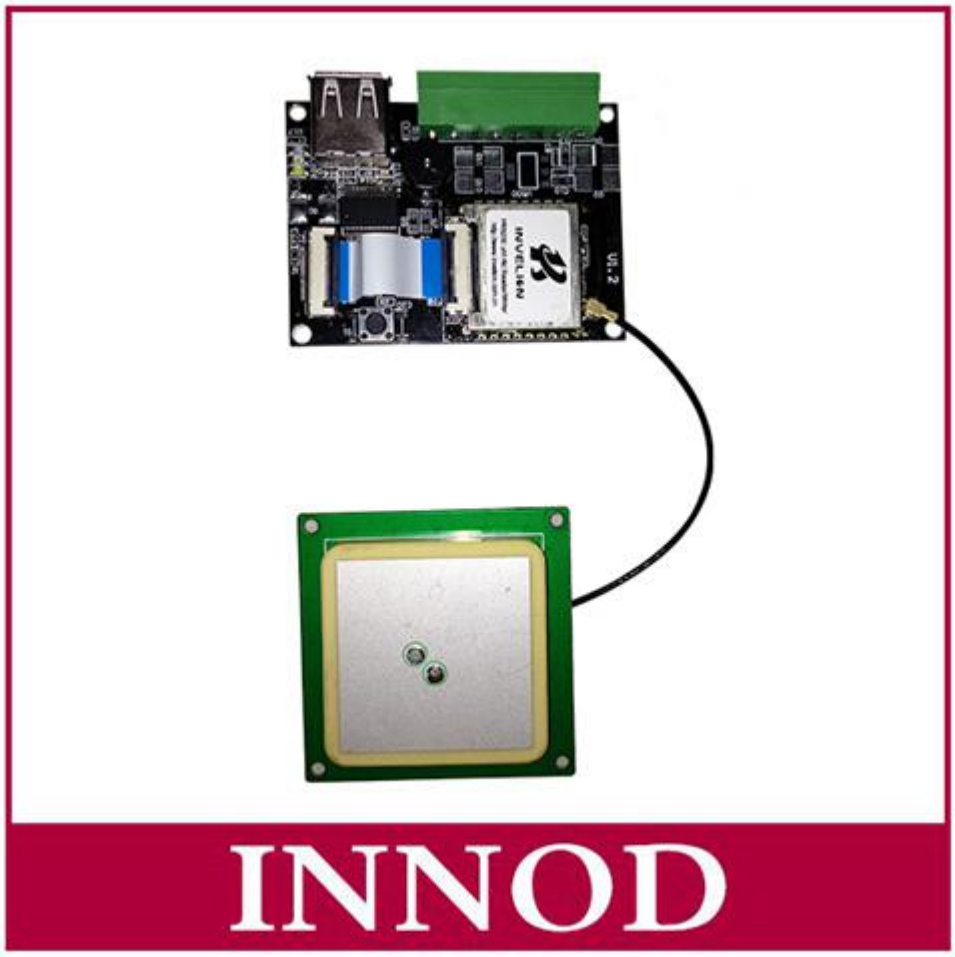
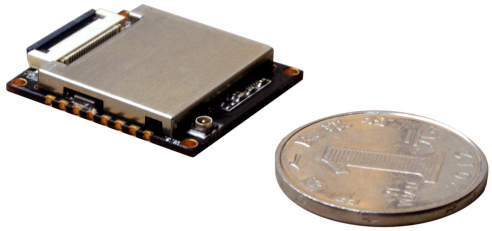
Small UHF RFID Reader Module Specification



V 1.1

Table one: The module's features



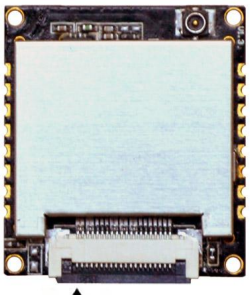
Indy PR9200 RFID chip	**◆Using most competitive UHF RFID chips in the industry.**
Excellent reading labels performance	**◆Tag identification sensitivity, stability.** **◆Small ceramic antenna stable recognition distance up to 10cm -3 m.** **◆with 8dBi circular antenna 1-10 m.** **◆with 12 dBi linear polarization antenna 1- 15 m.** **◆Multi-tag identification performance: 1- 50 tags.** **◆The tag identification speed: >1-50 PC/s.**
Completely solve the problem of fever	**◆Without any external cooling devices.** **◆Long-term continuous Workload unheated at room temperature .** **◆Working current < 180 mA @ 3.5 V (26 dBm Output).**
Excellent stability	**◆ 24 h x 365 days work don't crash.** **◆ Performance by the shell,electromagnetic environment etc. little outside influences .** **◆Wide temperature design, WenPiao coefficient is very low.**
Excellent consistency	**◆A masterpiece in** consistent design**.** **◆ All use the highest level of components, guarantee the stability of the various parameters.**
Concise and efficient software and hardware interface	**◆with our INDY R2000 series communication interface compatibility, easy used interchangeably.** **◆Peripheral circuit is extremely simple, single power supply, without external tantalum capacitor.(see figure 1: reference design circuit).**
Support two installation methods at the same time	**◆support "RFID connector + FPC connector" installation method.** **◆support surface mounting soldering.**

Table two: electrical parameters

Model	**IND903**
Dimension	**(just Module)28*25.5*2.5MM (module+board+connector) 60*46* 12MM**
Frequency	**902-928mhz/865-86mhz**
Protocol	**EPC global UHF Class 1 Gen 2 / ISO 18000-6C**
Interface(connector)	**TTL Uart (rs232)/Wiegand 26/Wiegand 34**

Output RFID connector	I-PEX
Output Power Range	18-26 dBm
Communication baud rate	115200 bps（Default and recommended）38400bps
Operating voltage	DC 3.5V – 5 V
Standby current	<80mA (EN Feet high level)
Sleeping current	<100uA (EN Feet low level)
Operating current	260mA @ 3.5V (26 dBm Output，25°C)。 110mA @ 3.5V (18 dBm Output，25°C)。
Starting time	<100ms
Operating temperature	- 20 ℃ - + 70 ℃
Storage temperature	- 20 ℃ - + 85 ℃
Operating humidity	< 95% (+ 25 ℃)
Output power precision	+/- 1dB
Output power flatness	+/- 0.2dB
Receiving sensitivity	< -70dBm
Peak speed of inventory tags	> 50PC/S
Label buffer	200 PC labels @ 96 bit EPC
Tag RSSI	support
GPIO	Two route enter two route output (3.3 V level)
heat-dissipating method	Air cooling (Without extern set heat sink）

Table three: the connector PIN feet definition (connector mode)

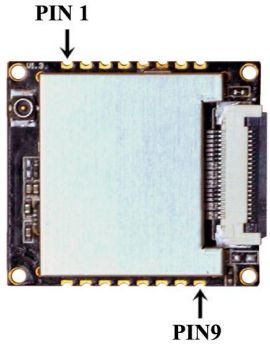


FPC connector (20Pin , Pin separation distance 0.5mm)

PIN	Definition	Description
1	VCC	Power source DC 3.5V-5V
2	VCC	
3	GND	Grounding
4	GND	
5	EN	High level can make the module

6	Reserved	keep
7	Reserved	keep
8	GND	Grounding
9	GND	
10	GPIO1	Input IO1
11	GPIO2	Input IO2
12	GND	Grounding
13	GND	
14	485 Direction	485 data direction control
15	Reserved	keep
16	RXD	UART RXD
17	TXD	UART TXD
18	Beeper	Buzzer control, need external buffer
19	GPIO3	Output IO3
20	GPIO4	Output IO4

Table four: connector PIN foot definition (SMT mode)



PIN	Definition	Description
1	Antenna	Antenna
2	GND	Grounding
3	GND	
4	GND	
5	GND	
6	GND	
7	GND	
8	GND	
9	VCC	Power source DC 3.5-5V
10	GND	Grounding
11	EN	High level can make the module
12	RXD	UART RXD
13	TXD	UART TXD

14	**Beeper**	**Buzzer**
15	**GPIO3**	**Output IO3**
16	**GPIO4**	**Output IO4**

Figure one: reference circuit design

Description:

- **Using the same phase buffer drive Wigan nterface.**
- **Using the same phase buffer drive buzzer.**

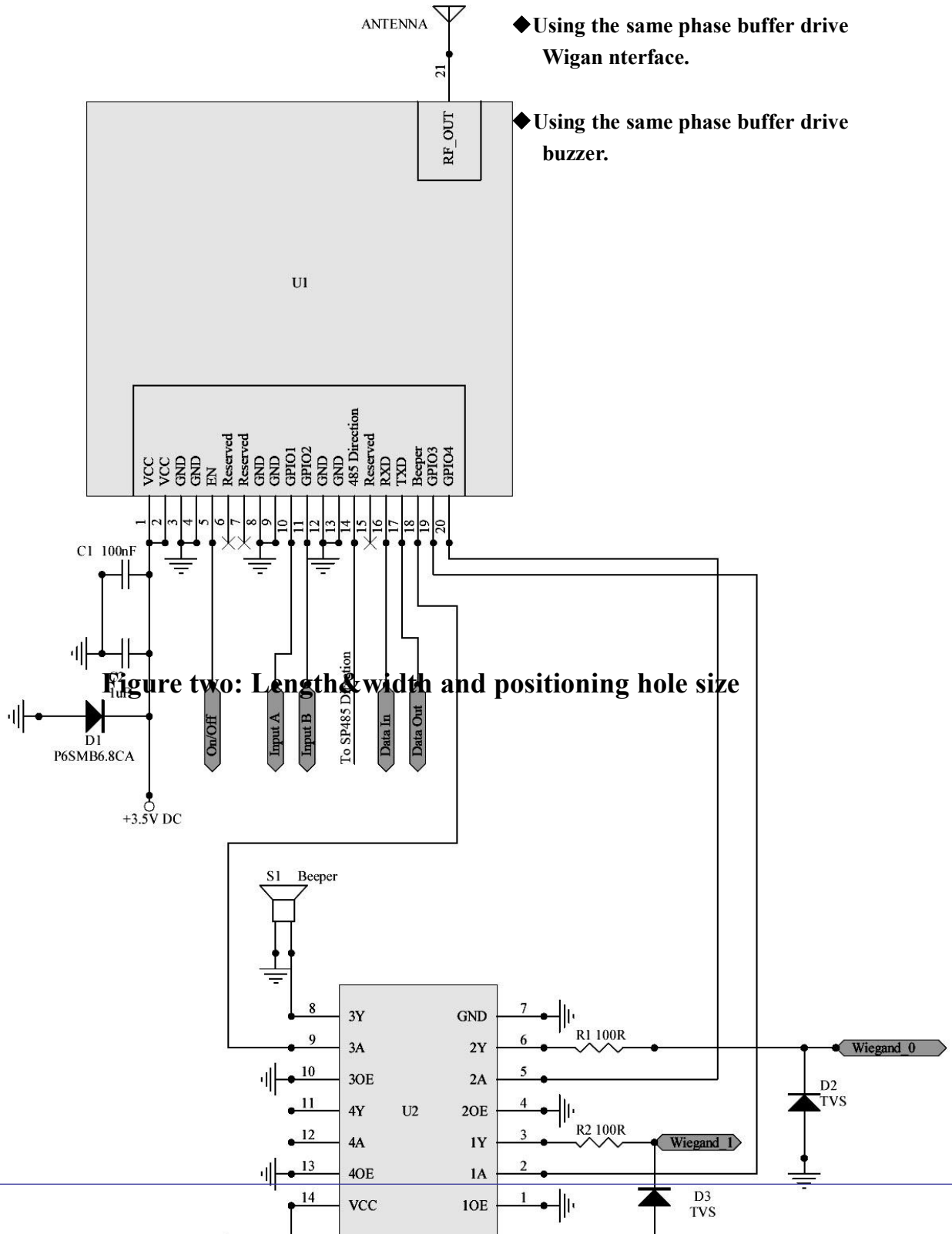


Figure two: Length&width and positioning hole size

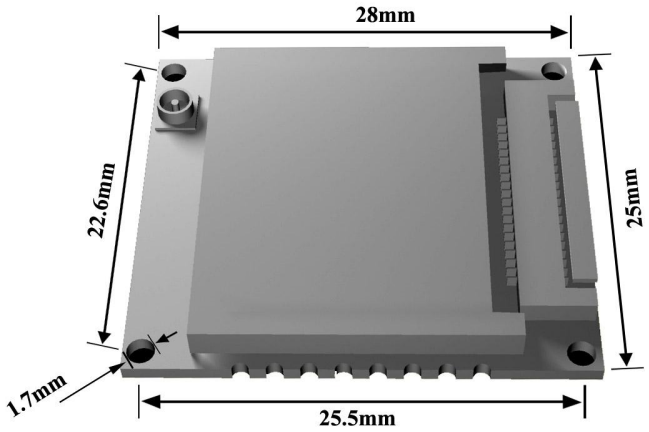


Figure three: Thickness of PCB and shielding case

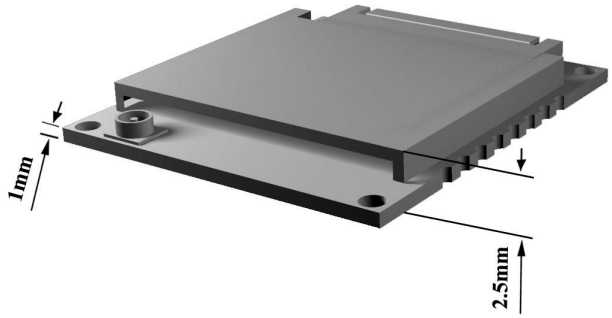
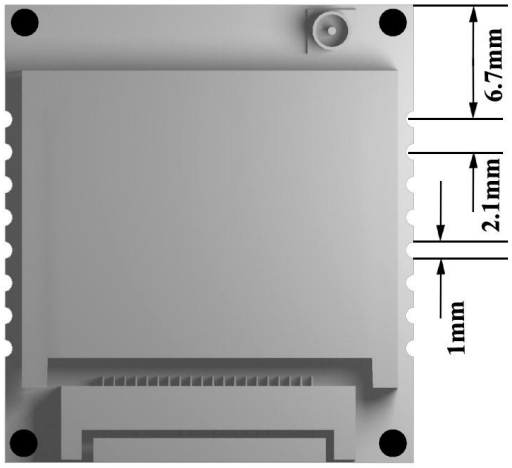


Figure four:SMT weld leg size



◆**Figure three and figure four are 3D effect drawings, non-food.**

◆ **If size of figure 3 and figure 4 have deviation with Kindl, please shall in kind prevail.**