Technical Description

The brief circuit description is listed as below:

2.4GHz RF Module

1) U1 and U2 act as Voltage Regulator (LC3030, LV1206).
2) U3 acts as MCU (STM32F103).
3) U4 acts as Voltage Regulator (LC1206).
4) U5 and U6 act as charging circuit (PMC131-DICE, K6000).
5) CON2 acts as 2.4GHz Module Circuit (RX1697).
6) M1, M2, M3, M4 act as Motor output.
7) U10 acts as Voltage Regulator for wifi module (LC3030C).
8) U11 and U12 act as stall protection (LBC857BDW1T1G/SOT-363).
9) U13 and U14 act as IR transmitter circuit (LBMT3904DW1TWG).
10) IR9, IR10, IR11 and IR12 act as IR receiver.
11) X1 is 16MHz crystal oscillator providing clock for CON1.

Wifi Module

1) U1 acts as MCU (SN98671AFG-QFN88).
2) Y1 is 12MHz crystal oscillator providing clock for U1.
3) U2 acts as MS1 Serial Flash (KH25L1606EM2I-12G).
4) U3 acts as Voltage Regulator (ACE50933BNA+).
5) U4 acts as Voltage Regulator (ACE50715BM+).
6) U5 acts as Voltage Regulator (ACE50933BNA+).
7) WF1 acts WiFi module (BL-7601MU6).
8) U6 acts as Voltage Regulator (ACE721CBN+).
9) U7 acts as Voltage Regulator (ACE721CBN+).
10) U8 acts as Voltage Regulator (ACE50918BNA).
11) J1 acts as Micro SD card connector.
12) MT7601-QFN40-5X5 acts as WiFi module IC.
13) U5 is 40MHz crystal oscillator providing clock for MT7601-QFN40-5X5.

2.4GHz RF Module

Antenna Type: Internal antenna
Antenna Gain: 0dBi
Nominal rated field strength: 86.7dBμV/m at 3m
Maximum allowed field strength of production tolerance: +/- 3dB

Wifi Module

For Wifi - Average Conducted Transmit Power

Operating Mode	Antenna Gain	Norminal Conducted Power	Production Tolerance
11b	0dBi	18.71dBm	+/- 2dB
11g	0dBi	15.95dBm	+/- 2dB