

RFID Reader 125kHz/13.56MHz

Technical Data

	HID PROX	Multi125	Inditag	Mifare	MultiISO	HID iCLASS	Legic
Housing	Material ABS, color black or white						
Frequency	125 kHz			13.56 MHz			
Dimensions	88mm x 56mm x 18mm						
Power Supply	5V ± 10% via communication cable						
Supply Current	140mA	220mA	220mA	120mA	N/A	220mA	280mA
Temperature Range	0°C up to +50°C						
Antenna	Aircoil			PCB Aircoil			
Antenna Gain	4DBi						
Supported Transponders	HID PROX	EM410x HITAG 1 HITAG 2 HITAG S EM4150 T5567, Q5	Indala	Mifare Ultralight, Mifare Mini Mifare 1k, 4k Mifare DESfire	Mifare Family ISO14443A ISO14443B ISO15693	HID iCLASS	Legic Prime, Legic Advant

Description:

7941W is a multi-protocol dual-band read and write module. Set IC and ID read and write one. It can read a variety of IC and ID card. Support Mifare1K, UID card, IC card, T5577 ID card.

Features:

- 1>. Voltage: DC 5V
- 2>. Current: 50mA
- 3>. Distance: Mifare>3cm; EM>5cm
- 4>. Size: 47mmX26mmX5mm
- 5>. Interface: UART, Wiegand
- 6>. Support Chips: ISO/IEC 14443 A/MIFARE, NTAG, MF1xxS20, MF1xxS70, MF1xxS50
- 7>. EM4100, T5577 read and write function
- 8>. Operating Temperature: -25~85 Celsius

Connection Introduction:

- 1>.5V: DC 5V power supply pin; if you use linearity power, it will gain better effects
- 2>.RX: receive pin
- 3>.TX: transmit pin
- 4>.GND: power supply ground pin
- 5>.IO: definition

Protocol Introduction: (UART serial port communication protocol is shown as below)

Sending Protocol:					
Protocol Header	Address	Command	Data Length	Data	XOR Check
AB BA	1 Byte	1 Byte	1 Byte	1-255 Byte	1 Byte
Receiving Protocol:					
Protocol Header	Address	Command	Data Length	Data	XOR Check
CD DC	1 Byte	1 Byte	1 Byte	1-255 Byte	1 Byte

- 1>. Protocol Header: send (0xAB 0xBA)
- 2>. Return: (0xCD 0xDC)
- 3>. Address: default 0x00

4>. Command:**Send:**

- 1). 0x10 read UID number
- 2). 0x11 write UID number (4 bytes), use default password ffffffff
- 3). 0x12 read specified sector
- 4). 0x13 write specified sector
- 5). 0x14 modify the password of group A or group B
- 6). 0x15 read ID number
- 7). 0x16 write T5577 number
- 8). 0x17 read all sector data (M1-1K card)

Return:

- 1).0x81 return operation succeeded
- 2).0x80 return operation failed

5>. Data Length: means following data length; if it's 0, then the following data will not occur.

6>. Data: read and written data**Sending Data:**

- 1). Read Specified Sector: the first byte of the data represents sector; the second byte means the certain block of the sector; the third byte means A or B group password (0x0A/0x0B); then it comes with password of 6 bytes.
- 2). Write Specified Sector: the first byte of the data represents sector; the second byte means the certain block of the sector; the third byte means A or B group password (0x0A/0x0B); then it comes with password of 6 bytes and block data of 16 bytes.
- 3). Modify Password: the first byte means the certain sector; the second byte means A or B group password (0x0A/0x0B); then it comes with old password of 6 byte and new password.

Receiving Data:

Read specified sector return data format, the first byte is sector; the second byte is the certain block of sector; then it comes with block data of 16 bytes.

7>. XOR check: result of other bytes check except protocol header.

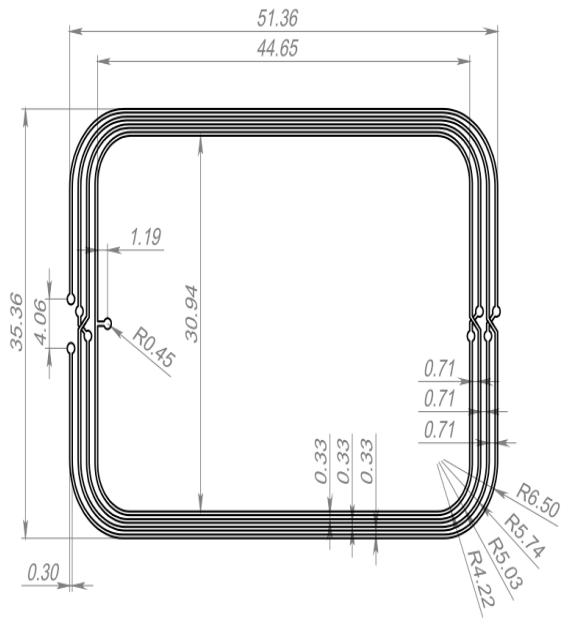
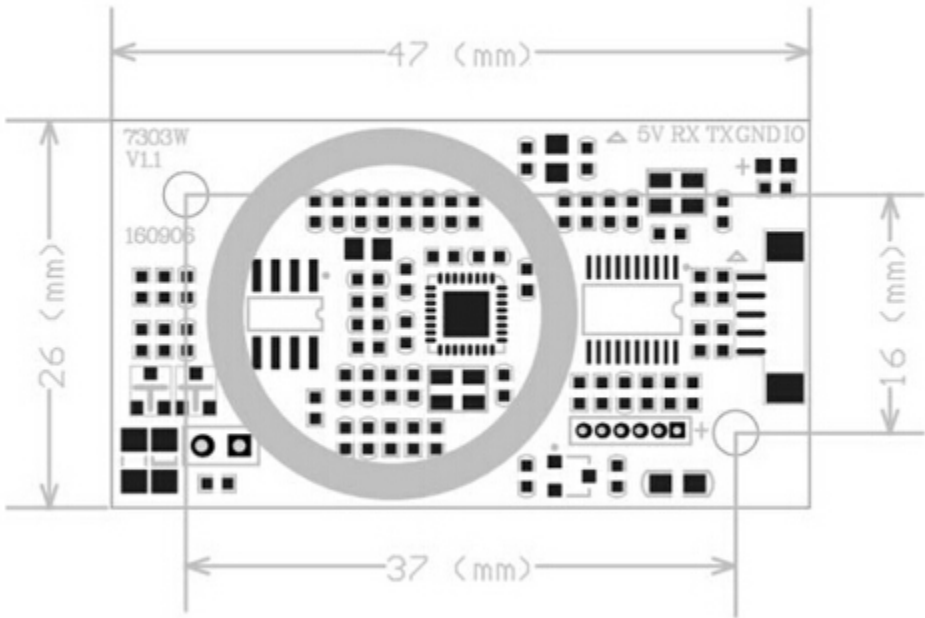
Example:

```
AB BA 00 10 00 10
AB BA 00 11 04 6D E9 5C 17 DA
AB BA 00 12 09 00 01 0A FF FF FF FF FF FF 10
AB BA 00 13 19 00 01 0A FF FF FF FF FF FF 00 01 02 03 04 05 06 07 08 09 01 02 03 04 05 06 07
AB BA 00 14 0E 00 0A FF FF FF FF FF FF 01 02 03 04 05 06 17
AB BA 00 15 00 15
AB BA 00 16 05 2E 00 B6 A3 02 2A
AB BA 17 07 0A FF FF FF FF FF FF 1A
```

Applications:

- 1>.Attendance Fingerprint Read Write Module
- 2>.Entrance Guard Intercom Read Write Module
- 3>.Replicator

Module Size:



• Product Category

7941W-X

- W26 WIEGAND26
Format Output Multi-Protocol Module
- W34 WIEGAND34
Format Output Multi-Protocol Module
- UART Command Multi-Protocol Module
- 7941W Multi-Protocol Card Reader