



WMU6204

11ac 2T2R WIFI & BT Module

Technical Specifications

Standards

Data Rate

Operating Frequency

Interface

Modulation

Recommended Operating Conditions

Output Power & Sensitivity

STANDARDS

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, non-conensing

Storage Humidity (non-condensing): 5% ~ 90%, non-conensing

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

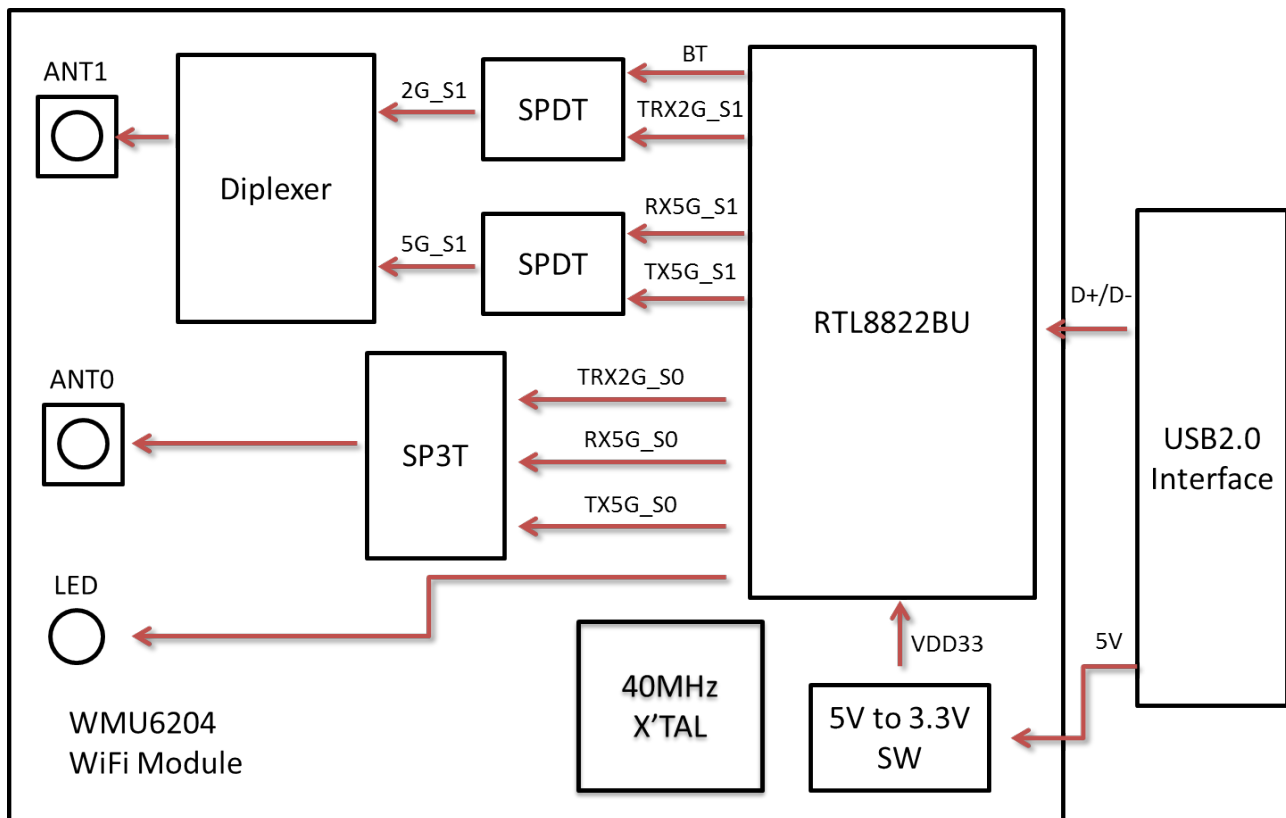
CPU Supported:

X86

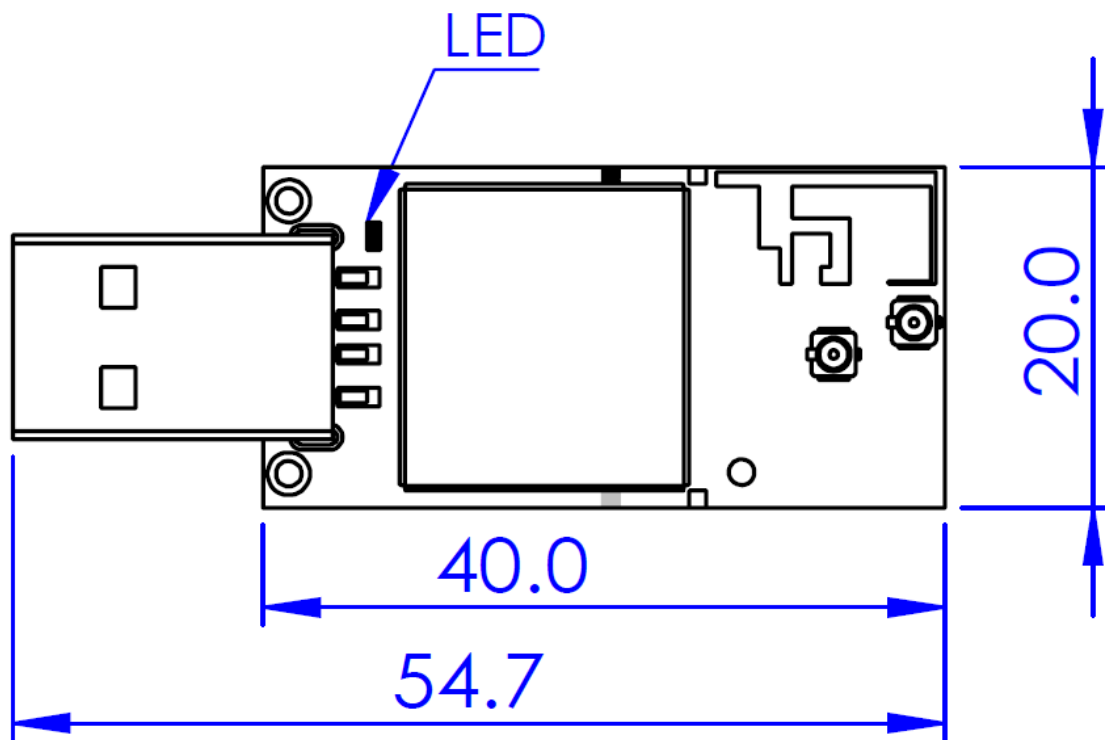
ARM

MIPS

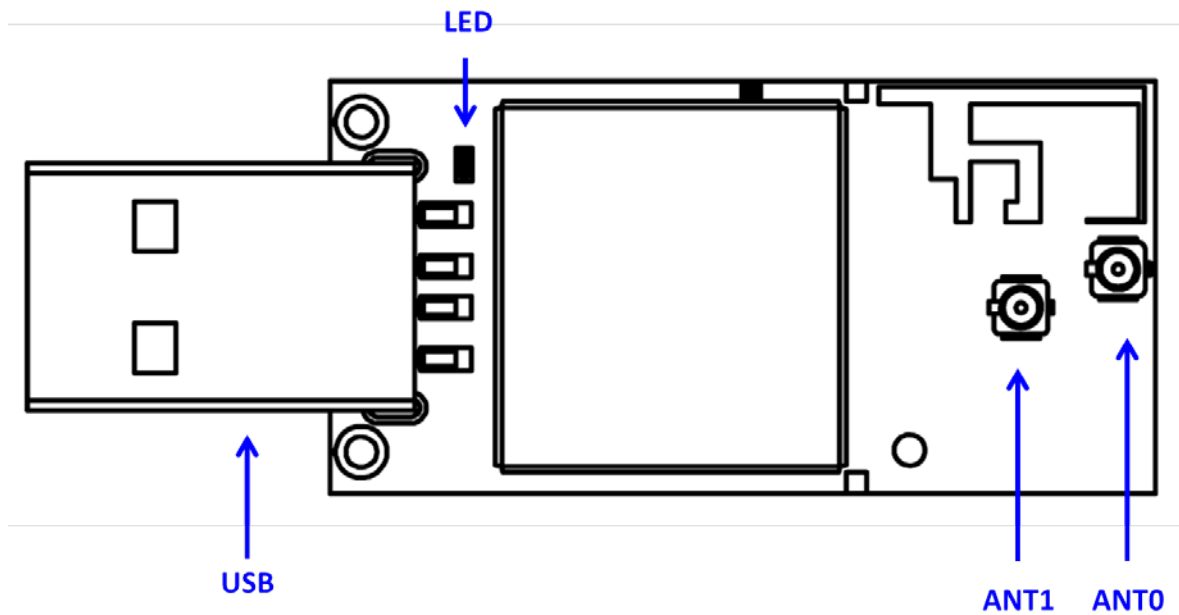
Block Diagram



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 / 2.4 GHz

	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 / 5 GHz

	Data Rate	Tx +/- 2dB (1TX)	Tx +/- 2dB (2TX)	Rx Sensitivity +/- 2dB
HT20	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