

# MC100

## USER MANUAL

Please read it carefully and keep  
it properly.



Fast recognition

Voice broadcast

Support WiFi output interface



## 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.

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, Beijing Vguang Internet 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
2018. 1. 2	V1. 0	Initial version	
2018. 6. 8	V1. 1	Update function	
2021. 8. 20	V2. 0	Update description	

## Catalog

1. Preface.....	6
1.1. Product introduction.....	6
1.2. Product features.....	6
1.3. Notes.....	8
2. Product size.....	9
3. Product parameters.....	10
3.1. General parameters.....	10
3.2. Recognition parameters.....	11
3.3. Electric parameters.....	12
3.4. Working environment.....	12
4. Voice function.....	14
4.1. Voice configuration.....	14
4.2. Voice broadcast.....	14
4.2.1. USB and RS232 mode voice broadcasting function.....	14
4.2.2. Wifi mode voice broadcasting function.....	15
5. Operating instructions.....	16
5.1. Wiring diagram.....	16
5.1.1. Data cable attached to each version.....	16
5.1.2. Connection diagram.....	18
5.2. Equipment configuration.....	19
5.3. Configuration example.....	20



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6. Common problem..... 23

# 1. Preface

Thank you for using the MC100 scanning equipment provided by Vguang. Reading this document carefully can help you understand the functions and features of this device, and quickly master the use and installation of the device.

The company does not assume responsibility for the property loss or personal injury caused by the user's abnormal operation. Please design and develop the corresponding product according to the technical specifications and reference in the manual. Also please pay attention to the general safety matters that should be taken into account when using mobile products. Before the statement, the company has the right to modify the contents of this manual according to the needs of technological development.

## 1.1. Product introduction

MC100 code scanner is a comprehensive device with multi-function, multi interface, small volume and multi scene applications. The device can support USB, RS232, WiFi and other output modes.

## 1.2. Product features

### 1, Strong reading ability

It can recognize the QR code and one-dimensional code on the screen of the mobile phone, support the enhanced engine mode, and can scan and read the code when the screen of the mobile phone is dark.

### 2, Voice broadcast

It can broadcast custom voice.

### 3, High speed reading



Different mobile phone LCD screens generally have different contrast, color, and degree of reflection, which can be read as long as the code system is within the reading window.

#### 4, Easy to use

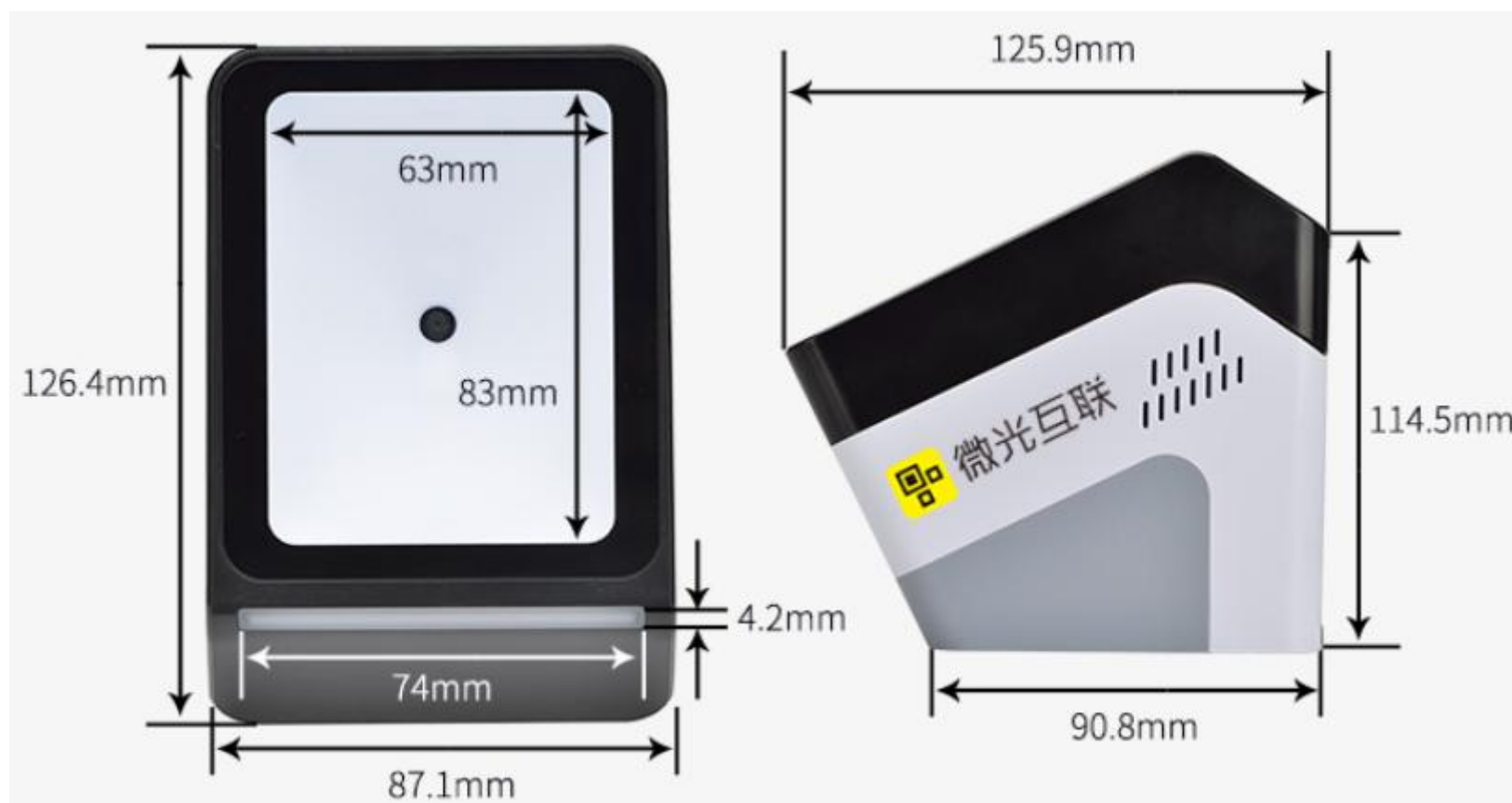
Scanners can be configured using configuration tools to achieve optimal operation.

## 1.3. Notes

- 1, Dismantling and modification: Please do not disassemble or modify the hardware of the product. If the equipment is damaged thereof, the company will not be responsible for the warranty.
- 2, Abnormal condition: Keep away from fire. If you find unusual odor, overheat or smoke, please immediately turn off the power switch and unplug the plug from the AC outlet, and contact the dealer where you purchased the product or our customer service center.
- 3, Drop damage: If the product is damaged due to falling on the ground, please immediately turn off the power and contact the dealer where you purchased the product or our customer service center.
- 4, Placement location: Please do not place the product in an unstable or uneven place, so as to avoid the device falling down and causing damage; please do not put the device in a place with large amount of moisture or dust, so as to avoid causing electric leakage or fire.
- 5, Do not touch the window glass with abrasive substances, so as to avoid wearing the window glass and affecting the reading effect.



## 2. Product size



## 3. Product parameters

### 3.1. General parameters

General parameters	
Communication interface	USB、RS232、WIFI
Indication mode	Buzzer prompt, speaker voice prompt, color indicator
Image Sensor	300,000 pixel CMOS sensor chip
Maximum resolution	640*480
OS	Windows (xp.7.8.10) , Linux, Android, Mac etc.
Installation mode	Recommended desktop
Reading window size	83mm*63mm
Material	ABS+PC+Tempered glass
Light source	Led diffuse lighting: white light fill
Data line	USB cable \ DB9 serial port cable

## 3.2. Recognition parameters

QR Code Recognition Parameters	
Symbologies	QR Code, EAN-8, EAN-13, ISBN-10, ISBN-13, CODE39, CODE93, CODE128, UPC, ITF etc.
Decoding support	Mobile screen / paper code
Read depth of field	0mm-130mm
Precision	$\geq 10\text{mil}$
Reading speed	100ms each time (average), supporting continuous reading
Reading direction	360°
Field of view angle	Level: 77° Vertical: 60°

## 3.3. Electric parameters

Power input is not allowed until the equipment is connected. If you plug in or unplug the equipment (with electric heating plug-in) when the cable is charged, its electronic components will be damaged. Please ensure that the power supply has been cut off during cable plug-in.

Poor power connection, too short power off and on operation, or too large voltage drop pulse may cause the equipment to not be in a stable and normal working state. It is necessary to maintain the stability of power input. After turning off the power input, the power input can be turned on again at an interval of more than 2 seconds.

3.3. Electric parameters	
Working voltage	DC 4.8V-5.5V
Working current	850mA (Typical 5V power supply with voice)
Rated power consumption	4250mW (Typical 5V power supply with voice)

## 3.4. Working environment

Working environment parameters	
Electrostatic protection	$\pm 4\text{kV}$ (Direct application)
Working environment	$-20^{\circ}\text{C}-70^{\circ}\text{C}$

Storage temperature	-40° C-80° C
Working humidity	5%-95% (No condensation) (Ambient temperature 30°C)
Ambient illumination	0-80000Lux( (Non-direct sunlight)



## 4. Voice function

### 4.1. Voice configuration

Download the "Audio UI Setting Tool v1.2.3.rar" at the download center of the official website of Beijing Vguang Internet Technology Co., Ltd. (<http://www.vguang.cn/xzzx1>) Configure voice through the audio configuration tool. When the audio configuration is successful, the code scanner will make a drip sound, which means that the setting is successful. If there is no sound, it is not successful.

When recording voice, you need to follow readme.txt in the voice configuration tool, otherwise it will not take effect.

MC scanner can be configured with up to 6 voice signals:

0.wav: Power on voice broadcast.

1.wav: Voice broadcast when scanning Alipay payment code.

2.wav: Voice broadcast when scanning Wechat payment code.

3.wav: Voice broadcast when scanning other non payment codes.

s.wav: In the network transmission mode, the voice broadcast when the transmission is successful.

f.wav: In the network transmission mode, the voice broadcast when the transmission fails.

### 4.2. Voice broadcast

#### 4.2.1. USB AND RS232 MODE VOICE BROADCASTING FUNCTION

Normal mode

: only established functions can be used, power on voice broadcast 0.wav, voice broadcast when scanning payment code 1.wav, 2.wav, voice broadcast when scanning other

non payment codes 3.wav.

Development mode: In serial port mode, corresponding instructions can be issued according to the “Vguang communication protocol” to control the broadcasting of voice 0, 1, 2 and 3.

In USB mode, the corresponding voice interface shall be encapsulated according to the “Vguang communication protocol”, and the interface shall be called to broadcast 0, 1, 2 and 3 voice. For specific encapsulation methods, please refer to the API examples in the SDK.

#### 4.2.2. WIFI MODE VOICE BROADCASTING FUNCTION

Under normal working mode: the output port needs to be configured as “TCP Protocol” or “HTTP Protocol”, not “TCP” or “HTTP”. In the “transmission success \ failure behavior” option, you need to tick “voice prompt”. When the server receives the data, it will return “code = 0000” in text \ plain format to the code scanner. After the code scanner receives the return value, the code scanner will broadcast the successful voice s.wav. If it does not return or returns other values, it will broadcast the failed voice f.wav.

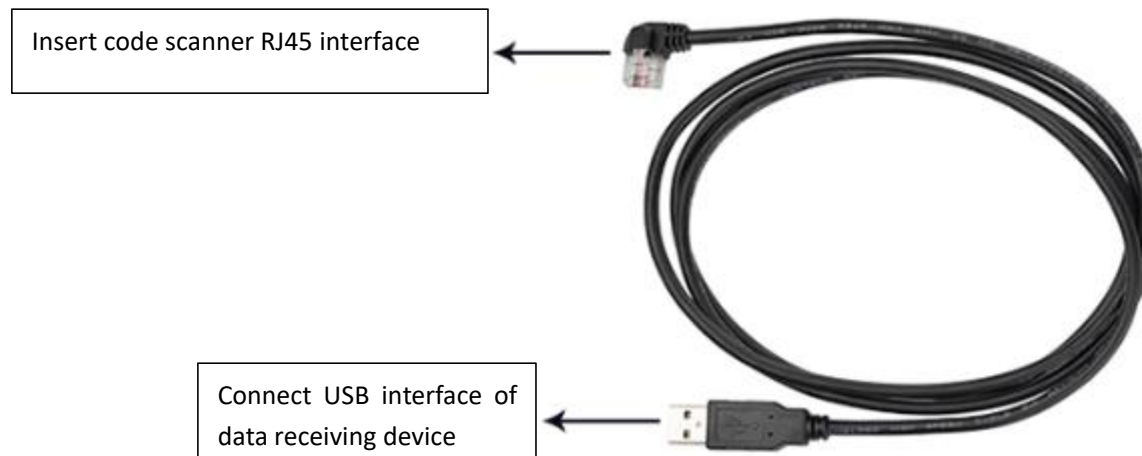
In development mode: only “TCP” mode is supported in development mode, and “TCP Protocol”, “HTTP” and “HTTP Protocol” are not supported. In the development mode, the protocol instruction is issued through the “Vguang communication protocol” to control the corresponding voice broadcast.

## 5. Operating instructions

### 5.1. Wiring diagram

#### 5.1.1. DATA CABLE ATTACHED TO EACH VERSION

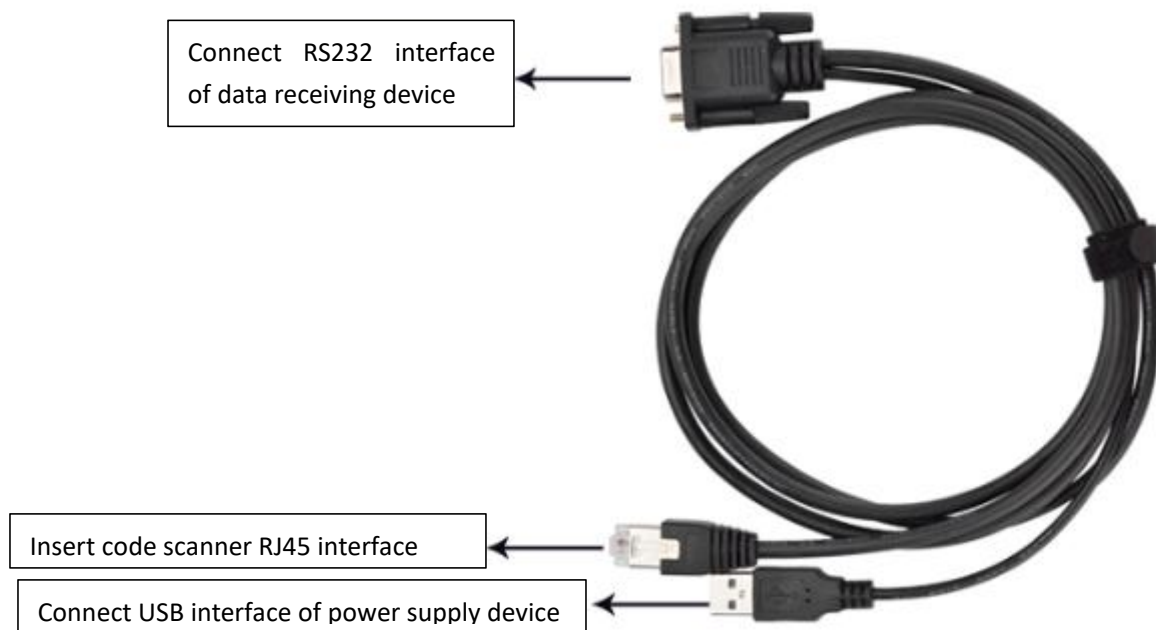
##### 5.1.1.1. Usb&Wifi output mode wiring



5.1 usb data cable / power cable



## 5.1.1.2. RS232 output mode wiring

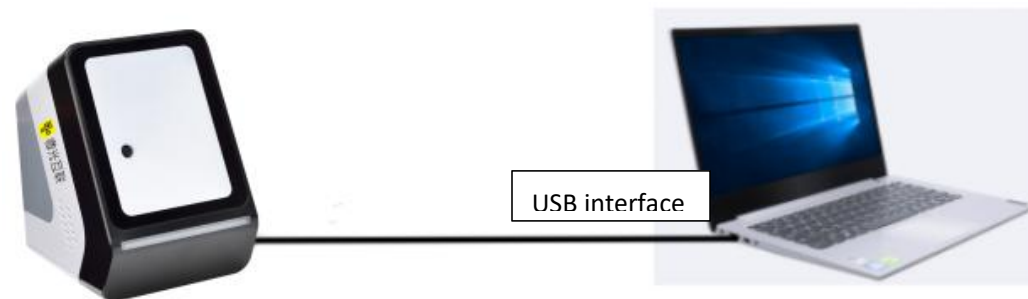


5.2 RS232 data cable

## 5.1.2. CONNECTION DIAGRAM

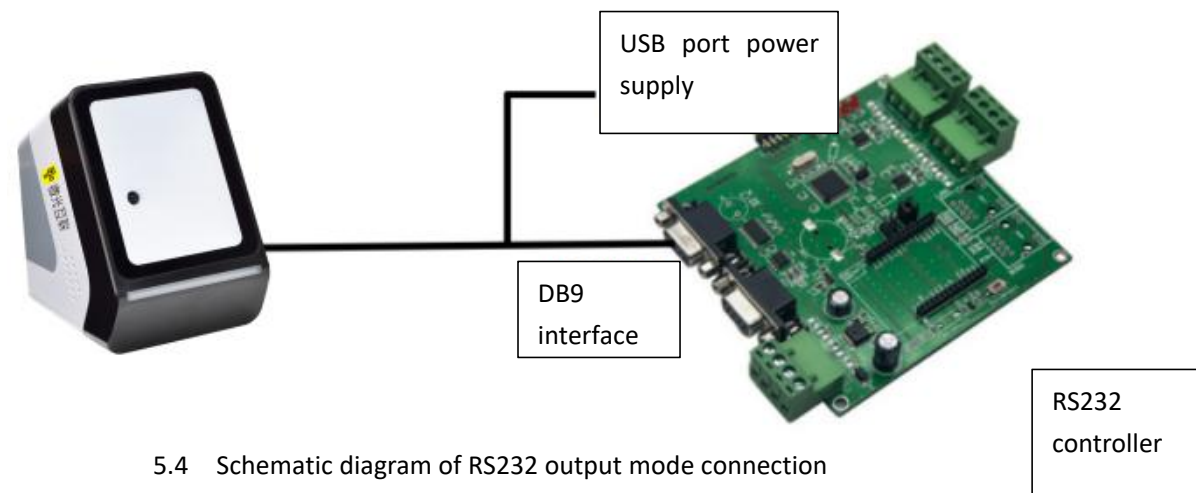
### 5.1.2.1. Schematic diagram of USB output mode connection

One end of the USB cable is connected to the code scanner, and the other end is connected to the USB interface of the computer.



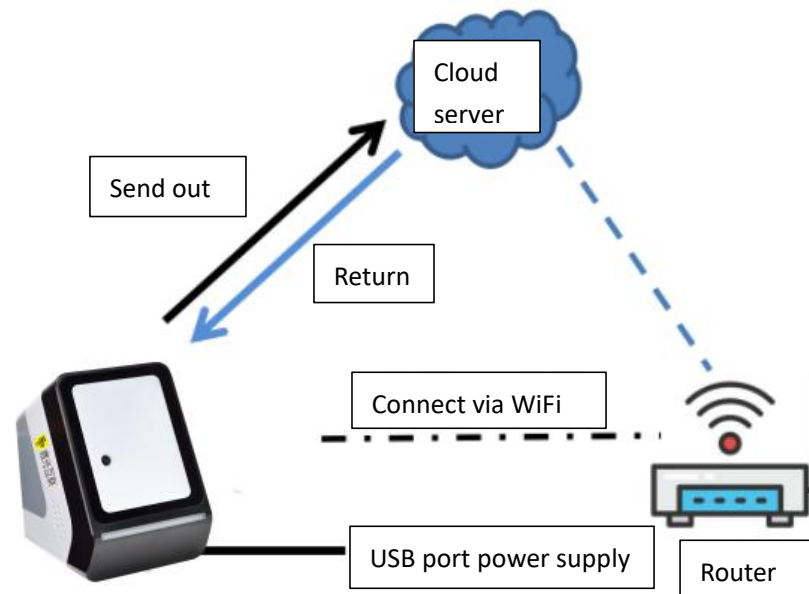
5.3 Schematic diagram of USB output mode connection

### 5.1.2.2. Schematic diagram of RS232 output mode connection



5.4 Schematic diagram of RS232 output mode connection

## 5.1.2.3. Schematic diagram of WIFI output mode connection



5.5 Schematic diagram of WIFI output mode connection

## 5.2. Equipment configuration

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

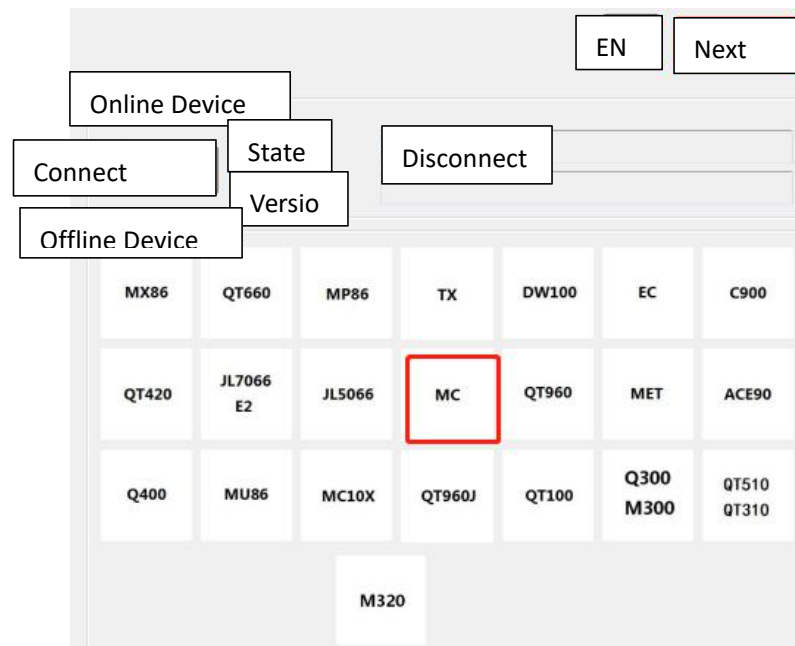


For the usage of the configuration tool, please refer to the user manual of Vguang configuration tool on the official website.

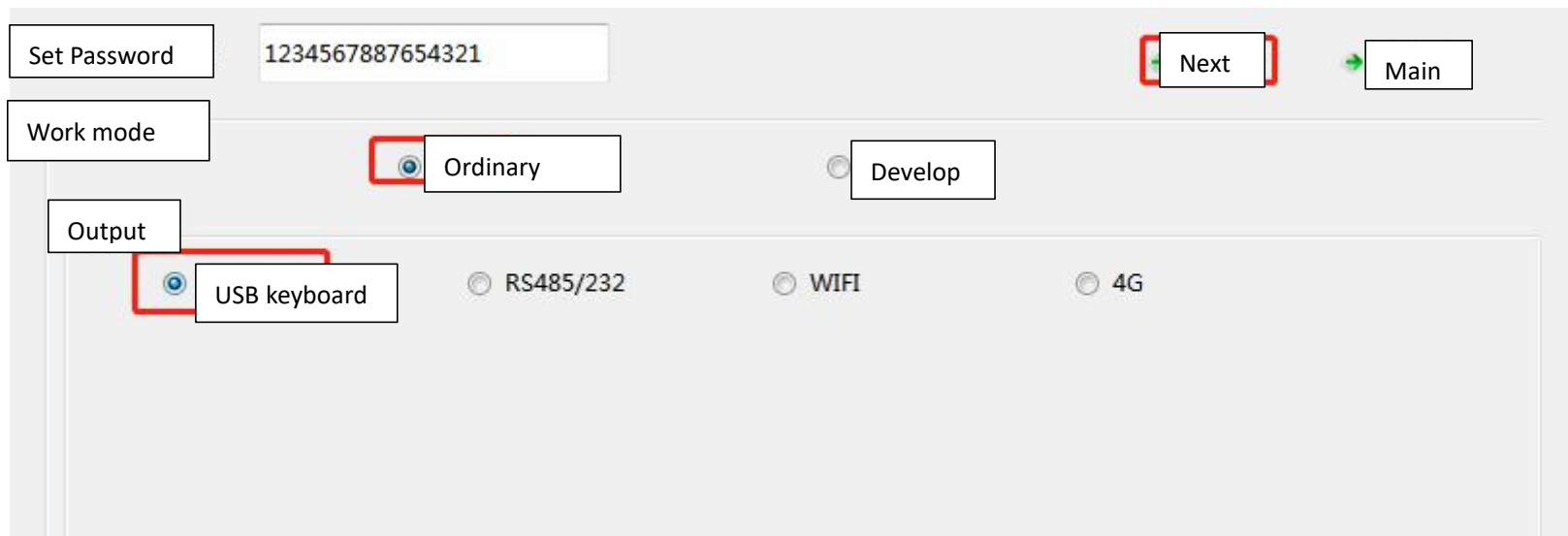
## 5.3. Configuration example

Take USB normal mode mode as an example.

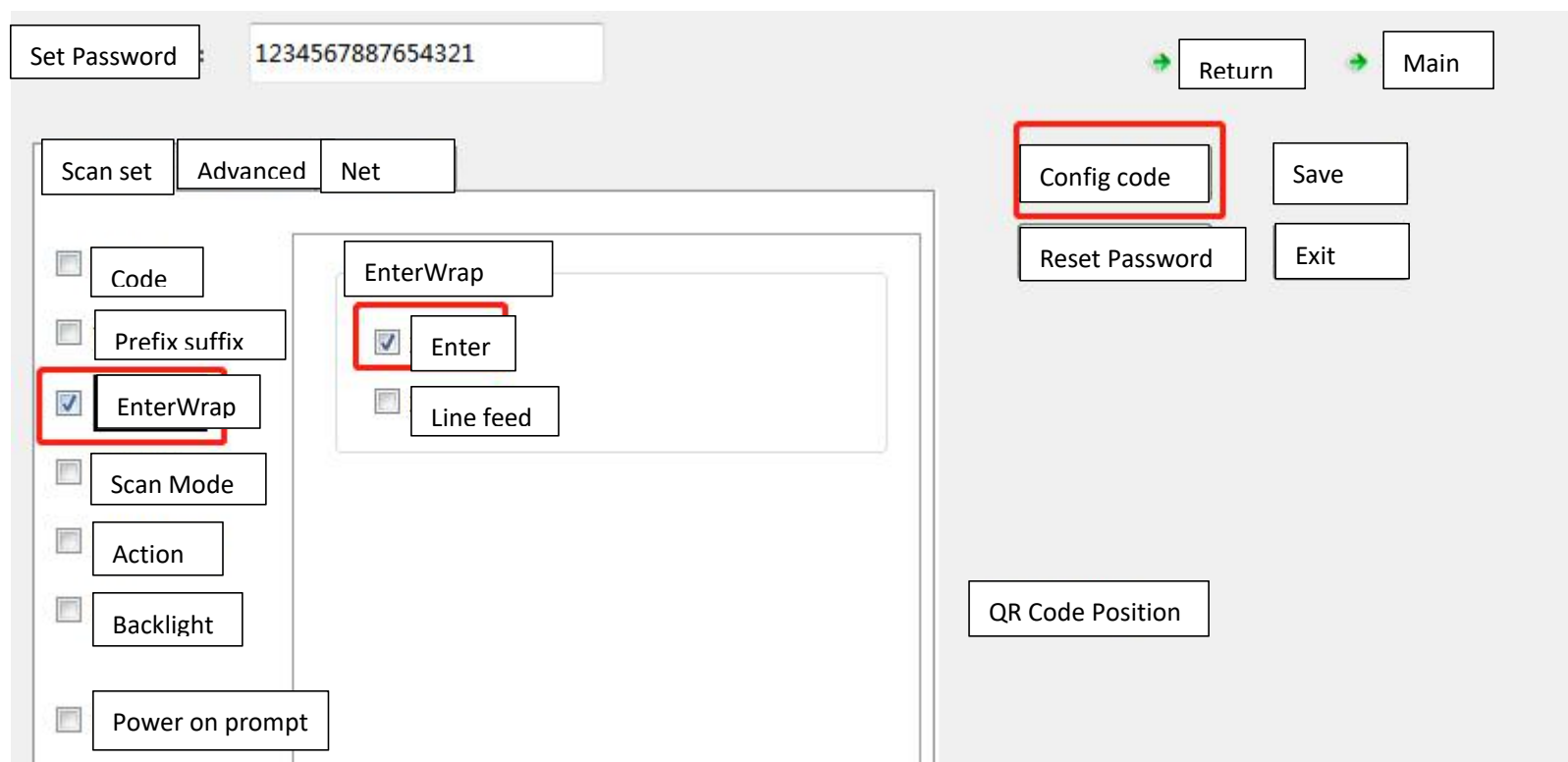
A Double click to open the configuration tool, select the corresponding device, and click next page.



B Select “normal” for working mode and “USB keyboard” for output mode, and click next page.

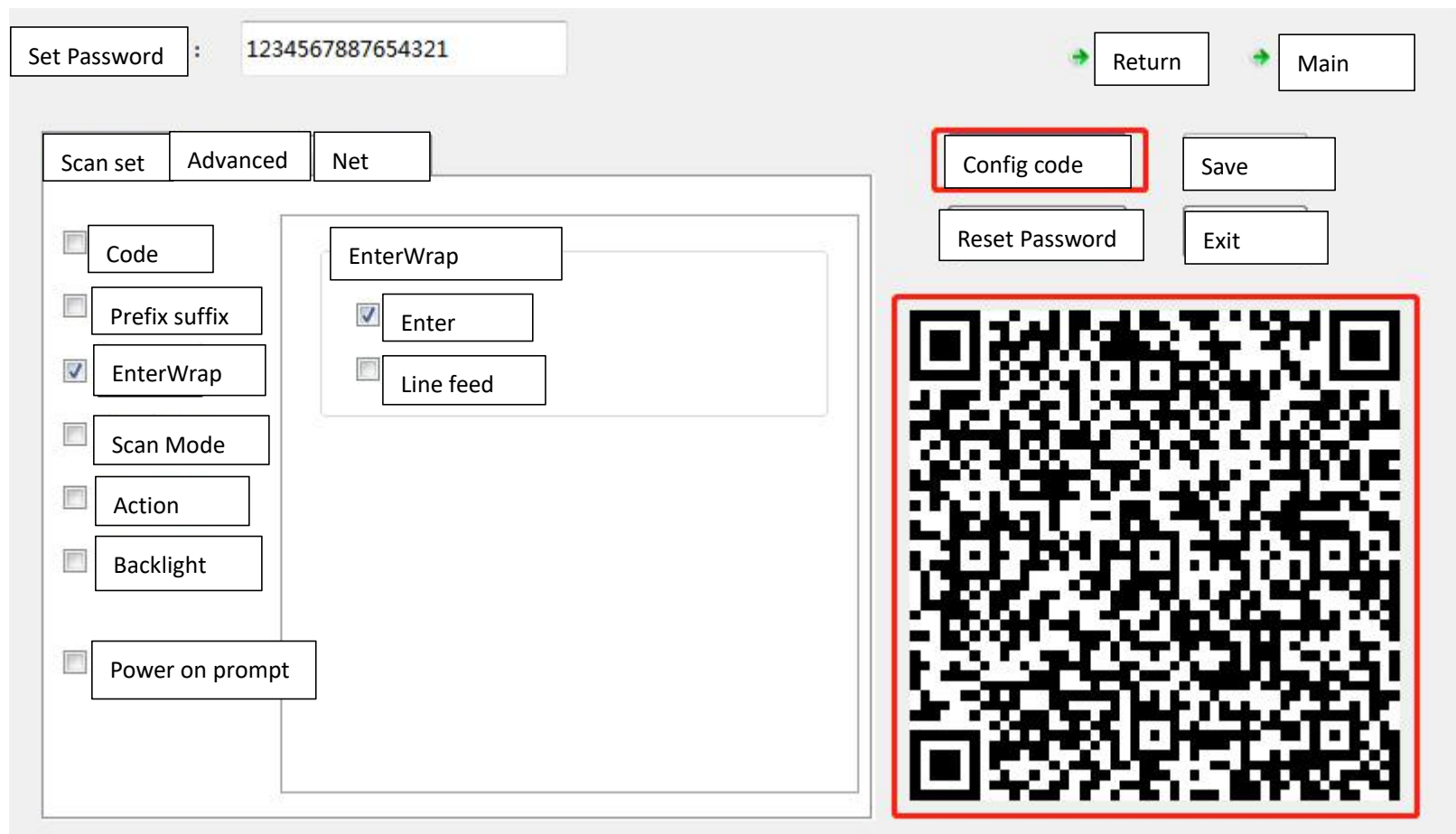


C Select the options to be configured, taking the "enter" character as an example. Check "EnterWrap", and then check the "enter" option.



D Click to generate the configuration code, send configuration code to the mobile phone, and then scan the code.

After scanning the configuration code, the flashing light indicates that the configuration is successful. After power off and restart, the configuration takes effect.



## 6. Common problem

(1) The device can not connect to the configuration tool.

When configuring the code scanner, you need to use the code scanning configuration method, that is, use the configuration tool to generate the configuration code and scan the configuration code for configuration.

(2) No response when scanning code.

You can adjust the brightness of the mobile phone to the maximum, and then conduct code scanning test.

(3) How to do secondary development of serial port equipment?

The serial port version of the scanner needs to be controlled by the protocol. Directly monitor the serial port through the program to receive and send instructions.

(4) How to determine whether the device is connected to WiFi?

You can't directly see whether WiFi is connected from the appearance of the device. You need to check it from the background of the router. The device only supports WiFi in 2.4G band.

## Contact info

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