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Radio ZQR388 QR Code Access Control Card Reader User Guide

Contents

Radio

Radio ZQR388 QR Code Access Control Card Reader

Specifications

- Product Name: QR Code Access Control Card Reader
- Version: 1.1

Installation

1. Remove the screw and 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 screws.
3. Connect the wires properly and install the device on the backplate.
4. Use the screw removed in step 1 to fix the device on the backplate.
5. If required, install the device cable through the wall.

Product Introduction

The QR code reader has the following features:

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

Wiring Instructions

Wiring Definition
QR Code Reader: 9 core wire connection mark

Wire Color	Connection	Function
Red	12V	Power supply
Black	GND	Ground
White	D1	Data 1
Green	D0	Data 0
Purple	Beeper	Beeper control
Gray	LED	LED control
Yellow	485A	RS485 A
Blue	485B	RS485 B
Orange		

Device Connection
Please connect the device to other equipment according to the wiring definition of the QR code reader. The following instructions only refer to the partial wiring of the QR code reader and the controller.

Wiegand or 485 connection

1. Connect the QR code reader to the controller via Wiegand or RS485.
2. Connect the +12V power supply to the QR code reader.

Wiegand Connection Mode

The Reader	Controller
12V	+
GND	−
D1	Data 1
D0	Data 0

RS485 Connection Mode

| The Reader	Controller
12V	+
GND	–
D1	Data 1
D0	Data 0
Beeper	Beeper control
LED	LED control
485A	RS485 A
485B	RS485 B

USB connection

1. Connect the QR code reader to the PC terminal through the USB cable.
2. Open DEMO software and select USB for the serial port number.

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.

① As shown in the figure above, remove the screw and remove the backplate from the device.

② screw hole is facing down

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

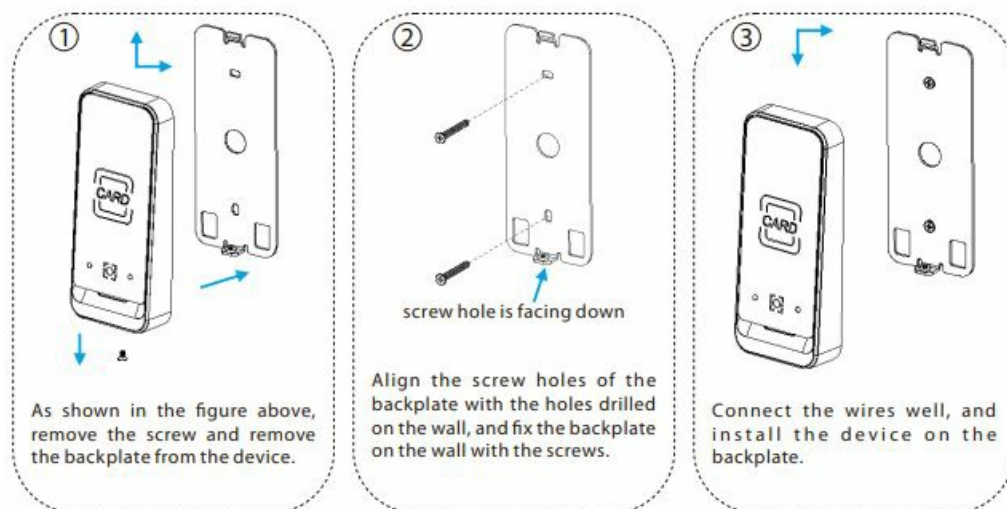③ Connect the wires well, and install the device on the backplate.

4. Use the screw removed in step1 to fix the device on the backplate
5. Installation of device cable through the wall.
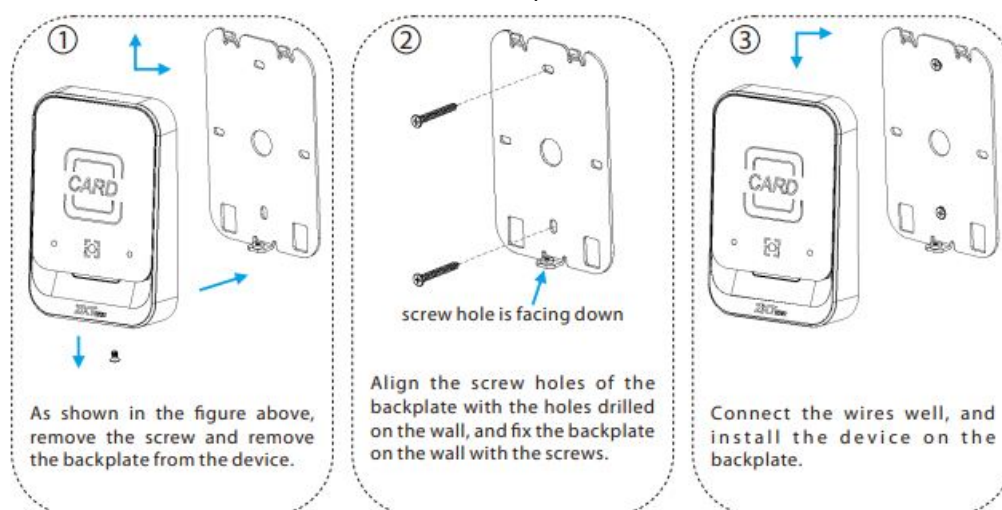
Use the screw removed in step 1 to fix the device on the backplate.

Installation of device cable through the wall.
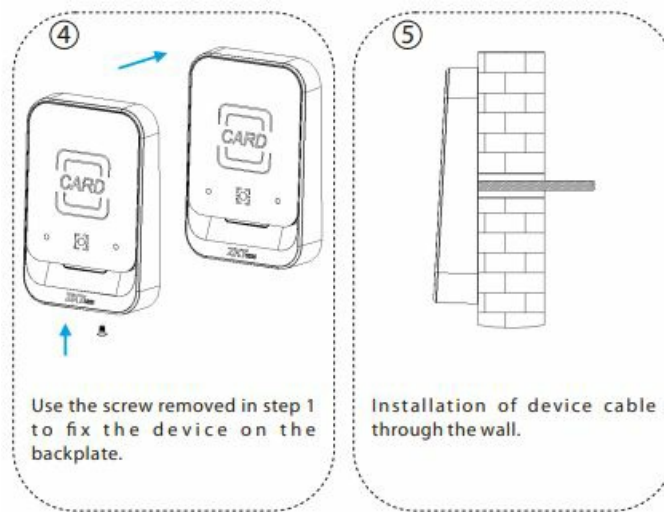
Product size 2: (length 138 (±0.5) * width 58 (±0.5) * height 22.67 (±1)) (mm)

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.

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

screw hole is facing down

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

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.

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

Installation of device cable through the wall.
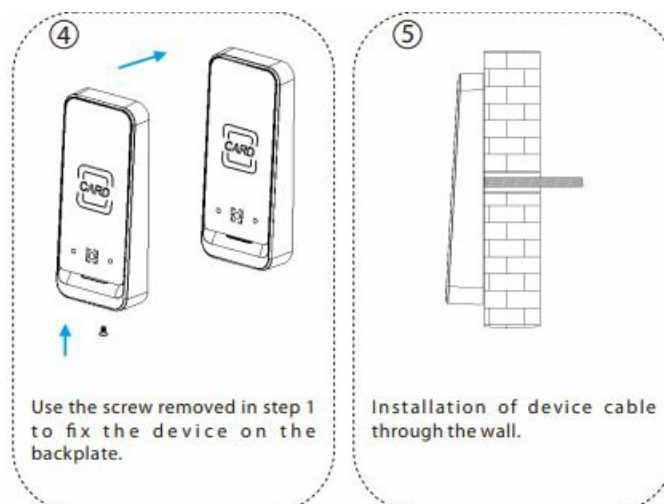
Product Introduction

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, and 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 inline 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 the identification of MF, Desfire EV1, resident ID card and QR code
- Support QR code recognition : 2D : QR , Data Matrix , PDF 417 ; 1D : GS1 data bar, code128/Ean128, UPC/EAN, Codebar, code39/code93
- Support Wiegand34/26/32/66/RS485 switching at the same time
- Number keyboard (optional)

Wiring Instructions

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

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 to 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
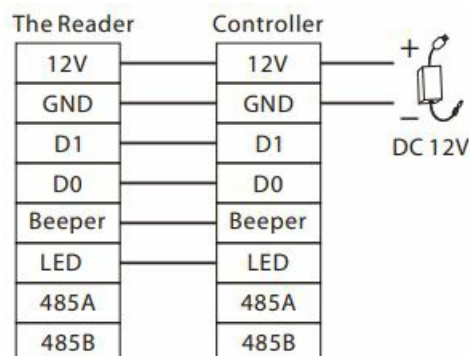
RS485 Connection Mode
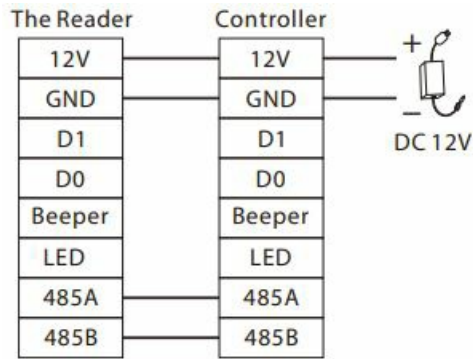
2. Open DEMO, select the serial port number, the default baud rate is 115200, click "Connect" and " **Scan Address"** and then put the card or QR code (paper, electronic, mobile phone) into the recognition range of the card reader, and read the card. The device automatically obtains and transmits the information carried by the card or QR code to the controller.
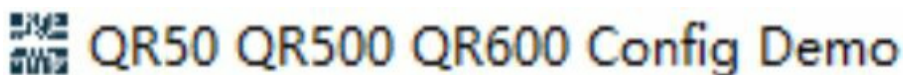
USB connection

1. First, connect the QR code reader to the PC terminal t 1. 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.

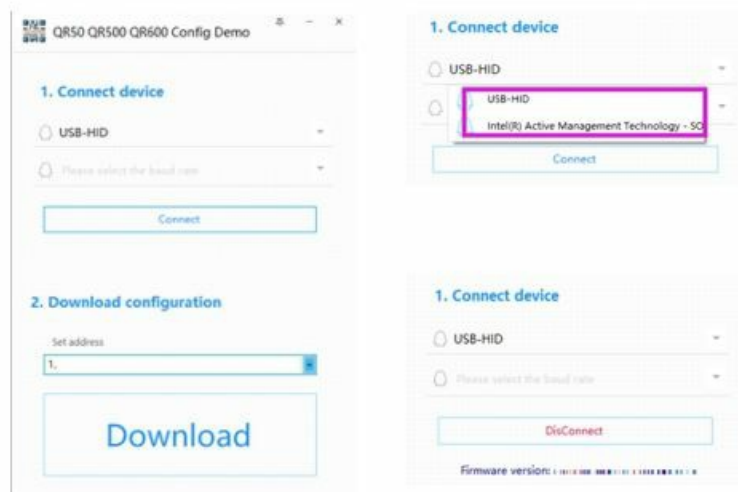## Set up the QR Code Reader with Demo Software

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

Configuration

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

2. Enter the connection page.

3. Select "USB-HID", click "Connect", and 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. 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.
2. 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.
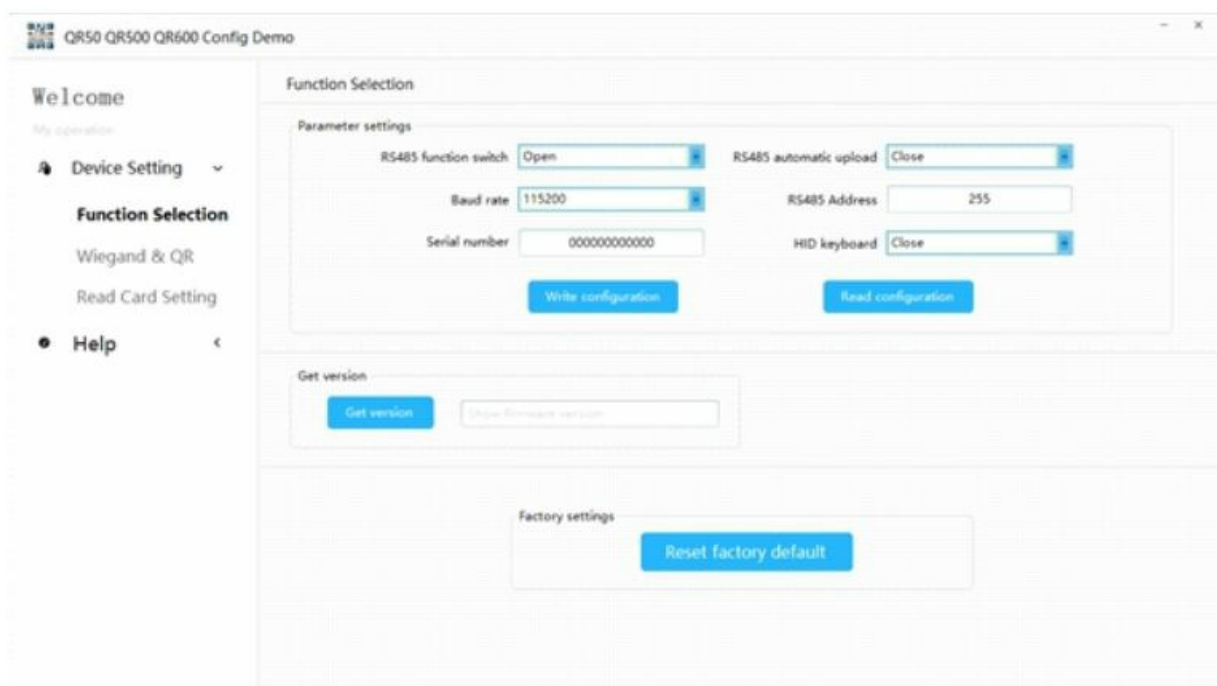
Device Operation

Operation Steps

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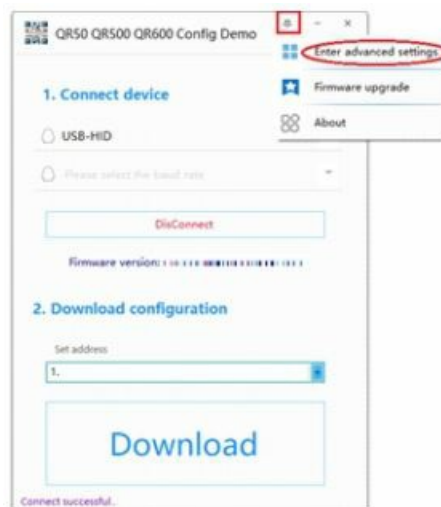
2. Enter an advanced settings page.

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
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.

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

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

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.

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.

Import and Export Configuration

Operation Steps

On the "Page Configuration" page, click "**Export Configuration**" to export the page configuration information of the current device, and click "**Import Configuration**" to import configuration information. 4.6 Import and Export Configuration Information.

Configer file path: \\192.168.1.8\Radio smart

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.

Firmware Upgrade

Operation Steps

On the "Firmware Upgrade" page, click "Open File", select the upgrade program, and click the "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 the receiver.
- Connect the equipment to 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 a minimum 20cm distance between the radiator and your body: Use only the supplied antenna.

FAQ

Q: What types of QR codes does the reader support?

A: The reader supports 2D QR codes like QR, Data Matrix, PDF417, and 1D codes like GS1 databar, code128/Ean128, UPC/EAN, Codebar, code39/code93.

Q: Can I use the reader as a number keyboard?

A: Yes, the number keyboard is optional and can be used with the QR code reader.

Q: How do I connect the QR code reader to other equipment?

A: You can connect the QR code reader to a controller via Wiegand or RS485. Please refer to the wiring instructions for detailed connections.
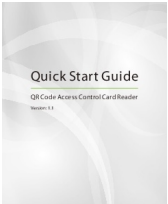
Q: How do I power the QR code reader?

A: The QR code reader requires a +12V power supply.

Q: How can I test the QR code reader?

A: You can open the DEMO software, select the appropriate serial port number, and put a card or QR code within the reader's recognition range. The device will automatically obtain and transmit the information carried by the card or QR code to the controller.

Documents / Resources

Radio ZQR388 QR Code Access Control Card Reader [pdf] User Guide
ZQR388 QR Code Access Control Card Reader, ZQR388, QR Code Access Control Card Reader, Access Control Card Reader, Control Card Reader, Card Reader, Reader

References

- **User Manual**