

● Introduction

PIFC-18U1W66T is Felica & Mifare UID reading module. It is power supplied via USB cable. It can provide easy ID filing by USB keyboard emulator without any driver (plug & play) and no request of external power supply. Compact design with mounting holes suitable for various integrations such as portable products.

We provide complete software/Hardware support and shorten schedule of RFID product development, OEM/ODM service is available.

● Features

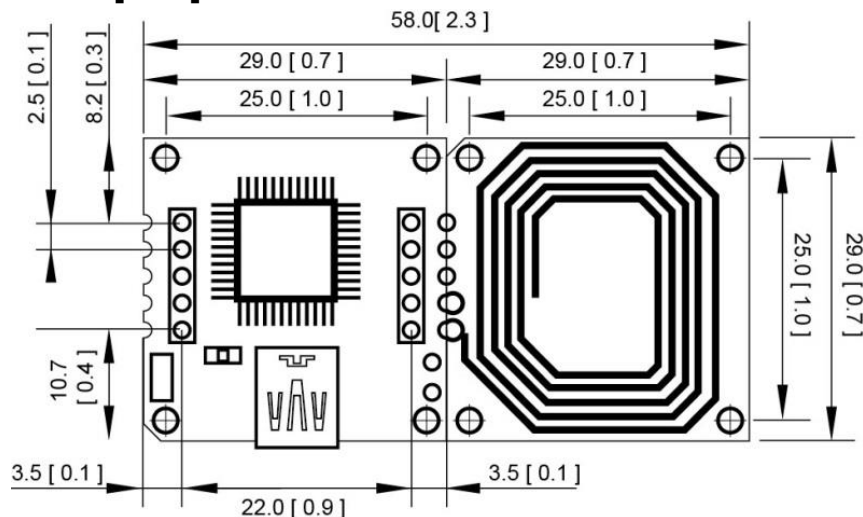
- Support Felica ISO18092 & Mifare ISO14443A.
- Antenna can be replaced upon request
- Supply firmware modification accords to request of special function
- High speed data transfer and high integrity
- Comply with ROHS
- With fixed holes around the corner.



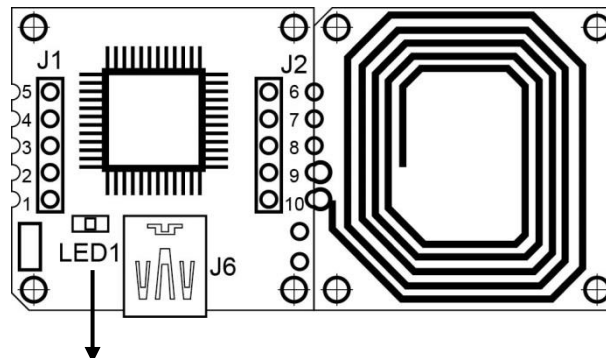
● Specification

| | | |
|----------------------------|----------------|--|
| RFID frequency | | 13.56MHz |
| Applicable cards | | Mifare S50 / S70, Mifare Ultralight, Felica, NFC Tag or compatible |
| Reading range | Card (T:0.8mm) | Max.4 cm |
| | Tag | Max.3 cm |
| Output interface | | USB |
| Power input | | By USB |
| Standby current | | 60mA±10% @5V DC |
| Working current | | 56mA±10% @ 5V DC |
| Dimensions(L) x(W) mm/inch | | 58 x 29 / 2.3 x 0.7 |
| Operating temperature | | -10℃~70℃ |
| Storage temperature | | -20℃~85℃ |

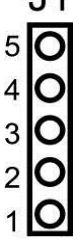
● Dimension: Unit: mm[inch]

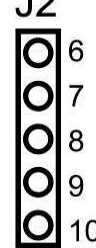


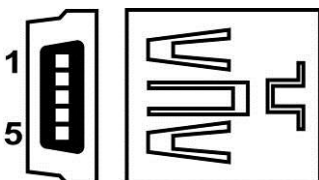
- Wire configuration



LED1:
Standby: Orange
Card(Tag) approach to the module: LED off for 0.5 Sec.

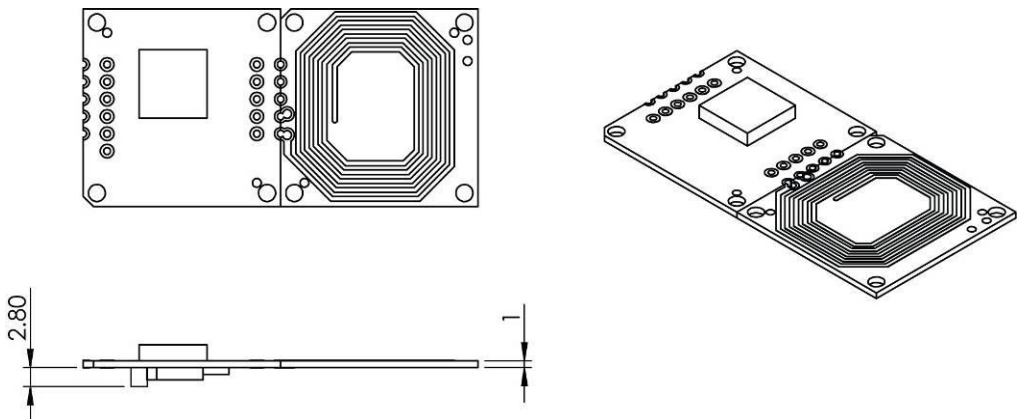
| J1- UART Output | | | |
|--|-----|------------------|-----------|
|  | Pin | Signal direction | Function |
| | 5 | --- | --- |
| | 4 | --- | --- |
| | 3 | → | Tx |
| | 2 | — | GND |
| | 1 | ← | +4.5~5.4V |

| J2-Wiegand Output | | | |
|---|-----|------------------|----------|
|  | Pin | Signal direction | Function |
| | 6 | ← | Buzzer |
| | 7 | — | Data 0 |
| | 8 | → | Data 1 |
| | 9 | → | Antenna |
| | 10 | → | Antenna |

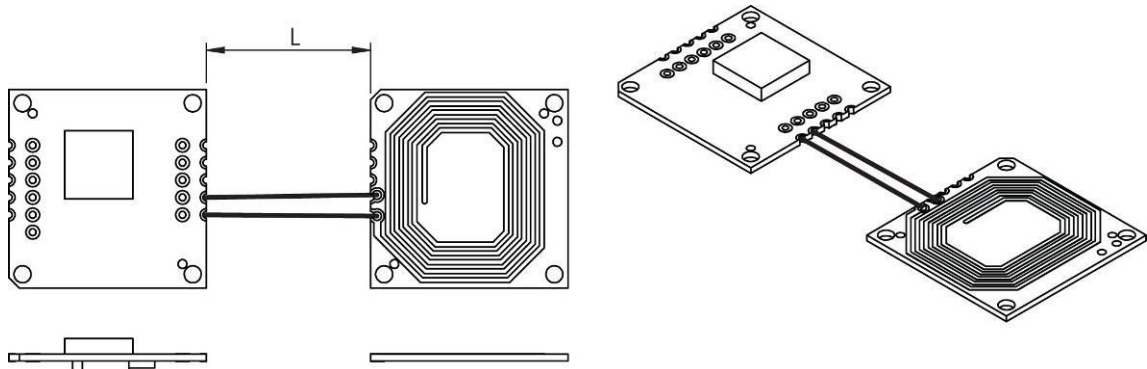
| Mini USB Connector | | | |
|---|-----|------------------|----------|
|  | Pin | Signal direction | Function |
| | 1 | ← | +5 VDC |
| | 2 | → | D- |
| | 3 | → | D+ |
| | 4 | X | X |
| | 5 | — | GND |

● Application

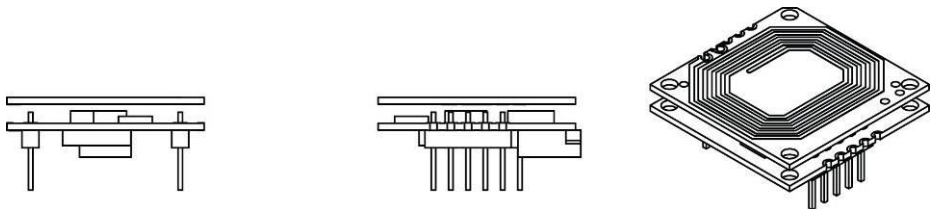
Type A



Type B



Type C



● Data formats

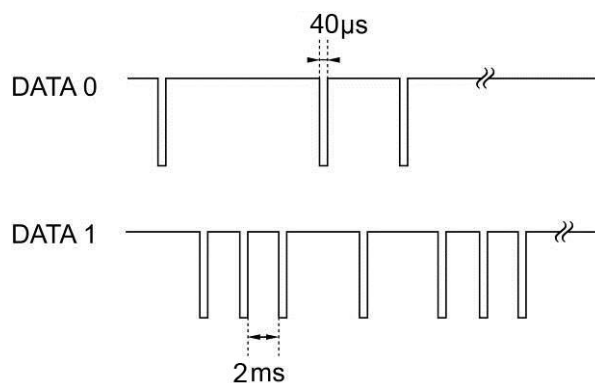
Wiegand 66bits

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 |
| P | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C |
| P | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Summed for even parity(E) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | P |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | O | P |
| Summed for Odd parity(O) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

P=Starts Even parity bit and stop Odd parity bit.

Even parity “E” is generated by summing from bit2 to bit33; Odd parity “O” is generated by summing from bit34 to bit65.



UART output format (For Mifare)

| STX(02Hex) | CARD ID(8 ASCII) | CR(0DHex) | LF(0AHex) | ETX(03Hex) |
|------------|------------------|-----------|-----------|------------|
|------------|------------------|-----------|-----------|------------|

If the card no. is 00318F59, you will get the following ASCII.

STX CR LF ETX
Hex : 02H, 30H, 30H, 33H, 31H, 38H, 46H, 35H, 39H, 0DH, 0AH, 03H

UART output format (For Felica)

| STX(02Hex) | Manufacture Code(4 ASCII) | CARD ID(12 ASCII) | CR(0DHex) | LF(0AHex) | ETX(03Hex) |
|------------|---------------------------|-------------------|-----------|-----------|------------|
|------------|---------------------------|-------------------|-----------|-----------|------------|

If the card no. is **0127006292D44EE1**, you will get the following ASCII.

STX CR LF ETX
Hex : 02H, 30H, 31H, 32H, 37H, 30H, 30H, 36H, 32H, 39H, 32H, 44H, 34H, 34H, 45H, 45H, 31H, 0DH, 0AH, 03H

Transmission Spec.

Baud rate : 9,600 bps
Parity bit : none
Data bit : 8
Stop bit : 1

● Ordering information

| | |
|-----------------------|---|
| PIFC-18U1W66T | Felica & Mifare module, Hexadecimal, Felica: Wiegand 66 bit, Mifare: Wiegand 34bit, UART, USB |
| PIFC-18U1W66TS | Felica & Mifare module, Hexadecimal, Felica: Wiegand 66 bit, Mifare: Wiegand 34bit, UART, USB, Card number: in positive |

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Specifications subject to change without notice for further modification.

PIFC-18U1W66T/E