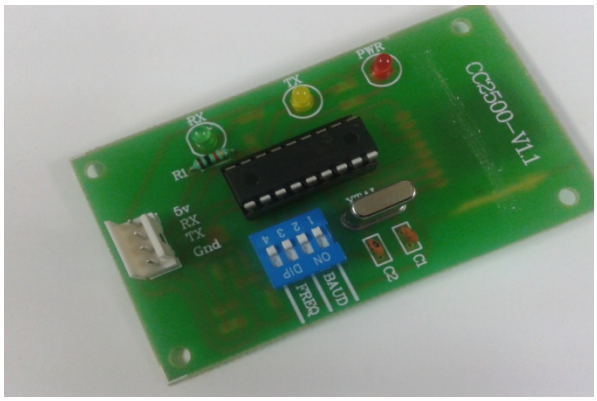
CC2500 RF Modem



CC2500 RF Modem is a transceiver module which provides easy to use RF communication at 2.4 Ghz. It can be used to transmit and receive data at multiple baud rates from any standard CMOS/TTL source. This module is a direct line in replacement for your serial communication it requires no extra hardware and no extra coding to turn your wired communication into wireless one.

It works in Half Duplex mode i.e. it provides communication in both directions, but only one direction at same time (not simultaneously). This switching from receiver to transmitter mode is done automatically.

Features:

- Supports Multiple Baud rates (4800/9600/19200/38400).
- Works on ISM band (2.4 GHz) which is reserved internationally so no need to apply for license.
- Supports multiple frequencies within the same band rate thus avoiding data collision.
- No complex wireless connection software or intimate knowledge of RF is required to connect your serial devices.
- Designed to be as easy to use as cables.
- No external Antenna required.
- Plug and play device.
- Works on 5-9v DC supply.
- Standard UART Interface.

SPECIFICATION

Name	Min	Typical	Max	Units
Working Voltage	4.5	5	10	Volts
Frequency		2.4		GHz
Range	15	25	30	Meters

The unit supports multiple baud rates and multiple frequency channels. The settings will take place only during power on i.e. you will have to restart the module every time you change the setting.

Switch number 1 & 2 are used to set the baud rate. Whereas switch number 3 & 4 are used to select channel frequency. Channel frequency allows you to use more than one set of RF module without interfering with each other. Pairs will same channel frequency will be able to communicate with each other. Thus avoiding data collision between multiple set of units.

Switch State	Baud Rate and channel
	4800 Baud rate. Channel 1
	9600 Baud rate. Channel 1
	19200 Baud rate. Channel 1
	38400 Baud rate. Channel 1
	9600 Baud rate. Channel 2
	9600 Baud rate. Channel 3
	9600 Baud rate. Channel 4

APPLICATION

- Wireless Sensor Network.
- Wireless Device Control.
- Wireless Data Transfer.
- Wireless Energy Metering.
- Home Automation.
- Robotics.
- Wireless Data Logger.

NOTE:

Obstacles are among the biggest problems the range will vary according to the size and type of obstacle.