Operational Description

General Product Information

The E-FLY 2.4GHz transmitter series of ETC61-2.4GHz / ETC62-2.4GHz and the receiver ER62-2.4GHz are the latest RC products of ART-TECH.

Circuit Description

The transmitter ETC61-2.4GHz / ETC62-2.4GHz is composed of input signals sample module、digital encode module and signal amplifier.

The input signals of the transmitter are from joysticks and switches. These signals are processed by MCU and transmitted Through SPI interface. Then the signal is send by RF IC at frequency of 2.4 GHz.

The receiver ER62 -2.4GHz is composed of digital decode module and signal output module.

The received signal enters into the MCU of the receiver through SPI interface. After processed the signals are send to servos or ESC (Electronic Speed Controller).

Ratings and System Details

data rate:125 kbps

asynchronous or packet mode transmission format : 8DR mode

Format of RX/TX data

Preamble(3 byte) +SOP(2 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, PNCODE and CRC seed information to the receiver.

2. At work mode, the receiver wait on one of the two work channels, and the transmitter transmit data using the two 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, two channels are chosen as work channels.

transmitter

Transmitter Frequency:2.402-2.480GHz

Crystal Tolerance: ±20ppm

RF Power:<20 dbm

Power Consumption: DC 12V 200mA

Modulation mode: DSSS

Antenna length: 15 cm

receiver

receiver Frequency:2. 402-2.480GHz

Crystal Tolerance: ±20ppm

Power Consumption: DC 5V 20mA

Antenna length: 4cm