

# 17WFM25

## Description of Operation

### General Description

The 17WFM25 WI-FI + BT combo module design is a highly integrated MIMO wireless LAN (WLAN) and BT solution to let users enjoy the digital content via the wireless technology and connect wireless sound devices, HID devices, BT remote controller etc. The card is built with WI-FI 2T2R and Bluetooth v5.0 and BT 4.2 Low Energy (LE) capable RF/baseband single chip. 17WFM25 is based on MediaTek MT7668BUN solution (use an external 40MHz crystal oscillator).

The 17WFM25 module design implements multiple input, multiple output (MIMO) orthogonal frequency division multiplexing (OFDM) with 2 transmit and 2 receive paths and is compatible with 802.11 n/ac specifications for WI-FI.

For legacy compatibility, direct sequence spread spectrum (DSSS), complementary code keying (CCK) and OFDM baseband processing are included to support all 802.11b, and 802.11g data rates. Differential phase shift keying modulation schemes, DBPSK and DQPSK are available along with complementary code keying to provide the data rates of 1, 2, 5.5 and 11Mbps with long or short preamble. It supports BPSK, QPSK, 16QAM, and 64QAM modulation of the individual subcarriers and rate compatible punctured convolutional coding with coding rate of 1/2, 2/3, 3/4, and 5/6, provides the maximum data rate of 54 Mbps and 300 Mbps for IEEE 802.11g and 802.11n/a MIMO OFDM respectively. It can support MCS0-9 (up to 256 QAM) in 20/40/80 MHz channels for 802.11ac mode.

Module is only a DFS Client.

Frequency band

WLAN: 2400-2483.5 MHz, 5150-5350 MHz, 5470-5725 MHz, 5725-5850 MHz  
(CH 1-13, 36-64, 100-140, 149-165)

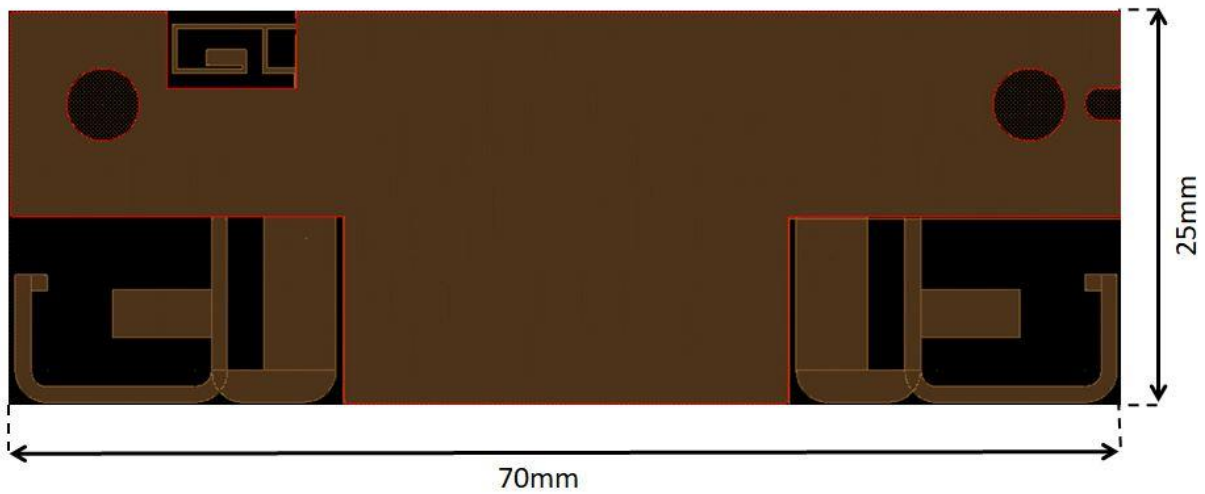
Bluetooth: 2400-2483.5 MHz  
CH 0-78 (BR), CH0-39 (BLE)

## Antenna Characteristic

Module has on board printed antennas with the given gain values in below.

### Onboard Printed Antenna Gains

	2.4 Ghz	5 Ghz low band (5180 to 5320 ) (ch 36-64)	5 Ghz medium band (5500 to 5700) (ch100-140)	5 Ghz high band (5500 to 5700) (ch100-140)
Antenna 0	3,4 dBi	2,97 dBi	3,69 dBi	2,89 dBi
Antenna 1	2,12 dBi	3,7 dBi	3,68 dBi	2,83 dBi
BT	0,29 dBi			



### External Antenna Gains

Below two external antennas on the table may use as an option instead of the antenna 0.

Antenna	2.4 Ghz	5 Ghz low band (5180 to 5320 ) (ch 36-64)	5 Ghz medium band (5500 to 5700) (ch100-140)	5 Ghz high band (5500 to 5700) (ch100-140)
JC-JCW601	3 dBi	3 dBi	3 dBi	3 dBi
Taoglas_WS.01.B.055111	4,12 dBi	4,74 dBi	N/A	N/A