Operational Description

General Product Information

The E-FLY 2.4GHz transmitter series of ETB41-2.4GHz / ETB62-2.4GHz / ETC61-2.4GHz / ETC62-2.4GHz and the receiver ER61-2.4GHz / ER101-2.4GHz are the latest RC products of ART-TECH.

Circuit Description

The transmitter ETB41-2.4GHz / ETB62-2.4GHz / 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 ER61-2.4GHz / ER101-2.4GHz 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:250 kbps

asynchronous or packet mode transmission format:

Sync mode

Format of RX/TX data

Address check (1 byte) + Payload data (Variable length, max is 20 bytes) + CRC (1 byte)

frequency hopping channel : 2.402-2.480GHz;

synchronization mechanism for transmitter and receiver devices:

1. At bind mode, the transmitter sends the work channels 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 plan for the 195 channels :

Channel spacing = 400 kHz

After binding, two channels are chosen as work channels.

transmitter

Transmitter Frequency:2.402-2.480GHz

Number of channels: 195

RF Power:0 dbm

Power Consumption: DC 12V 200mA

Modulation mode: GFSK

Antenna length: 15 cm

receiver

receiver Frequency:2.402-2.480GHz

Number of channels: 195

Power Consumption: DC 5V 20mA

Antenna length: 4cm