

Q350

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 Suzhou CoolCode Technology Co., Ltd. will not be responsible for the warranty or replacement of the product.

The pictures in this manual are for reference only. If any individual pictures do not match the actual product, the actual product shall prevail. For the upgrade and update of this product, Suzhou CoolCode Technology Co., Ltd. reserves the right to modify the document at any time without notice.

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Edit history

Change date	Version	Description	Responsible
2022.2.24	V1.0	Initial version	

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1. Preface

Thanks for using the Q350 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

Q350 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

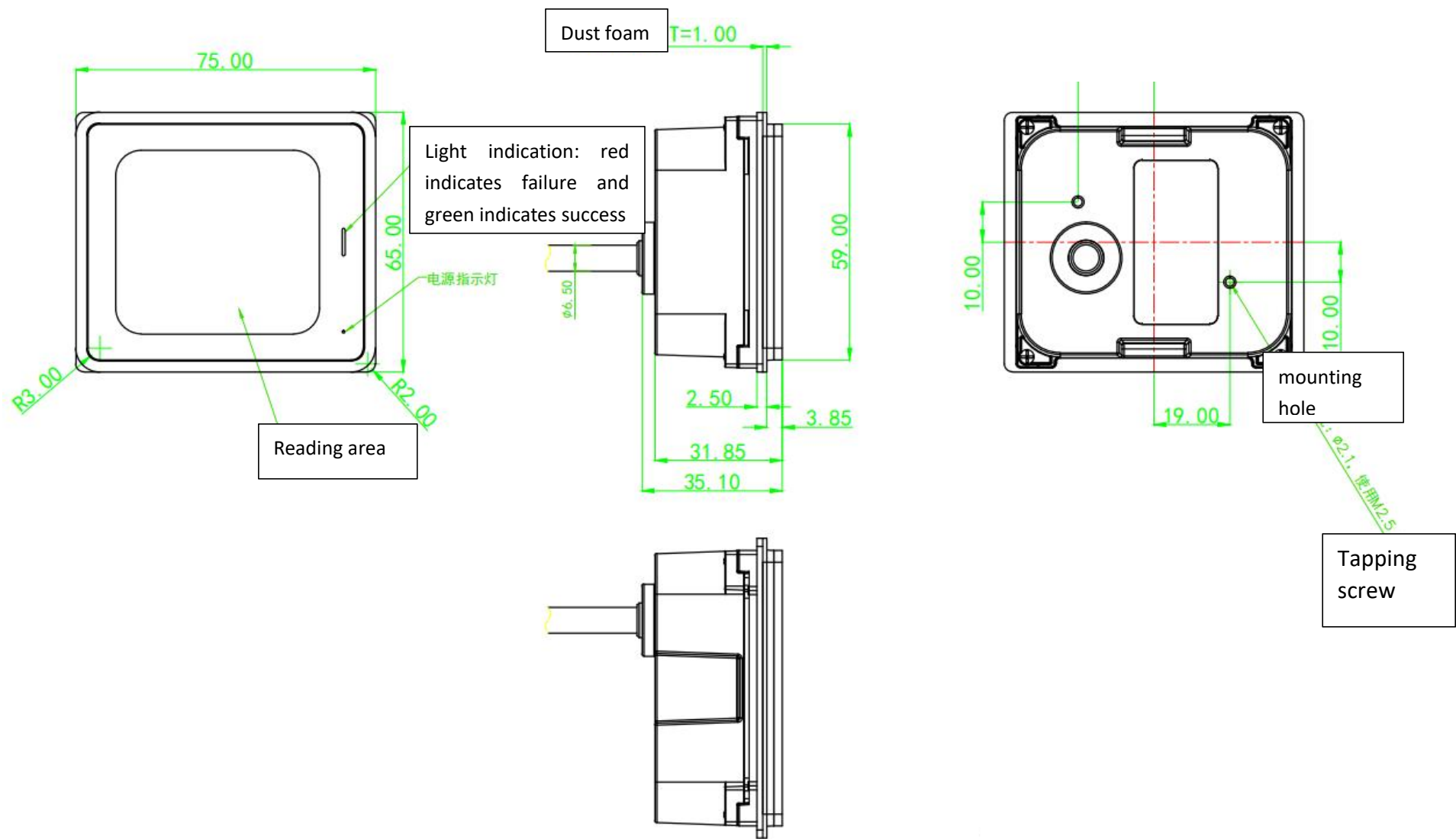
- 1, Scan code& swipe card all in one.
- 2, Fast recognition speed, high accuracy, 0.1 second the fastest.
- 3, Easy to operate, humanized configuration tool, more convenient to config the reader.

2. Product appearance

2.1.1. OVERALL INTRODUCTION



2.1.2. PRODUCT SIZE



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
Size	75mm*65mm*35.10mm

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.

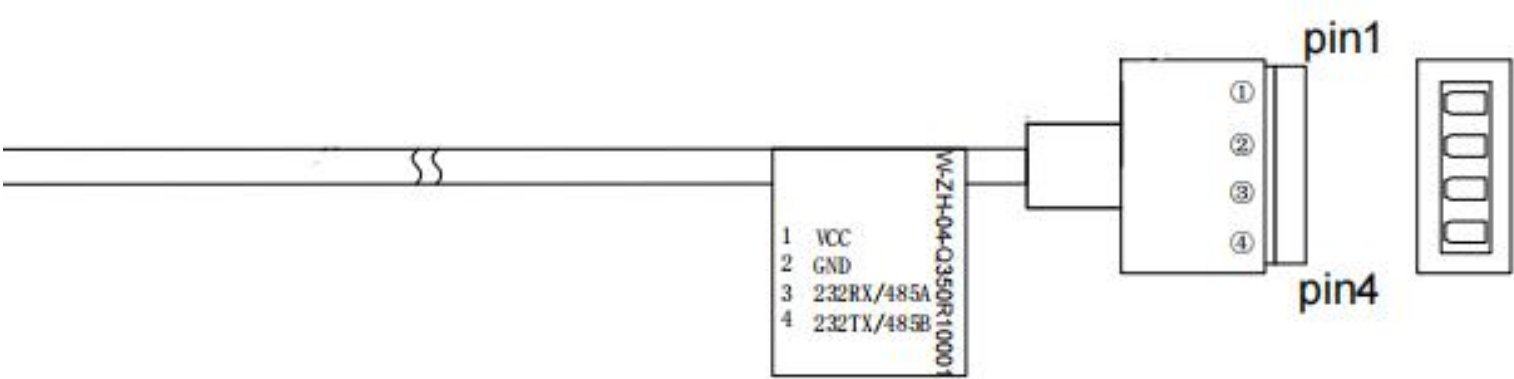
Electric parameters		
Working voltage	RS232, RS485, Wiegand, TTL	DC 5–15V
	Ethernet	DC 12–24V
Working current	RS232, RS485, Wiegand, TTL	156.9mA (5V typical value)
	Ethernet	92mA (5V typical value)
Power consumption	RS232, RS485, Wiegand, TTL	784.5mW (5V typical value)
	Ethernet	1104mW (5V typical value)

3.4. Working environment

Working environment	
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°C)
Ambient light	0-80000Lux(Non direct sunlight)

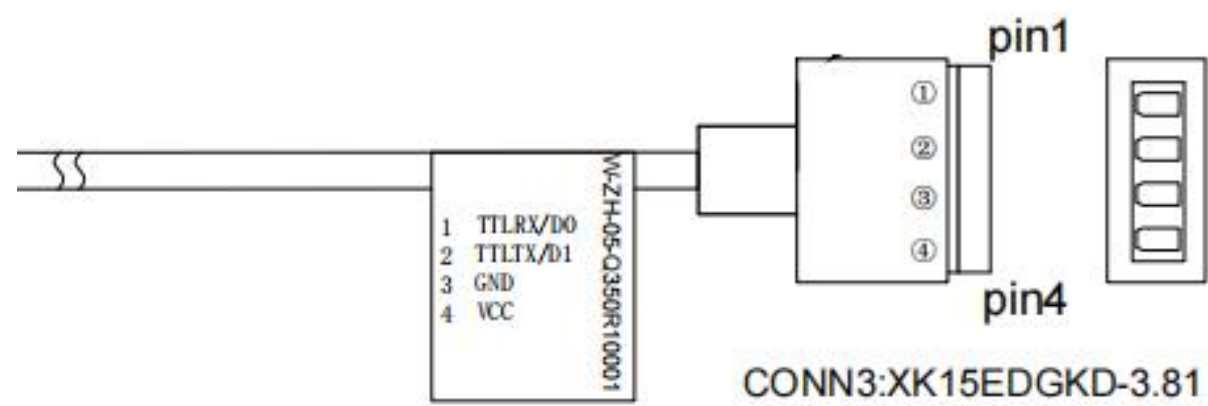
4. Interface definition

4.1. RS232, RS485 Version



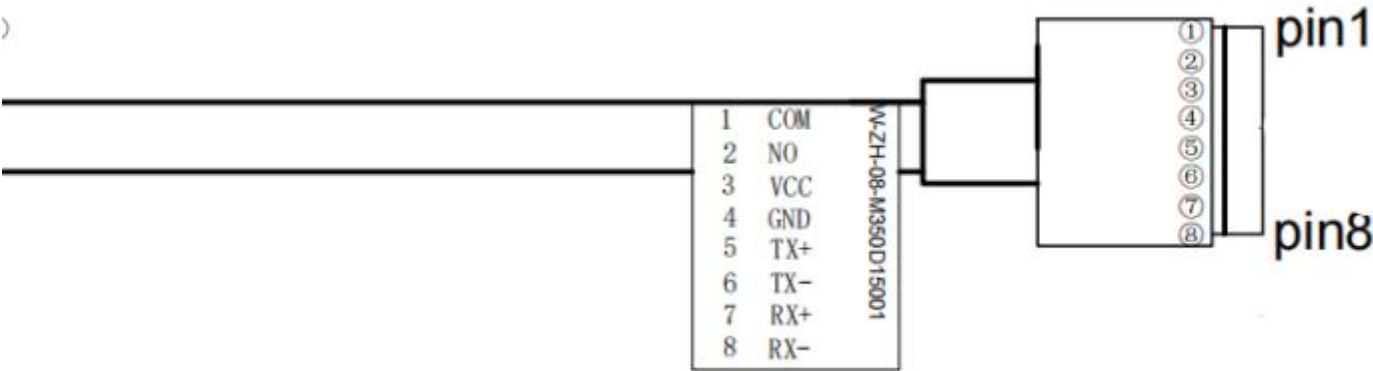
Serial number	Definition	Description	
1	VCC	Positive power supply	
2	GND	Negative power supply	
3	232RX/485A	232 Version	Data receiving end of code scanner
		485 Version	485 _A cable
4	232TX/485B	232 Version	Data sending end of code scanner
		485 Version	485 _B cable

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

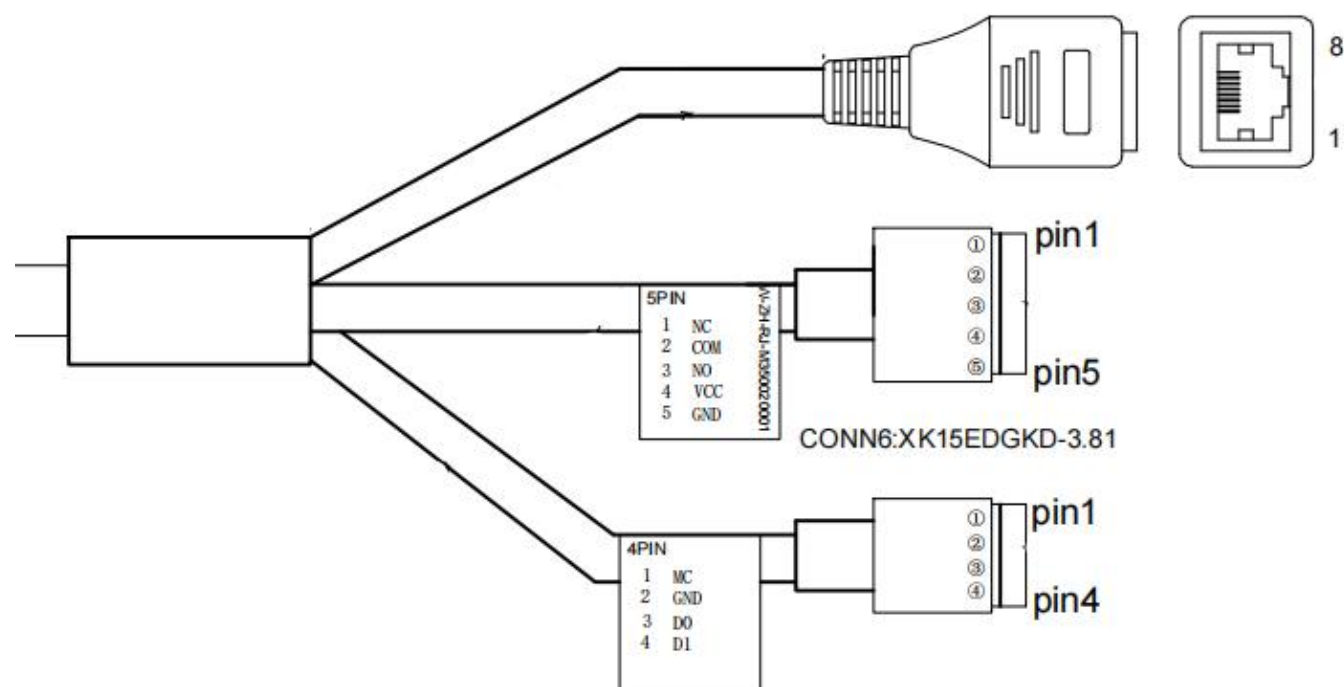
4.3. Ethernet Version



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)
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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

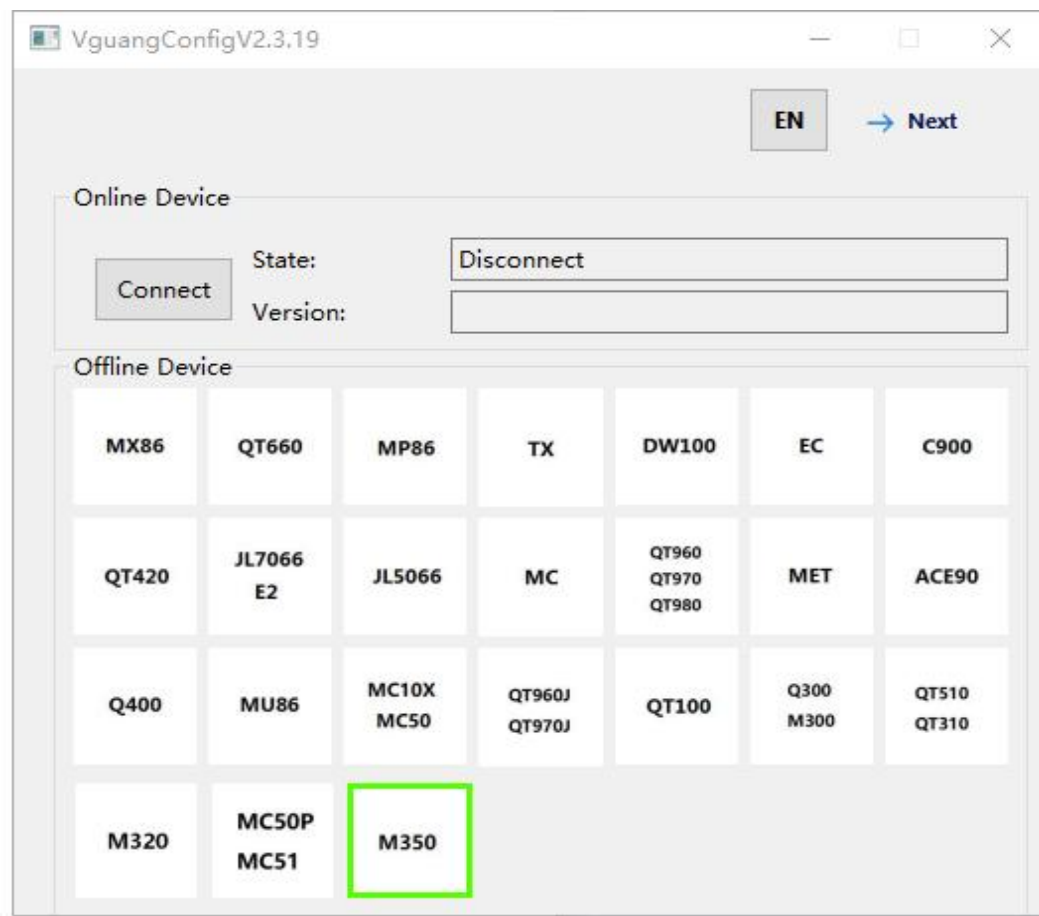
Use the Vguang config tool to configure the device. Open the following configuration tools (available from the download center on the official website)



5.1 config tool

Config the device as the step shows, the example are showing 485 version reader.

Step 1, Select the model number Q350 (Select M350 in the configuration tool) 。



Step 2, Select the output interface, and config the corresponding serial parameters.

The screenshot shows the VguangConfigV2.3.19 software interface. At the top, there is a 'Set Password:' field with the value '1234567887654321' and two buttons: 'Next' and 'Main'. Below this is the 'Work mode' section with two radio buttons: 'Ordinary' (selected) and 'Develop'. The 'Output' section has four radio buttons: 'RS485/232' (selected), 'TTL', 'Wigan', and 'Ethernet'. The 'Serial' section contains four dropdown menus: 'Baudrate' (showing a list with '115200' selected), 'Databit' (set to '5'), 'CheckDigit' (set to 'N'), and 'Stopbit' (set to '1').

VguangConfigV2.3.19

Set Password: 1234567887654321 → Next → Main

Work mode

☒ Ordinary ☐ Develop

Output

☒ RS485/232 ☐ TTL ☐ Wigan ☐ Ethernet

Serial

Baudrate: 115200 Databit: 5 CheckDigit: N Stopbit: 1

115200
300
2400
4800
9600
19200
38400
57600

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

VguangConfigV2.3.19

Set Password: 1234567887654321

→ Main

→ Return

Scan set

Advanced

Swipe

Net

Wigan

☒ Code

☒ Prefix suffix

☒ EnterWrap

☒ Scan Mode

☒ Action

☒ Backlight

Code

☒ QR

☒ ISBN10

☐ CODE93

☐ AZTEC

☐ UPCA

☒ PDF417

☒ ISBN13

☐ EAN13

☐ EAN8

☐ DM

☒ CODE128

☐ CODE39

☐ ITF

☐ UPCE

☐ DATABAR

Config code

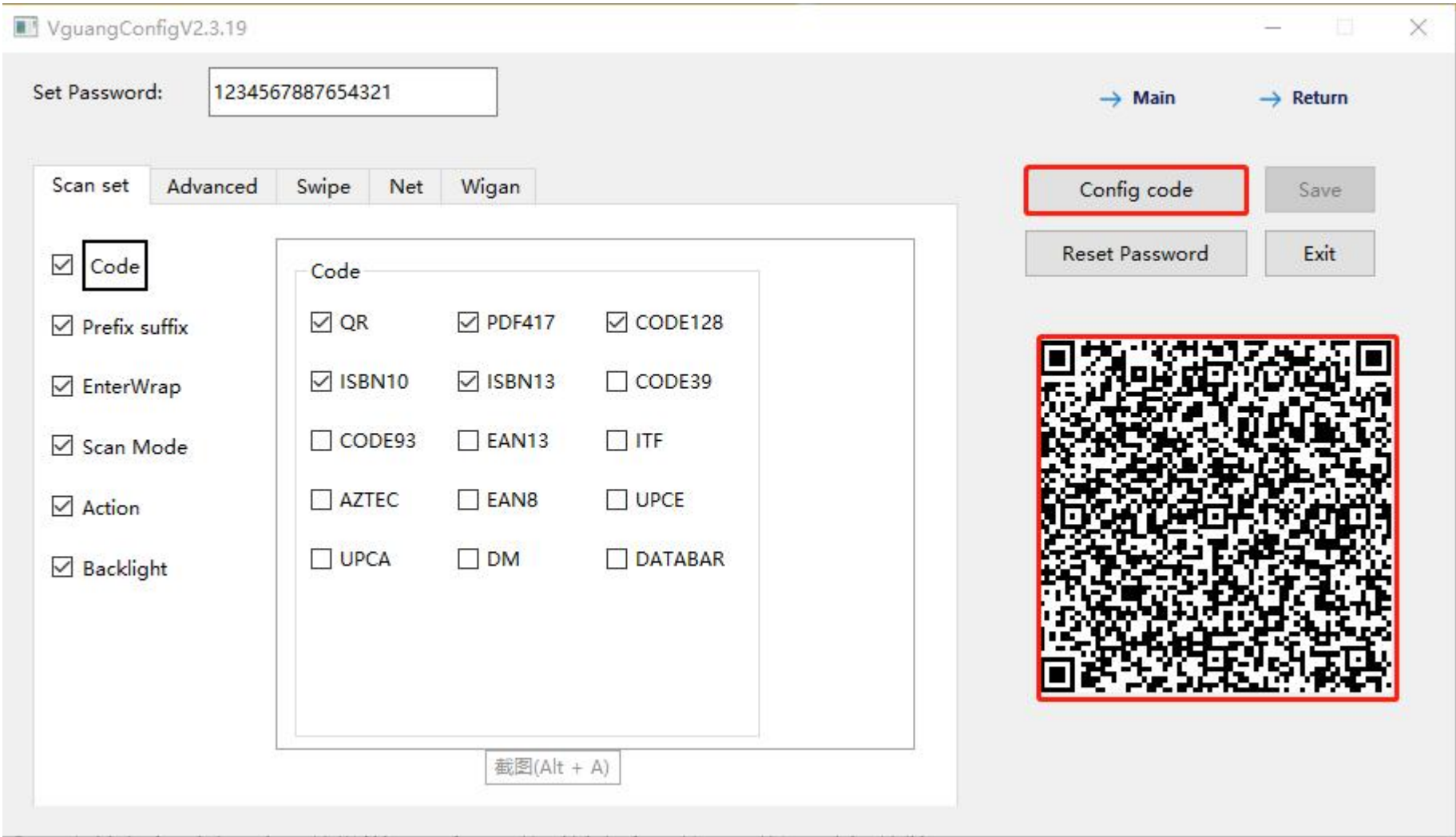
Reset Password

Save

Exit

QR Code Position

Step 4, 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.

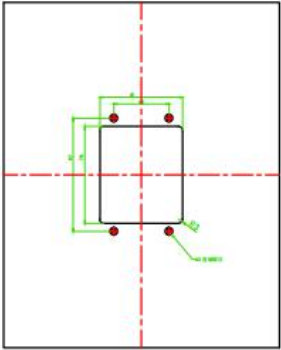
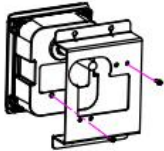
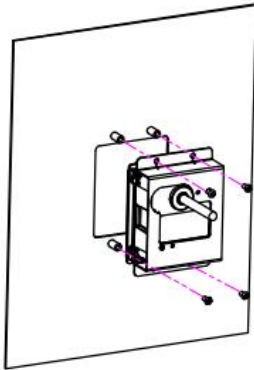
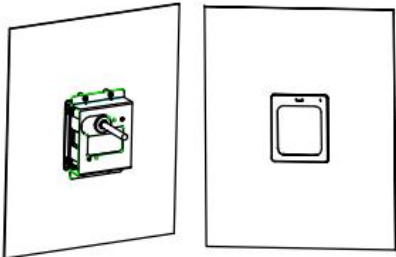
For more details about configurations, please refer to the “Vguang configuration tool user manual”.

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: Open a hole in the mounting plate.70*60mm	Step 2: Assemble the reader with the holder, and tighten the screws, then plug the cable.M2.5*5 self tapping screw.	Step 3: assemble the holder with the mounting plate, then tighten the screws.	Step 4, 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, 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

Company name: Suzhou CoolCode Technology Co., Ltd.

Address: Floor 2, Workshop No.23, Yangshan Science and Technology Industrial Park, No. 8, Jinyan Road, High-tech Zone, Suzhou, China

Hot line: 400-810-2019

9. Warning Statement

FCC Warning:

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.

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

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 a 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.

NOTE: This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter

RF Exposure Statement

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance of 20cm the radiator your body. This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter

ISED Canada Statement:

This device contains licence-exempt tasmittre(s)/receiver(s)/ that comply with Innovation Science and Economic Development Canada 's licence-exempt RSS(s).

Operation is subject to the following two conditions:

1) this device may not cause interference and

2) this device must accept any interference, including interference that may cause undesired operation of the device.

Radiation Exposure: This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment

RF Exposure Statement

To maintain compliance with IC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance of 20mm the radiator your body. This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter

Déclaration de l'ISED Canada :

Cet appareil contient des transmetteur (s) / récepteur (s) sans licence / conformes à l'innovation RSS exemptes de licence de Sciences et Développement économique Canada. L'opération est sous réserve des deux conditions suivantes :

- 1) cet appareil ne peut pas causer d'interférences et
- 2) ce dispositif doit accepter toute interférence, y compris peut provoquer le fonctionnement indésirable de l'appareil.

Exposition aux rayonnements : Cet équipement est conforme aux radiations du Canada limites d'exposition pour un environnement incontrôlé noncé d'exposition RF

Pour maintenir le respect des guides d'exposition RF d'IC, l'équipement doit être installé et actionné avec une distance minimale de 20mm le radiateur de votre corps. Cet appareil et ses antennes ne doivent pas être co-localisé ou en opération en conjonction avec toute autre antenne ou émetteur