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Invengo

User's Manual

XC-RF855 Reader

Invengo Information Technology Co., Ltd.

FCC WARNING STATEMENT

Changes or modific ations not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment. 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 diffe rent from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.

Thank you for using Invengo's RFID products!

We are glad that you've chosen XC-RF855 Integrative Reader. We hope our product will make your daily tasks at work easier!

Foreword

This manual applies to the following model:

XC-RF855 Reader

This manual provides information on product application, maintenance, repair and other features for users and maintenance staff of the products.

or trademark belongs to Invengo.

All introduction and explanation on the product features, as well as the functions and other related information, written in this manual, are the latest and accurate as at time of print. The company reserves all rights to make any correction or amendment to this manual without prior notice, and shall bear no responsibility for these actions.

Safety Instructions

Warning sign

If operate improperly, it may result in damage to your equipment(s).

Attention

If ignored, it may result in unsuccessful operation

If ignored, it may cause undesirable effect

10.After-sale service

10.1 After-sale Service

When a user encounters unsolvable problems during the device usage, please contact our customer service center.

8.Transportation and Storage

8.1 Transport Requirements

XC-RF855 reader meets all the requirements of relevant standard under road, rail, air, and water transportation.

Items to take note during transportation: Avoid heavy pressure, rain, corrosive chemicals and harmful gas.

8.2 Storage Requirements

The long term storage of XC-RF855 reader must fulfill the following conditions:

Ambient temperature: -15℃ - +60℃;

Relative humidity: less than 60%（25±2℃）;

9.Packaging and Unpacking

9.1 Packaging

XC-RF855 reader is packaged using cassette packaging.

9.2 Unbox Inspection

For future storage and transportation, please keep the box and packaging materials during inspection.

Please check the product and its accessories carefully based on the packing list. Please contact us immediately if there is any discrepancy or damage.

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7.2 Troubleshooting and solution

Failure Phenomenon	Possible Cause	Resolvent
Equipment cannot start	Whether the power line has been connected	Connect the power line
	Poor contact of power plug	Pull out the power plug and reinsert it
Unable to read labels	The antenna connector is loose	Tighten the RF connector on the RFID module
	The antenna has been damaged	Check or replace the reader antenna
	Tags are not in the antenna reading area	Move the tags closer to the antenna
	The tags in the antenna reading area have been damaged	Change a label to test it again
	The signal is seriously disturbed	Confirm whether there is a similar device work around it
	Serial port work abnormality	Turn off the power supply and restart the equipment
Unable to connect devices through serial port	The USB line is broken	Change the USB line
	Serial port number selection error	Reselect serial port to match PC COM number.
	Serial port is occupied	Closes the program which occupies the serial port
LED lights are not bright	The power line of the LED is not connected	Check whether the power line is in good contact
Program without response	Program issue	Reboot device

7.Routine Maintenance, FAQs and Troubleshooting

7.1 Routine Maintenance

When cleaning the equipment, the power should be turned off.

●When the equipment is out of use for a long time, the power cord should be unplugged, and the equipment should be covered with dustproof fabric and kept in a cool and dry environment.

●If The equipment has been put away for a long time, inspection is recommended to see whether there is any breakage of the connecting line before making use of the equipment.

●For any unsolvable issues, please get in touch with the customer service center or technical support department of Invengo.

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1. Product overview

1.1 Product component, functions and properties

XC-RF855 reader is a comprehensive UHF RFID equipment that was equipped with RFID module and antenna in it.This equipment has strong multi-tag reading capability, compatible with the protocol standards of ISO18000-6C (EPC global UHF Class 1 Gen 2). The appearance is beautiful and easy to use.

1.2 Main usage and application range

XC-RF855 reader is mainly used in commercial retail, library management and other fields.

1.3 Model description

This user manual is applicable to the XC-RF855 reader.

1.4 Operating conditions

The RFID data collection system is composed of reader, tag, antenna, PC system and reader interface software.

Before using the XC-RF855 reader, verify that all components of the RFID data collection system are complete and reliable connections between components.

1.5 Work environment

This product should work on the hard, flat surface of the room, and be required good ventilation and heat dissipation conditions.

Operating temperature：-10℃～+55℃

Humidity range：10%～90% RH（no condensation）

Power supply：Power adaptor（Standard accessory）or other Power supply

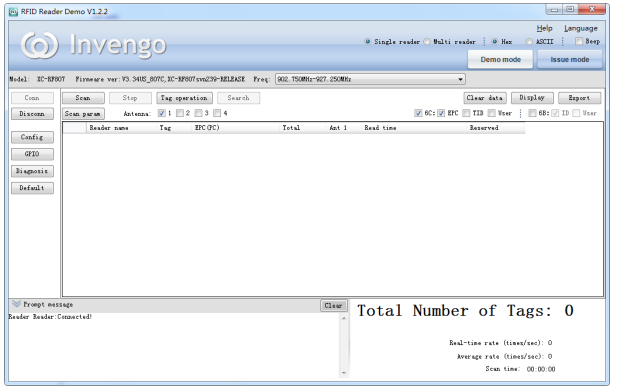

Figure 6.3.2

6.4 Buzzer switch setting

Demo can be configured to turn on or turn off the buzzer, and the operation steps are shown below.

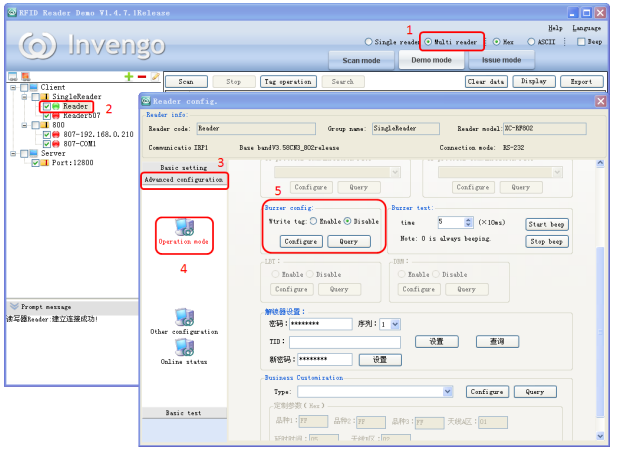

Figure 6.3.3

6.5 Read labels

Place tags on the panel, 20 tags can be read by default. When testing, it is recommended to flip the label carrier.

6. Instructions

6.1 Preparation and Inspection

Confirm that the power supply and USB have been properly connected.

6.2 Working State

After the power supply, the top power indicator light.

6.3 Demo software operation

Click on “Conn” button as shown in the figure below:

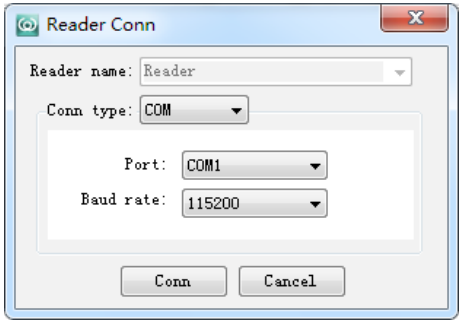

Figure6.3.1

（DC Output +4.5V～+6V，Drive current≥2A,Power Ripple≤100mV）

The technical specifications of the power adapter are as follows：

Order code：1080200011

AC Input：100～240V，50Hz～60Hz；

DC Output：5V/4A MAX；

Storage temperature：-20℃～+60℃；

1.6 Impact on the environment and energy

Any radio transmitting equipment, including this equipment, may cause interference with medical equipment that is not properly protected. If there is any problem in this regard, please consult with the medical equipment manufacturer. The operation of this equipment may also cause interference with other electronic devices.

1.7 Safety and protective measures

The power adapter that is equipped with this equipment is AC power 100V - 240V.And the input voltage range of the DC power outputof this product is 4.5V～6V. Please check your voltage range properly before installation!

2. Main features

2.1 Main Functions

□ Compatible with the protocol standards of ISO18000-6C (EPC global UHF Class 1 Gen 2), and the performance of reading and writing tags is excellent.

□ By matching the application software, the corresponding label information can be established.

□ Support multi-tag reading. 20 Tags can be read by default, and supports more label reading by increasing power.

2.2 Main technical parameters

Frequency band: 920.25MHz–927.25MHz

RF output power：0dBm～27dBm，stepping 1dB, power selectable

Air interface protocol：Support EPC global UHF Class 1 Gen 2 / ISO 18000-6C

Read label EPC code rate：≥140 pieces/S

Readingdistance：0～50cm

Writing distance：0～50cm

Misreading range：10cm

Baud rate：115200bps

Maximum operating current：1.5A

Operating temperature：-10℃～+55℃

Storage temperature：-15℃～+60℃

Humidity range：10%～90% RH（no condensation）

□ The reader is fixed firmly, no loosening

□ Screws tightened.

5.6.2 Performance acceptance

Mainly from two aspects to check whether the reader is working normally：

□ Check whether the reader is working properly.

□ Check the range of reading and writing to meet the requirements.

20 tags can be read at the same time by default；The reading range on top of the cover is not less than 50cm；The misreading area around the metal frame is no more than 10cm；When testing, it is recommended to flip the label carrier.

Use the USB cable provided to connect the reader to the PC.

5.4 Power Supply

Please follow the following steps to connect the XC-RF855 reader power supply:

□ Confirm that the input voltage and frequency of AC power supply meet the requirements:

AC input100-240V, 50-60Hz;

□ Confirm that the output voltage of the power adapter is 5V/4A.

□ Insert the power cord into the AC power supply socket and insert the other end into the power interface of the reader.

□ Once connected to power supply, the power indicator of the LED panel will be on, and the reader enters the initialization state, and the system complets the initialization process and enters the standby mode.

XC-RF855 reader enters standby mode by default after initialization. The reader does not transmit any frequency when initializing and standby (RF amplifier is turned off). RF amplifier only enters into operating condition after receiving command of “read or write tag” or “start amplifier” from the PC.

5.5 USB driver supported system

Windows10 32,64-bit; Windows8/8.1 32,64-bit; Windows7 32,64-bit; Windows Vista and Vista 64-bit; Windows XP and XP 64-bit; Windows 98, 98SE, ME, 2000, Server 2003, XP, Server 2008 and server 2012 R2,Windows XP Embedded,Windows CE 4.2, 5.0 and 6.0

5.6 Acceptance

The acceptance criteria are mainly given from two aspects: structure and performance.

5.6.1 Structural acceptance

Check whether the installation meets the installation standards and the assembly in good condition.

3. Dimension and Weight

3.1 Dimension

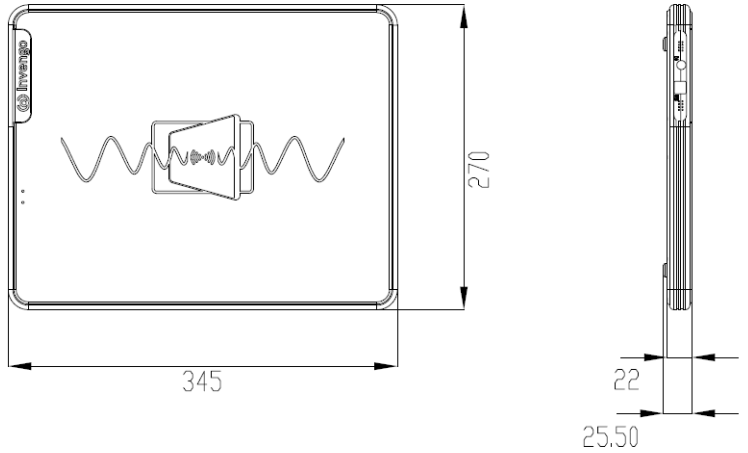

Figure 3.1 XC-RF855 reader

The external size of XC-RF855 reader is：345mm×270mm×25.5mm

3.2 Weight

The weight of XC-RF855 reader is：2.5Kg（net weight）

4. Structural Features

4.1 Overall Structure Component

XC-RF855 reader consists of RFID module, antenna, power supply and casing.

4.2 Interface Panel Description

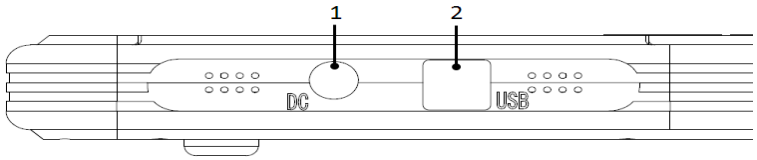

Figure 4.2 Interface Panel

Interface panel description as follows:

1——Power interface (DC 5V/4A),is used to connect the 5V/4A power adapter.

2——USB communication interface,is used to communicate with PC.

4.3 LED Panel Description

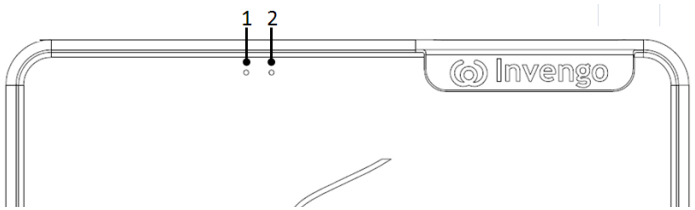

Figure 4.3 LED Panel Description

LED Panel Description as follows:

1——The power indicator When the reader is powered on, the power indicator shows red. indicates that the reader is connected to the power supply.

2——Working indicator.When the working indicator shows and flashes green,indicating that the reader is reading tags.

5. Installation and Commissioning

Please read the chapter carefully before installing XC-RF855 reader.

5.1 Safety during installation

⚠ The power adapter that is equipped with this equipment is AC power 100V - 240V. Please check your voltage range properly before using the external power supply.

⚠ The input voltage range of the DC power outlet of this product is 4.5V～6V. Please check your voltage range properly before installation!

ⓘ The reader should be install in sheltered and well-ventilated places, protected from the rain, humidity and the sun (not suitable for places with high humidity).

ⓘ Note that the USB line is well connected.

ⓘ Any radio transmitting equipment, including this equipment, may cause interference with medical equipment that is not properly protected. If there is any problem in this regard, please consult with the medical equipment manufacturer. The operation of this equipment may also cause interference with other electronic devices.

5.2 Installation requirement

Before the installation of XC-RF855 reader, please make sure the product is intact, the accessories are complete. Should there be any discrepancy or damage, please contact the local supplier immediately for replacement. At the same time, please check if the following items fulfill the installation requirement

□ Compactible with the operating environment.

□ Complete list of accessories that are sufficient to fulfill the required standard and form a complete tag reading and writing environment.

5.3 Connection

Connect the XC-RF855 reader with the PC.