

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: 86.7dB μ V/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