



# WMU6204

## 802.11ac 2T2R WIFI & BT Module

### Technical Specifications

- System Information
- Data Rate
- Operating Frequency
- Interface
- Modulation
- Recommended Operating Conditions
- Driver Support
- Certification
- Block Diagram
- Dimension
- Pin Assignment
- Output Power & Sensitivity

### System Information

Wireless: IEEE 802.11a/b/g/n/ac (2T2R)

Bluetooth: v2.1/v3.0/v4.1/v4.2

Chipset: Realtek RTL8822BU

### Data Rate

802.11b	: 11Mbps
802.11a/g	: 54Mbps
802.11n	: 300Mbps
802.11ac	: 867Mbps

### Operating Frequency

IEEE 802.11 a/b/g/n Band, 2.412GHz ~ 2.484GHz, 5.150GHz ~ 5.850GHz

### Interface

USB Type-A (WiFi+BT)

Antenna Ports : U.FL x 2 for 2T2R

### Modulation

802.11a	: BPSK, QPSK, 16-QAM, 64-QAM
802.11b	: DBPSK, DQPSK, CCK
802.11g	: BPSK, QPSK, 16-QAM, 64-QAM
802.11n	: BPSK, QPSK, 16-QAM, 64-QAM
802.11ac	: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM

### Recommended Operating Conditions

Operating Voltage: DC 5V  $\pm$  10%  
Operating Temperature Range: -20°C ~ 70°C  
Storage Temperature Range: -40° ~ 85°C  
Operating Humidity (non-condensing): 5% ~ 95  
Storage Humidity (non-condensing): 5% ~ 90%  
Power consumption: 2W(MAX)  
Dimension (in mm): 55 x 20 mm

### Driver Support

Platform Supported:

Windows 7/8/10 (32bit/64bin)  
Linux (kernel 2.6.24~ 4.15)  
Android 1.6 ~ 2.3, 4.0 ~ 8.x

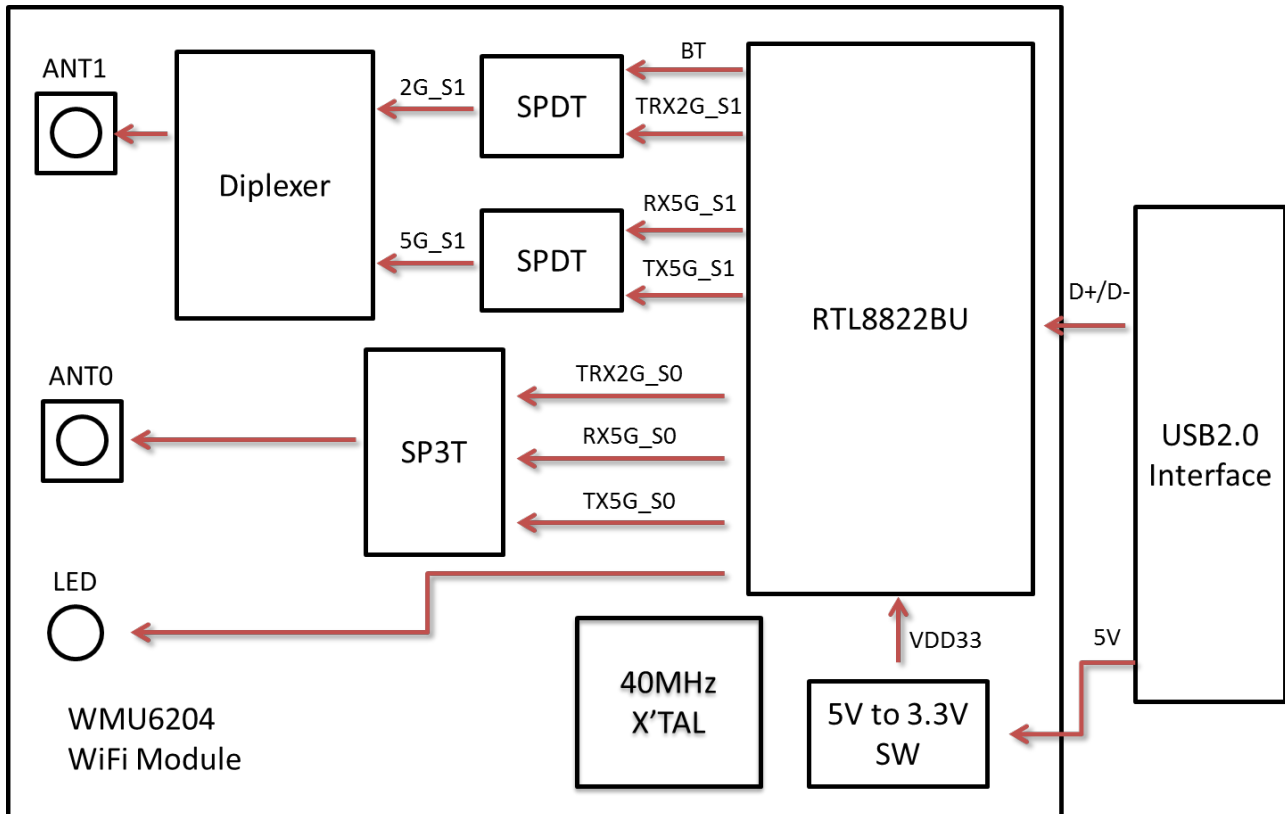
CPU Supported:

X86  
ARM  
MIPS

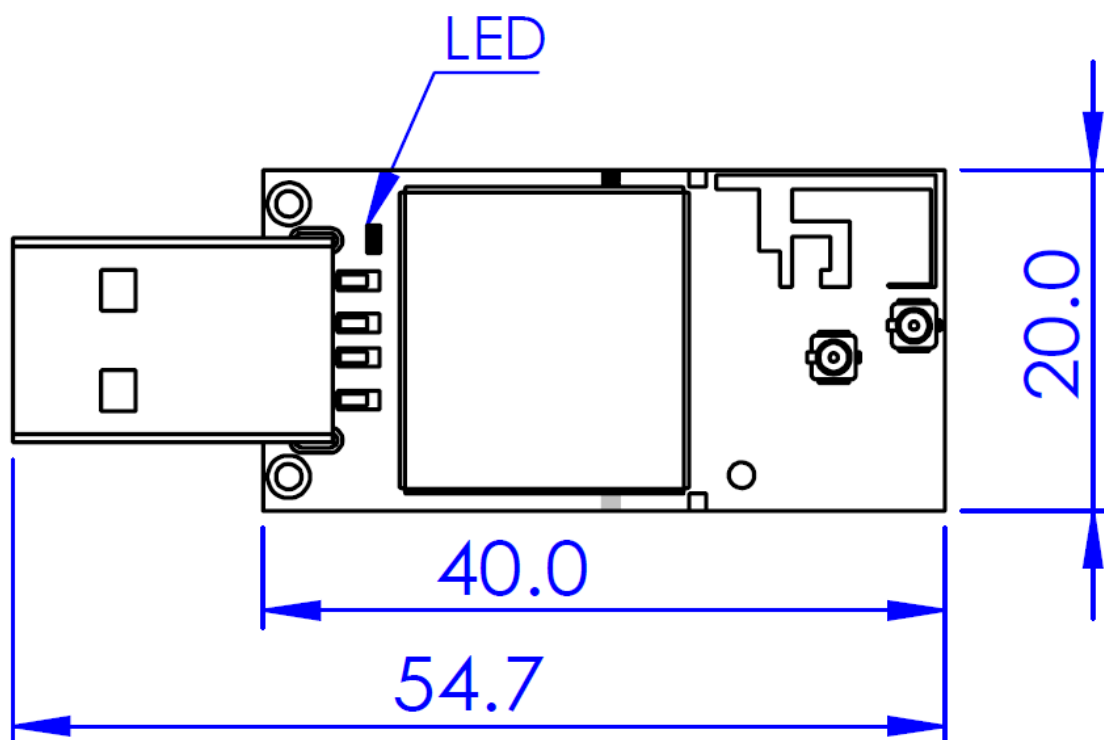
### Certification

FCC / CE / IC / Telec

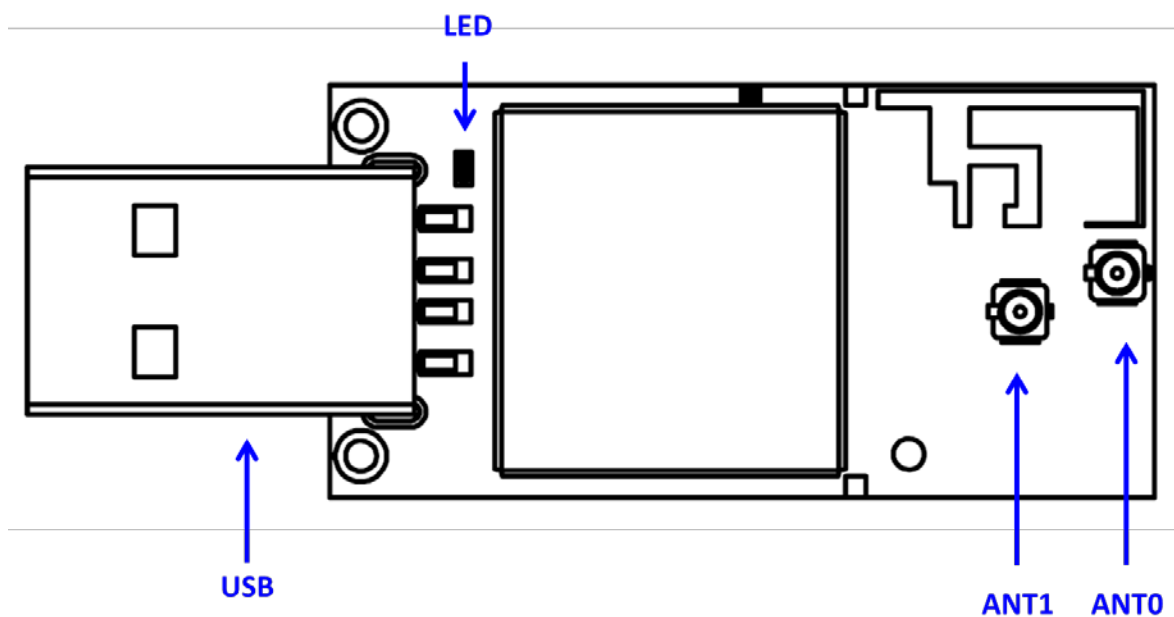
## Block Diagram



Dimension



## Pin Assignment



Pin Name	Discription
USB	USB Type-A connector for USB2.0
LED	WiFi LED
Ant_0	RF Antenna for WiFi 2.4GHz/5GHz
Ant_1	RF Antenna for WiFi 2.4GHz/5GHz & Bluetooth

## Output Power & Sensitivity

### Bluetooth

Data Rate	Tx +/- 2dB (Class 2 device)	Rx Sensitivity
3Mbps	$0 \leq \text{Output Power} \leq +4\text{dBm}$	<0.1% BER at -70 dBm

### 802.11b/g

Data Rate	Tx +/- 2dB	Rx Sensitivity +/- 2dB
1~11Mbps	15dBm	-80dBm
24Mbps	15dBm	-70dBm
54Mbps	14dBm	-70dBm

### 802.11n/2.4GHz

	Data Rate	Tx +/- 2dB (1TX)	Tx +/- 2dB (2TX)	Rx Sensitivity +/- 2dB
HT20	MCS 0	15dBm	18dBm	-70dBm
	MCS 4	14dBm	17dBm	-61dBm
	MCS 7	13dBm	16dBm	-61dBm
HT40	MCS 0	15dBm	18dBm	-70dBm
	MCS 4	14dBm	17dBm	-61dBm
	MCS 7	13dBm	16dBm	-61dBm

### 802.11a

Data Rate	Tx +/- 2dB	Rx Sensitivity +/- 2dB
6Mbps	15dBm	-70dBm
24Mbps	15dBm	-70dBm
54Mbps	13dBm	-70dBm

802.11n/5GHz				
HT20	Data Rate	Tx +/- 2dB (1TX)	Tx +/- 2dB (2TX)	Rx Sensitivity +/- 2dB
	MCS 0	14dBm	17dBm	-70dBm
	MCS 4	13dBm	16dBm	-60dBm
	MCS 7	12dBm	15dBm	-60dBm
HT40	MCS 0	14dBm	17dBm	-70dBm
	MCS 4	13dBm	16dBm	-60dBm
	MCS 7	12dBm	15dBm	-60dBm

802.11ac				
VHT20	Data Rate	Tx +/- 2dB (1TX)	Tx +/- 2dB (2TX)	Rx Sensitivity +/- 2dB
	MCS 0	14dBm	17dBm	-70dBm
	MCS 4	13dBm	16dBm	-60dBm
	MCS 8	12dBm	15dBm	-60dBm
VHT40	MCS 0	12dBm	15dBm	-60dBm
	MCS 4	10dBm	13dBm	-60dBm
	MCS 9	9dBm	12dBm	-50dBm
VHT80	MCS 0	12dBm	15dBm	-60dBm
	MCS 4	10dBm	13dBm	-60dBm
	MCS 9	9dBm	12dBm	-51dBm