Quick Start Guide

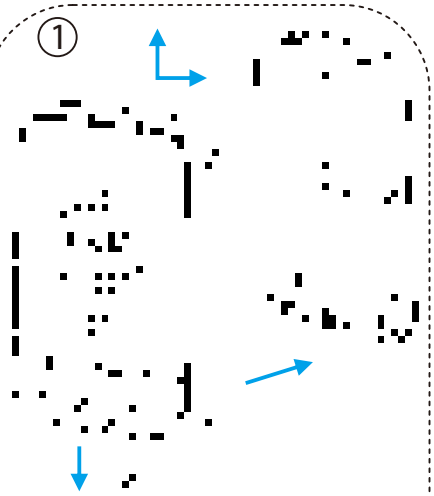
QR Code Access Control Card Reader

Version: 1.1

1. Installation

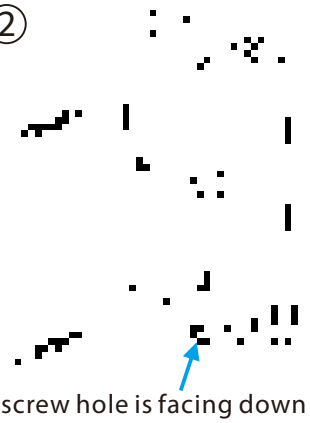
Product size 1: (length 120 (±0.5) * width 80 (±0.5) * height 22.67 (±1)) (mm)

①



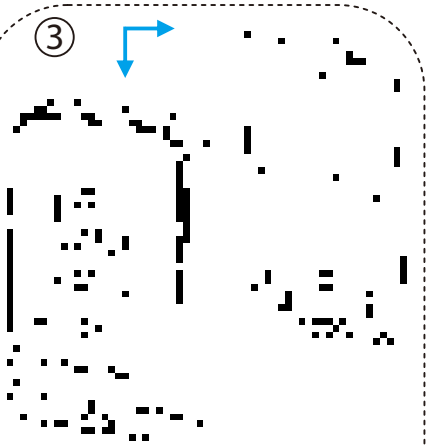
As shown in the figure above, remove the screw and remove the backplate from the device.

②



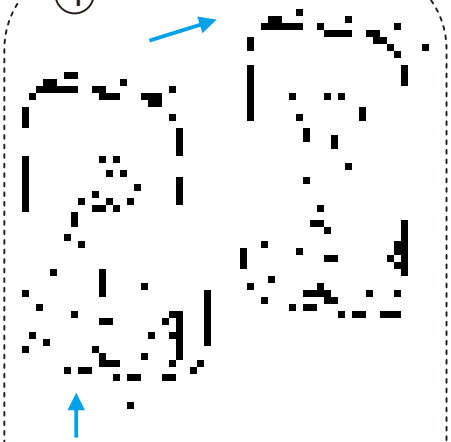
Align the screw holes of the backplate with the holes drilled on the wall, and fix the backplate on the wall with the screws.

③



Connect the wires well, and install the device on the backplate.

④



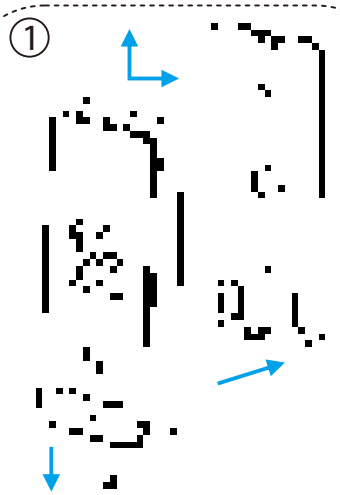
Use the screw removed in step 1 to fix the device on the backplate.

⑤

Installation of device cable through the wall.

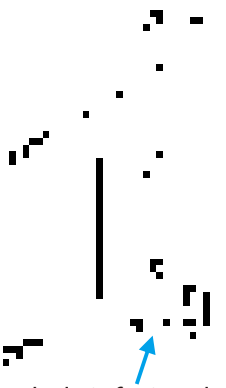
Product size 2: (length 138 (±0.5) * width 58 (±0.5) * height 22.67 (±1)) (mm)

①



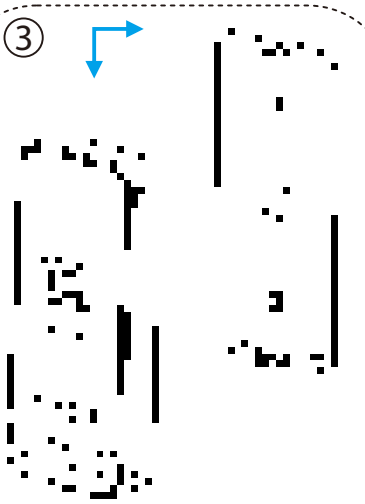
As shown in the figure above, remove the screw and remove the backplate from the device.

②



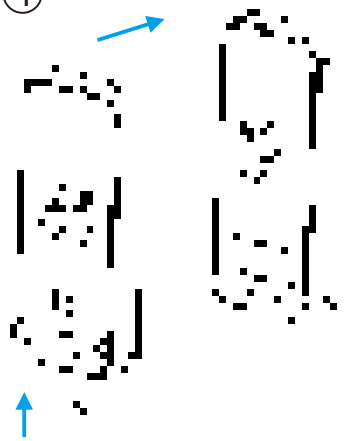
Align the screw holes of the backplate with the holes drilled on the wall, and fix the backplate on the wall with the screws.

③



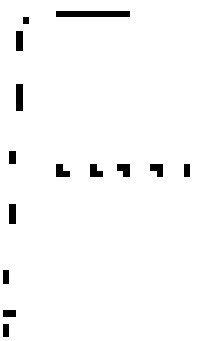
Connect the wires well, and install the device on the backplate.

④



Use the screw removed in step 1 to fix the device on the backplate.

⑤



Installation of device cable through the wall.

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 control controller that supports Wiegand input. The reader adapts to various application scenarios and supports the identification of RFID radio frequency cards and QR codes, and uses non-contact identification to replace traditional RFID cards. Dynamic QR codes can better protect user information security, and the product supports IP65 waterproof, which can be applied in community management, visitor management, hotel management, unmanned supermarkets, and other fields. The design of this series of products is also in line with CE, FCC and other certification standards.

The features of QR code reader are as follows:

- New QR code access control technology
- ID supports EM4100/EM4200
- IC supports identification of MF, Desfire EV1, resident ID card and QR code
- Support QR code recognition: 2D: QR, Data Matrix, PDF417; 1D: GS1 databar, code128/Ean128, UPC/EAN, Codebar, code39/code93
- Support Wiegand34/26/32/66/RS485 switching at the same time
- Number keyboard (optional)

3. Wiring Instructions

3.1 Wiring Definition

QR Code Reader: 9 core wire connection mark

Red	Black	White	Green	Purple	Gray	Yellow	Blue	Orange
12V	GND	D1	D0	Beeper	LED	/	485A	485B

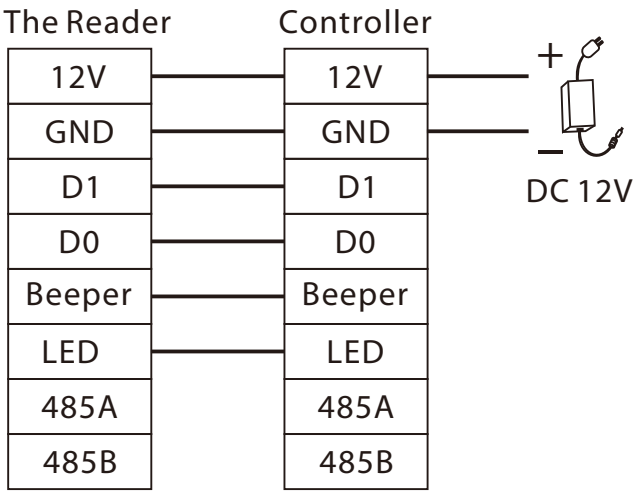
3.2 Device Connection

Please connect the device 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 reader and the controller. It does not represent all wiring definitions of the controller. Please refer to the actual controller wiring definition.

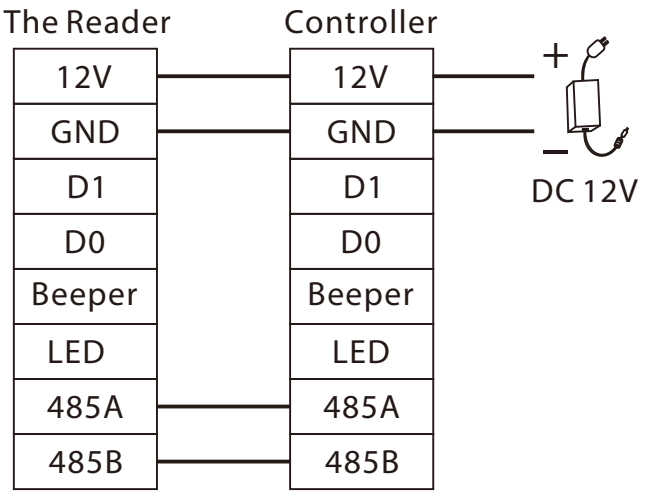
❖ **Wiegand or 485 connection**

1. Connect the QR code reader to the controller via Wiegand or RS485 and then connect it the +12V power supply. The QR code reader does not need to be connected to the lock body when it is used as a reader. The controller in the figure only lists some of the wirings, and there are many kinds of connections between the machines. Wiegand or RS485 common connection reference as shown below:

Wiegand Connection Mode:



RS485 Connection Mode:



2. Open DEMO, select the serial port number, the default baud rate is 115200, click "**Connect**" and "**Scan Address**" and then put the card or QR code (paper, electronic , mobile phone) into the recognition range of the card reader, and read the card. The device automatically obtains and transmits the information carried by the card or QR code to the controller.

❖ **USB connection**

1. First, connect the QR code reader to the PC terminal through the USB cable.
2. Open DEMO, select USB for the serial port number, click "**Connect**" and "**Scan Address**", it prompts that the connection is successful, and then place a card or QR code (paper, electronic, mobile phone) within the reader's recognition range, the card reader will automatically obtain and transmit the information carried by the card or QR code to the controller.

4. Set up the QR Code Reader with Demo Software

This section describes how to configure the QR code reader through the DEMO software.

4.1 Configuration

1. Connect the QR code reader to the computer with a USB to 4Pin cable, open the DEMO software.

2. Enter the connection page.

3. Select "USB-HID", click "Connect", wait for about 2 seconds, the page will display the firmware version of the device, that is, the connection is successful.

Note:

① Support to connect the configuration tool through USB and serial port.

② USB-HID: Connect to the configuration tool by means of USB communication; USB Serial Port (COM): Connect to the configuration tool by means of 485 communication. If a serial connection is selected, the baud rate is 15200 by default.

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

4.2 Device Operation

Operation Steps:

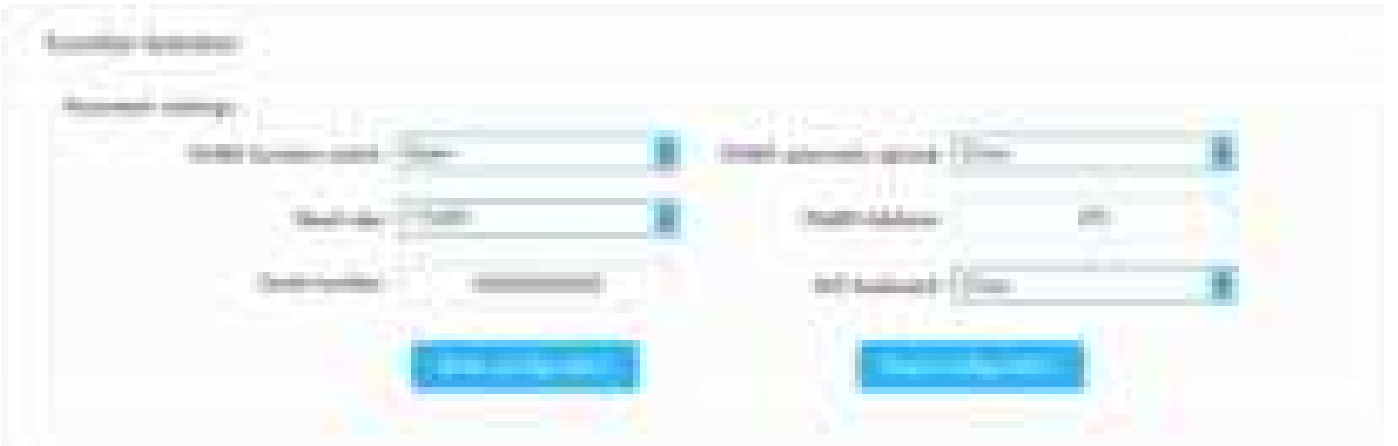
1. If the user needs to set the parameters of the QR code reader by themselves, open the Demo software, after successful connection, enter the advanced settings page in the top right corner of the page.

2. Enter advanced settings page.

4.3 Function Selection

Operation Steps:

1. On the "**Function Selection**" page, click "**Read Configuration**" to view the configuration information of the current card reader.
2. Users can also set the parameter information of the reader by themselves, and then click "**Write Configuration**" to configure the parameter information of the QR code 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.
RS485 Function	Open or Close of the RS485 communication method of the card reader. The configuration tool can still be connected via 485 when it is closed.
Serial Number	The serial number of the device of the reader.
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.
HID Keyboard	When opened, the USB communication can transfer the card number/information to the computer (such as a text file). 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 a serial connection is selected, setting the baud rate is supported.
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.

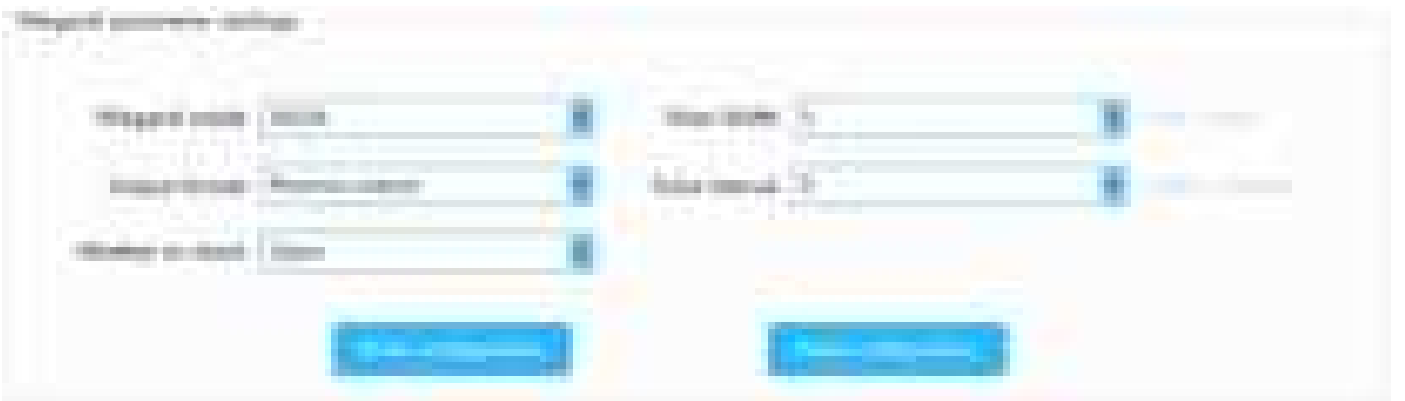
3. Click "**Get Version**" to view the version number information of the card reader.

4. Support for restoring the card reader to its factory settings.

4.4 Wiegand and QR Parameter Settings

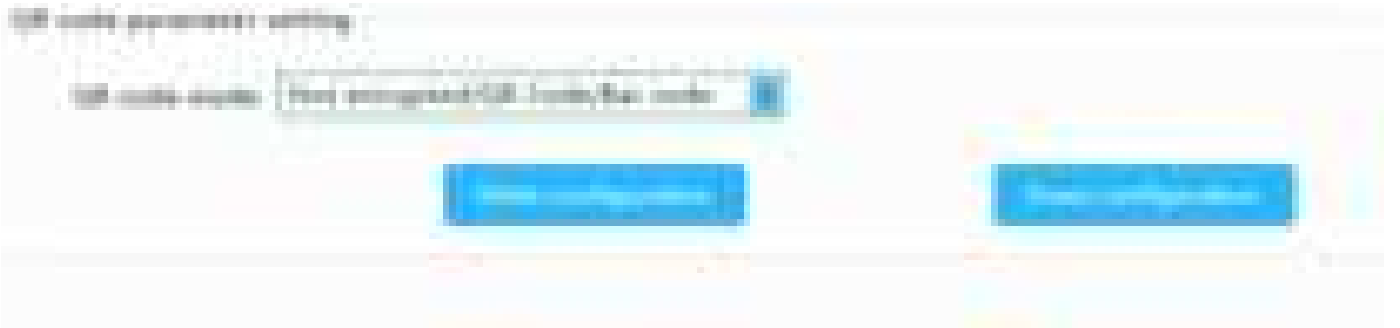
Operation Steps:

1. On the "**Wiegand Setting**" page, set the parameters for Wiegand.



Parameter	Description
Wiegand Mode	Wiegand 26, 34 and 66 are available.
Output Format	When Wiegand outputs the card number/information, the card number can be output in forward/reverse direction.
Whether to check	Whether to transmit the Wiegand check bits out, optionally output/not output.
Pulse Width	Wiegand pulse width, optional (1~99) * 10us
Pulse Interval	Wiegand pulse gap, optional (0~89) * 100+1000us.
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 "**QR Code Parameter setting**" page.



Parameter	Description
QR Code Mode	Choose ''Not encrypted'', ''Chile'' or ''Argentina''.
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.

4.5 Reader Parameter Setting

Operation Steps:

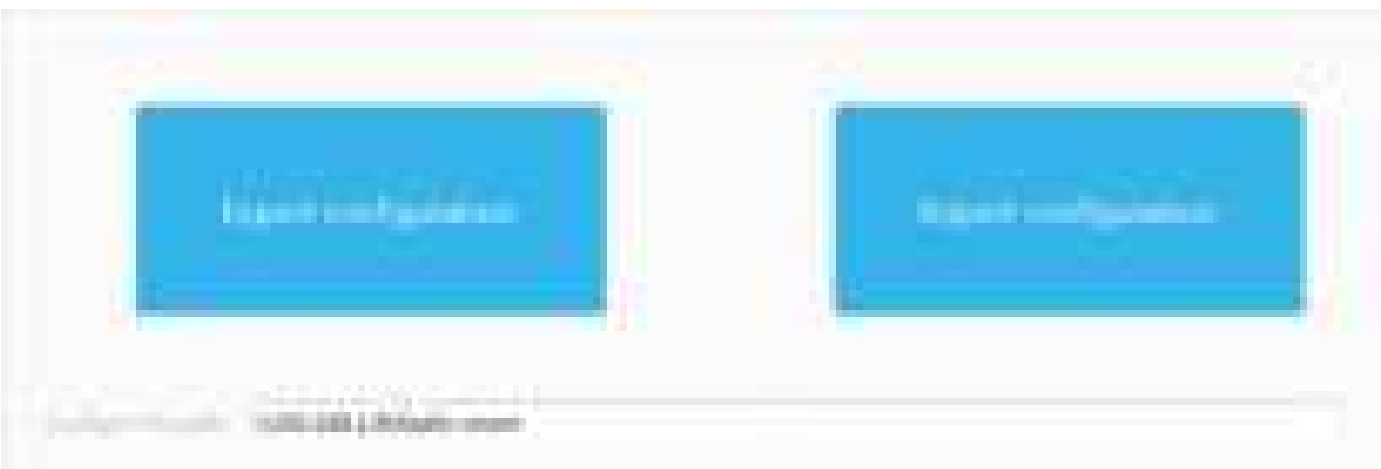
On the "**Read Card Setting**" page, set the reading parameters of the card reader.

Parameter	Description
App ID	The ID of the directory file where the content of the user card to be read is located.
File ID	The file ID where the content of the user card to be read is located.
Key ID	The key ID of the 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 consistent with the "User Card Key" set on the configuration card.
Start Block	The content of the user card to be read starts from the first few blocks.
Start Byte	The content of the user card to be read starts from the first few bytes.
MF Card Key	The sector key of the MF user card content to be read.
NFC Switch	NFC function can be enabled or disabled.
Prior Choice	When setting the card reader to swipe the composite card, select CPU priority or MF card priority.
Read Card Mode	Custom settings read the physical card number or content of the CPU card, the physical card number or content of the MF.
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.

4.6 Import and Export Configuration

Operation Steps:

On the "**Page Configuration**" page, click "**Export Configuration**" to exporting the page configuration information of the current device, click the "**Import Configuration**" to importing configuration information.



Note:

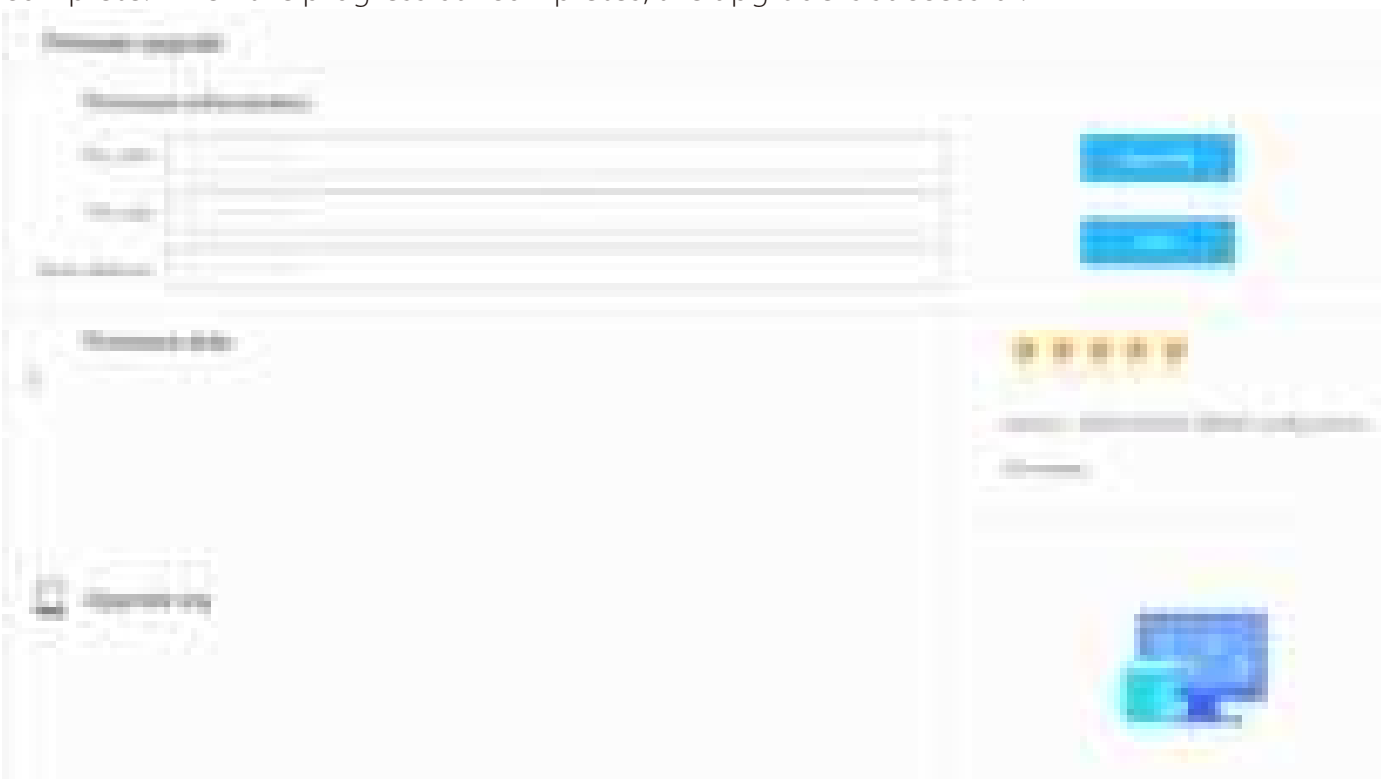
① If the reader is RS485 communication, the configuration is imported, and the RS485 address needs to be set.

② On the connection page (as shown below), the functions of downloading configuration and importing configuration are the same.

4.7 Firmware Upgrade

Operation Steps:

On the "**Firmware Upgrade**" page, click "**Open File**", select the upgrade program, click "**Start**" button. Power off the reader, unplug the USB, and then reconnect the USB. The reader will automatically start the upgrade, and wait for the progress bar at the bottom of the page to complete. When the progress bar completes, the upgrade is successful.



Note: When upgrading, you need to power off the reader, unplug the USB, and then reconnect the USB.

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.