APC220 Radio Data Module

2008-09-22

Version: 1.1

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℃ ~ +70℃

Range: 1200m line of sight (1200 bps)
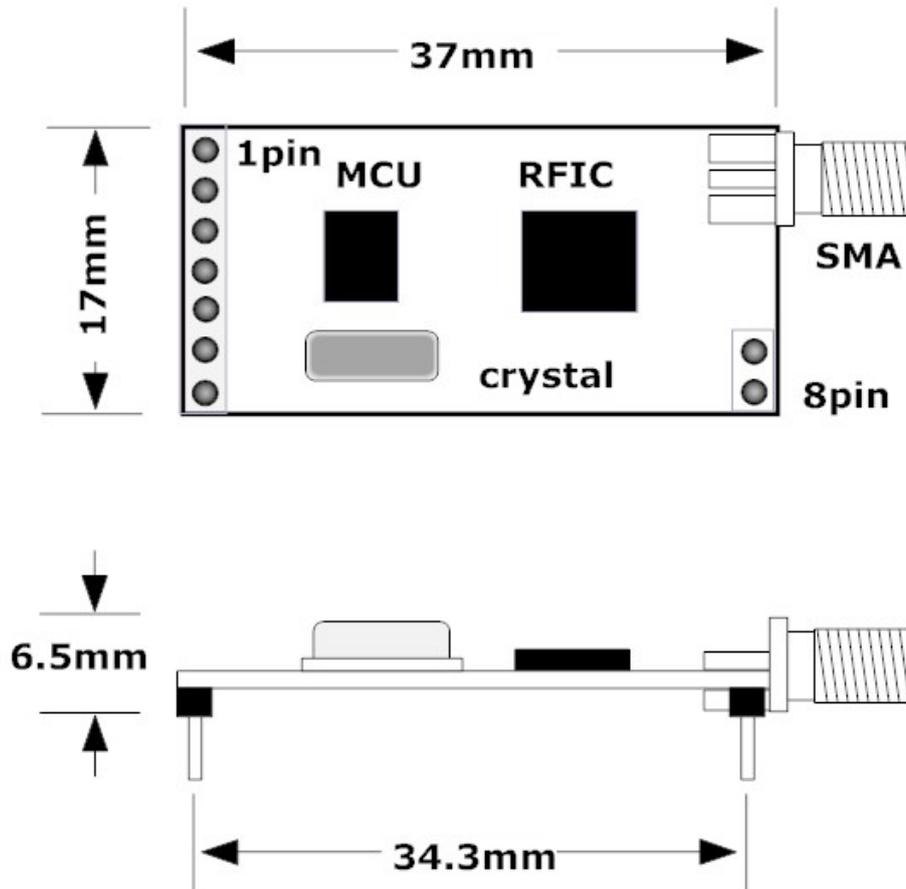
Interface: UART/TTL

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
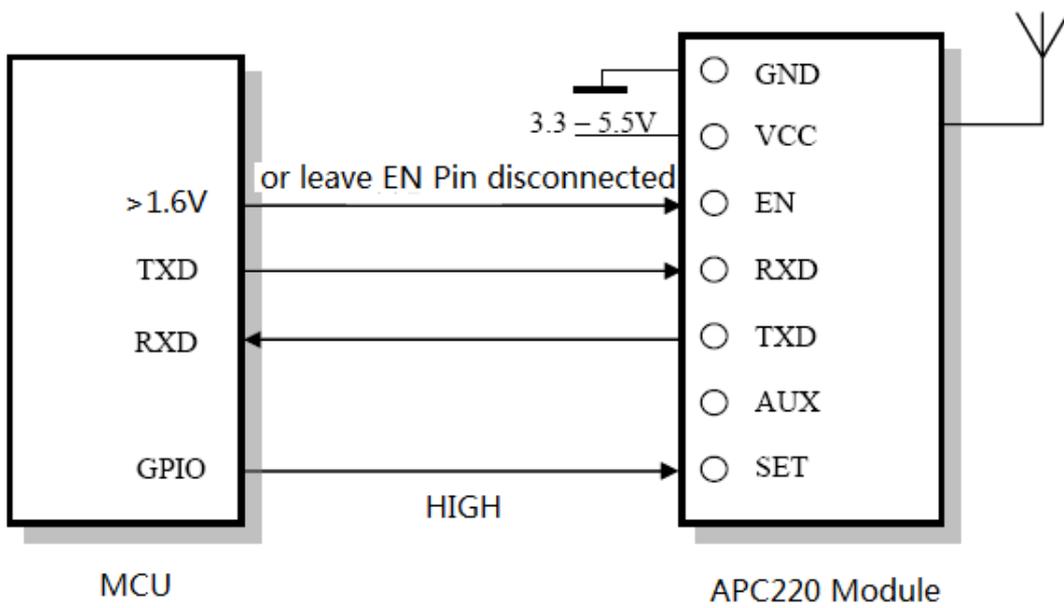Output Power: 20mw

Connection

- **Connect APC220 to PC**

To connect APC220 to PC, a TTL to RS232 or TTL to USB converter is required.
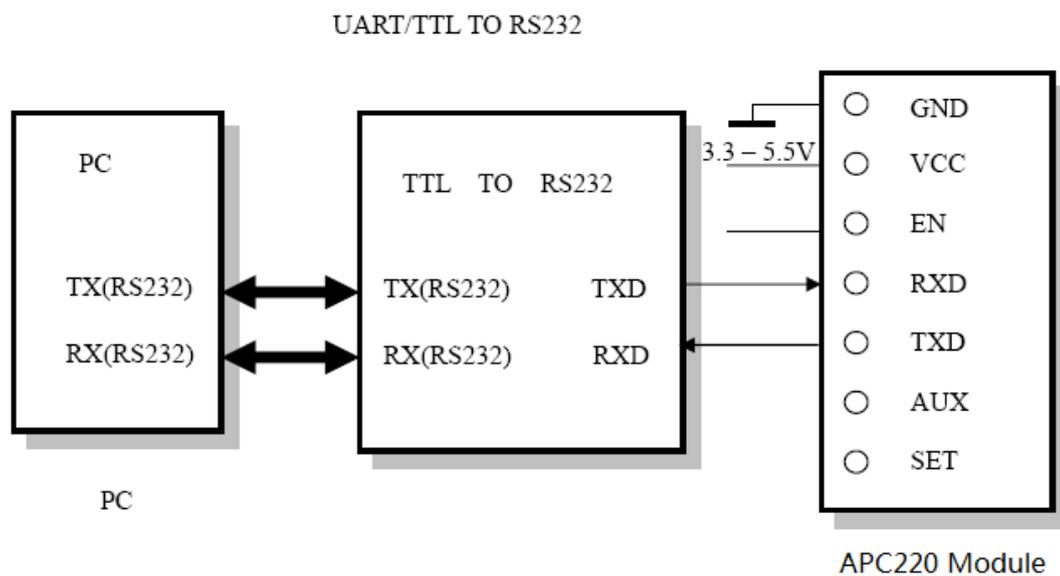
Figure: Connect APC220 to PC via RS232-TTL converter
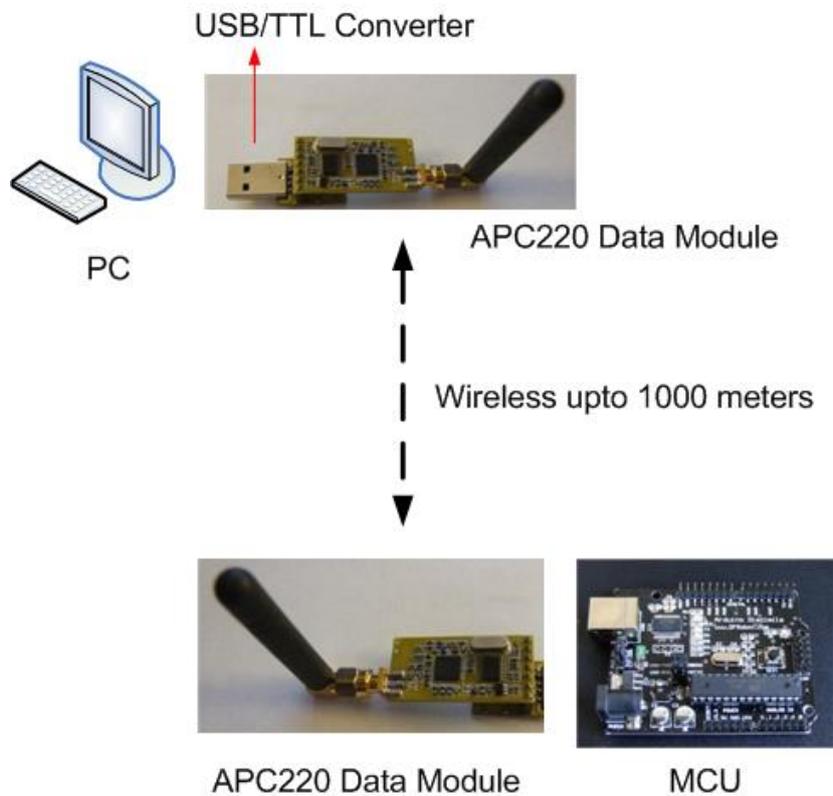
- **Connect APC220 to MCU**

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
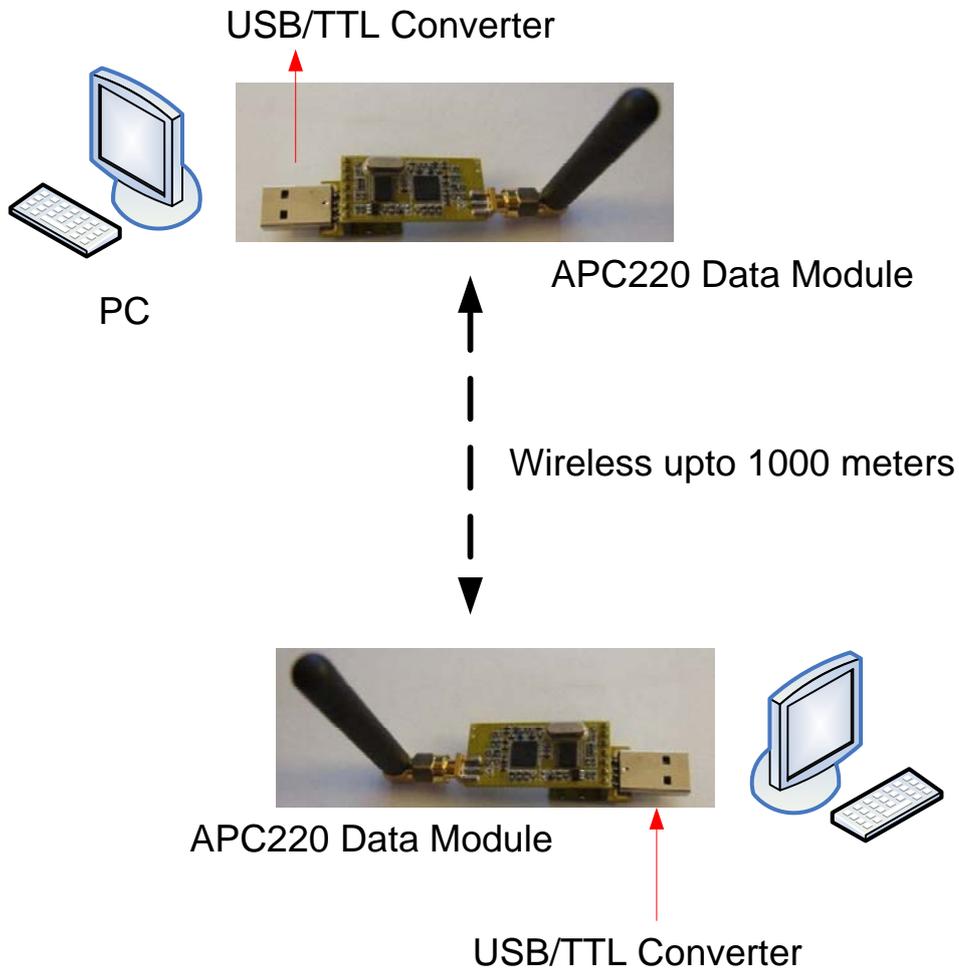
- **Connect PC to MCU via APC220**

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.

USB/TTL Converter

PC

APC220 Data Module

Wireless upto 1000 meters

APC220 Data Module

USB/TTL Converter

Download:

1) APC220 Helpmate
2) USB-TTL Converter Driver

Help

If you have any questions or difficulty in using this module, please contact us via d_robotics@hotmail.co.uk or visit our website

 www.droboticsonline.com

Credit also goes to:

YeRobot Technology Ltd (UK)