# Bluetooth chip card reader Spec

**Version： V1.0.1**

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# 一、 Function Introduction

## 1. Appearance and dimensions

The Bluetooth card reader is xxxCM long, xxxCM wide, xxxCM high, and weighs about xxxg. Applicable to mobile phones with Android Bluetooth 4.0 or higher and iOS iPhone 4S or higher.

2. basic function

The product connects and communicates with mobile phones and other terminal devices through the Bluetooth interface, and completes the reading and writing functions of non-contact IC cards and contact IC cards on the mobile phone. The device is small in size and easy to operate. It can be widely applied to personal and merchant management and operation campus cards, public transit cards, bank cards, small payment cards and other application scenarios

The communication interface is mobile phone Bluetooth; supports non-contact 14443A/B CPU card and M1 card, Desfire card and other IC cards to read and write; support Android and iOS systems; built-in rechargeable lithium battery; can provide Demo, support reprogram development.

# 二、Detail Spec

This product has good card reading and Bluetooth communication compatibility. It has good

compatibility with mainstream mobile phones in the market, with a compatibility of 95%. It has good compatibility with mainstream card vendors in the market and all IC cards involved in bus projects, with a compatibility of 98%.

1. Non-contact card reading and writing

(1) Support non-contact 14443A/B CPU card and M1 card, Des fire card, Felica, etc. to read and write;
(2) It has good reading and writing performance for standard cards and special-shaped cards, and the reading distance can reach 3-5cm.
(3) Q value is 30±2%
(4) The card reading speed can meet the business needs of the bus card project. Read or write 1k bytes of data within 1 second.
(5) There is no loss or error in reading and writing 1k bytes of data at a time.
(6) working frequency 13.56MHz
(7) The electromagnetic field intensity of the product reading surface (Hmax) ≤ 7.5A/m rms
(8) The electromagnetic field intensity of the product reading surface (Hmin) ≥ 1.5A/m rms
(9) Support card rate 106kbps、212kbps、424kpbs

2. contact card reading and writing

(10) Support iso7816, T=0, T=1;
(11) AT24CXX AT88SCXX AT45D041
(12) SLE4442、SLE4428series SSF1101 AT88SC153
(13) Support card rate 106kbps、212kbps、424kpbs

3. Keypad

The device comes with a password keyboard, numbers 0-9, confirm and cancel buttons。

4. Encryption

Support 3DES encryption, compatible with EMV LEVEL1/LEVEL 2, compatible with PCI。

## 5. Bluetooth communication

Bluetooth 4.0 or above BLE communication standard。

（1） It can communicate with BLE Bluetooth Android mobile devices above 4.0. Can communicate with iOS devices above Bluetooth BLE 4.0.

（2） The communication speed can meet the business needs of the bus card project. Complete 1k byte data transmission within 1 second。

（3） Open communication distance 5m。

（4） There is no loss or error in reading and writing 1k bytes of data at a time.

## 6. Device status query and display

Through the display light and software interface, the following status of the device can be clearly displayed or obtained：

（1）The green light flashes when not connected, and the green light is always on when connected。

（2）When the charging is not completed, the green light is always on, and the green light is off when the charging is completed (turn off and charge)。

（3）The red light flashes when the card is found or data is exchanged with the card, and the red light is always on when the card is activated.

The light flashing cycle is 1s. The software version number of the device can be returned through the SDK interface。

## 7. Battery charging and power consumption

Support ultra-low power automatic sleep
Battery capacity：60mAh
Charging port：MICRO-USB， 5V-500mA
Charging time：30minutes
Standby time：7days
Continuous working time：5hours（200,000 instructions sent）

## 8. System stability

The button functions normally, and can be turned on and off repeatedly. The card reading and Bluetooth communication are stable. The overall system is stable, does not crash, and does not appear abnormal. Abnormal watchdog restart mechanism。

### Fall resistance, water resistance

It is not damaged when dropped from a height of 1.2 meters. No harmful effects from splashing water in any direction。

### Power switch characteristics

5V charging. It can be charged with a power bank or general mobile phone charger. The switch is a self-locking switch, which opens when pressed.

## 8. Environmental requirements

Charging voltage 5V±5%
Working temperature -25℃~55℃
Storage temperature -40℃~85℃
Relative humidity < 90%
Storage and transportation relative humidity 20%～93%
Atmospheric pressure 60kPa～110kPa