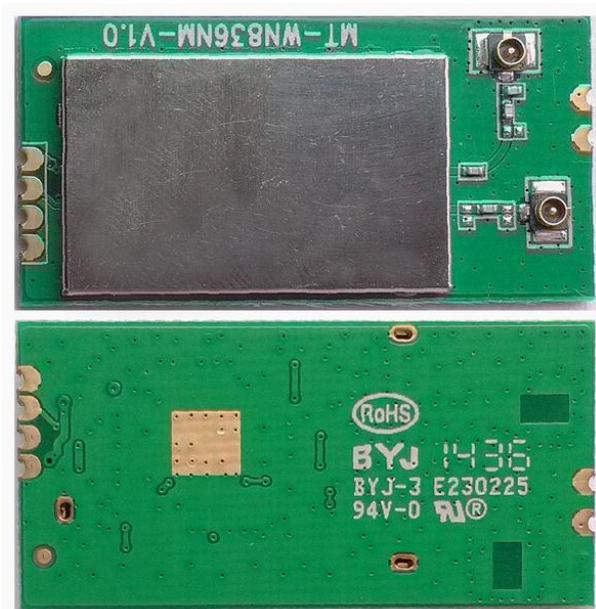


MT-WN836NM Datasheet

802.11 b/g/n 300Mbps Wireless USB Module



REV: V 1.0

Date: 2014/09/18

1、Product Description:

MT-WN836NM is a 300Mbps wireless module. It uses a highly integrated single-chip MIMO (Multiple In, Multiple Out) Wireless LAN (WLAN) USB 2.0 network interface controller RTL8192EU CPU, support for 2.4G frequency band, in full compliance IEEE802.11N protocol standards, but also fully compatible with 802.11G and 802.11B standards. It combines a MAC, 2T2R capable baseband and RF in a single chip, provides a complete solution for a high-performance wireless client. It baseband implements Multiple Input, Multiple Output (MIMO) Orthogonal Frequency Division Multiplexing (OFDM) with two transmit and two receive paths (2T2R). It supports fast receiver Automatic Gain Control (AGC) with synchronous and asynchronous control loops among antennas, antenna diversity functions, and adaptive transmit power control functions to obtain better performance in the analog portions of the transceiver. It MAC supports 802.11e for multimedia applications, 802.11i for security, and 802.11n for enhanced MAC protocol efficiency. All in all, for the end user at any time to play the greatest efficiency.

2、Product Features:

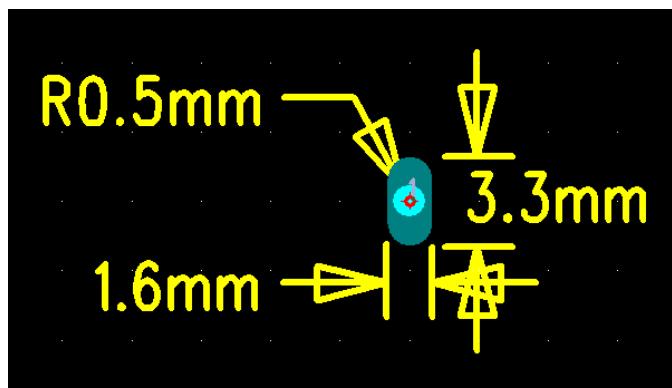
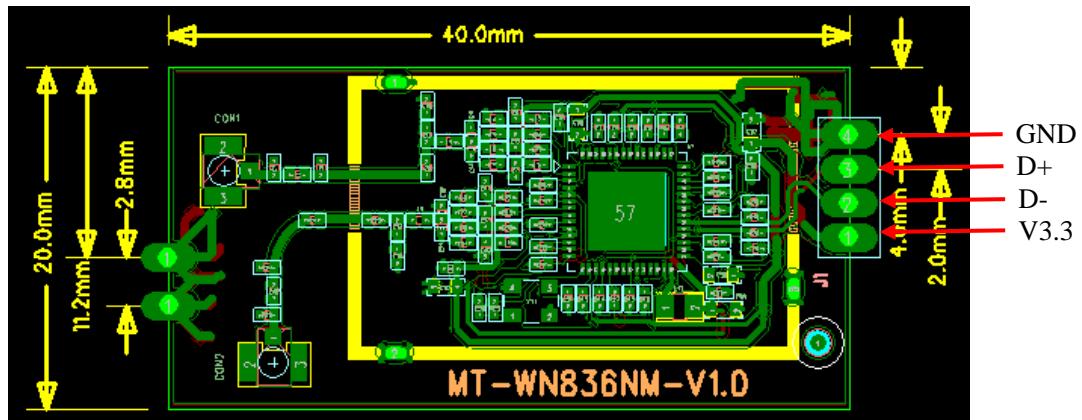
- Support USB 2.0;
- Support 20MHz/40MHz Bandwidth transmission;
- Comply with IEEE 802.11n protocol, compatible with IEEE 802.11g, IEEE 802.11b standards;
- Support IEEE802.11e; IEEE802.11i; IEEE802.11h;
- Automatic transmission rate detection network and transform;
- Supports 64/128 bit WEP data encryption; support WPA/WPA2/TKIP/AES other encryption methods;
- Two Transmit and Two Receive path (2T2R)
- Built-In two I-PEX Antenna seat
- Support 2.4G band;
- Support Multiple BSSID
- Supports Wake-On-WLAN via Magic Packet and Wake-up frame
- Support QoS Enhancement (WMM)
- Support WPS: PIN, PBC
- Support Cisco Compatible Extensions (CCX4)
- Support TPC, Spectrum Measurement
- Support two work mode: Infrastructure mode and Soft AP mode
- MIMO power saving mechanism
- Operating System Support: Windows XP 32/64, 2000, Vista32/64, Windows 7 32/64, Win8, Linux, Macintosh

3、Product Specifications:

| | |
|----------------------------|---|
| Protocol standards | IEEE 802.11n; IEEE 802.11g ; IEEE 802.11b; IEEE802.11e; IEEE802.11i; IEEE802.11h; |
| | 11b: 1/2/5.5/11Mbps |
| Transmission rate | 11g: 6/9/12/18/24/36/48/54Mbps |
| | 11n: up to 300Mbps |
| Transmit power | Max 25.94 dBm - Conducted (802.11g) Max 25.98 dBm – Conducted (802.11n_20MHz) Max 25.45 dBm – Conducted (802.11n_40MHz) Max 26.65 dBm – Conducted (802.11n_20MHz, MIMO) Max 27.55 dBm – Conducted (802.11n_40MHz, MIMO) |
| Frequency range | 2.412 ~ 2.472 GHz |
| Work channel | 1~11 |
| Spread-spectrum technology | DSSS (Direct sequence spread-spectrum) |
| Modulation type | CCK/ OFDM/ BPSK/ QPSK/ 16-QAM/ 64-QAM |
| Receiver Sensitivity | 11n: -67dBm@130M; -68dBm@108M 11g: -65dBm@54M 11b: -86dBm@11M |
| | WPA-PSK/WPA2-PSK; WPA/WPA2-Mixed/TKIP/AES |
| Encryption | 64/128 bit WEP encryption WPS (PIN, PBC) |
| | 802.1x |
| Operating System Support | Window 2000/XP/XP64/Vista/Win7/ Win8/Linux/Mac OS |
| Interface | USB 2.0 (4 pin 2.0 pitch stamp holes) |
| Antenna | Built-In two I-PEX Antenna seat |
| Size (mm) | 40 * 20 |
| | Operating Temperature: 0°C~40°C |
| Use of the environment | Storage temperature: -20°C~70°C Operating Humidity: 10% ~ 90% RH Non-condensing Storage Humidity: 5% ~ 95% RH Non-condensing |

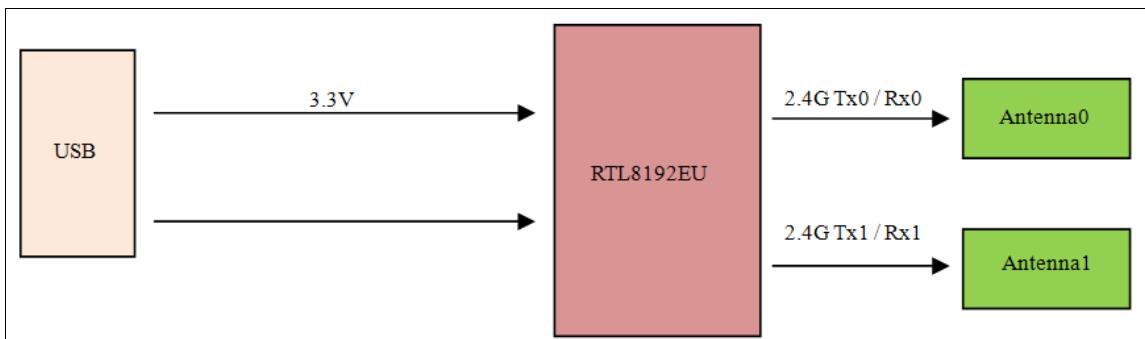
4、Module interface definitions and dimensions:

| | |
|---|-----------|
| 1 | GND |
| 2 | D+ |
| 3 | D- |
| 4 | VCC(3.3V) |



Stamp hole sizes

5、Block Diagram:



6、Channel allocation of work:

2.4GHz Channel Support

| Channel | Frequency | FCC (US) | IC(CA) | ETSI (EU) | Japan (JP) |
|---------|-----------|----------|--------|-----------|------------|
| 1 | 2.412 GHz | X | X | X | X |
| 2 | 2.417 GHz | X | X | X | X |
| 3 | 2.422 GHz | X | X | X | X |
| 4 | 2.427 GHz | X | X | X | X |
| 5 | 2.432 GHz | X | X | X | X |
| 6 | 2.437 GHz | X | X | X | X |
| 7 | 2.442 GHz | X | X | X | X |
| 8 | 2.447 GHz | X | X | X | X |
| 9 | 2.452 GHz | X | X | X | X |
| 10 | 2.457 GHz | X | X | X | X |
| 11 | 2.462 GHz | X | X | X | X |
| 12 | 2.467 GHz | | | X | X |
| 13 | 2.472 GHz | | | X | X |
| 14 | 2.484 GHz | | | | X |

KEY:

US = United States, CA = Canada, EU = European Countries (except France and Spain) ,JP = Japan

Many countries and region are currently revising the channel assignment.

X = Supported

FCC Information to User

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution

Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Compliance Information :

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation

IMPORTANT NOTE:

FCC RF Radiation Exposure Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device is intended only for OEM integrators under the following conditions:

- 1) The transmitter module may not be co-located with any other transmitter or antenna,
- 2) OEM shall not supply any tool or info to the end-user regarding to Regulatory Domain change.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual.