APC200-43 Series Ultra Low Power Data RF Module

SHENZHEN APPCON TECHNOLOGIES CO.,LTD

Add：Rm1005, 10F，West CBD，Xinzhou 11 Avenue，

FUTIAN District, SHEN ZHEN City, CHINA

Postcode: 518048

Tel：+86 755 33370185

Fax: + 86 755 33370186

Web：www.appcon.com.cn

E-mail: appcon@126.com

I.) FEATURE:

1. The transmission power of 10mW (Can changed to 20mW)
2. Work frequency :ISM(431-478MHz)also order to 915MHz or 868MHz or others RF module
3. High anti-interference and low BER(Bit error Rate)

   Based on the GFSK modulation mode,the high-efficiency forward error correction channel encoding technology is used to enhance data's resistance to both burst interference and random interference and the actual bit error rate of (10-5---10-6) can be achieved when channel bit error rate is ( )
4. Transmission Distance:

   Within the range of visiblity.the reliable transmission distance is >1000m .
5. Offering three transparent (TTL/RS232/RS485) data interfaces, it is suitable for any standard or non-standard user protocols;
6. Auto filtration of false data produced in the air, and able to transmit long data frames;
7. Effective speed: 1200/4800/9600/19200bps, it is set by RF-Magic soft
8. Low power consumption and sleep function:

   Power: 3.3V-5.5V, receiving current<28mA, transmitting current<35mA, sleep current: <5uA ;
9. Good reliability for long-time use, low failure rate, and suitable for both indoor and outdoor use;
10. Size: Ultra small size (39mm×19mm×2.8mm) ,Antenna's Housing and antenna base excluded
11. Temperature: -35℃~+75℃
12. Impedance： 50Ω (SMA antenna base, multiple antenna options available) ;
13. Work Humidity: 10%-90% (No Condensation)
14. Checkout: Disable, Even Parity, Odd Parity

II.) Application :

*** Data radio can be used for wireless meter reading for gas, water, electricity meters for residential quarters;**

*** Radio modem can be used for wireless meter reading for power supply bureaus and stations;**

*** RF modem can be used for fire protection safety alarm and building automation control;**

*** RF transmitter can be used for access control, attendance check and dinner disperser system;**

*** Wireless telemetry can be used for medical instruments;**

*** Wireless modem can be used for wireless remote control alarm of power supply and fan equipment in the computer room;**

*** Wireless sensor can be used for warehouse logistics, laser gun and bar code reader;**

*** Data radio can be used for Wireless conference voting system;**

*** Mapping;**

*** Radio modem can be used for Sports training & competition;**

*** Wireless dishes ordering;**

*** Wireless POS, PDA wireless smart terminal;**

*** RF modem can be used for Electronic bus station and intelligent traffic;**

*** RF transmitter Wireless electronic display screen and queuing machine;**

*** Wireless telemetry Charging for parking, parking lot;**

*** Wireless modem Automobile inspection and four-wheel orientation;**

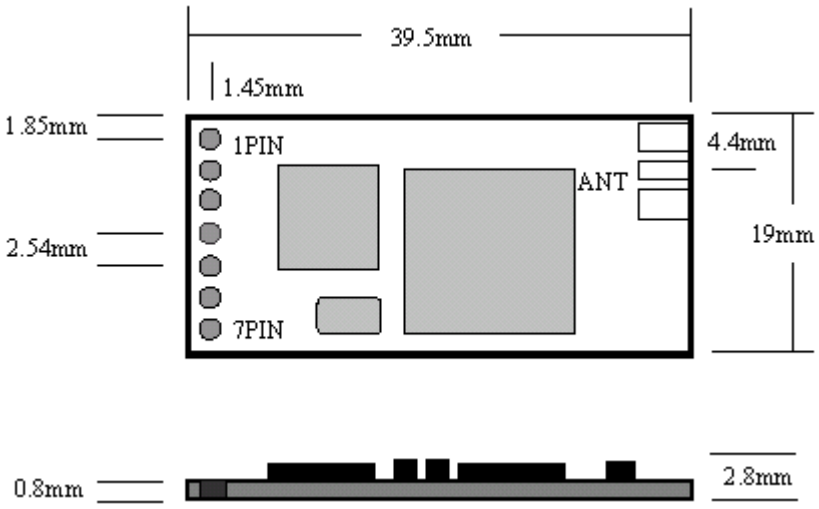
*** Wireless sensor Industrial wireless remote control and air conditioning remote controller;**

*** Observation and predication of oil well and hydrological information;**

*** Wireless RS232/RS485 conversion/connector;**

*** Point to multi-point wireless network, wireless on-the-spot bus and automatic data collection system;**

III.) 1.Module Size Drawing



Note: Housing and antenna base excluded

2.PIN Description

APC200A-43		
PIN	Meanings	Description
1	GND	0V
2	VCC	3.3V-5.5V
3	EN	> 1.6V or Don't connect
4	RXD	URAT Import
5	TXD	URAT Export
6	B/RX	RS485- or RS232 RX (Setup by RF-Magic)
7	A/TX	RS485+ or RS232 TX (Setup by RF-Magic)

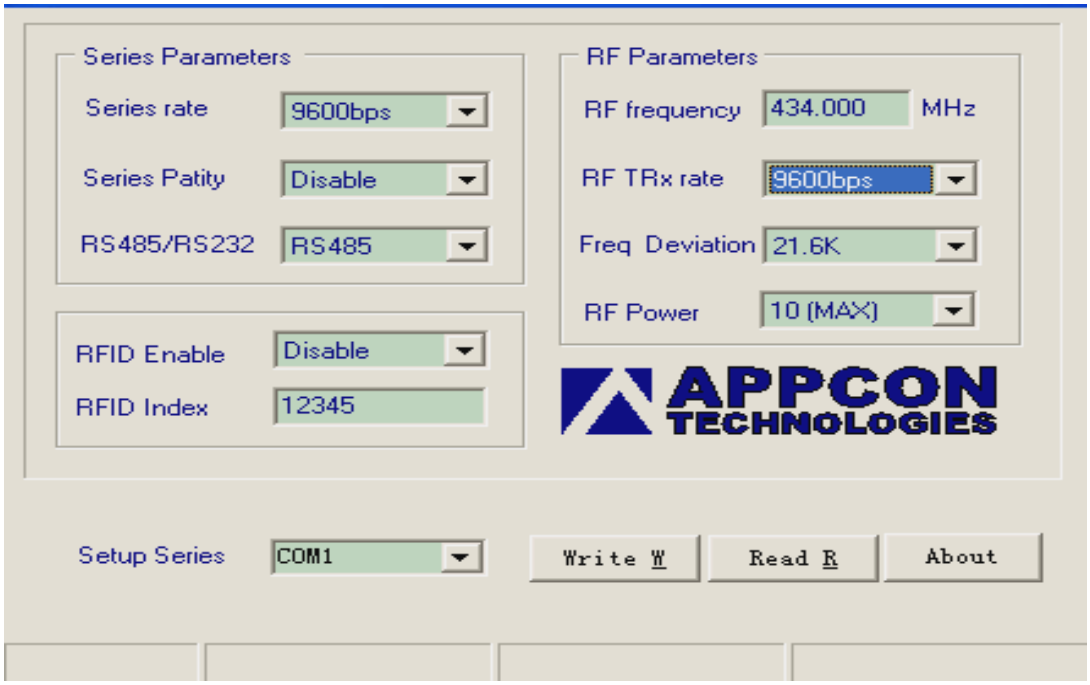
IV) Module Parameters Description

APC200A-43 Module

Setup	Option	Default
Interface Series Rate	1200,2400,4800,9600bps	9600bps
Series Parity	Disable, Even Parity, Odd Parity	Disable
Interface Type	RS485,RS232	RS485/TTL
RFID Disable	0-65535(16 位)	12345
RF Frequency	431MHz-478MHz(precision± 100Hz)	434MHz
Air Series Rate	1200,2400.4800,9600bps	9600bps
Frequency Deviation	5.4, 10.8, 43.2, 86.4KHz	21.6KHz
RF Power	1-10(10=20mW)	10(20mW)

V) M OD UL E

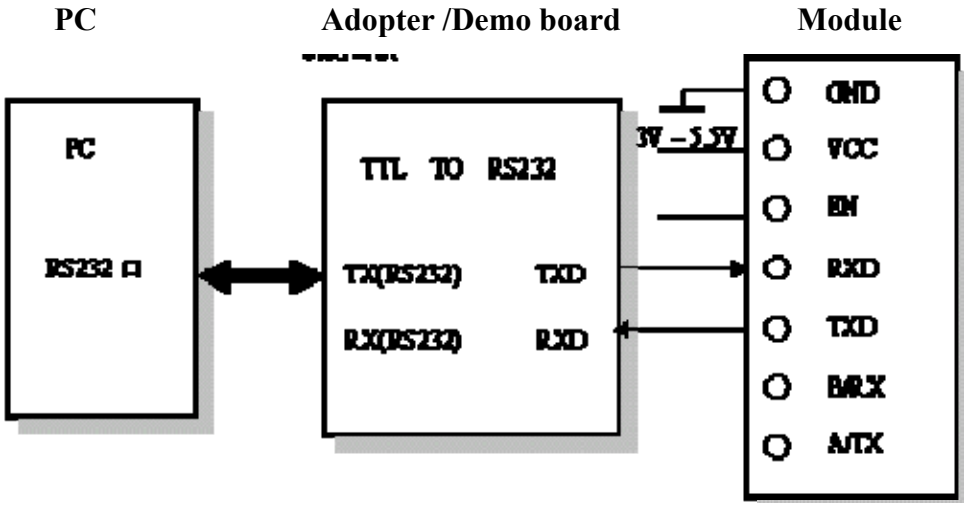
SET SOFT:



RF-Magic Soft Drawing

NOTES:

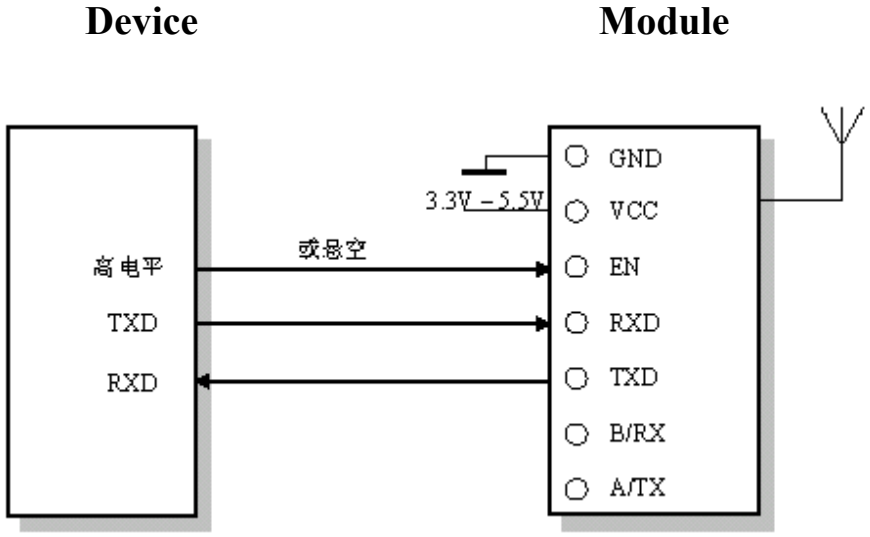
1. **First, Open off setup soft on PC.**
2. **Secondly, will PC CABLE connect to the board (RSR232changed to TTL board)**
3. **Supply electricity to the board, the module insert a plug (TTL)**
4. **Soft will found the device (module),able to Setup Module Parameter**



RF-Magic Setup Connecting Drawing

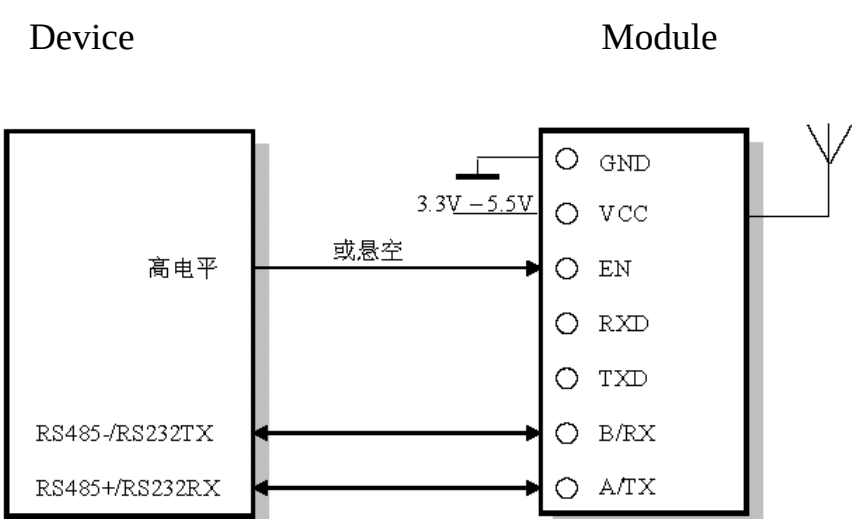
VII) MODULE CONNECTING DEVICE DRAWING

1. A TYPE DEVICE (UART/TTL) DRAWING



Notes: When join TTL **interface, Please don't join in 6PIN and 7PIN**

2. B TYPE DEVICE (RS232/RS485) DRAWING



Notes: When join RS232/485 **interface, Please don't join in 4PIN and 5PIN**

VIII ）Demo Testing Board

Notes:

In order to customer testing, Our Demo could testing for bring any where, but you knowing knowledge

No Communication	Two terminal device isn't the same protocols. As, bps or series speed and so on.

	Two terminal module isn't same type product.
	Voltage connect is wrong or power supply wrong.
	The module change to bad module.
	Communication more than used distance.
	PIN wrong
Communication distance too bad	Voltage ultra range
	Power supply's wave too big
	Antenna Choose is wrong
	Environment Quite Bad
	Having same frequency disturb
The Data Receive isn't the same data	Interface Setup is wrong
	Interface connect loose
	Interface Cable too long
	Setup 9600bps, Demo can show display of LCD. Others bps can communication ,but can’t show LCD 0f Demo