



## **APC220 Radio Data Module**

2010-01-19

Version: 1.3

## Introduction

This APC220 is a highly versatile, low power radio solution that is easy to setup and integrate into any project requiring a wireless RF link.

It is perfect for robotic application which gives you a wireless control. You can connect one of these modules with your MCU through TTL interface. And connect your PC with another APC220 module through a TTL/USB converter

## Specification

Working frequency: 431 MHz to 478 MHz

Power: 3.3-5.5V

Current: <25-35mA

Working temperature: -20°C ~ +70°C

Range: 1200m line of sight (1200 bps)

Interface: UART/TTL

Baud rate: 1200-19200 bps

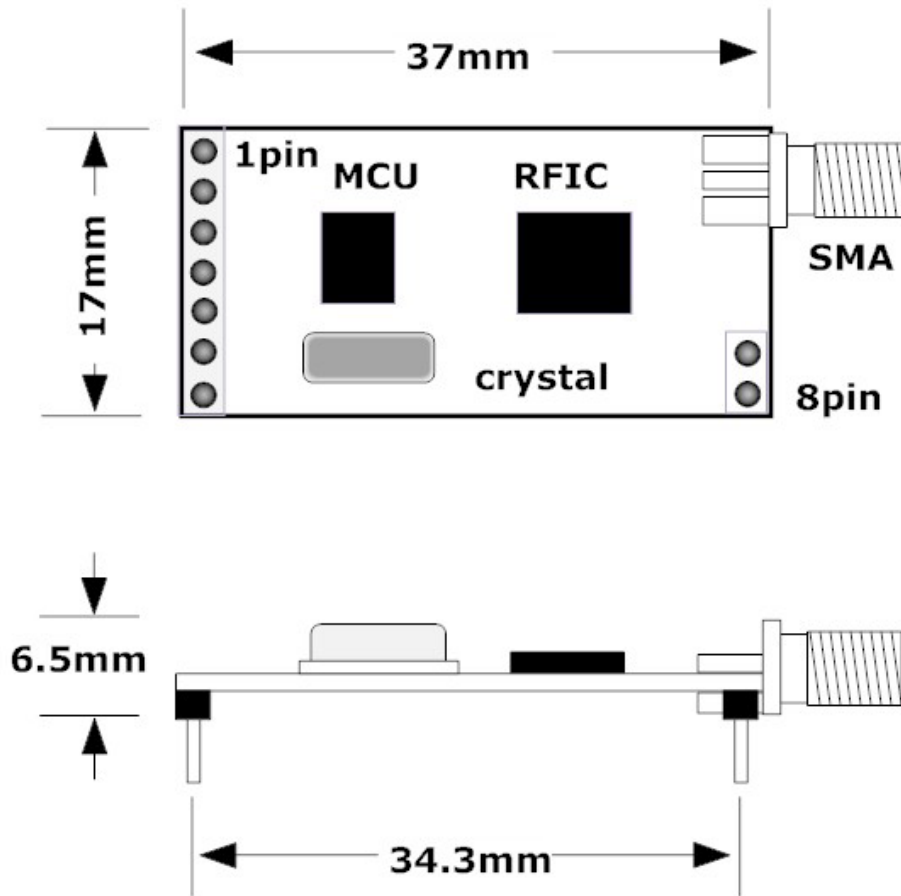
Baud rate (air): 1200-19200 bps

Receive Buffer: 256 bytes

Size: 37mm × 17 mm × 6.6mm

Weight: 30g

## Pin Definition



Pin	Definition	Detail
1	GND	0V Ground
2	VCC	3.3V-5.5V Power
3	EN	Enable the device when leave it disconnected or apply >1.6V Disable the device when apply <0.5V
4	RXD	UART RX
5	TXD	UART TX
6	AUX	UART Signal- Receive (low) Transmit (high)
7	SET	Set parameters (low)

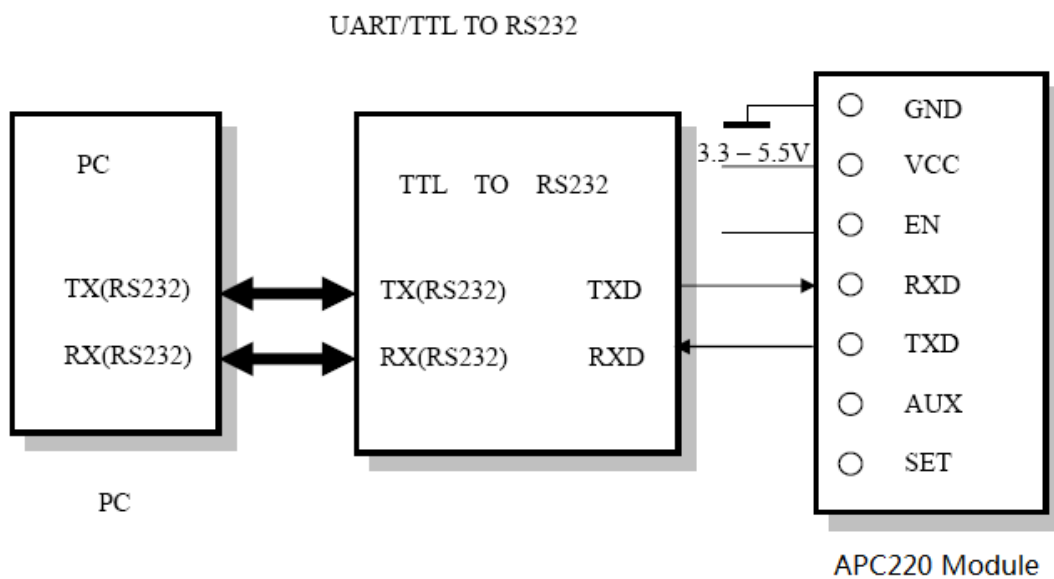
## Default Setting

Baud Rate: 9600 bps  
Bits: 8  
Parity: None  
Stop bit: 1  
RF Frequency: 431 MHz  
Air Rate: 9600 bps  
Output Power: 20mw

## Connection

- **Connect APC220 to PC**

To connect APC220 to PC, a TTL to RS232 or TTL to USB converter is required.



**Figure:** Connect APC220 to PC via RS232-TTL converter

- **Connect APC220 to MCU**

Any MCU which has TTL port is able to talk to APC220. A diagram is shown below for easy connection.

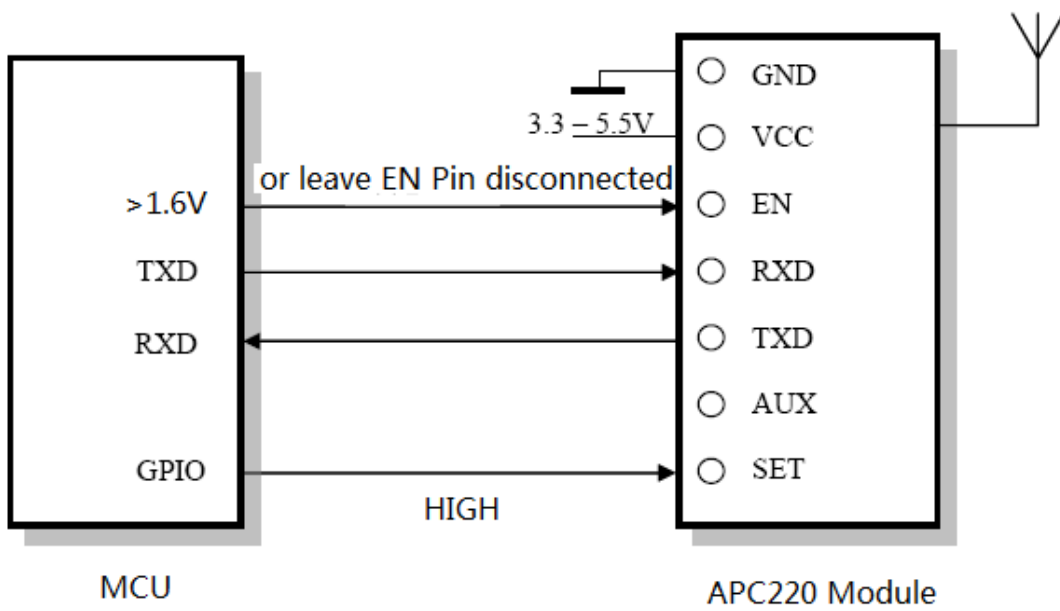


Figure: Connect APC220 to MCU

- **Connect PC to MCU via APC220**

To connect PC with MCU via APC220, a RS232-TTL or USB-TTL converter is required.

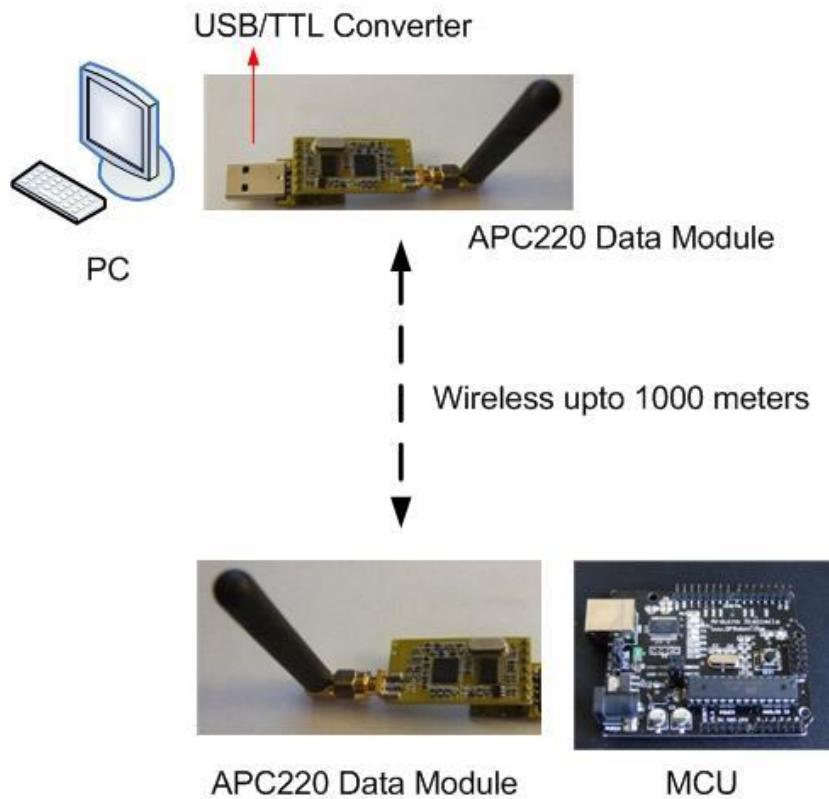
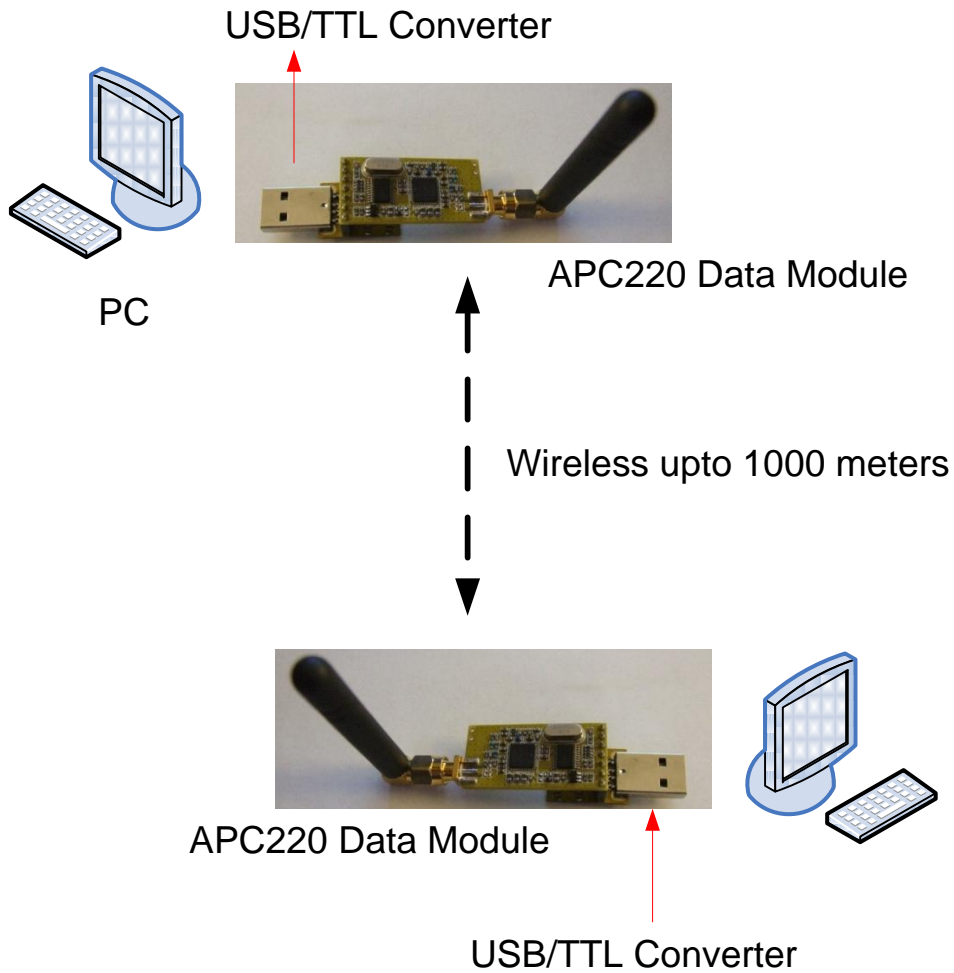


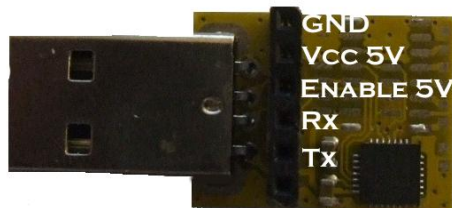
Figure: Connect PC to MCU via APC220

- **Connect PC to PC via APC220**

To connect PC to PC via APC220, two USB-TTL or RS232-TTL converters are required. A diagram is illustrated below.



**Others:**



USB-TTL Converter Pin out diagram

USB-TTL driver download:

<http://silicon-laboratories-cp210x-vcv-drivers12.software.informer.com/>

## **Tutorials:**

## **Help**

If you have any questions or difficulty in using this module, please leave your question and problems at

<http://www.yerobot.com/forum/>