

# WUBM-273ACN

## 802.11ac/abgn Dual-Band

## 2T2R USB Module



### Wireless USB Module for Embedded Solution

The WUBM-273ACN is powered by MediaTek radio chip and features 2x2 11ac technology for higher throughput performance, reliability and range. It is designed to meet the demanding performance requirements of critical embedded applications.

#### Embedded Application :

Applications include medical devices, security systems, industrial, PoS, digital signs, Gaming machine, Medical equipment, industrial tablet PC's, handheld devices, thin client devices, and many more.

#### Key Feature :

- MediaTek MT7612U
- Antenna: U.FL \* 2 for 2T2R
- Data Rates: allows link speeds up to 867Mbps.
- Support Windows XP, Win7, Win8.1, Linux driver

#### Specification :

|                              |                                                                                                                                                                                         |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards:                   | IEEE 802.11ac/abgn (2T2R)                                                                                                                                                               |
| Chipset:                     | MediaTek MT7612U                                                                                                                                                                        |
| Data Rate:                   | 802.11b: 11Mbps / 802.11a/g: 54Mbps / 802.11n: 300Mbps / 802.11ac: 867Mbps                                                                                                              |
| Operating Frequency:         | IEEE 802.11 ac/abgn ISM Band, 2.400GHz ~ 2.4835GHz, 5.150MHz ~ 5.825MHz<br>*Subject to local regulations                                                                                |
| Interface:                   | USB Type A or 12-pin wafer connector                                                                                                                                                    |
| Form Factor:                 | USB                                                                                                                                                                                     |
| Antenna:                     | 2 x UFL connector or printed antenna for 2T2R                                                                                                                                           |
| Modulation:                  | 802.11b: DSSS (DBPSK, DQPSK, CCK)<br>802.11a/g: OFDM (BPSK, QPSK, 16-QAM, 64-QAM)<br>802.11n: OFDM (BPSK, QPSK, 16-QAM, 64-QAM)<br>802.11ac: OFDM (BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM) |
| Operating Voltage:           | 5V                                                                                                                                                                                      |
| Operating Temperature Range: | 0°C ~ +50°C (Operating) / -20°C ~ +70°C (Storage)                                                                                                                                       |
| Humidity (Non-Condensing):   | Operating Humidity (non-condensing): 10% ~ 85%<br>Storage Humidity (non-condensing): 5% ~ 90%                                                                                           |
| Power Consumption:           | Continue TX: 460mA / Continue RX: 390mA                                                                                                                                                 |
| Dimension (in mm):           | 55 x 25 x 4.2 mm (±0.5mm)                                                                                                                                                               |
| Weight (g):                  | ≤ 7g                                                                                                                                                                                    |
| Driver Support:              | Windows XP, Win7, Win8.1, Linux                                                                                                                                                         |
| Security                     | 64/128-bits WEP, WPA, WPA2, 802.1x                                                                                                                                                      |

### OUTPUT POWER & SENSITIVITY

#### 802.11g

| Data Rate | Tx $\pm$ 2dBm | Rx Sensitivity |
|-----------|---------------|----------------|
| 54Mbps    | 13dBm         | $\leq -65$ dBm |

#### 802.11n / 2.4GHz

| HT20 | Data Rate | Tx $\pm$ 2dBm (1TX) | Tx $\pm$ 2dBm (2TX) | Rx Sensitivity |
|------|-----------|---------------------|---------------------|----------------|
|      | MCS7      | 12dBm               | 15dBm               | $\leq -64$ dBm |
| HT40 | MCS7      | 12dBm               | 15dBm               | $\leq -61$ dBm |

#### 802.11a

| Data Rate | Tx $\pm$ 2dBm | Rx Sensitivity $\pm$ 2dBm |
|-----------|---------------|---------------------------|
| 54Mbps    | 12dBm         | $\leq -65$ dBm            |

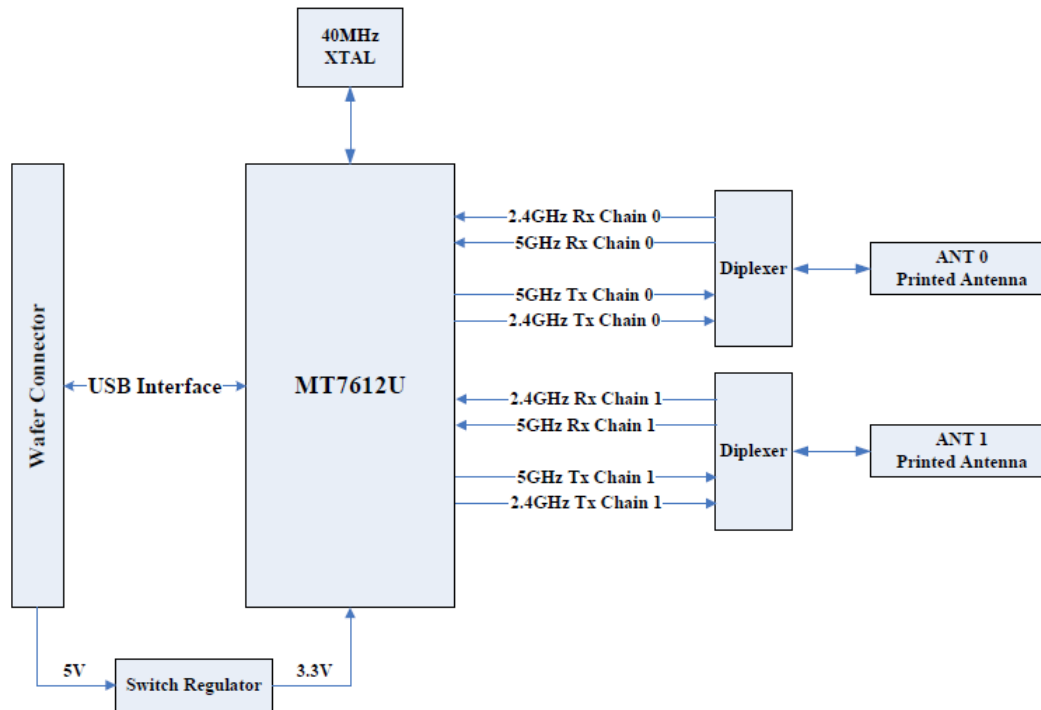
#### 802.11n / 5GHz

| HT20 | Data Rate | Tx $\pm$ 2dBm (1TX) | Tx $\pm$ 2dBm (2TX) | Rx Sensitivity |
|------|-----------|---------------------|---------------------|----------------|
|      | MCS7      | 11dBm               | 14dBm               | $\leq -64$ dBm |
| HT40 | MCS7      | 11dBm               | 14dBm               | $\leq -61$ dBm |

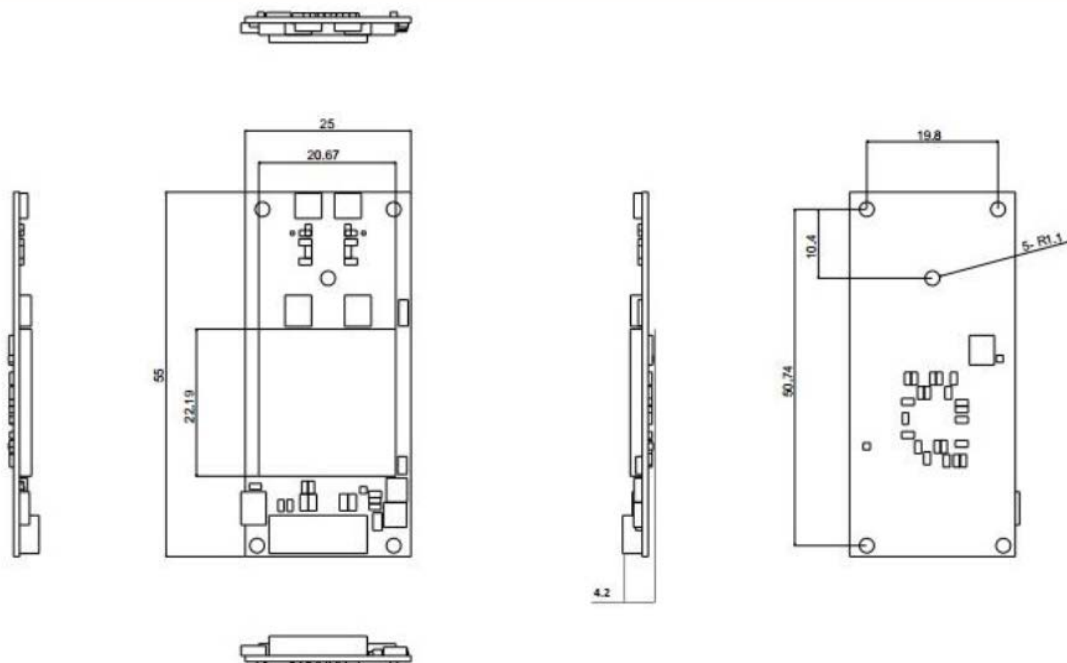
#### 802.11ac

| VHT80 | Data Rate | Tx $\pm$ 2dBm (1TX) | Tx $\pm$ 2dBm (2TX) | Rx Sensitivity |
|-------|-----------|---------------------|---------------------|----------------|
|       | MCS9      | 10dBm               | 13dBm               | $\leq -51$ dBm |

## Block Diagram



## Mechanical Dimension (mm)



## Pin Assignment

| Pin# | Pin Name       | Description                                                                                                                                                                                                                 | Pin# | Pin Name         | Description                                                                                                                                                                       |
|------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | RF_Option(OPT) | Input and active low signal. This signal is used by the system to disable radio operation on add-in card that implement radio frequency applications. When implemented, this signal requires a pull-up resistor on the card | 2    | WL_LED indicator | Output and open drain active low signal. This signal is used to allow the USB module add-in card to provide status indicators via LED devices that will be provided by the system |
| 3    | Reserve        | -                                                                                                                                                                                                                           | 4    | Reserve          | -                                                                                                                                                                                 |
| 5    | Reserve        | -                                                                                                                                                                                                                           | 6    | Reserve          | -                                                                                                                                                                                 |
| 7    | USB_D+         | USB serial data                                                                                                                                                                                                             | 8    | GND              | GND                                                                                                                                                                               |
| 9    | USB_D-         | USB serial data                                                                                                                                                                                                             | 10   | Reserve          | -                                                                                                                                                                                 |
| 11   | +5V            | +5V                                                                                                                                                                                                                         | 12   | Reserve          | -                                                                                                                                                                                 |

**\*NA→No active, OPT →Optional**