

产品规格书

Specification

产 品 名 称： 多协议读卡模块(IIC)

Product Name : Multi-protocol RFID Module(IIC)

产品型号 Model: HW70I3-WBDB

产品编码 Code: 7025112601

硬件版本 Hardware Version: 1.0

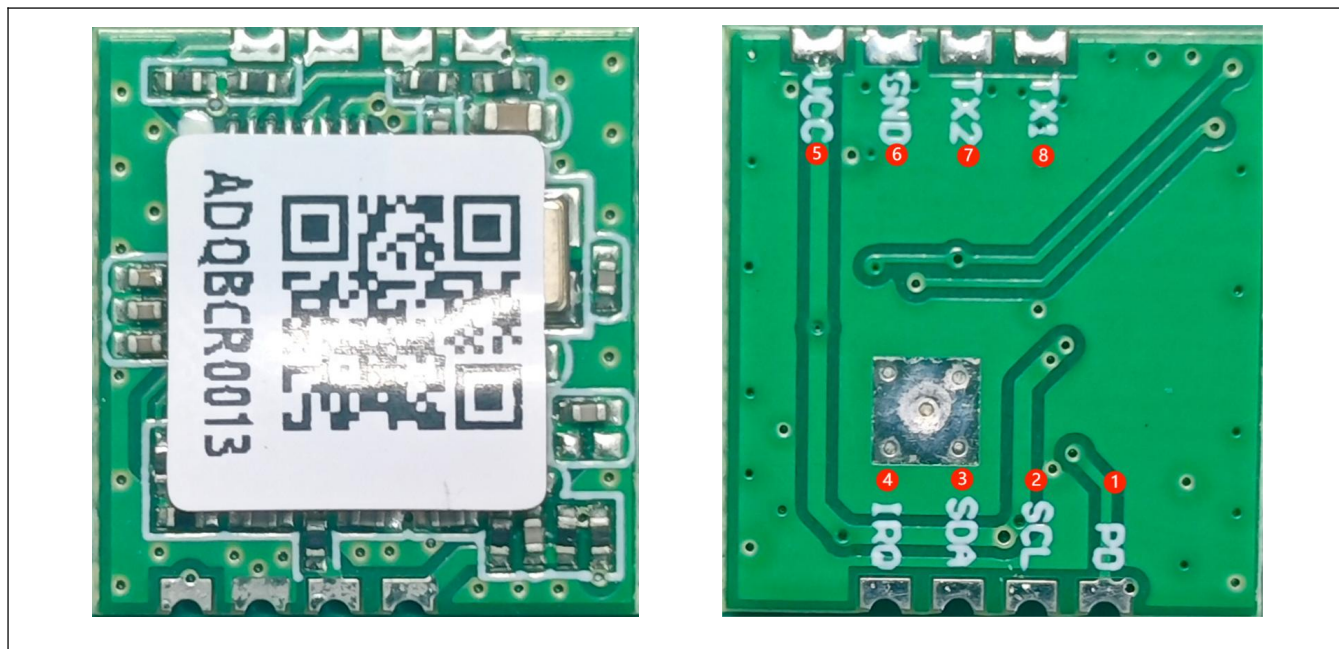
软件版本 Software Version: NA



变更记录 Change Log:

日期	版本	编写	审核	内容	备注
2025/11/26	HV:1.0	许小兵 Xu Xiaobing	王汉平 Wang Hanping	首次编写 Original Drafting	
2026/01/23	HV:1.0	张业杰 Zhang yejie	王汉平 Wang Hanping	更新产品图片 Update product images	

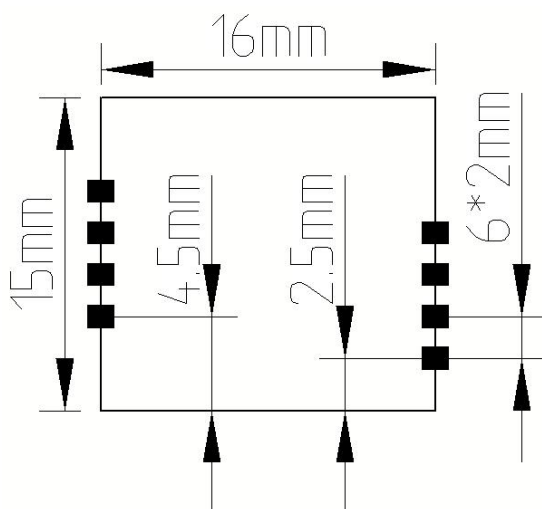
1. 产品图片 Product Image:



接口定义 Interface Specification:

①PIN	②PIN	③PIN	④PIN	⑤PIN	⑥PIN	⑦PIN	⑧PIN
掉电复位	时钟	数据	中断输出	电源正极	电源负极	天线连接 2	天线连接 1
PD	SCL	SDA	IRQ	VCC	GND	TX2	TX1

产品尺寸 Product Size (mm $\pm 0.2\text{mm}$):



2. 产品概况 Product Overview:

2.1、本模块是基于一款多协议读卡芯片开发的 13.56MHz 读写卡模块；

This module is a 13.56MHz RFID read/write module developed based on a multi-protocol reader chip;
该读卡芯片支持 ISO/IEC 14443 Type A/Type B 协议；

The reader chip supports ISO/IEC 14443 Type A/Type B protocols.

支持 Apple Pay、Samsung Pay 等手机支付应用；

Supports mobile payment applications such as Apple Pay and Samsung Pay.

支持 ISO/IEC 18092 的 P2P passive initiator 模式；

Supports P2P passive initiator mode under ISO/IEC 18092.

支持 ISO/IEC 15693 协议；

Supports ISO/IEC 15693 protocol.

支持 EMV3.0/3.1 认证，包括电气、协议、及手机兼容性认证测试；

Complies with EMV 3.0/3.1 certification, including electrical, protocol, and mobile compatibility tests.

本模块默认集成 Mifare1 S50/S70、Mifare UltraLight、Mifare

Desfire、CPU 卡以及二代居民身份证 ID 的读取的操作命令；

The module comes pre-integrated with operational commands for reading Mifare1 S50/S70, Mifare UltraLight, Mifare DESFire, CPU cards, and second-generation Chinese resident ID cards.

2.2、宽电压工作范围，电压 2.0V-5.5V；

Wide operating voltage range: 2.0V–5.5V；

2.3、I2C 接口，标准模式速率为 100kbit/s；

I²C interface, standard mode rate is 100 kbit/s.

2.4、支持低功耗主动监测卡进入模式；

Supports Low Power Card Detection (LPCD)；

2.5、主控 MCU 消耗资源少，可以支持多种内核；

Low-resource, multi-core MCU compatible module.

2.6、集成 PCB 天线，可以简单地实现稳定可靠的非接卡片操作；

Supports an external antenna for enhanced compatibility with various RFID cards and operational environments.

3. 产品参数 Product Parameters:

名称 Name	多协议读卡模块(IIC) Multi-protocol RFID Reader Module(IIC)
型号 Model	HW70I3-WBDB
尺寸 Size	长宽高(L × W × H)16*15*2.5mm
使用环境 Operating Environment	温度 Temperature: -40~85℃ 湿度 Humidity:: 5%~95% RH
卡片类型 Contactless Card	支持 14443 Type A/Type B 的非接触智能卡 Contactless smart cards supporting ISO/IEC 14443 Type A/Type B protocols 支持 ISO/IEC 15693 协议的非接触智能卡 Contactless smart cards compliant with ISO/IEC 15693 protocol 支持 Feilica 卡 Contactless Feilica cards
读卡距离 Card Reading Distance	≤5cm
通讯方式 Communication Method	I2C 接口, 标准模式速率为 100kbit/s I ² C interface, standard mode rate is 100 kbit/s.
电源 Power Supply	可支持 2.0~5.5V 输入 supports input range of 2.0~ 5.5V,
功耗 Power Consumption	典型工作电流 120mA(DC3.3V) Typical working current 120mA~200mA(DC3.3V)
软件开发 Software Development	详细模块操作时序及指令参考最新 MH1612 数据手册 Consult the most current MH1612 datasheet for details.
注意事项 Warnings and Cautions	安装在远离金属的空旷环境 (4cm 以上), 否则会有干扰造成读卡距离缩短, 如果有此情况, 请使用铁氧体吸波纸贴在读卡板反面,



	如仍达不到读卡要求，请联系技术支持。 Keep Away from Metal: Maintain ≥ 4cm clearance from metal surfaces to prevent signal interference and short read range. Troubleshooting: If range is short, apply ferrite sheet to reader's back. Contact support if unresolved.
认证 Certification	

FCC Statement

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: 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 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 different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Radiation Exposure Statement

This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device must operate with a minimum distance of 20 cm between the radiator and user body.