

USER MANUAL

802.11n, 2.4G 1T1R Wireless LAN USB Module

WN4608L

Realtek RTL8188ETV

Version 1.2

**Networking B.U.
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_____ (Date)

PRODUCT FEATURES

Wi-Fi Feature

- Operate at ISM frequency Band (2.4GHz)
- IEEE Standards Support, 802.11b, 802.11g and 802.11n
- CMOS MAC, Baseband PHY, and RF in a single chip for IEEE 802.11b/g/n compatible WLAN
- Complies with USB Specification 2.0, support Full-speed(12Mbps) and High-Speed(480Mbps)
- Enterprise level security supporting: WPA, WPA2
- Support 1 transmission and 1 receiving, transmission rate can up to 150Mbps (Physical Rate) in downstream and upstream
- RoHS compliance
- Low Halogen compliance

PRODUCT SPECIFICATIONS

MAIN CHIPSET

Realtek RTL8188ETV

FUNCTIONAL SPECIFICATIONS

Wi-Fi Function	
Standard	IEEE802.11b; IEEE 802.11g; IEEE 802.11n
Bus Interface	USB 2.0
Data Rate	<p><i>802.11b:</i> 11, 5.5, 2, 1 Mbps</p> <p><i>802.11g:</i> 54, 48, 36, 24, 18, 12, 9, 6 Mbps</p> <p><i>802.11n:</i> MCS 0 to 7 for HT20MHz MCS 0 to 7 for HT40MHz</p>
Media Access Control	CSMA/CA with ACK
Modulation Techniques	<p><i>802.11b:</i> CCK, DQPSK, DBPSK</p> <p><i>802.11g:</i> 64QAM, 16QAM, QPSK, BPSK</p> <p><i>802.11n:</i> BPSK, QPSK, 16QAM, 64QAM</p>
Network Architecture	Ad-hoc mode (Peer-to-Peer) Infrastructure mode
Operation Channel	<p><i>2.4GHz</i></p> <p>11: (Ch. 1-11) – United States 13: (Ch. 1-13) – Europe 14: (Ch. 1-14) – Japan</p>
Frequency Range	<p><i>802.11bg</i> 2.412 ~ 2.4835 GHz</p>
Transmit Output Power – 1x1 (Tolerance: ±1.5dBm)	<p><i>802.11b:</i> 16 dBm@1Mbps 16 dBm@11Mbps</p> <p><i>802.11g:</i> 16 dBm@6Mbps 14 dBm@54Mbps</p> <p><i>802.11n:</i> 20MHz: 16 dBm@MCS0 13 dBm@MCS7 40MHz: 13 dBm@MCS0 13 dBm@MCS7</p>
Receiver Sensitivity	<p><i>802.11b:</i> -82 dBm@11Mbps</p> <p><i>802.11g:</i> -70 dBm@54Mbps</p> <p><i>802.11n:</i> 20MHz</p>

	-68 dBm@MCS7 40MHz -65dBm@MCS7
Security	WEP 64&128 bit, WPA, WPA-PSK, WPA2, WPA2-PSK, WPS, IEEE 802.1X, IEEE 802.11i
Operating Voltage	3.3 V ±5% I/O supply voltage
OS Supported	Microsoft Windows Win7/Win8; Linux based
Power Consumption	<i>TX Mode:</i> 234 mA
Test Condition:	<i>RX Mode:</i> 162 mA
- Operate at HT40	
- File Transmission	<i>Standby Mode:</i> 147 mA
- Record MAX value	
Antenna Type	Metal Antenna

FCC Statement:**Federal Communication Commission Interference Statement**

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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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 Radiation Exposure Statement:**

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and consider removing the no-collocation statement.

LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following " Contains
TX FCC ID: MDZ-WN4608L

The OEM integrator is still responsible for the FCC compliance requirement of the end
product, which integrates this module.

Appropriate measurements (e.g. 15 B compliance) and if applicable additional equipment
authorizations (e.g. Verification , Doc) of the host device to be addressed by the
integrator/manufacturer.