Operation Description

This toy have include wifi module and main pcba.

This wifi module have transmitter and receiver function as 802.11b/g mode.This wifi module is consists of dc -dc to 3.3v ,Crystal and wi fi Soc,Matched network and Antenna.Main pcba include mcu and motor driver.

A. U3 is dc-dc to generation 3.3v for U1,40MHz Crystal X1 is the accessory for RF Generator and RF Modulate IC U1,U1 include mips mcu, Will load linux system from flash U10.This linux system run with sdram U35,After about 20seconds,Linux System boot finish,This wifi circuit in U1 also start work.This wifi ciucuit work in AP mode.System include DHCP and tcp server,Wifi product (such iphone and android mobile phone)Can connect with module from tcp server.This data will through serial port send to main pcb mcu,main pcb mcu received data and controll toy motor runner,main pcb mcu also feedback some data from serial port to other wifi product.

B. In the RF Circuit application, the antenna consists of whip wire line (diameter: 1mm，Length:100mm), the necessary the matched circuit consists of Inductance L11,L12 and Capacitance C35--C40,and C415.There is no external ground connection. The ground is only that of the printed circuit board.

C. This device power-supplied by 3.7V li-battery and in terms of periodic transmitting to decease the power consumption, gets the data from outside source, generates the RF signal through wifi Module IC, then radiate the RF signal to the sky via antenna through matched network, and complete the data-transmitting process wirelessly.

TYPICAL OPERATION

Typical operation would involve the user use wifi product such iphone connect to wifi module ssid,wifi moduld dhcp will give ip address to iphone.then user use software in iphone to control helicopter fly .

CONFIGURATION

THE TRANSMITTED RF CIRCUITRY CONSISTS OF A CRYSTAL CONTROLLED OSCILLAT

AND PLL AND BY ONE POWER AMPLIFIER, & FINALLY, AN ANTENNA. THE MAIN CHARA

OF THIS CONFIGURATION ARE SHOWN BELOW :-

FREQUENCY RANGES   2401-2473mhz

OCCUPIED BANDWIDTH (3DB)   40mhz   MAX

   FREQUENCY STABILITY   +/- 15PPM   MAX

   MODULATION METHOD   :11b,CCK,DSSS   11g,GPSK,QAM

   OUTPUT POWER   10dbm max

REFERENCE OSCILLATOR

   A 40MHZ CRYSTAL OSCILLATOR IS USED TO GENERATE THE REFERENCE FREQUENCY ,IT HAS A STABILITY OF + / - 15 PPM.

** AMPLIFIER

THE WIFI CHIP INCLUDE ONE AMPLIFIER. THE FINAL OUTPUT IS

10DBM MAX

** ANTENNA

   THE SYSTEM ANTENNA IS A WIRE ANTENNA LINKED TO PCB .

** MICROCONTROLLER

THE WIFI MODULE SYSTEM IS CONTROLLED INTERNAL MIPS,USE A 40MHZ OSCILLATOR AND MAIN PCB IS CONTROL BY A SMALL MICROCONTROLLER RUNNING WITH A INTERNAL 16MHZ+/- 20% OSCILLATOR