

## Circuit Description

MCU digital base band processor output PPM or PCM signal controlled by all switches and potentiometers. MCU base band processor outputs data on the 2.4G module. With SPI interface, the signal sent to digital base band processor then output RF signal after the demodulation and decoding. Then 2.4G antenna outputs signal after the signal sent to PA for enlargement.

## Ratings and System Details

data rate:250 kbps

asynchronous or packet mode transmission format : 8DR mode

Format of RX/TX data

Preamble(3 byte ) +SOP(8 byte )+Length(1 byte ) +Payload data (max is 16 bytes ) + CRC (2 byte )

synchronization mechanism for transmitter and receiver devices:

1. At bind mode, the transmitter sends the work channels, ADDRESS CODE,SOP and CRC seed information to the receiver.

2. At work mode, the receiver wait on one of the three work channels, and the transmitter transmit data using the three work channels.

3. If the receiver receives a packet of useful data, it switches to another channel.

4. Repeat the step 2 and step3.

Channel spacing =1MHz

After binding, three channels are chosen as work channels.

## Specifications

### transmitter

Transmitter Frequency:2.411-2.470GHz

Crystal Tolerance:  $\pm 20$ ppm

RF Power: <13 dBm

Power Consumption: DC 11.1V 200mA

Modulation mode: DSSS

Antenna length: 15 cm