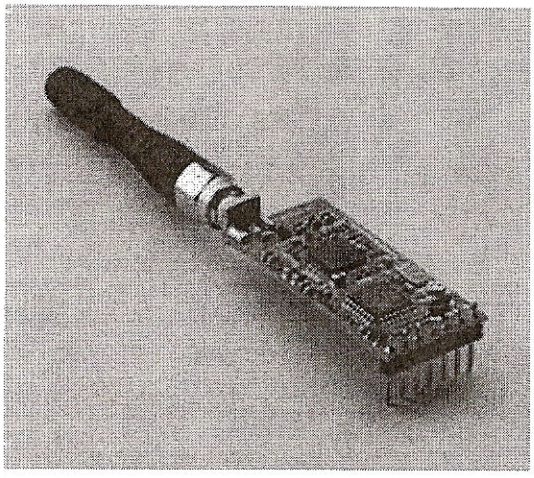
APC200

DVER 1.60

APC Family Module

APC200A-43 Long Range Multi-Channel Micro Embedded Transceiver Module



The APC200A-43 radio transceiver represents a simple and economic solution to wireless data communications. The employment of an embedded high speed microprocessor and high performance RF IC creates a transparent TTL and RS-485 interface, and eliminates any need for packetizing and data encoding.

Application:

- Automatic meter reading
- Handheld Wireless
- Home automation
- Telemetry
- Access control
- Instruments
- Data acquisition
- POS terminals
- Robotics

APC200

Features:

- 800m@ 9600bps at open area
- Transmit power 20mW
- High sensitivity (-112dBm @9600bps)
- Cyclic redundancy check encoder with interleaving
- More than 100 channels 431-478MHz
- GFSK modulation
- TTL/RS485 interfaces
- Embedded Watchdog
- Supply voltage +3.3-5.5V
- Small size 39x19x2.8mm

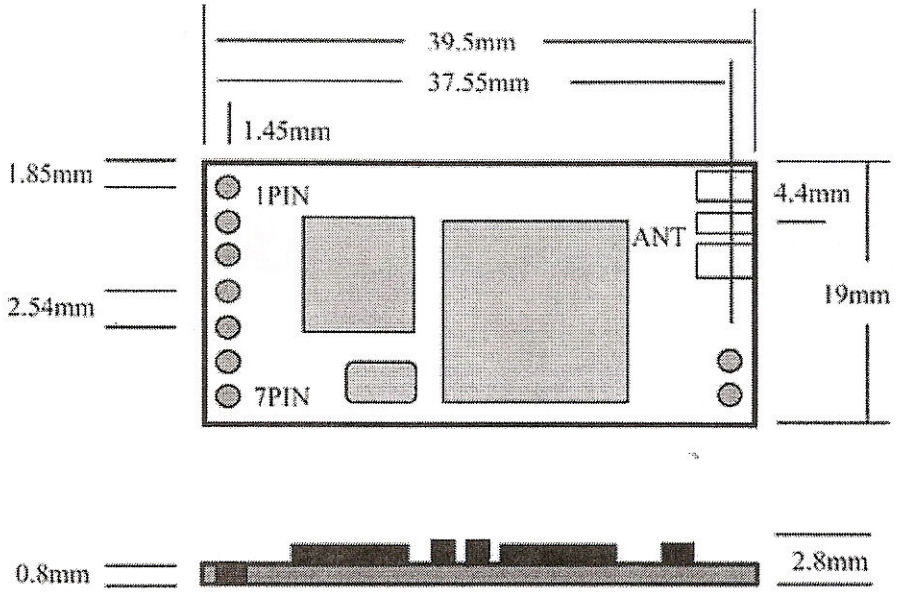
The designer does not have to write complex software routines for the transmission management. The APC200A-43 is a multi-channel RF transceiver which features selection of over 100 channels between 431and 478MHz and implements frequency modulation (GFSK) which guarantees a better noise immunity compared to amplitude modulation.

Open air range of up to 800 m@9600 bps with omni directional antennas can be achieved.

PIN ASSIGNMENT:

APC200A-43 PIN ASSIGNMENT		
Pin	**Definition**	**Description**
1	GND	0V
2	VCC	3.3V-5.5V
3	EN	POWER ENABLE
4	RXD	URAT input , TTL
5	TXD	URAT output , TTL
6	B/RX	RS485- or RS232 RX
7	A/TX	RS485+ or RS232 TX

DIMENSION:



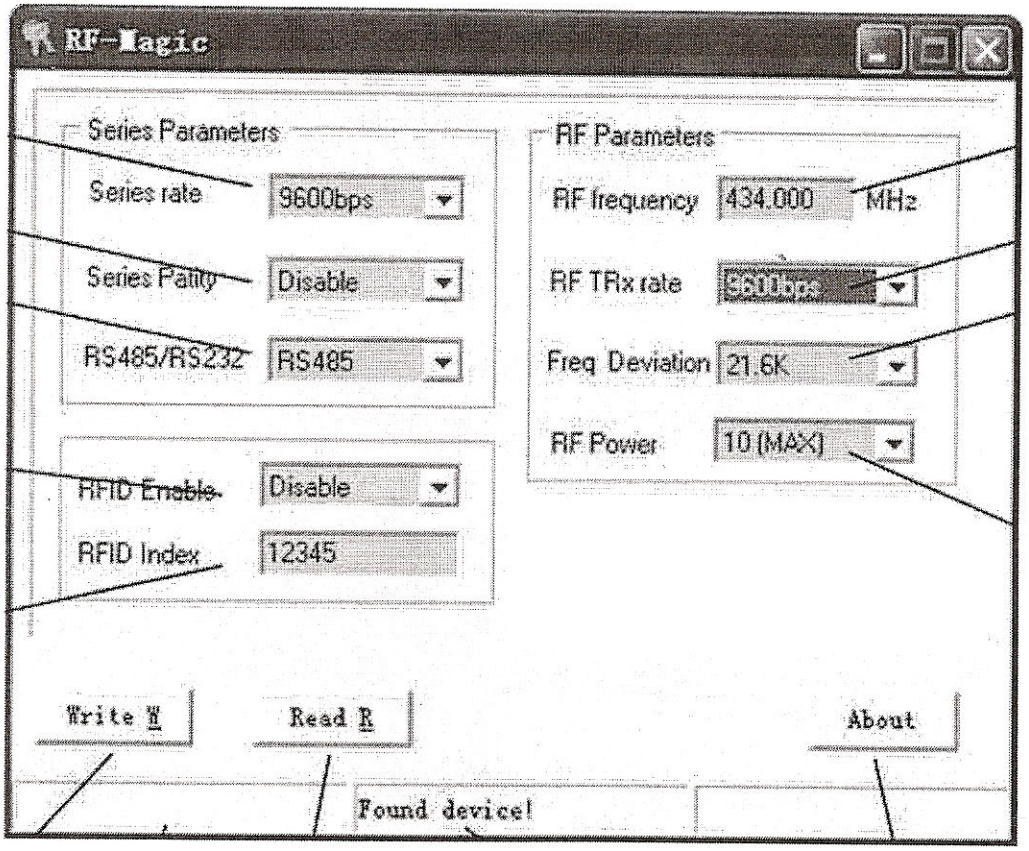
APC200A-43 MODULE Parameter setting

The module has built advance Cyclic Redundancy Check encoder with interleaving.

APC200A-43 MODULE : Parameter setting		
Parameter	Range	Factory Default
Series rate	1200, 2100, 4800, 9600 bps	9600bps
Series Parity	Disable , Even Parity, Odd Parity	disable
RS485/RS232	RS485, RS232	RS485
RFID Disable	Disable, Enable	Disable
RFID Index	0-65535 (16 bit)	12345
RF Frequency	431MHz-478MHz	434MHz
Series Rate	1200, 2100, 4800, 9600 bps	9600bps
Freq Deviation	5.4, 10.8, 21.6, 86.4 KHz	21.6KHz
RF Power	1-10 (10=20mw)	10(20mw)

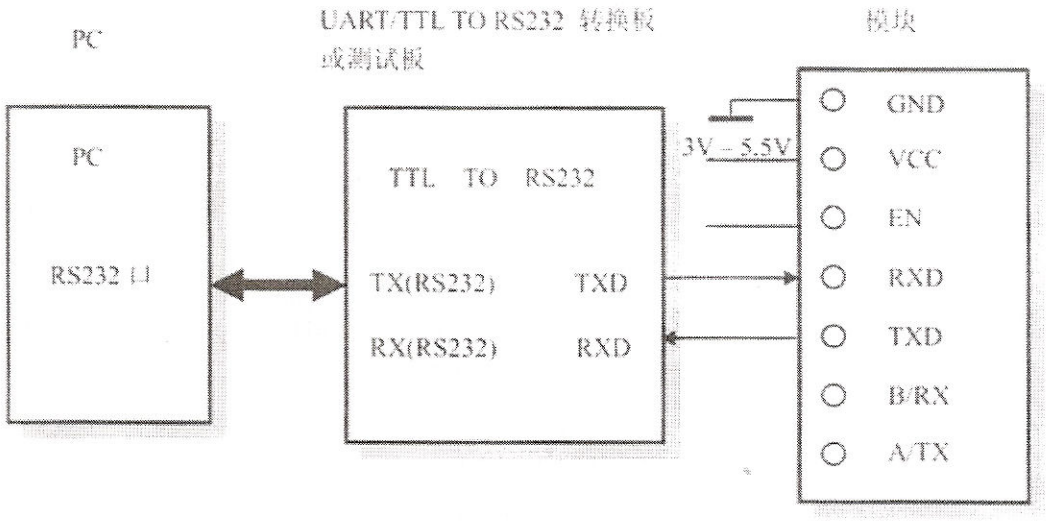
RF-MAGIC Software setting:

This module is very suitable for use in industry fields and conditions with much interference.



Connection Diagram of Software Setting:

For this encoding, it can correct max 24 bits continuous span of errors and reduce the gross bit error rate when operating near the sensitivity limit.



APC200A-43 Technical Data:

APC200A-43 Technical Specification	
Working Frequency	431MHz to 478MHz
Modulating	GFSK
Freq interleaving	200KHz
Transmit power	20mw
Sensitivity	-117dBm@1200bps
Speed in air	1200-9600bps
Speed in Port	1200-9600bps
Parity Check	8E1/8N1/801
Buffer	512 bytes
Working Humidity	10%-90%
Working Temperature	-20° C – 70° C
Power	3.3-5.5V
Transmission mode current	≤35mA@10mW
Receiving mode current	≤28mA
Sleep mode current	≤5uA
Distance	1000m transmission distance
Size	39mm x 19mm x 2.8mm

APC200

The designer through setting-up software can very straightforward setup channels, RF baud rate, RF output power , interface baud rate, interface checkout mode, type of interface, etc.

The APC200A-43 is extremely compact measuring only 39 x 19 x 2.8 mm.

Supply voltage is 3.3V-5.5V and a power down mode is available, reducing current consumption to less than 5μA.

It features with long transmit Range, high reliability and sensitivity, highly anti-interference, small size and easy use .

In conclusion , APC200A-43 is widely used in radio fields.

