RFID Card Reader Module Specification

Model：CM26-4ANT-RFID-RW

Product Description.

The 4-way swipe module is a highly reliable non-contact IC card reader module, with full independent property rights, the module has low power consumption, each way to read the card distance bureau can reach about 6cm, with a simple power supply and interface circuit, can quickly build 4 antenna RFID identification system.

Product Features.

1) ISO/IEC 14443 A/MIFARE standard card reading module, reading distance can reach: about 6CM.

2）Operating voltage: 2.5V-3.3V, operating temperature: 0-70°C.

3) Serial output: baud rate 9600bps (detailed reference protocol)

4) Module with MCU, external antenna before it can work, and can directly output UART signal, reduce the cost and at the same time, can also develop products faster.

Technical parameters.

Operating frequency: 13.56MHz

Operating voltage: DC 3.3V

Power consumption: 50mA

Reading distance: 0-60mm

Protocol standard: ISO1443A

Transmission rate: 9600bit/S

Modules can be applied to the following products.

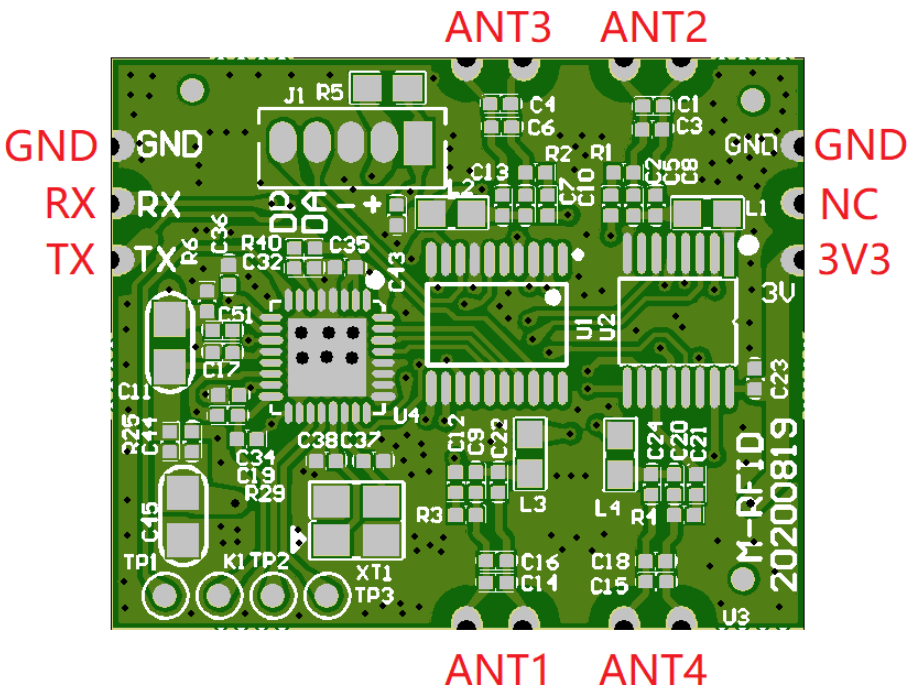
RFID identification, door lock access control, electronic wallet and other related industries

Product appearance and dimensions:

Size: 25*30 (mm)

Weight: about 7.5g

Package: in the form of stamp mouth package



Interface description: (refer to the physical)

Module RX to uplink TX

Module TX to uplink RX

Antenna Gain 3.0dBi

Antenna Manufacturer Information:

Zhangzhou iHastek Inc.

Add: No. 10, Jinda Road, Wanlida Industry Zone, Jinfeng Industrial Estate, Zhangzhou, Fujian, China

Serial port protocol.

Hardware interface: TTL level UART 9600 8n1

Communication data structure.

Command code (1 byte) ... n parameters 1 byte CRC

Response code (1 byte)..... n parameters 1 byte CRC

CRC check code calculation: all data logical isochronous to 0.

The communication data is encapsulated on the serial channel:

The data stream is added starting with 0xFE and ending with 0xEF.

If 0xFE, 0xEF, 0xFD are present in the data stream, they are converted according to the following rules:

0xFE to 0xFD 0x02

0xEF to 0xFD 0x03

0xFD to 0xFD 0x07

1. System Commands

1.1 Handshake command

Command code: 0x00 [0 to 16 bytes of random data]

Response code: 0x00 [0 to 16 bytes of random data]

The handshake command is parsed as follows.

Frame header: 0xFE

Command word:0x00

Parameter: 0x00~0x0F (1 byte)

CRC: Command word Iso-or Parameter

1.2 Get hardware and software version information

Command code: 0x01 0x55 0xAA

Response code: 0x01 1-byte software version 1-byte hardware version

1.3 Control the card reader to enter low-power hibernation

Command code: 0x02

Response code: 0x02

1.4 Turn off the antenna

Command code: 0x03

Response code: 0x03

2. Card Operation Commands

2.1 Channel selection

Command code:

0x10 1-byte antenna selection, 0x00 does not select any antenna, 0x01 represents ANT1,

0x02 represents ANT2, 0x03 represents ANT3, 0x04 represents ANT4.

Response code:

0x10 1-byte status code (0x00 for successful card reading, others represent related error codes) 7-byte card number (status 0x00, present) ---- 01 ff ff ff ff ff ff ff (no card Failure to answer) Timeout 200MS

2.2 Card Reading

Command code:

0x11 1-byte block address

Response code:

0x11 1-byte status code (0x00 means card reading success, other represents related error code) 4-byte block content (status 0x00, exists)

Error response.

0x11 0x01 ff ff ff ff

2.3 Write card

Command code:

0x12 1-byte block address 4-byte block content

Response code:

0x12 1-byte status code (0x00 indicates successful card reading, others represent related error codes)

Error response.

0x12 01 ff ff ff ff

3. Manufacturer-specific card operation commands

3.1 Four-channel data direct reading

Command Code:

0x20 1-byte block address

Response code: 0x20

1 byte antenna a status code (0x00 means card reading success, others represent related error code)

4 bytes antenna one block data (if the status is 0x00, the data is valid; otherwise, all are 0x00)

1 byte antenna two status code (0x00 means card reading success, other represents the relevant error code)

4 bytes antenna two card block data (state 0x00, data valid; otherwise all 0x00)

1 byte antenna three status code (0x00 indicates successful card reading, others represent related error code)

4 bytes antenna three card block data (status is 0x00, data valid; otherwise all as 0x00)

1 byte antenna four status code (0x00 indicates successful card reading, others represent related error code)

4 bytes antenna four card block data (status is 0x00, data is valid; otherwise, all are 0x00)