



User Manual of CL7206B8A RFID Reader



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1. Technical Specification

1.1 Feature

CL7206B8A is a high performance UHF RFID device integrated 6dBi circular antenna and reader all in one.

Supports ISO18000-6C/6B protocols. The work frequency includes China standard dual frequency 920MHz ~ 925MHz and 840MHz ~ 845MHz, **FCC 902MHz ~ 928MHz** and ETSI 865MHz ~ 868MHz.

Output power from 0 ~ 30dBm optional, with long identification distance, fast reading speed, high accurate rate, strong anti-interference ability, good protection performance and easy installation

1.2 Technical

1.2.1 Main function

- Protocol: support ISO18000-6C/6B standard
- Built-in LINUX operating system
- Multiple communication port (Ethernet, RS232, RS485)
- Support tag data filtering
- Adjustable RF output power
- Optional working mode: constant frequency / frequency hopping
- Supports online upgrade
- I/O interface: 1 port optocoupler input, 1 pair relay output and 1 pair Wiegand output

1.2.2 Technical parameter

- Working frequency: GB 920MHz ~ 925MHz, GB 840MHz ~ 845MHz,
FCC 902MHz~928MHz, ETSI 865MHz ~ 868MHz
- Output power (port): 22dBm±1dB (MAX)

- Power adjustment: 1 dB step-by-step
- Reading distance: 0 ~8meters (depending on tags, antennas and environment)
- Channel bandwidth: <200 KHz
- RS232 serial communication rate: 115200bps (default), 19200 bps, 9600bps
- RS485 interface communication rate: 115200bps (default), 19200 bps, 9600bps
- Support: Wiegand 26, 34, 66 interfaces
- Power adapter: AC input 100V ~ 240V, 50Hz ~ 60Hz
DC output: 24V/2.5A
- High protection grade: IP54

1.2.3 Operational environment and warning statements

- Working environment: -20°C ~ +70°C
- Relative Humidity: 5%RH ~ 95%RH (+25°C)
- 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.
- NOTE: THE GRANTEE IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.
- This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

2. Sketch map

2.1 Physical construction

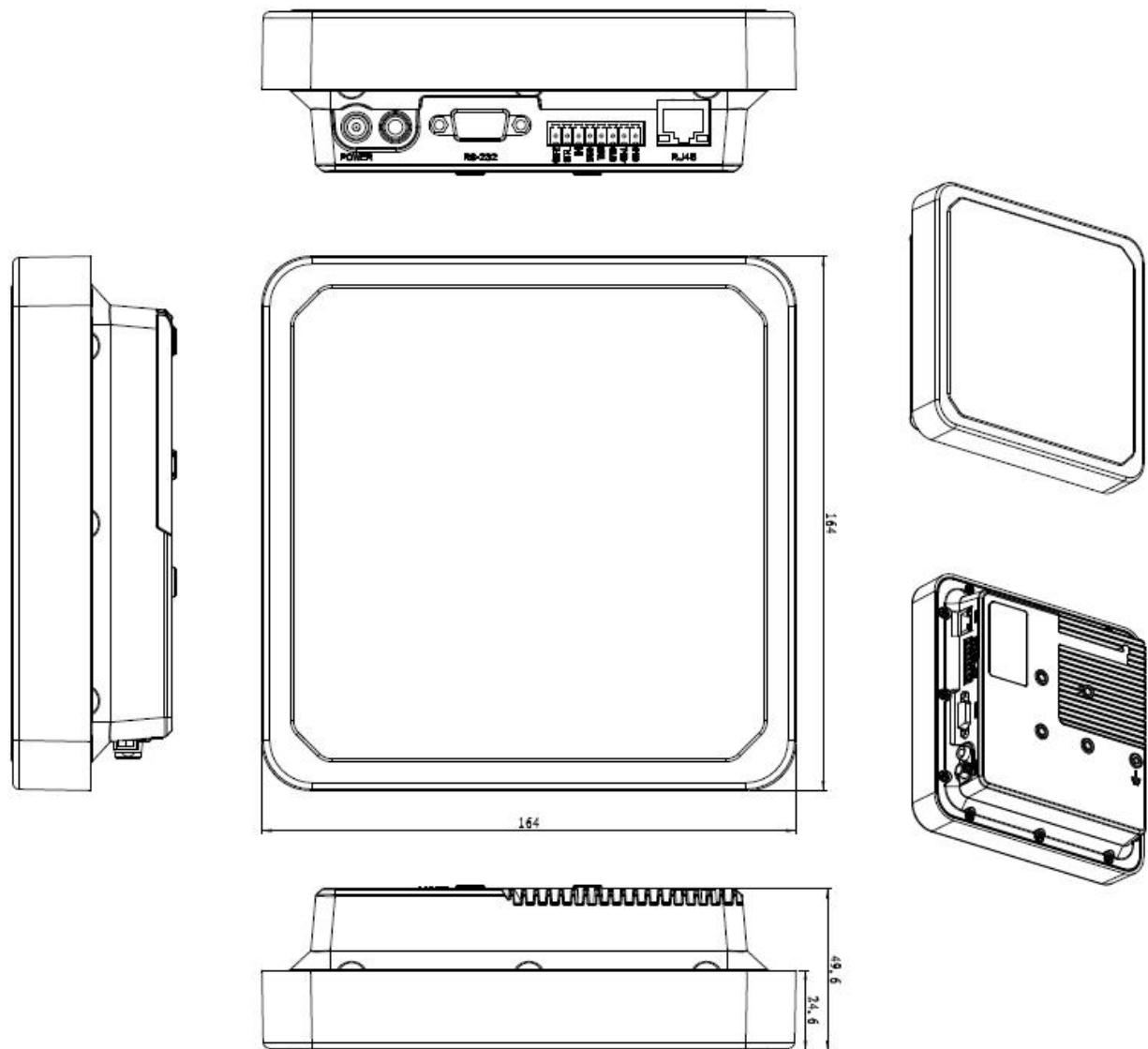


Image 2-1 Structure diagram of CL7206B8A

Size: 164mm×164mm×49.6mm

2.2 Weight

Main body: 0.7kg (accessories excluded)

2.3 Interfaces

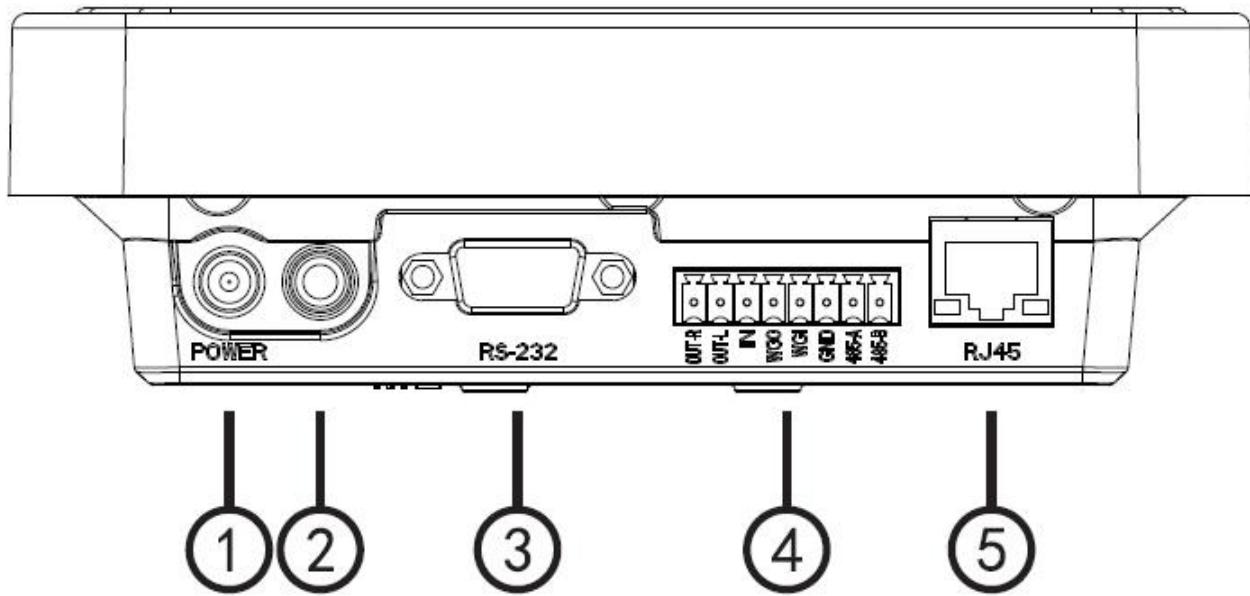


Image 2-2 I/O & communication interfaces of CL7206B8A

The interface description:

- 1 -- power interface
- 2 -- indicator light (WIFI or BT antenna)
- 3 - RS232 interface
- 4 -- I/O interface
- 5 - RJ45 interface

2.3.1 Indicator light status description

LED is a green light-emitting tube, which is always on when the device is started, flashing when it reads card(at an interval of 200ms), quick flashing when wiegand communicates (without regularity), and always on when stop reading.

Reader working status	LED status
Power on	always on
Reading	flashing(interval 200ms))
Wiegand communication	quick flashing (without regularity)
Stop reading	always on

2.3.2 I/O interface chart

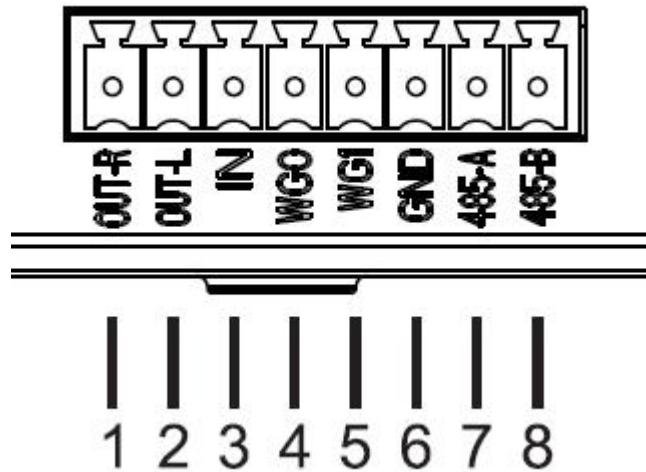


Image 2-3 I/O interfaces of CL7206B7A

The I/O interfaces control signal definition

Pin No.	Pin description	Pin definition
1	relay #1 output port	OUT_R
2	relay #1 output port	OUT_L
3	External signal input	IN
4	Wiegand output signal 0	WG0
5	Wiegand output signal 1	WG1
6	Ground	IO_GND
7	White-brown	RS485 positive
8	brown	RS485 negative

2.3.3 Network connection chart

Network interface used for long-distance high-speed connection (less than 80 m), can be connected with the

switcher or router through the network cable, or directly connected with the PC network interface, refer to below picture.

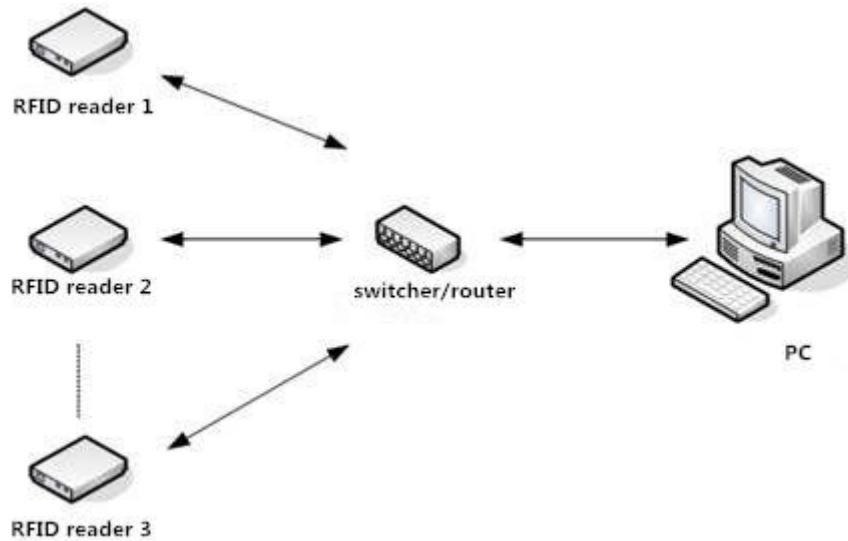


Image 2-4 Network application connection diagram

3. Installation

3.1 Notes

To ensure the normal and stable operation of the device and your personal property and safety, please carefully read the following notes before install CL7206B8A reader:

1. Firstly, check whether the power socket ground terminal is connected to the ground, and to see whether the local power supply voltage is in accordance with the applicable voltage range of the reader;
2. Check the device and the external connection if is closely connected;
3. Pay attention to the type selection and the length limit of the cable and the serial line:
 - Network cable connects directly, no longer than 80 meters
 - R485 cable connects directly, no longer than 80 meters
 - Serial line connects directly, no longer than 5 meters
4. When installing several readers, the antenna position and the antenna spacing should be appropriate to avoid interference with each other.

3.2 Installation conditions

Before installing the reader, please carefully check if the product is in good condition, the accessories are complete or not, if there is any damage, please contact the supplier.

3.3 Device connection

3.3.1 Power on

Insert the power cord into the AC power supply socket and plug another end into the power connector of the device and tighten.

Turn on and wait about 12 seconds, the system initialization process is completed and is standby state.

3.3.2 PC connection

The device provides special adapter cable, including interface of network, serial, USB and power;

- RS232 interface is for short distance communication (less than 5m), through the DB9 connector and the PC serial port connection to realize the communication of PC and the device.
- RS485 interface used for long distance serial communication (less than 80m)
- RJ45 network port used for long distance communication (less than 80m), connect PC with extend cable.

3.4 Device installation

The reading and writing range of the reader depends on the on-site application, the tilt angle of the antenna is adjusted to achieve the best reading and writing performance.

3.5 Acceptance

Mainly from two aspects of acceptance criteria: structure and performance.

3.5.1 Acceptance of structure

Check below details:

- Whether reader is fixed firmly, without loose;
- Whether the cable connected firmly ;
- Whether the screws are tighten

3.5.2 Performance acceptance

- Whether the reader is working properly;
- Whether the read and write range is reasonable.

4. Common failures

4.1 Daily maintenance

The routine maintenance of CL7206B8A usage:

☆To check if the reader power line connection is reliable

4.2 Common failure analysis and solution

Power supply system failures:

Check whether the power adapter is normal, and the AC supply voltage is between 100V ~ 240V.

The panel indicator light failed when power on:

Check whether the communication is normal, if it's not normal, please contact customer service.

The serial port unable to connect:

Check if the serial cable is not connected or connected unstable.

Check if the serial port connect baud rate of the reader is correct

Check if the selected COM port is right.

The network port cannot connect:

Factory set the default IP address: 192.168.1.116:9090 when CL7206B8A reader ex-factory, ensure the IP address of the PC and reader in the same network segment, such as "192.168.1.XXX" then you can connect to the reader, if you forget the IP address of the device, you can reset the reader's IP address through the serial port.

The reader can't read the tag

Check if the setting of antenna number is correct

Check if the label is damaged

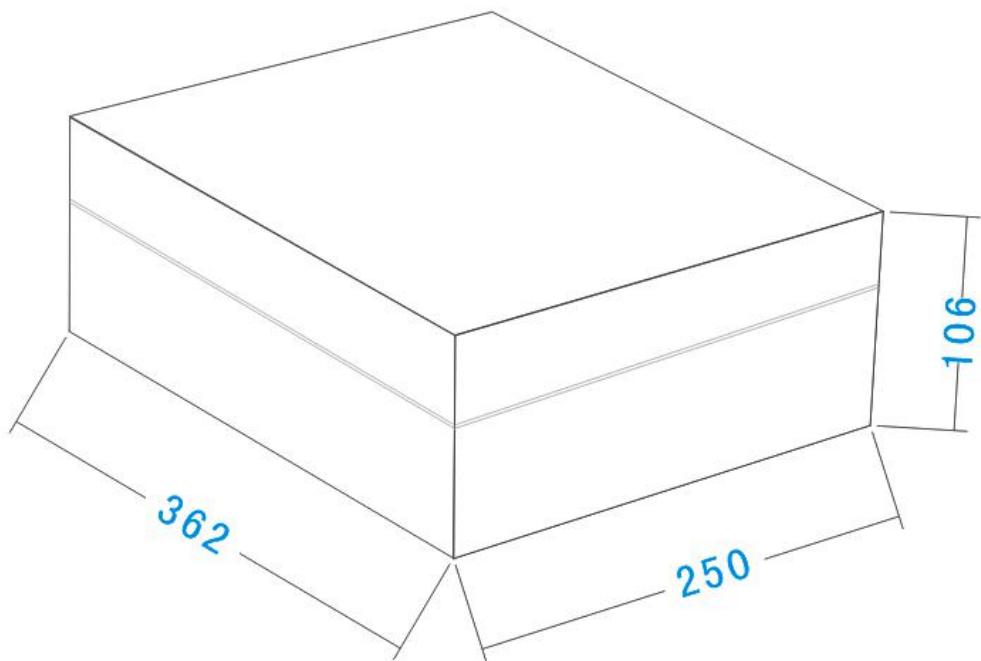
Check if the label is placed in the reader's valid reading and writing range.

Check if the electromagnetic interference between the reader and the other device.

For the problem users cannot solve, please contact customer service.

5. Package

5.1 Package



Imag5-1 Carton box size

Carton box size: 362 mm×250mm×106mm

5.2 Accessories

In order to facilitate the storage and transportation in near future, the packing box and the packing material should be kept properly after unpack.

Besides of the device in the box, accessories equipped with the reader are also included in, please check the product packing list to confirm whether the product and accessories are complete, if any discrepancies or damage, please contact with the after-sale service in time.

The specific list of accessories as shown in table 5-1

Table 5-1 Package list

NO.	Name	Qty	Unit	Remark
1	CL7206B7A integrated RFID Reader	1	set	Included
2	Power adapter 24V/2.5A	1	Pcs	Included
3	AC power cable	1	Pcs	Included
4	Network cable	1	Pcs	Included
5	RS232 cable	1	Pcs	Included
6	Fixed screw M5*8 plated with nickel	4	Pcs	Included
7	connection terminal	1	Pcs	Included
8	Warranty card	1	pcs	Included
9	Certificate of approval	1	pcs	Included

5.3 Storage environment

CL7206B7A fixed reader should be stored in below conditions:

★ Environment temperature: -40°C ~ +85°C

★ Relative humidity: 5% RH ~ 95%RH

6. After-sale service

Letter to Customers

Since our aim is to continuously improve our products for better user experience, we may modify the product characteristics, composition and design of circuits without given notifications. Thus the real product may be not in accordance with this manual. Generally, we will provide timely amendments to this manual. If it's not provided timely, please consult our service department.

Shenzhen Hopeland Technologies Co., Ltd.

Email: support@hopelandrfid.com

Tell: +86-755 36901035

Website: <http://www.hopelandrfid.com>

Address: Clou Buliding, Baoshen Road, Hi-tech Park North, Nanshan District, 518057, Shenzhen, China

Guarantee card of Shenzhen Hopeland Technology Co.,Ltd

Product Name			Model No.	
Product Code			Level	
Description of troubles				
User's name			Postcode	
Contact person		Contact no.		

Address of factory: Block 3 of CLOU Electronics Industrial Park, Baolong Industrial City, Longgang

District ,Shenzhen, Guangdong, China

Customer service centre: +86-755 36901035

Warranty Description: In order to offer users better service, our company provide warranty card with each device, please keep it to enjoy the service.

1, Products can replace free under conditions within one month after sale, in the precondition of normal operation without repairing.

2, Free maintenance won't be given under the following circumstance:

- ① The damage of the terminal caused by high voltage of the power grid.
- ② The damage caused by misuse or operated improperly.
- ③ The damage caused by excessive vibration when user delivering.

3, The software of this product can be upgraded freely, users can be training in our company for free.

4, Will be charge appropriately if the user don't have a warranty card.

5, Users will need to fill out the warranty card for repair service, and sent back to Hopeland.