window, there should have no metal or magnetic material within 10cm when installing the scanner, or it will affect the card reading performance.

Step 1:Assemble the reader with the 86 box, and tighten the screws.	Step 2:Install the product on the bracket, pay attention to press it tightly and snap it in place.	Step 3: Installation finished.

7. Attention

1，The equipment standard is 12-24V power supply, it can get power from the access control power or power it separately. Excessive voltage may cause the device fail to work normally or even damage the device.

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

3，The installation position of the scanner should avoid direct sunlight. Otherwise, the scanning effect may be affected. The panel of the scanner must be clean, otherwise it may affect the normal image capture of the scanner. The metal around the scanner may interfere with the NFC magnetic field and affect card reading.

4，The wiring connection of the scanner must be firm. In addition, ensure the insulation between the lines to prevent the equipment from being damaged by a short circuit.

8. Contact info

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