QR Code Reader

User Guide

Version: V1.1   Date: 2020.04.10

Important Statement

About us

Thank you for choosing this product. Please read the user's Guide (hereinafter referred to as the instruction manual) carefully before use to ensure that the product is used properly, has good use effect and verification speed, and avoids unnecessary damage to the product.

No part of this manual may be reproduced or transmitted in any form without the written consent of the company.

Due to the continuous updating of the products, the company cannot promise that the information is consistent with the actual products, and does not assume any disputes caused by the actual technical parameters and the inconsistency of this information, and any changes are not notified in advance. The company reserves the right of final change and interpretation.
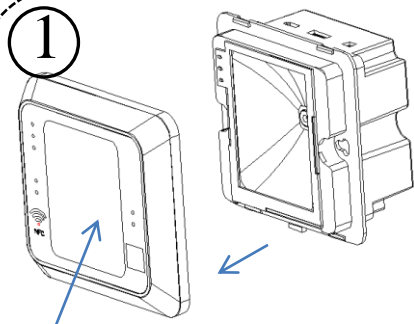
Change History

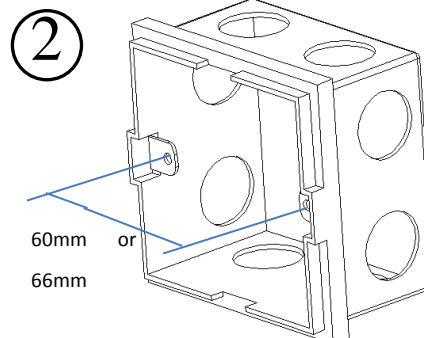| Version	Date	Description
V1.0	2019-09-30	The first official release.
V1.1	2020-04-10	Update DEMO software page.

Content

1、 Equipment Installation

Installation precautions: In order to ensure the normal use of the equipment, please strictly follow the installation instructions.
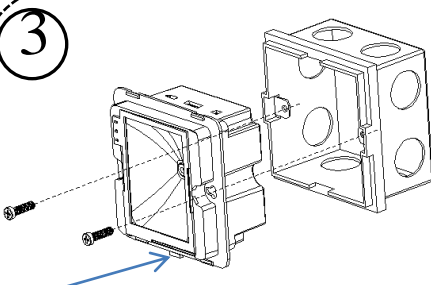
① Face shell (with panel)

Remove the face shell (with panel) from the device. It is necessary to gently remove the panel from the side of the USB socket to avoid damage to the LED light when it is removed.
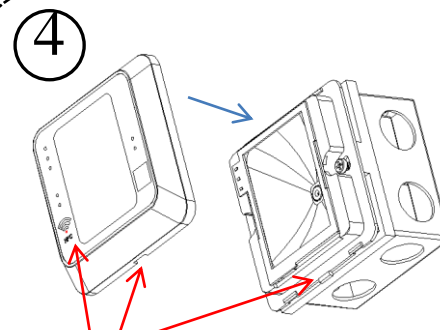
② 60mm or 66mm

The standard type 86 dark (bottom) box is purchased from the market with a mounting pitch of 60mm or 66mm. The installer places a dark (bottom) box on the wall surface according to the length and width of the standard type 86 dark (bottom) box and fixes it with cement sand.

③ When installing, the device has this boss facing down.

When installing, connect the cable and debug it. Then install the device into the Type 86 dark (bottom) box as shown in the figure, and fix the device with two M4*15PB mechanical teeth screws. Note that the device has the boss facing downward.

④ The panel is printed upright, and the notch below the shell is aligned with the boss below

First find the right point, then buckle the shell (with panel) into the device (as shown), pay attention to the assembly direction during installation and check whether the printing on the rear panel is upright.

2、 Product Introduction

The QR code Reader is a new generation of intelligent access control card reader developed by our company. The product has high-end appearance, high scanning speed, high recognition rate, strong compatibility, and can be connected to any access controller that supports Wiegand input. Adapt to various application scenarios, and support the identification of RFID radio frequency cards and QR codes, which can be applied in community management, visitor management, hotel management, unmanned supermarkets and other fields.

The characteristics of the QR code reader are as follows:

- New QR code access control technology development;
- Comes with a card reader antenna and working frequency is 13.56MHz
- Support MF, CPU, NFC (analog card), DESFire EV1, Chinese resident ID card, QR code;
- Support Wiegand, RS485, USB, TCP/IP network output mode;

3、 Wiring Instructions

3.1 Wiring Definition

From the reverse side from left to right (As shown above)：

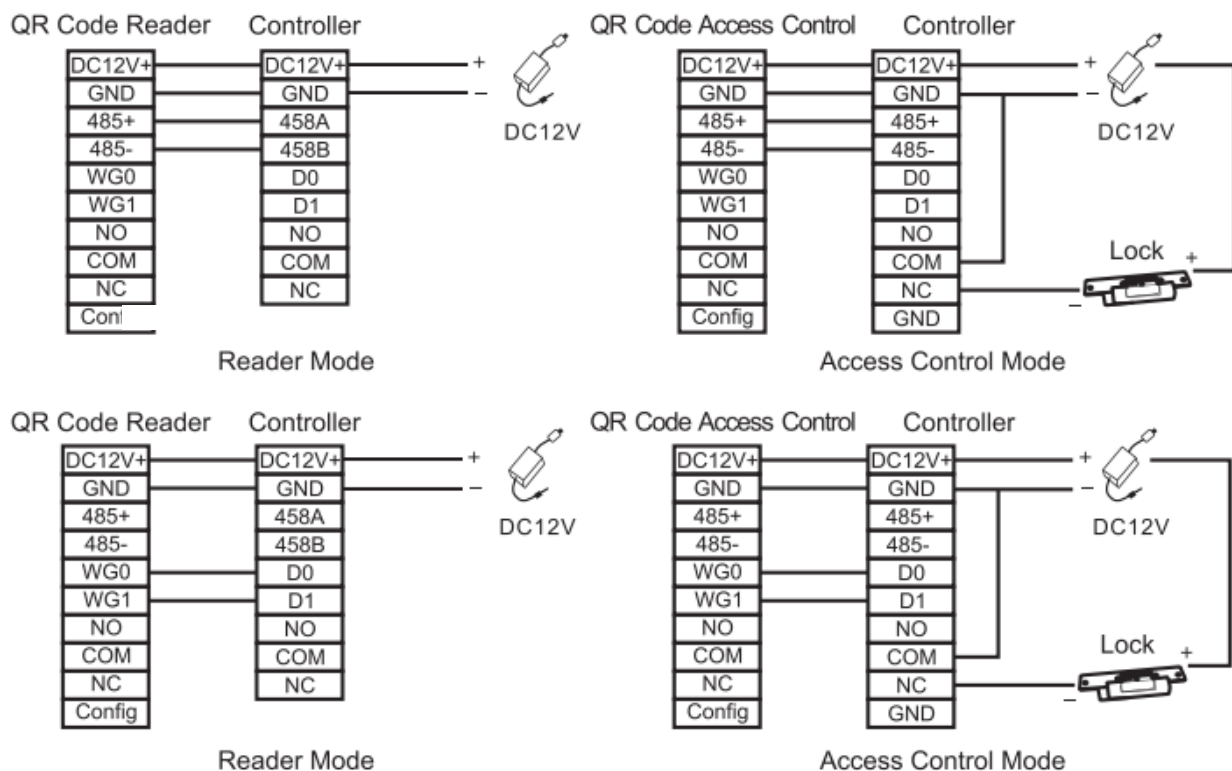| DC(+12V)	GND	485+	485-	WGO	WG1	NO	COM	NC	Config
Power	Ground	RS485 Interface		WG Interface		/	/	/	/

3.2 Instructions

Notice：Please connect to other equipment according to the wiring definition of the QR code reader. In addition, the following only refers to the partial wiring of the QR code card reader and the controller. It does not represent all the wiring definitions of the controller. Please refer to the actual controller wiring definition.

1. Wiegand or RS485 Communication

①First, connect the QR code card reader to the controller via Wiegand or RS485, and then connect the +12V power supply.

The two-dimensional code reader does not need to be connected to the lock body when it is used as a read head. When it is used as an integrated machine, it is necessary to connect the lock to control the switch door. The controller in the figure only lists some of the wiring, and there are many kinds of connection between the machines. Wiegand or RS485 common connection reference as shown below:
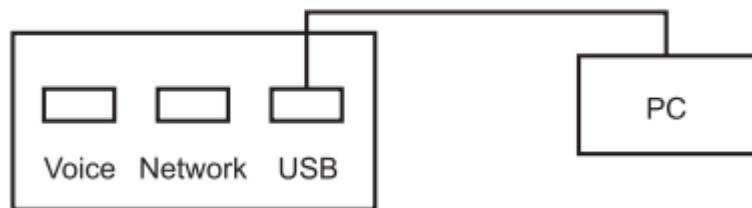

②Then put the card or QR code (paper, electronic, mobile phone) into the reader recognition range, the card reader will automatically obtain and transmit the information carried by the card or QR code to the controller.

2. USB Communication

①First, connect the QR code card reader to the PC terminal through the USB cable.

QR Code Reader Side Interface

②First open the **HID keyboard** in the DEMO software settings. Then put the card or QR code (paper, electronic, mobile phone) into the reader recognition range, the card reader will automatically obtain and transmit the information carried by the card or QR code to the PC, which can be demonstrated by text.

3. TCP/IP Network Communication

Notice： Only a few models support TCP/IP network communication.

①First, the QR code card reader is connected to the PC through the network terminal.

QR Code Reader Side Interface

②Then put the card or QR code (paper, electronic, mobile phone) into the reader recognition range, the card reader will automatically obtain the information carried by the card or QR code and transmit it to the PC, which can be demonstrated by text.

4、Set The QR code Reader With DEMO Software

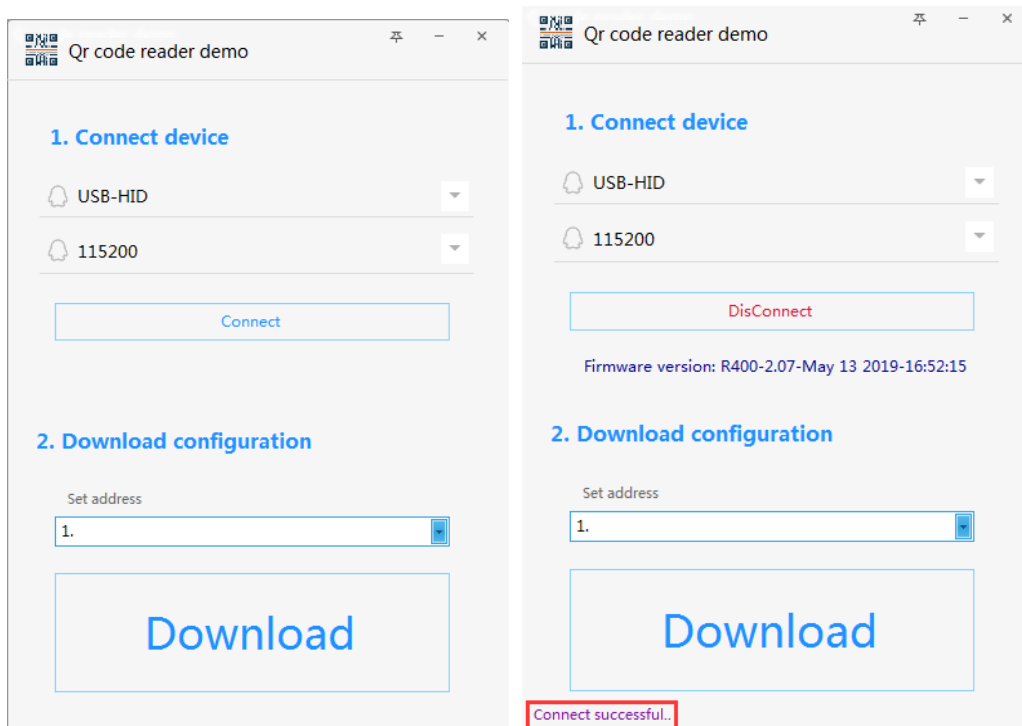This section describes how to configure the card reader through the Demo software.

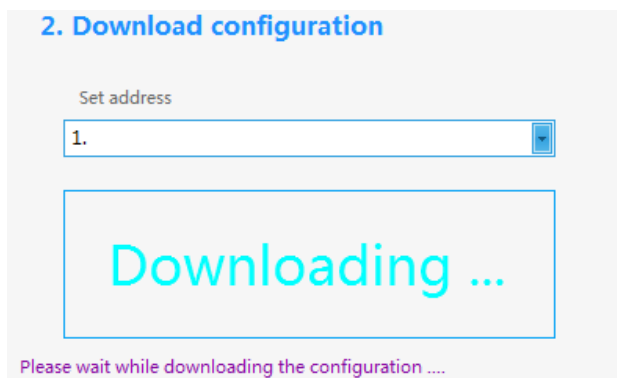## 4.1 One-click Configuration

Operation

1. Connect the QR code reader to the computer with a USB cable, open the Demo software, select the USB-HID port, click OK, the connection is successful. (Remarks: If serial port connection is selected, the default baud rate is 115200)
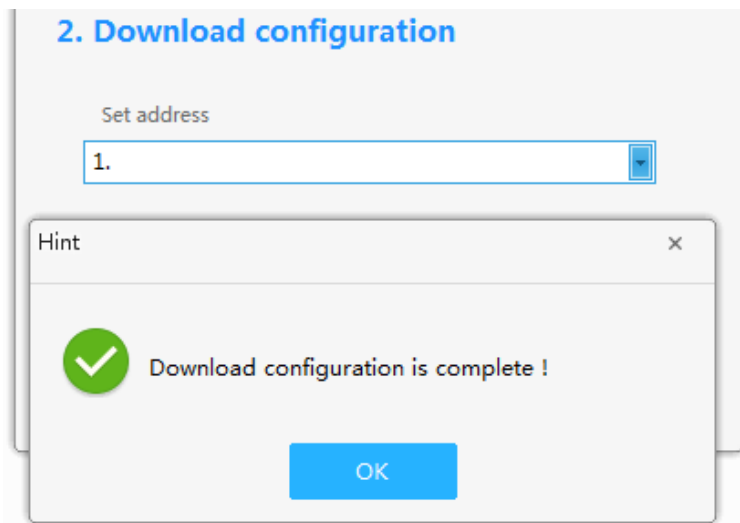
Notes：

1) Support for connecting configuration tools via USB and serial ports.

2) If you select RS485 communication mode to connect to the configuration tool, the baud rate defaults to 115200.

3) The version number in the screenshot only represents the version number of the test prototype, please refer to the actual product version number.

2. The connection is successful. In the download configuration area below, click Download.

3. A pop-up page prompts that the download configuration is complete, you can complete the QR code reader configuration with one click, and the operation is simple.
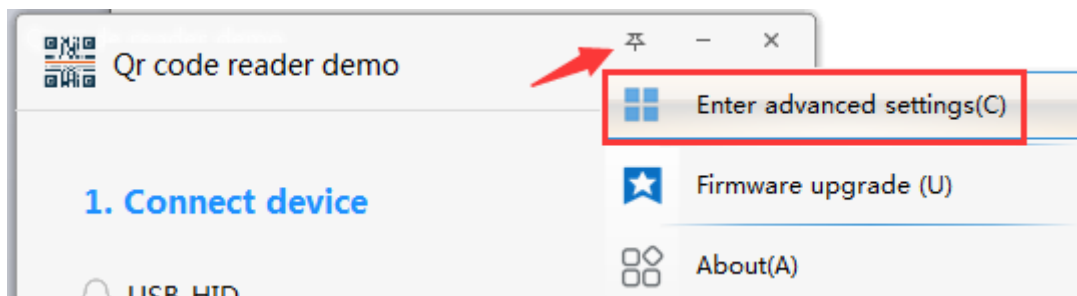
-----**END**

4.2 Basic Operation

Operation

1. If the user needs to set the parameters of the QR code reader by himself, open the Demo software, after the connection is successful, enter the advanced settings page in the upper right corner of the page.

2. Enter the main page of advanced settings.

3. On the Basic settings-1 page, set the configuration parameters of the reader as needed.

   a) Click **Find device** to view the address of the card reader.

   Notes：If you choose RS485 communication, you need to click "Scan Device" to get the correct device address before you can perform other operations.
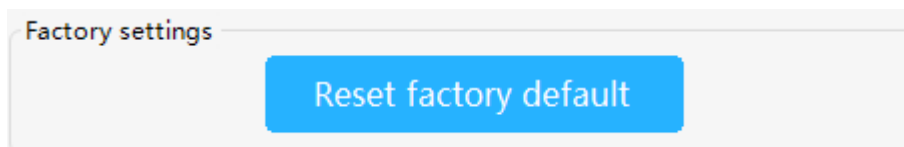

   b) Click **Get version** to view the version number information of the card reader.

   c) Click **Read configuration** to view the configuration information of the current reader.

d) The user can set the parameter information of the card reader and click **Write configuration** to configure

the parameter information of the QR code card reader.

Parameter	Description
RS485 Address	0: Broadcast address, that is, the communication connection can be made regardless of whether the machine 485 address is set to 0~255. If the machine 485 address is set to 1~255, fill in the corresponding, you can also communicate.
Opening times	When the card reader is directly connected to the door lock, the length of time the door is opened when the card or QR code with normal door opening permission is swiped.
Serial number	The serial number of the device of the reader.
RS485 function switch	Turn RS485 communication on or off the card reader. The configuration tool can still be connected via 485 when it is turned off.
RS485 automatic upload	When opened, the card reader data is automatically uploaded to the server under the 485 interface. When closed, the reader data will not be uploaded to the server.
Work mode	Reader mode: When the card reader is connected, the read head mode is selected, and the parameters of the read head are set by the DEMO software. Offline mode: When connecting to the all-in-one, select the all-in-one mode and set the parameters of the all-in-one through the DEMO software.
HID keyboard	When turned on, USB communication can transfer the card number/information to a computer (such as a text document). When turned off, the swipe/QR code will have normal feedback, but USB will not transfer the card number/information to the computer.
HID keyboard	When opened, USB communication can transfer the card number / information to the computer (such as a text document). When closed, the card / QR code will have normal feedback, but the USB will not transfer the card number / information to the computer.
Baud rate	If you choose a serial port connection, you can set the baud rate.
Write configuration	After modifying the above parameters, click **Write Configuration**, that is, the new configuration information is successfully written to the card reader.
Read configuration	Get the current configuration information of the reader and display it.

4. Supports the factory reset of the card reader.

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4.3 Parameter Setting

Operation

1. On the **Basic settings-2** page, set the relevant parameters of the QR code.

Parameter	Description
QR code decoding key	The decryption key of the QR code when the encryption mode is selected.
QR code effective time	The effective time of the QR code display.
Door ID	Access ID number, support setting output or not output ID number.
QR code mode	The output mode of the two-dimensional code: Not encrypted, Custom encryption, Dynamic QR code.
Light mode	QR code light mode: Constantly bright, intermittent, induction.
Write configuration	After modifying the above parameters, click **Write Configuration**, that is, the new configuration information is successfully written to the card reader.
Read configuration	Get the current configuration information of the reader and display it.

2. On the **Basic Settings-2** page, set the parameters for Wiegand.

Parameter	Description
Wiegand mode	Choose WG26, WG34, or WG66.
Output format	When Wiegand outputs the card number information, the card number can be selected for forward or reverse output.

Whether to check	Choose whether to output the Wiegand check digit or not.
Pulse Width	Wiegand pulse width, optional（1~99）*10ms
Pulse interval	Wiegand pulse gap, optional（0~89）*100+1000ms
Write configuration	After modifying the above parameters, click **Write Configuration**, that is, the new configuration information is successfully written to the card reader.
Read configuration	Get the current configuration information of the reader and display it.

----- END

4.4 Card Reading Parameter Setting

Operation

1. On the **Basic Settings-3** page, set the card reader's card reading parameters.

Parameter	Description
App ID	The directory file number of the user card content to be read.
File ID	The file number of the user card content to be read.
Key ID	The key identifier for external authentication of the CPU card.
CPU user key	The key of the CPU user card content to be read. Note: The authentication key of the user card must be the same as the **user card key** set on the configuration card.
Start block	The content of the user card to be read starts from the first block.
Start byte	The content of the user card to be read starts from the first few bytes.

MF user key	The sector key of the MF user card content to be read.
Prior choice	Select the CPU priority or MF card priority when setting the card reader composite card.
Reading Card mode	Custom settings read the physical card number or content of the CPU card, MF card UID or content, ISO15693 card UID or content.
Write configuration	After modifying the above parameters, click **Write Configuration**, that is, the new configuration information is successfully written to the card reader.
Read configuration	Get the current configuration information of the reader and display it.

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4.5 Reader Parameter Setting

Operation

1. On the Reader Operation page, set the parameters of the reader.

Parameter	Description
Read RTC	Get the time of the reader.
Write RTC	Set the time of the reader.
Write in real time RTC	The time when the reader is connected to the PC.

Control door	Support setting remote door opening and remote closing.
Opcode	1~23 is a fixed ringtone, and 255 is a vocal broadcast.
Encoding	GB2312, GBK is a different Chinese coded character set.
Text data	You can enter the text you want to play. When the opcode is 255, click **Play voice**, the card reader will play the text.
Save voice	You can select the small ringtone from 1~23, or enter "Hello" as the opening voice and save it. The card reader will play the voice automatically when you open the door next time.
Get voice	Let the saved open door voice play out.

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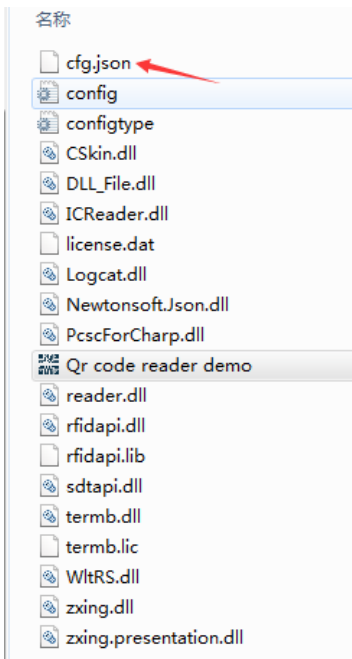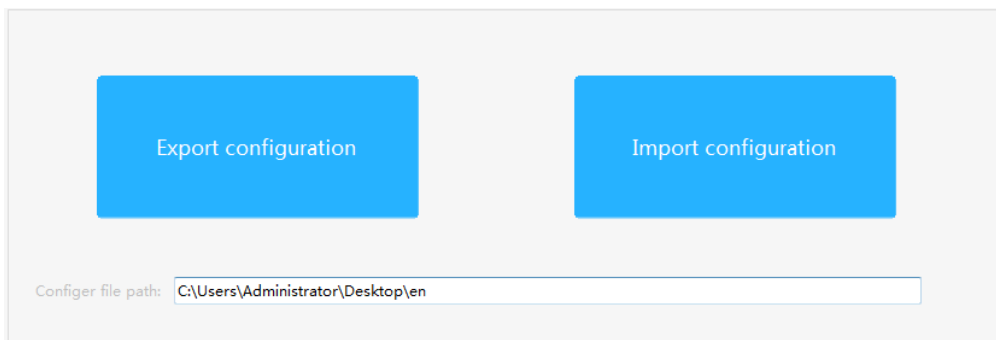# 4.6 Import And Export configuration

Operation

1. On the Page Configuration page, click Export Configuration.

    Notes：

    This function is used for operations before and after restoring factory settings, After the factory settings are restored, the function parameters are restored to the default values, and it is necessary to reload the setting parameters that can read PDF417 and QRcode. Therefore, it needs to be configured according to function 4.6. .Json needs to be backed up before restoring the factory settings. Otherwise, please do not restore the factory settings.

    a) The configuration file for import and export can only be a cfg.json file.

    b) The exported configuration file can be used for one-key configuration. When entering the advanced settings page, the configuration information will also be loaded according to the cfg.json configuration file.

    c) If there is no cfg.json configuration file in the .exe directory, the cfg.json file will be generated by default in the background when you enter the advanced settings page.
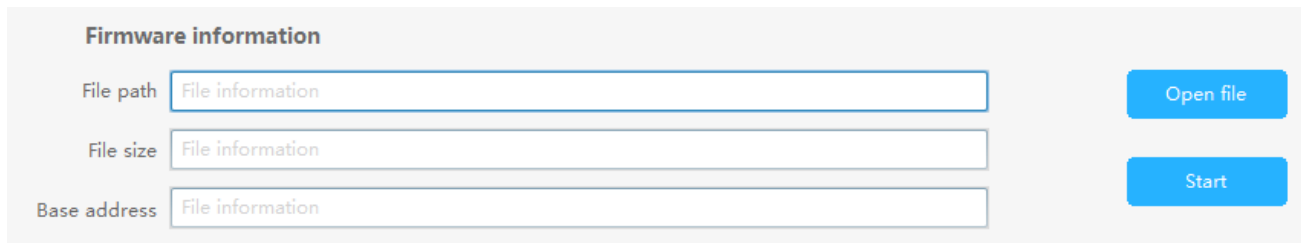
名称
- cfg.json
- config
- configtype
- CSkin.dll
- DLL_File.dll
- ICReader.dll
- license.dat
- Logcat.dll
- Newtonsoft.Json.dll
- PcscForCharp.dll
- Qr code reader demo
- reader.dll
- rfidapi.dll
- rfidapi.lib
- sdtapi.dll
- termb.dll
- termb.lic
- WltRS.dll
- zxing.dll
- zxing.presentation.dll

----- END

4.7 Firmware Upgrade

Operation

1. On the **Firmware Upgrade** page, click **Open file**, select the upgrade program, click the **Start** button, plug in the USB and reconnect the computer to the computer to view the prompt message, indicating that the upgrade is successful.

----- END

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.

Any 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.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body: Use only the supplied antenna.