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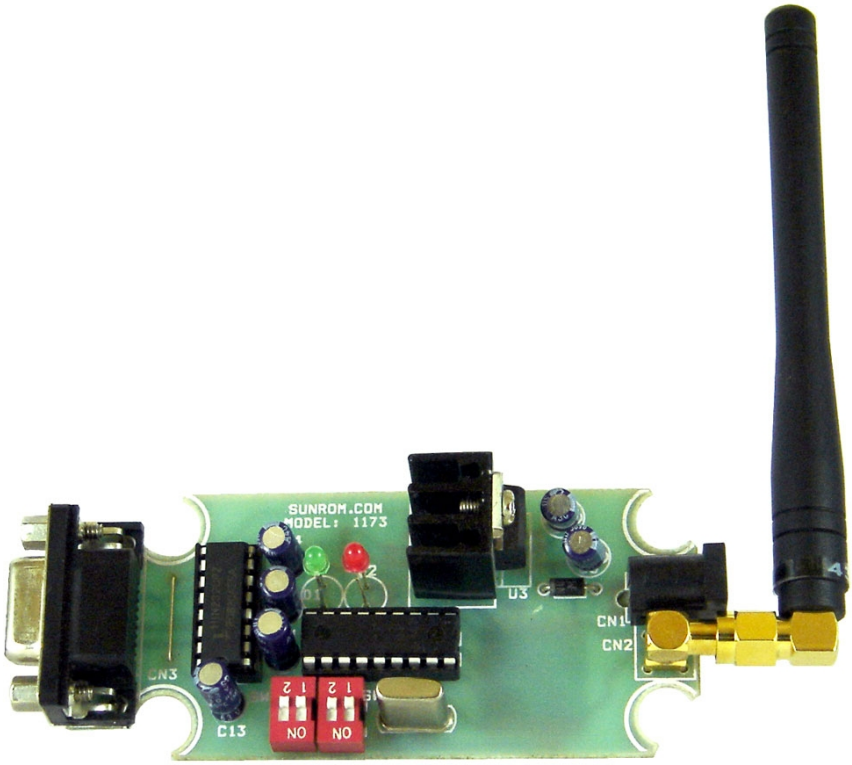
RF Modem, 9600 bps Serial RS232 Level

RF modem can be used for applications that need two way wireless data transmission. It features adjustable data rate and longer transmission distance (100mts). The communication protocol is self controlled and completely transparent to user interface. The module can be embedded to your current design so that wireless communication can be set up easily.



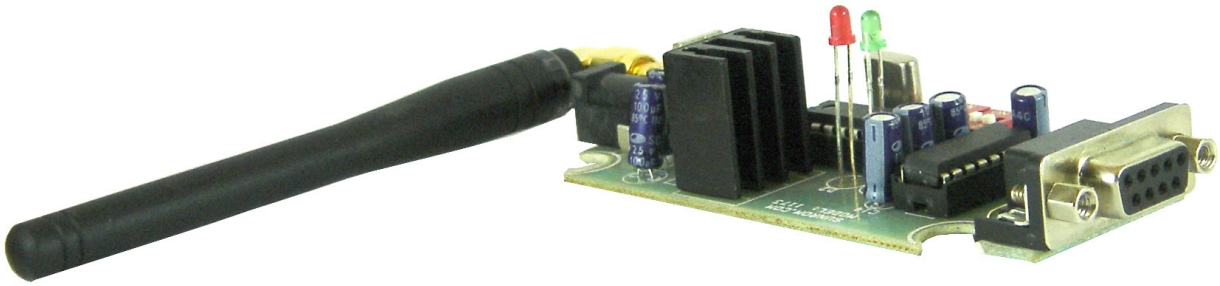
Features

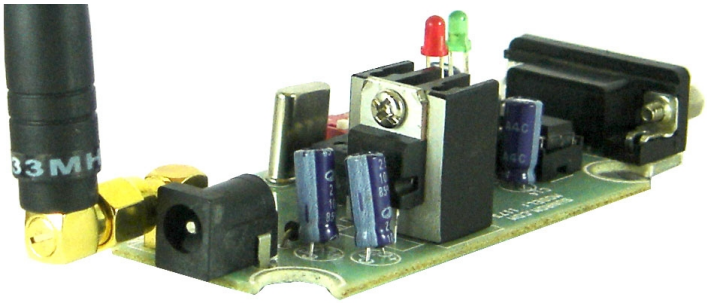
- Automatic switching between TX and RX mode.
- FSK technology, half duplex mode, robust to interference.
- 433 MHz band, no need to apply frequency usage license.
- Protocol translation is self controlled, easy to use.
- High sensitivity, long transmission range.
- Standard UART interface, RS232 level.
- Very reliable, small size, easier mounting.
- No tuning required, PLL based self tuned.
- Error checking(CRC) of data.

Application

- Sensor Networks / Data collection
- Wireless metering
- Access control / Identity discrimination
- IT home appliance
- Smart house products / Security Systems
- Remote control / Remote measurement system
- Weather stations

More Images



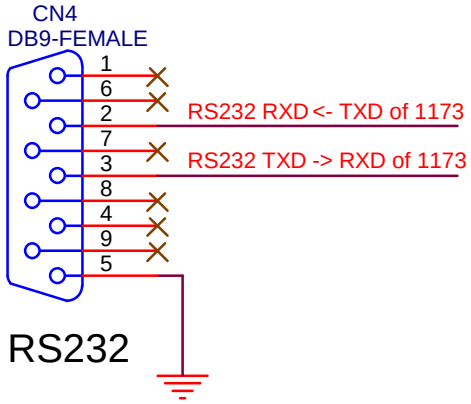


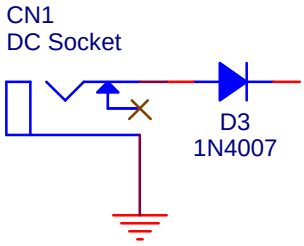
Specifications

Name	Min	Typ	Max	Unit
Working Voltage	9	12	15	V DC
Frequency of Operation		433.92		MHz
Output RF Power		0		dbm
Typical Operating Range		100		meters
UART baud rate (8 bit data, no parity, 1 stop bit)		9600/4800/38400/19200		bps

Connectors for Data and Power Supply

Data Output connector has standard RS232 level connections which can connect to PC serial port. DC Socket has reverse protection diode. Inner side is positive, Outer pin is ground.



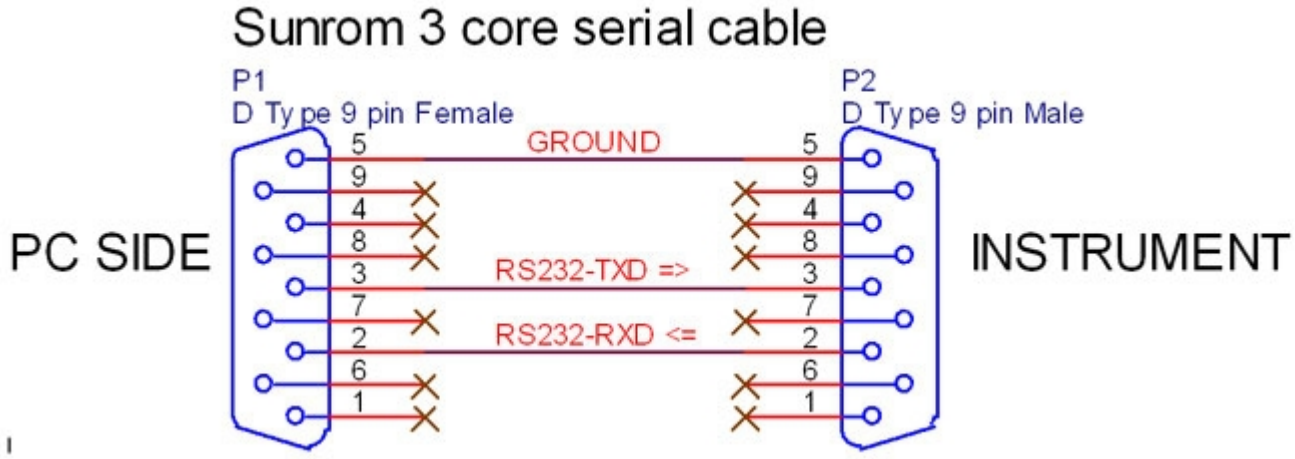


Power Supply Input

Pin	Pin Name	Details
RXD of 1173	Receive Input	Input serial data of RS232 level, Usually connected to TXD pin of PC.
TXD of 1173	Transmit Output	Output serial data of RS232 level, Usually connected to RXD pin of PC.
GND	Ground	Ground level of power supply.
+12V DC	Power Supply	9-15V supply input.

Serial Cable connections for RS232 interfacing

To use with a PC serial port, use a serial cable of male-female type with pins 2,3,5 connected to 2,3,5 straight(no cross over cable).

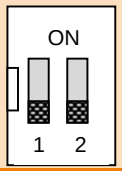
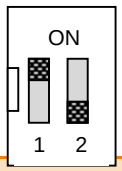
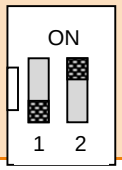
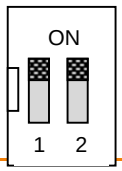


Operation

This module works in half-duplex mode. Means it can either transmit or receive but not both at same time. After each transmission, module will be switched to receiver mode automatically. The LED for TX and RX indicates whether IC is currently receiving or transmitting data. The data sent is checked for CRC error if any. If chip is transmitting and any data is input to transmit, it will be kept in buffer for next transmission cycle. It has internal 64 bytes of buffer for incoming data.
When you power on the unit, the TX LED will briefly blink indicating that initialization is complete and it is ready to use.
The RX LED is directly on TX OUT pin to indicate that actual data is received and it is sent to output pin.

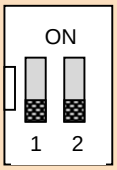
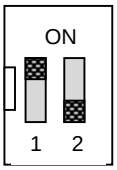
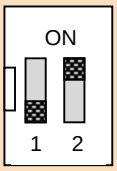
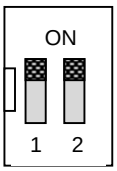
Baud Rate Setting

Baud rate has to be set when unit is OFF, as the switches are read only during power up. Modifying during power up will have no effect on operation of module.

Switch	State	Baud Rate
	SW1 = OFF SW2 = OFF	9600 bps
	SW1 = ON SW2 = OFF	4800 bps
	SW1 = OFF SW2 = ON	38400 bps
	SW1 = ON SW2 = ON	19200bps

Frequency channel setting

Setting Frequency Channel can be used to have multiple sets operating at same time but without interfering with each other. The pair having same Channel setting will be able to communicate with each other. Frequency channel has to be set when unit is OFF, as the switches are read only during power up. Modifying during power up will have no effect on operation of module.

Switch	State	Mode
	SW1 = OFF SW2 = OFF	CHANNEL #1
	SW1 = ON SW2 = OFF	CHANNEL #2
	SW1 = OFF SW2 = ON	CHANNEL #3
	SW1 = ON SW2 = ON	CHANNEL #4