

**Wifi+BT combo card
WLU6300B (T-RoHS)
Instruction for use**

Hardware Specification

General Specification

Host Interface	USB interface
Form factor	USB 2.0
Chipset	Realtek RTL8723AS-VAU
Network Standard	IEEE 802.11b/g/n 1T1R Wireless LAN and BT 4.0
Network Architectures	Ad hoc , Infrastructure
Modulation Techniques	WiFi: BPSK, QPSK, DBPSK, DQPSK, 16QAM, 64QAM Bluetooth: GFSK, $\pi/4$ DQPSK, 8-DPSK
Encode method	CCK, DSSS and OFDM
Operating Channel	IEEE 802.11b/g: CH1~CH11 IEEE 802.11n: MCS0~MCS7 Bluetooth: 0~78
Supported Data Rates	IEEE 802.11b: 11, 5.5, 2, 1 Mbps IEEE 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps IEEE 802.11n: 72.2Mbps(HT20), 140Mbps(HT40) Bluetooth: 3, 2, 1Mbps
Antenna type	External antenna for Wi-Fi /BT transmit and receive Antenna port impedance: 50ohm 1. Dongle Flying Lead Antenna, 2.4~ 2.484GHz, 2 dBi 2. Dongle Chip antenna, 2.4~ 2.484GHz, 2 dBi, clearance definition must be 6.0 * 5.0 mm 3. BOX PCB antenna, 2.4~ 2.484GHz, 2 dBi, RF connector, matching circuit 4. BOX PCB antenna, 2.4~ 2.484GHz, 2 dBi, matching circuit
RF Output Power (Tolerance: ± 2dBm)	802.11b@11Mbps 18dBm 802.11g@54Mbps 16dBm 802.11n 15dBm (MCS 7_HT20) 15dBm (MCS 7_HT40) Bluetooth: 0dBm~20dBm (class 1)
Temperature(ambient)	Storage temperature: -40~80°C Working temperature: 0~70°C
Humidity	5~90%
OS Compatibility	Win7 , XP, Vista
Operating Frequencies	802.11b/g : 2.412GHz~2.462GHz 802.11n (HT20) : 2.412GHz~2.462GHz 802.11n (HT40) : 2.422GHz~2.452GHz

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	Bluetooth:2.402~2.480GHz
Security	WEP, TKIP, and AES hardware encryption

Description

General Description

The Realtek is a highly integrated single-chip 802.11n Wireless LAN(WLAN) USB-MF (USB Multi-function) network interface controller with integrated Bluetooth 2.1/3.0/4.0 controller. It combines a WLAN MAC,a 1T1R capable WLAN baseband, and RF in s single chip。The RTL8723AS-VAU provides a complete solution for a high-performance integrated wireless and Bluetooth device。

The integration provides better coordination between 802.11 and Bluetooth, and with sophisticated dynamic power control and packet traffic arbitration, RTL8723AS-VAU is able to provide the best coexistence performance。

External antenna for Wi-Fi /BT transmits and receives

Features

- ◆ All-COMS MIMO solution interoperable with IEEE 802.11 a/b/g/n WLANs
- ◆ 72.2Mbps receive PHY rate and 72.2Mbps transmit PHY rate using 20MHZ bandwidth
- ◆ 150Mbps receive PHY rate and 150Mbps transmit PHY rate using 40MHZ bandwidth
- ◆ Compatible with 802.11n specification
- ◆ Backward compatible with 802.11b/g devices while operating in 802.11n mode
- ◆ Qualified Bluetooth v2.1+EDR, v3.0+HS and v4.0 LE System
- ◆ Support for v4.0 Bluetooth low energy
- ◆ Integrated class1, class2, and class3 PA and modem in Bluetooth controller
- ◆ Small size 20mm*10mm
- ◆ External antenna for Wi-Fi /BT transmit and receive

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FCC Statement:

This equipment has been tested and found to comply with the limits for 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 or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

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.

Note: Modifications to this product will void the user's authority to operate this equipment.

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FCC Important Notes:

(1)

FCC Radiation Exposure Statement

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

This equipment complies with Part 15 of the FCC Rules. Operation is subject 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.

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. Modular could be only used in mobile or fix device, and could not be used in any portable device.

Caution !

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modification could void the user authority to operate the equipment.

(2)

Co-location Warning:

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

(3)

Limited Channels fixed for use in the US:

IEEE802.11b or 802.11g or 802.11n (HT20) operation of this product in the U.S. is firmware-limited to Channel 1 through 11.

IEEE 802.11n (HT40) operation of this product in the U.S. is firmware-limited to Channel 3 through 9.

(4)

OEM integration instructions:

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

The antenna must be installed such that 20 cm is maintained between the antenna and users, and the transmitter module may not be co-located with any other transmit or antenna. The module shall be only used with the integral antenna(s) that has been originally tested and certified with this module.

As long as 3 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 requirement with this module installed(for example, digital device emission, PC

peripheral requirements, etc.)

(5)

OEM integration instructions:

In the event that these conditions cannot be met (for example certain laptop configuration or co-location with another transmitter), then the FCC authorization for this module in combination with the host equipment is no longer considered valid and the FCC ID of the module cannot be used on the final product. In these and circumstance, the OEM integrator will be responsible for re-evaluating. The end product (including the transmitter) and obtaining a separate FCC authorization.

(6)

End product labeling:

This transmitter module is authorization only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users.

The final end product must be labeled in a visible area with the following:

“Contains Transmitter Module FCC ID:2AAYDWLU6300B

(7)

Information that must be placed in the end user manual:

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.