RFID Overhead reader

CER511

User Manual

Revision:

Version	Author	Data	Remarks
V1.0	Product department	2024-02-11	First draft

Contents

1. Overviews

Century RFID Overhead Reader CER511 is an advanced UHF RFID device that seamlessly integrates narrow-beam antenna and reader. Equipped with a high-gain narrow-beam antenna, this device boasts features such as portability, extended read range, superior multi-label recognition capability, and enhanced inteference resistance. It's versatile applications span across various sectors including apparel and fashion, supermarkets and hypermarkets, retail, library and archive management, access management, asset tracking, and intelligent warehouse management, etc.

1.1 Features

- ✧ Equipped with a built-in Linux system to streamline customer application development.
- ✧ Horizontally narrow-beam design for precise coverage, mounting heights 2.0~3.5m.
- ✧ Supports multi-channel GPIO input and output, enabling the integration of peripheral devices based on specific application scenarios.
- ✧ Compatible with both ceiling and wall-mounted installations, significantly reducing installation costs.

1.2 Specifications

- ✧ Built-in system: Linux
- ✧ Communication interface: RS-232(DB9)、RJ45
- ✧ Power supply: AC 220V+10%,47~63 Hz
- ✧ Operating Temperature: -10℃~+50℃
- ✧ Storage Temperature: -20℃~+55℃
- ✧ RFID Power: Maximum 33dBm

2. Installation

2.1 Input power requirement

- ✧ All devices using 220VAC must have the same circuit of electricity fromthe distribution box, and meet the safety grounding requirements
- ✧ The mains power cord is never allowed to be tied to the output DC line, nor is itallowed to wrap the output DC line around the adapter body.

2.2 Installation position

- ✧ Ensure that the antenna is installed in a well ventilated area.
- ✧ Ensure a clean and dry environment.
- ✧ Pay attention to the installation height of the antenna.
- ✧ Ensure that there are no labels stored around the antenna.
- ✧ Confirm that the power supply of the equipment is independent (not shared with other electromechanical equipment).
- ✧ Confirm that the power supply voltage of the host is normal.
- ✧ The labels must be kept 3 meters away from the antenna system.
- ✧ Check if there are metal frames, coiled cables, etc. around the device.

2.3 Installation steps

- ✧ Prepare construction and debugging tools.
- ✧ Check the power reserve and installation position, and try to keep the device adapter and cables as far away from other high-power devices as possible.
- ✧ Check if there are other equipment around the site, such as spotlights, LED screens, elevators, and other high-power equipment, and try to avoid installing such equipment as much as possible.
- ✧ Before fixing the antenna, connect the antenna power supply, conduct a test first, and then fix it after meeting the installation requirements.
- ✧ After installation is completed, test again to confirm if the equipment can meet customer needs

2.4 Hardware

(1) Front panel

(2) Control module

(3) External antenna interface

(4) Network interface

(5) RS232 interface

(6) GPIO interface

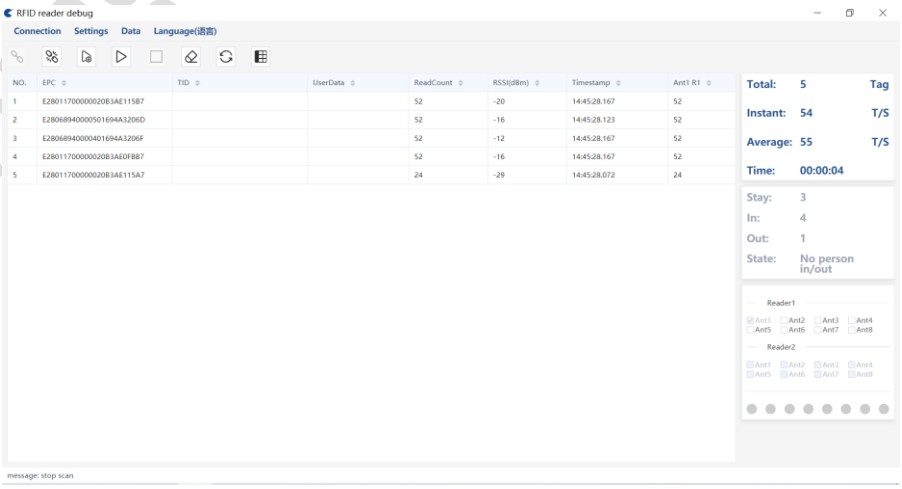
(7) Ceiling mounting interface*4

(8) Side mount interface*2

3. Software

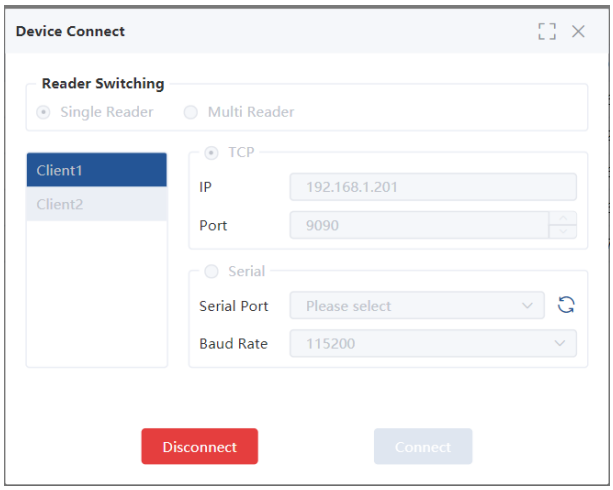
3.1 Test demo

3.1.1 Main interface



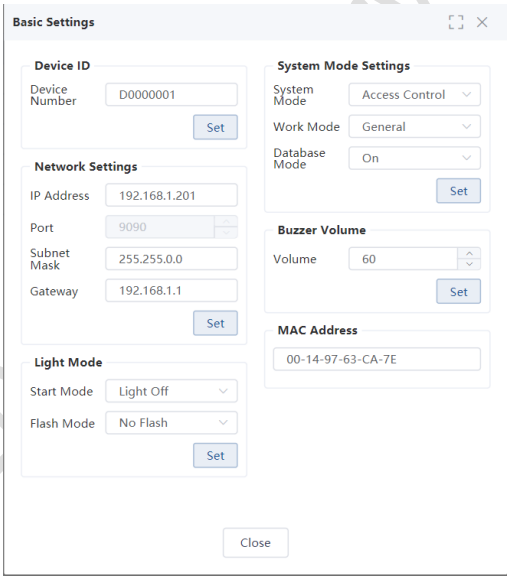
In the main interface, you can view the read data, the speed of reading, personnel in and out of the data, choose whether the antenna is working and so on

3.1.2 Device Connect



The device supports two connection modes, TCP and Serial. The default TCP IP address is 192.168.1.201. The default serial port baud rate is 115200.

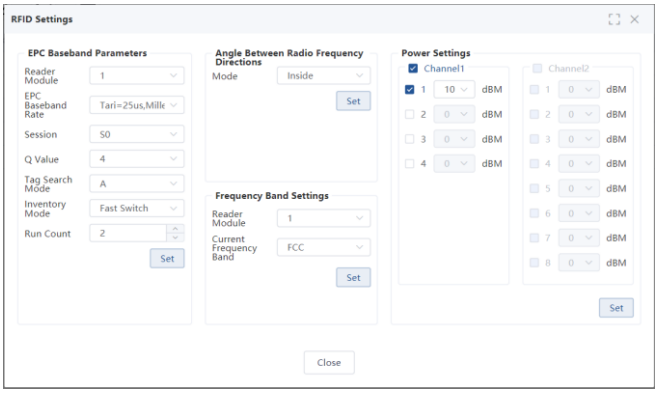
3.1.3 Basic Settings



The parameters will be automatically obtained, if you need to change, you can modify the click Set.

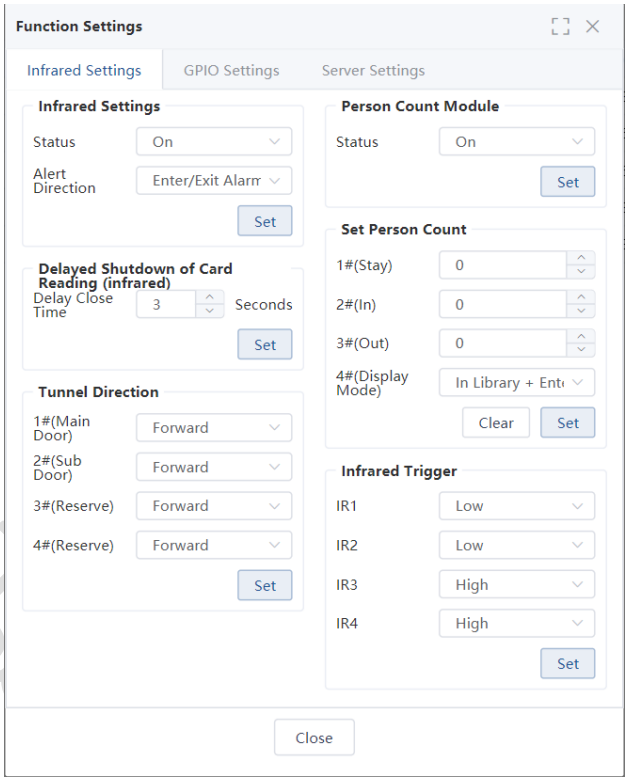
- ✧ Light Mode:
  This parameter is available for CER510 but unavailable for CER511
- ✧ System Mode Settings:
  Access Control and General are selected by default and do not need to be changed. The database is used for one of the anti-theft detection schemes and can be set to turn on or off
- ✧ Buzzer Volume:
  Buzzer volume Value is 0-255.

3.1.4 RFID Settings



The parameters for RFID are set here.

3.1.5 Function Settings



The CER511 requires external infrared to use this feature.

- ✧ Infrared Settings:

  When the infrared status is turned on, the infrared trigger automatically associates the tag reading.

  The alarm direction can be set to go out the alarm or enter the alarm.

- ✧ Delayed shutdown of tag Reading (infrared):

  The tag read execution time after infrared trigger. The default tag read time after infrared trigger is 3 seconds. You can change it.

- ✧ Tunnel Direction:

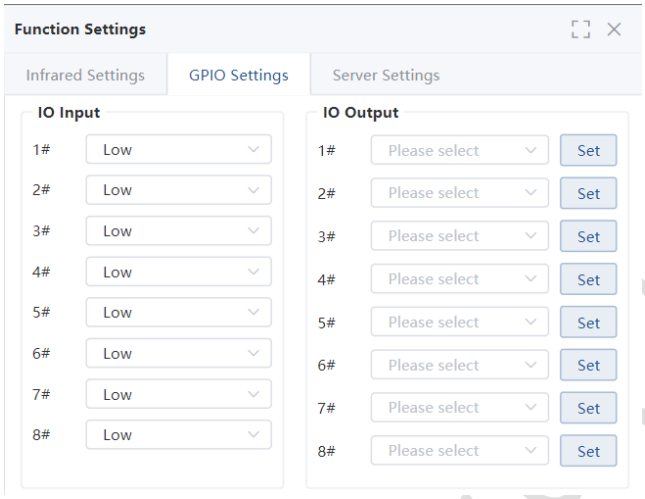
Change the statistical direction of access control.

✧ Set Person Count:

You can set and clear the number of people counted on the main screen.

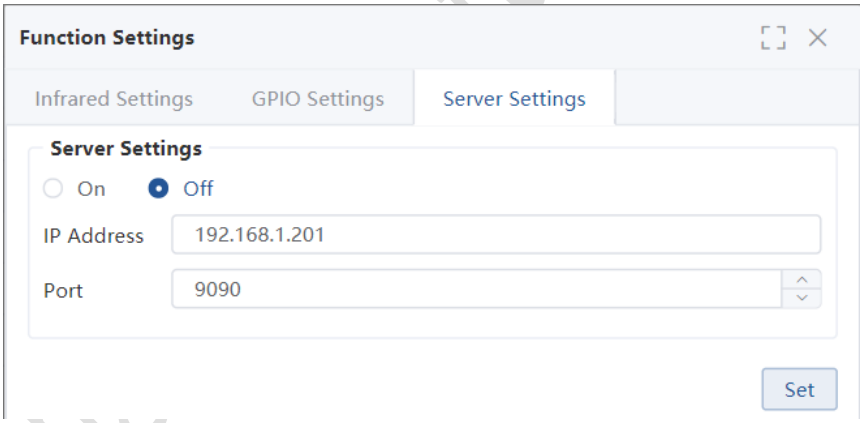
✧ Infrared Trigger:

1 and 2 are two pairs of infrared states for the primary channel.



✧ GPIO Settings:

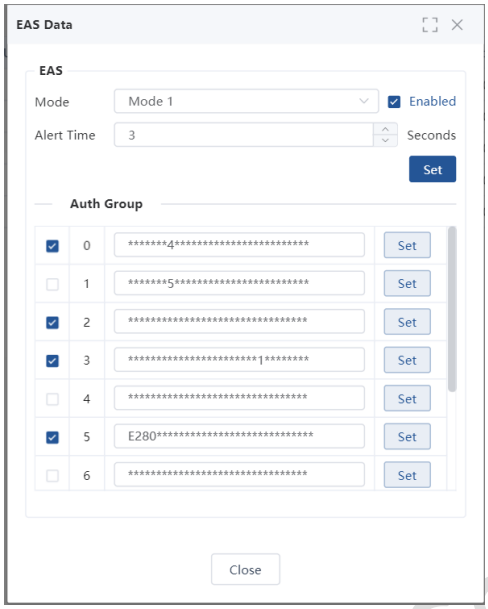
1 buzzer output control for CER511.



✧ Server Settings:

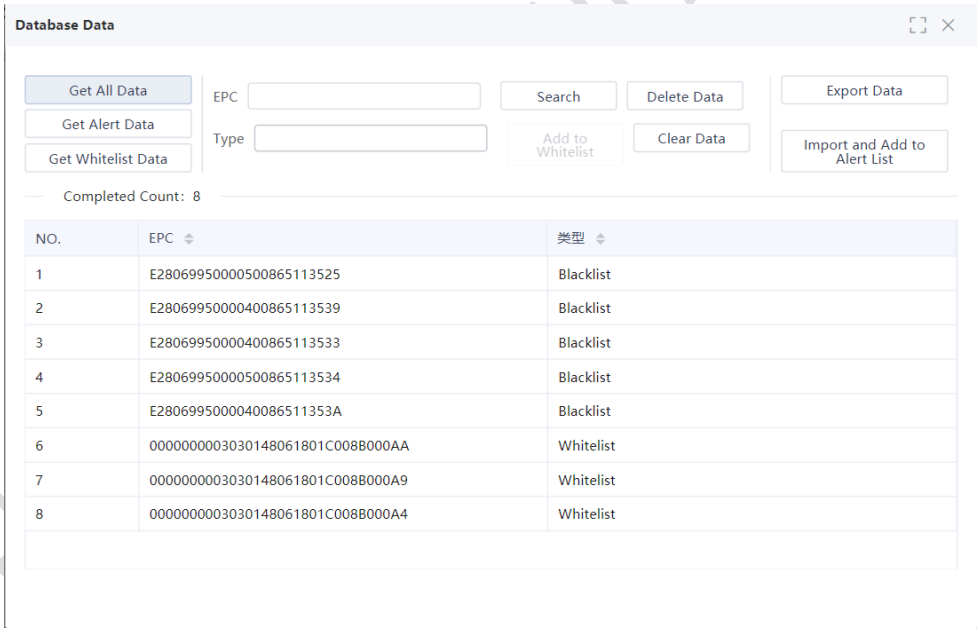
Simulated access control actively reports data to the server.

3.1.6 Eas data



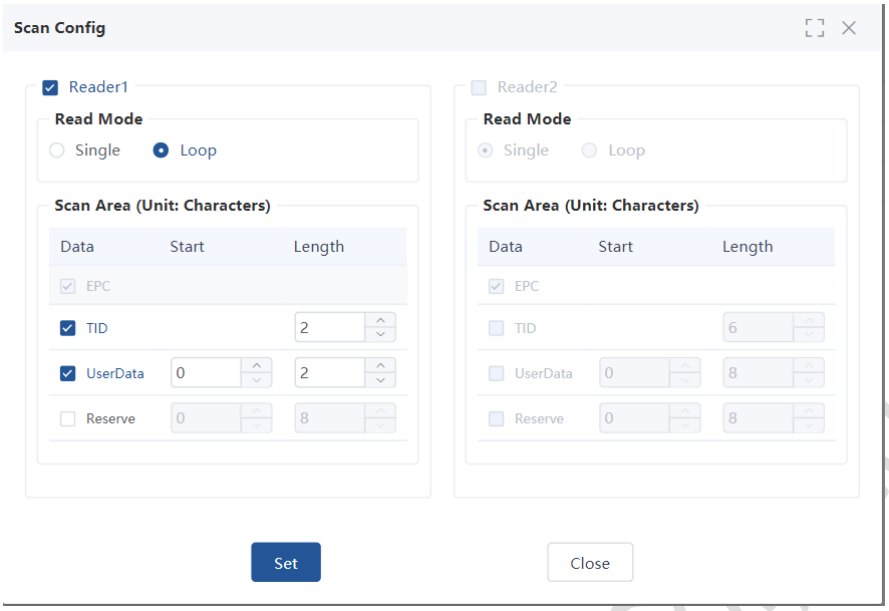
A variety of EPC data alarm rules can be configured. Only need to fill in some key alarm data, other bits default to *.

3.1.7 Database data



You can configure the blacklist and whitelist. The blacklist data is used for alarm, and the whitelist data is not used for alarm.

3.1.8 Scan Config



Set scanning rules, such as whether to read TID.

3.2 SDK API

Provides standard SDK apis for development. It can be developed based on business software.

Development SDK refer to " CER511 JAVA SDK Documentation ".

4. Q&A

Any technical questions, please contact with Century technical team, lizhenghao@century-cn.com