Specification
For
USB 80211ac/a/b/g/n WiFi Module
TWR0073
Rev. 1.1

2012-2017 Pulse(Suzhou) Wireless Products Co., Ltd

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Overview

TWR0073 is 802.11 ac/a/b/g/n 2.4G/5G dual band 1T1R USB2.0 module. It run up to 433Mbps (MCS9) 5G and 150Mbps 2.4G and delivers superior WiFi output up to 16dBm. It use highly integrated SOC chip MT7610UN.

TWR0073 have small form factor and high performance design for wireless connection with popular USB interface. It is good choose for high throughput networking and multimedia application. In addition, it not only support WPS for easy connection, but also support security encryption through WPA, WPA2 ..and so on.
Feature:

1. Dual band 1T1R mode with support of 433Mbps PHY rate
2. IEEE 802.11 a/b/g/n and 802.11ac client
3. Transmit Beamforming and STBC
4. QOS: WFA WMM, WMM PS
5. Security: WFA WPA/WPA2 personal, WAPI, WPS2.0
6. Integrate high efficiency switching regulator
7. Supports 802.11w protected managed frames
8. Support WPS
9. Supports Wi-Fi Direct
10. Antenna: IPEX antenna
11. USB 2.0/1.1 USB-A type and 2.54-pitch 4 pin header (option) interface
12. Support Windows XP, Vista, Win 7, Win8, Linux 2.6.x
**Application:**
- Desk-Top/Mini PC/Note-Book
- Mobile, portable smart device
- Set-top box/Media player
- Tablet
- Blue-ray Disk

**Property:**

<table>
<thead>
<tr>
<th>Main Chip</th>
<th>Mediatek MT7610U</th>
</tr>
</thead>
<tbody>
<tr>
<td>WiFi Standard</td>
<td>IEEE 802.11 a/b/g/n/ac</td>
</tr>
<tr>
<td>Frequency</td>
<td>2.4~2.4835GHz</td>
</tr>
<tr>
<td></td>
<td>5.15GHz ~5.850GHz</td>
</tr>
<tr>
<td>USB type</td>
<td>2.0/1.1</td>
</tr>
<tr>
<td>Data Rates</td>
<td>11ac: MCS0 ~MCS9</td>
</tr>
<tr>
<td></td>
<td>11n: MCS0~MCS7</td>
</tr>
<tr>
<td></td>
<td>11a/g: 6~54 Mbps</td>
</tr>
<tr>
<td></td>
<td>11b: 1~11 Mbps</td>
</tr>
<tr>
<td>Modulation</td>
<td>802.11ac:OFDM(BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM)</td>
</tr>
<tr>
<td></td>
<td>802.11a/n/g:(BPSK, QPSK, 16-QAM, 64-QAM)</td>
</tr>
<tr>
<td></td>
<td>802.11b:(DBSK,DQPSK,CCK)</td>
</tr>
<tr>
<td>TX power</td>
<td>802.11ac HT20: 12+-1.5dBm@MCS8</td>
</tr>
<tr>
<td></td>
<td>802.11ac HT40: 12+-1.5dBm@MCS9</td>
</tr>
<tr>
<td></td>
<td>802.11ac HT80: 12+-1.5dBm@MCS9</td>
</tr>
<tr>
<td></td>
<td>802.11a/g: 12 +/1.5dBm@54Mbps</td>
</tr>
</tbody>
</table>
RX Sensitivity

<table>
<thead>
<tr>
<th>Standard</th>
<th>Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>802.11a/g</td>
<td>-73dBm +/- 2dBm at 11Mbps</td>
</tr>
<tr>
<td>802.11n</td>
<td>-66dBm +/- 2dBm @HT20 MCS7</td>
</tr>
<tr>
<td></td>
<td>-63dBm +/- 2dBm @HT40 MCS7</td>
</tr>
<tr>
<td>802.11a/g</td>
<td>-67dBm +/- 2dBm @54Mbps</td>
</tr>
</tbody>
</table>

Power Consumption

<table>
<thead>
<tr>
<th>State</th>
<th>Current (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idle</td>
<td>38</td>
</tr>
<tr>
<td>Continue RX</td>
<td>240</td>
</tr>
<tr>
<td>Continue TX</td>
<td>355</td>
</tr>
</tbody>
</table>

Environment

- Operation Temperature Range: -5 ~ 50°C
- Storing Temperature Range: -10 ~ 70°C
- Operation Humidity: 5% ~ 90%
- Storing Humidity: 5% ~ 90%

Pin out:

<table>
<thead>
<tr>
<th>Pin no.</th>
<th>Name</th>
<th>In/Out/P/G</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DC</td>
<td>P</td>
<td>5V power input</td>
</tr>
<tr>
<td>2</td>
<td>DM</td>
<td>I/O</td>
<td>USB D-</td>
</tr>
<tr>
<td>3</td>
<td>DP</td>
<td>I/O</td>
<td>USB D+</td>
</tr>
<tr>
<td>4</td>
<td>GND</td>
<td>G</td>
<td>Ground pin</td>
</tr>
</tbody>
</table>
Function Block Diag.

UW2001 Module Function Block Diag.

- USB HOST
- Main Chip MT7610AN
- Antenna connector
- 2.4GHz TX/RX
- 5GHz TX/RX
- FEM PA
- 40MHz 10PPM XTL
- Switching Circuit
- 5V
- USB D+/D- Signal Data
- 3.3V
Module PCB Dimension:

USB A Type:
DIP-4 2.54 Type:
ME case dimension
Module Packing

Top view
- Plastic tray covers the modules
- Plastic tape wrapped around
- 36pcs of the modules per tray

Bottom view
- Cardboard
- Plastic tape wrapped around
- 330mm x 330mm

Profile view
- 5 levels of Plastic tray
- Cardboard
- Plastic tape wrapped around

Protection Tray for 100pcs of modules
1. Pack 2 Protection trays (200pcs of modules) into an Aluminum Foil Bag. Seal the Aluminum Foil Bag.

2. Pack 5 Aluminum Foil Bags with the modules into a carton box (1000pcs in total).

Carton Box
Packing Instruction

Carton Size: 471 x 321 x 250mm
QTY: 1000 sets
1. Pack 2 Protection trays (200pcs of modules) into an Aluminum Foil Bag. Seal the Aluminum Foil Bag.

2. Pack 6 Aluminum Foil Bags with the modules into a carton box (1000pcs in total).

**Carton Box Packing Instruction**

Carton Size: 471 x 321 x 250mm
QTY: 1000 pcs