

## 1. General Description

IS-7601MU5 product Accord with FCC CE is a highly integrated Wi-Fi single chip which supports 150 Mbps PHY rate. It fully complies with IEEE802.11n and IEEE802.11b/g stands, offering feature-rich wireless connectivity at high standards, and delivering reliable, cost-effective throughput from an extended distance. Optimized RF architecture and baseband algorithms provide superb performance and lower power consumption. Intelligent MAC design deploys a high efficient DMA engine and hardware data processing accelerators which offloads the host processor. BL-R7601MU5 is designed to support standard based features in the areas of security quality of service and international regulations, giving end users the greatest performance anytime and in any circumstance.

## 2. The range of applying

MID, networking camera, STB GPS, E-book, Hard disk player, Network Radios, PSP, etc, the device which need be supported by wireless networking.

## 3. Features

| Feature                                                   | Implementation                                                          |
|-----------------------------------------------------------|-------------------------------------------------------------------------|
| Power supply                                              | VCC_3.3V +0.2V                                                          |
| Clock source                                              | 40MHz                                                                   |
| Temperature range                                         | Work temperature: - 0 °C ~ 40 °C<br>Storage temperature - 40 °C ~ 70 °C |
| Package                                                   | SMT 6 pins                                                              |
| ■IEEE 802.11b/g/n client                                  |                                                                         |
| ■Embedded high-performance 32-bit RISC microprocessor     |                                                                         |
| ■Highly integrated RF with 55nm COMS technology           |                                                                         |
| ■1T1R mode with support of 150Mbps PHY rate               |                                                                         |
| ■Integrate high efficiency switching regulator            |                                                                         |
| ■Best-in-class power consumption performance              |                                                                         |
| ■1/2/3/4-wire PTA Wi-Fi/Bluetooth coexistence support     |                                                                         |
| ■IEEE 802.11d/h/k compliant                               |                                                                         |
| ■Security support for WFA WPA/WPA2 personal, WPS2.0 ,WAPI |                                                                         |
| ■Support 802.11w protected managed frames                 |                                                                         |
| ■QOS support of WFA,WMM,WMM PS                            |                                                                         |
| ■Support Wi-Fi Direct                                     |                                                                         |
| ■Fully compliance with USB v2.0 High-Speed mode           |                                                                         |
| ■Per packet transmit power control                        |                                                                         |
| ■Antenna diversity                                        |                                                                         |
| ■Auto-calibration                                         |                                                                         |

## 4. DC Characteristics

| Symbol       | Parameter           | Minimum | Typical | Maximum | Units |
|--------------|---------------------|---------|---------|---------|-------|
| VD33A, VD33D | 3.3V Supply Voltage | 2.97    | 3.3     | 3.63    | V     |
| VD12A, VD12D | 1.2V Supply Voltage | 1.14    | 1.2     | 1.26    | v     |
| VD15A, VD15D | 1.5V Supply Voltage | 1.425   | 1.5     | 1.575   | v     |

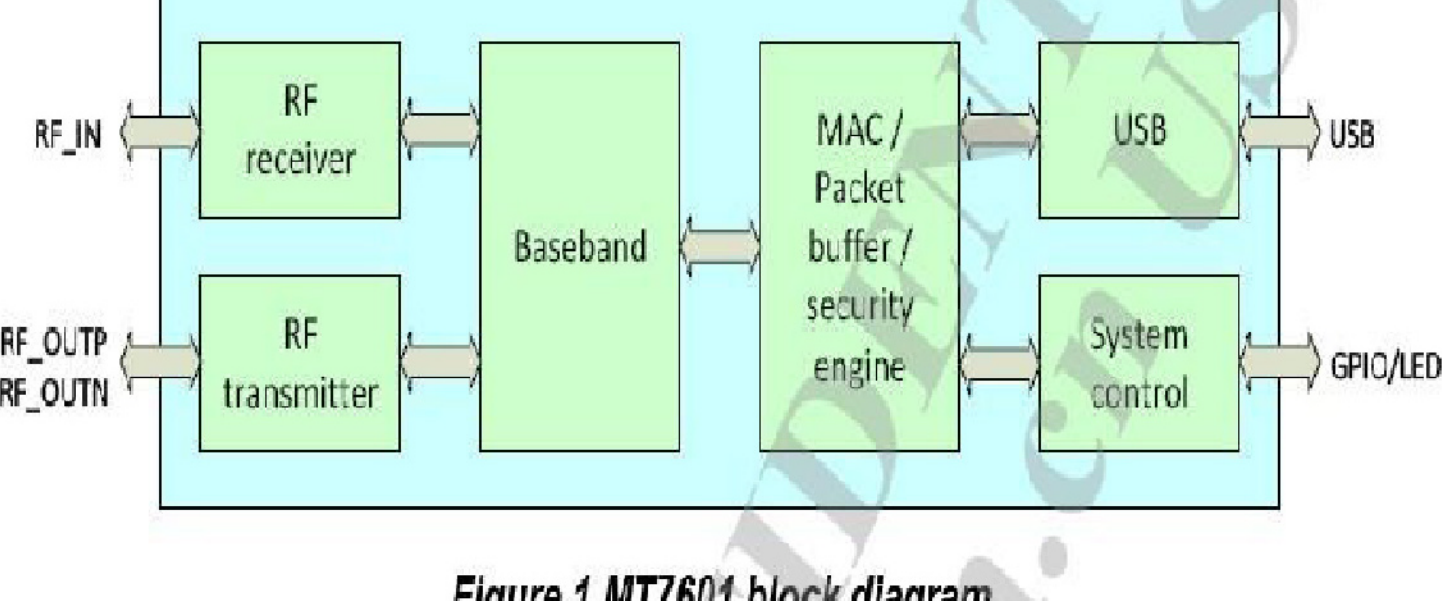
## 5.The main performance of product

| Item                                | Description                                                                                             |
|-------------------------------------|---------------------------------------------------------------------------------------------------------|
| The supported protocol and standard | IEEE 802.11n, IEEE 802.11g,EE 802.11b                                                                   |
| Interface type                      | USB2.0                                                                                                  |
| The range of frequency              | 2.4-2.484GHZ                                                                                            |
| The amount of working Channel       | 1-11（America, Canada）;1-13（China, Europe）;1-14（Japan）                                                   |
| Data Modulation                     | OFDM/DBPSK/DQPSK/CCK                                                                                    |
| Working Mode                        | Infrastructure, Ad-Hoc                                                                                  |
| The transmitting rate               | 135/54/48/36/24/18/12/9/6/1M（self-adapting）                                                             |
| Spread spectrum                     | DSSS                                                                                                    |
| Sensitivity @PER                    | 135M:-68dBm@8%PER,<br>54M:-74dBm@8%PER,<br>11M:-88dBm@8%PER,<br>6M: -90dBm@8%PER ,<br>1M: -92dBm@8%PER, |
| RF Power                            | 135M:14dBm<br>54M:15dBm<br>11M:18dBm                                                                    |
| Throughput                          | 90Mbps(external 2dbi antenna ,damping 40dbm in Shielding box )                                          |
| The connect type of Antenna         | Connect to the external                                                                                 |
| The transmit distance               | Indoor 100M, Outdoor 300M, according the local environment                                              |
| MENS(L*W*H)                         | 20.3MM*14MM*8.5MM                                                                                       |
| The chipset model                   | MT7601                                                                                                  |

## 6. DC/RF characteristics

|                             |                                         |      |      |      |
|-----------------------------|-----------------------------------------|------|------|------|
| Mode                        | DSSS / CCK                              |      |      |      |
| Frequency                   | 2412 – 2484MHz                          |      |      |      |
| Data rate                   | 1, 2, 5.5, 11Mbps                       |      |      |      |
| DC Characteristics          | min                                     | Typ. | max. | unit |
| TX mode                     | 239                                     | 245  | 249  | mA   |
| Rx mode                     | 91                                      | 92   | 93   | mA   |
| Sleep mode                  | 47                                      | 48   | 48   | mA   |
| Specification : IEEE802.11g |                                         |      |      |      |
| Mode                        | OFDM                                    |      |      |      |
| Frequency                   | 2412 - 2484MHz                          |      |      |      |
| Data rate                   | 6, 9, 12, 18, 24, 36, 48, 54Mbps        |      |      |      |
| DC Characteristics          | min                                     | Typ. | max. | unit |
| TX mode                     | 149                                     | 150  | 153  | mA   |
| Rx mode                     | 92                                      | 93   | 100  | mA   |
| Sleep mode                  | 46                                      | 48   | 49   | mA   |
| Specification : IEEE802.11n |                                         |      |      |      |
| Mode                        | OFDM                                    |      |      |      |
| Frequency                   | 2412 - 2484MHz                          |      |      |      |
| Data rate                   | 6.5, 13, 19.5, 26, 39, 52, 58.5, 65Mbps |      |      |      |
| DC Characteristics          | min                                     | Typ. | max. | unit |
| TX mode                     | 151                                     | 152  | 153  | mA   |
| Rx mode                     | 91                                      | 92   | 93   | mA   |
| Sleep mode                  | 47                                      | 48   | 49   | mA   |

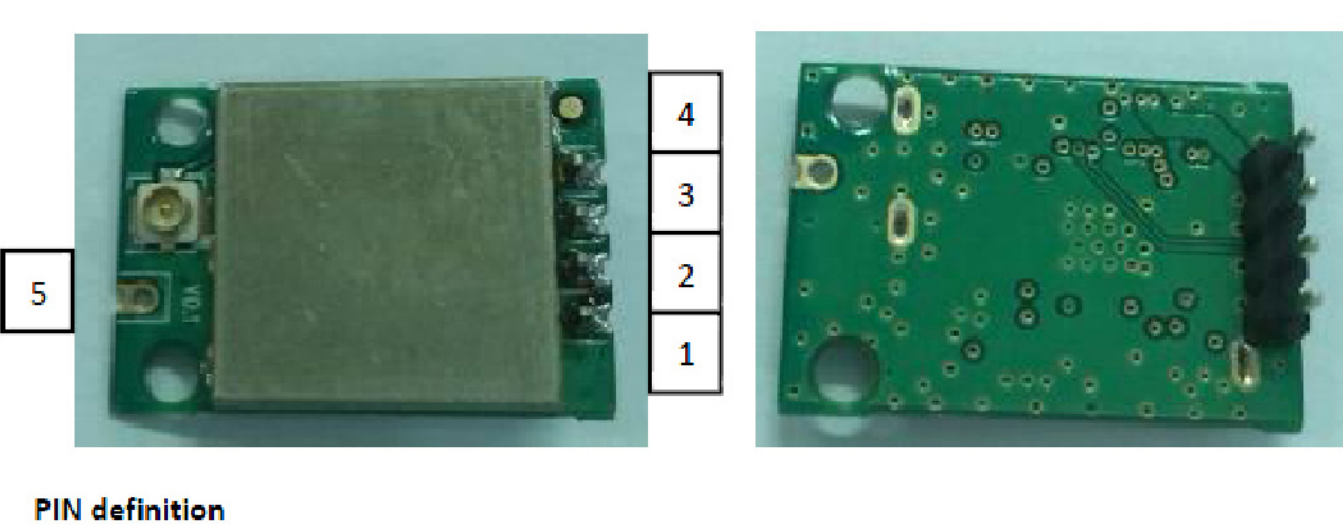
## 7.The block diagram of product principle



## 8. The supported platform

| Operating System      | CPU Framework | Driver |
|-----------------------|---------------|--------|
| WIN2000/XP/VISTA/WIN7 | X86 Platform  | Enable |
| LINUX2.4/2.6          | ARM, MIPSII   | Enable |
| WINCE5.0/6.0          | ARM ,MIPSII   | Enable |

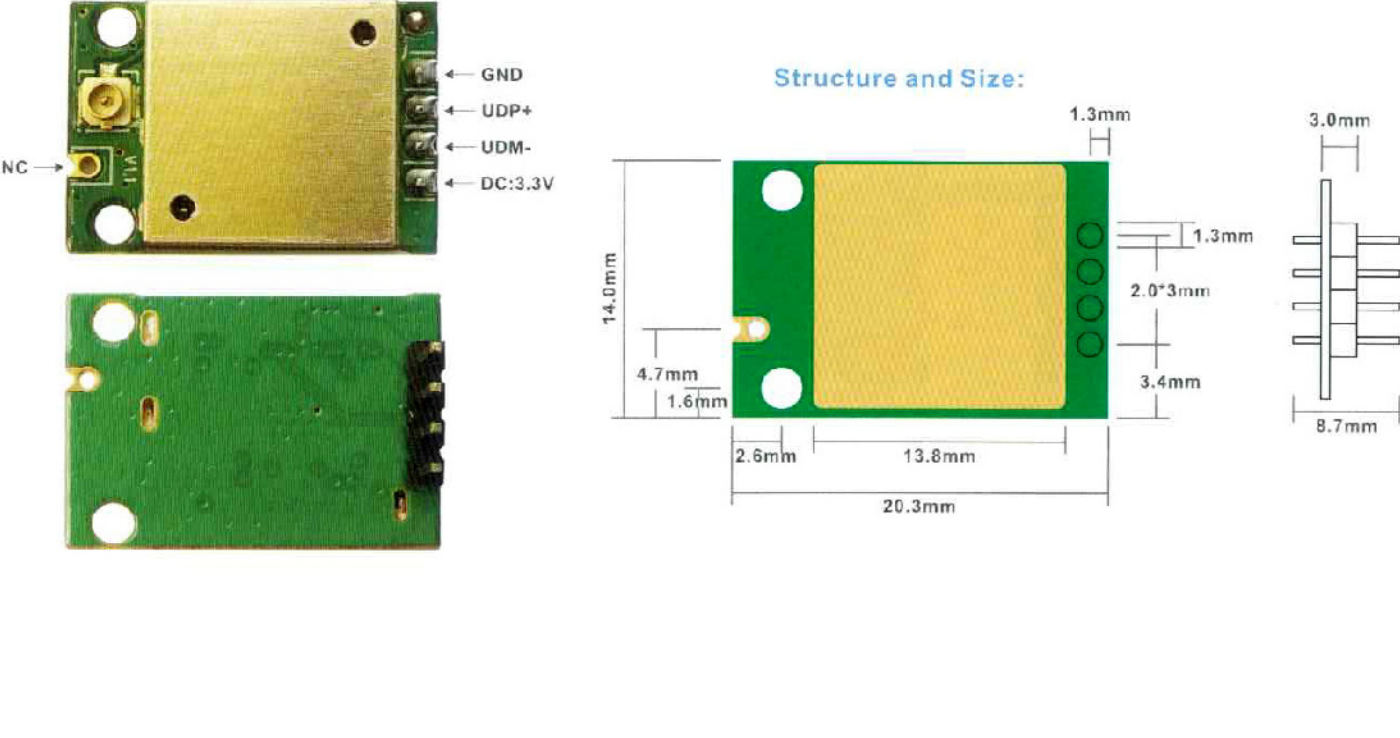
## 9.The definition of product Pin



PIN definition

| Pin No: | TYPE | Description |
|---------|------|-------------|
| 1       | P    | DC :3.3V    |
| 2       | I/O  | UDM-        |
| 3       | I/O  | UDP+        |
| 4       | P    | GND         |
| 5       | NC   | NC          |

## 10.The Structure and Size of product



## 11.Typical Solder Reflow Profile

