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# WLAN 11b/g/n USB MODULE

## BL-R8192EU6

Version: 0.1

<b>Customer</b>			
<b>Date</b>			
<b>Model Name</b>	<b>BL-R8192EU6</b>		
<b>Part NO.</b>			
<b>Blink Approve Field</b>			
<b>ENGINEER</b>	<b>QC</b>	<b>SALES</b>	
<b>Customer Approve Field</b>			
<b>ENGINEER</b>	<b>QC</b>	<b>MANUFACTORY</b>	<b>PURCHASING</b>

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## FCC Statement

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.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:** 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 or more 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.

The WLAN 11b/g/n USB MODULE is designed to comply with the FCC statement. FCC ID is S8J-R8192EU6. The host system using WLAN 11b/g/n USB MODULE, should have label indicated it contain modular' s

FCC ID: S8J-R8192EU6.

This radio module must not installed to colocate and operating simultaneously with other radios in host system , additional testing and equipment authorization may be required to operating simultaneously with other radio.

### \* RF warning for Mobile device:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

## 0. Revision History

Date	Document revision	Product revision	Change Description
2015/08/22	V0.1	V0.1	Draft initial release

## 1. General Description

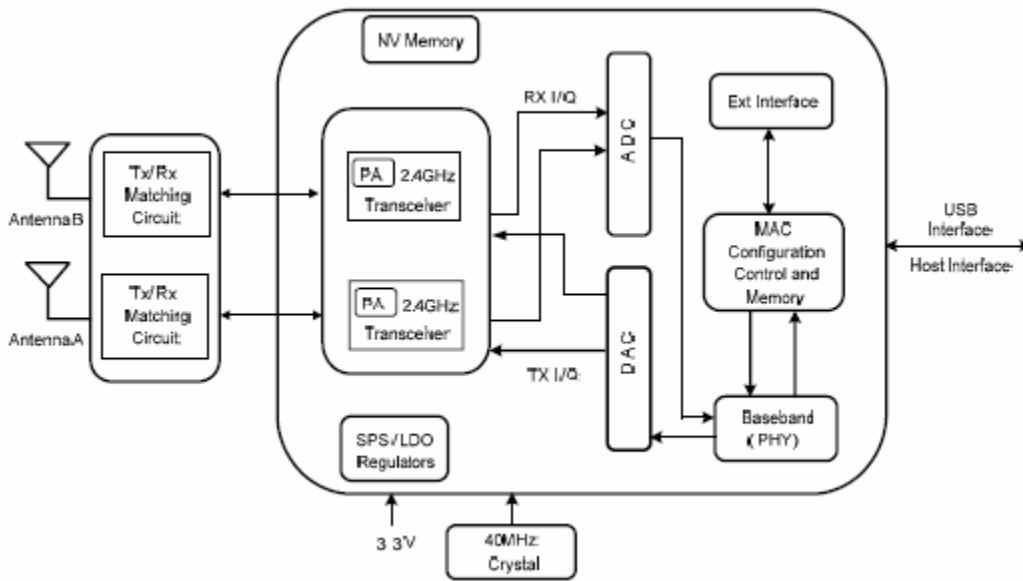
BL-R8192EU6 product is designed base on The Realtek RTL8192EU chipset . It uses a highly integrated single-chip MIMO (Multiple In, Multiple Out) Wireless LAN (WLAN) solution for the wireless high throughput 802.11n specification. It combines a MAC, a 2T2R capable baseband, and RF in a single chip. It provides a complete solution for a high throughput performance wireless Lan controller. The RTL8192EU baseband implements Multiple Input, Multiple Output (MIMO) Orthogonal Frequency Division Multiplexing (OFDM) with 2 transmit and 2 receive paths (2T2R) and is compatible with the 802.11n specification. 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 the better performance in the analog portions of the transceiver.

## 2. The range of applying

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

## 3. Product Specification

### 3.1 Function Block diagram



### 3.2 Electrical and Performance Specification

Item	Description
Product Name	WLAN 11b/g/n USB MODULE
Major Chipset	RTL8192EU
Host Interface	USB2.0
Standard	IEEE802.11b, IEEE 802.11g, IEEE 802.11n
Frequency Range	2412-2462MHz for 802.11b/g/n(HT20) ; 2422-2452MHz for 802.11n(HT40)
Modulation Type	802.11b: CCK, DQPSK, DBPSK 802.11g: 64-QAM, 16-QAM, QPSK, BPSK 802.11n: 64-QAM, 16-QAM, QPSK, BPSK
Working Mode	Infrastructure, Ad-Hoc
Data Transfer Rate	1, 2, 5.5, 6, 11, 12, 18, 22, 24, 30, 36, 48, 54, 60, 90, 120, 135 and maximum of 300Mbps
Spread Spectrum	IEEE 802.11b: DSSS (Direct Sequence Spread Spectrum) IEEE 802.11g/n: OFDM (Orthogonal Frequency Division Multiplexing)
Sensitivity @PER(Typical)	1M: -94dBm@8%PER 6M: -91dBm@10%PER 11M: -86dBm@8%PER 54M: -74dBm@10%PER 135M: -68dBm@10%PER
RF Power	18dBm@11b, 14dBm@11g, 13dBm@11n (Tolerance: +/-2dB)

Antenna type	Connect to the external antenna through the IPEX
The transmit distance	Indoor 100M, Outdoor 300M, according the local environment
Dimension(L*W*H)	40.0x 20.0x 3.2mm (LxWxH) Tolerance:+/-0.2mm
Power supply	3.3V +/-0.2V
Power Consumption	standby mode 30mA@3.3V , TX mode 190mA@3.3V
Clock source	40.00MHz
Working Temperature	-10°C to +50°C
Storage temperature	-40°C ~ +85°C

### 3.3 DC Characteristic

Terms	Contents			
Specification : IEEE802.11b				
Mode	DSSS / CCK			
Data rate	1, 2, 5.5, 11Mbps			
DC Characteristics	min	Typ.	max.	unit
TX mode	182	190	204	mA
Rx mode	37	40	41	mA
Sleep mode	28	30	32	mA
Specification : IEEE802.11g				
Mode	OFDM			
Data rate	6, 9, 12, 18, 24, 36, 48, 54Mbps			
DC Characteristics	min	Typ.	max.	unit
TX mode	176	184	192	mA
Rx mode	36	38	41	mA
Sleep mode	26	29	31	mA
Specification : IEEE802.11n				
Mode	OFDM			
Data rate	13.5,27,40.5,54,81,108,121.5,135Mbps			
DC Characteristics	min	Typ.	max.	unit
TX mode	184	196	200	mA
Rx mode	37	41	42	mA
Sleep mode	26	30	32	mA

### 3.4 Product Photo

TOP

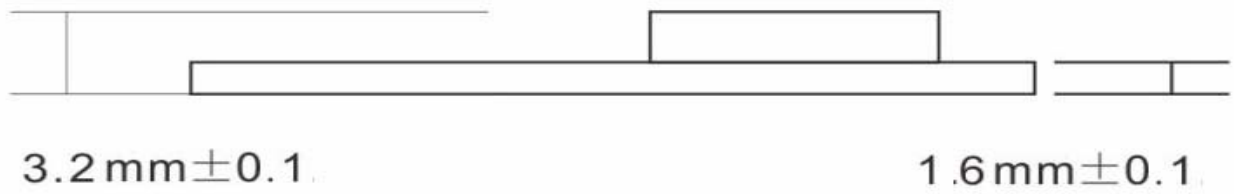
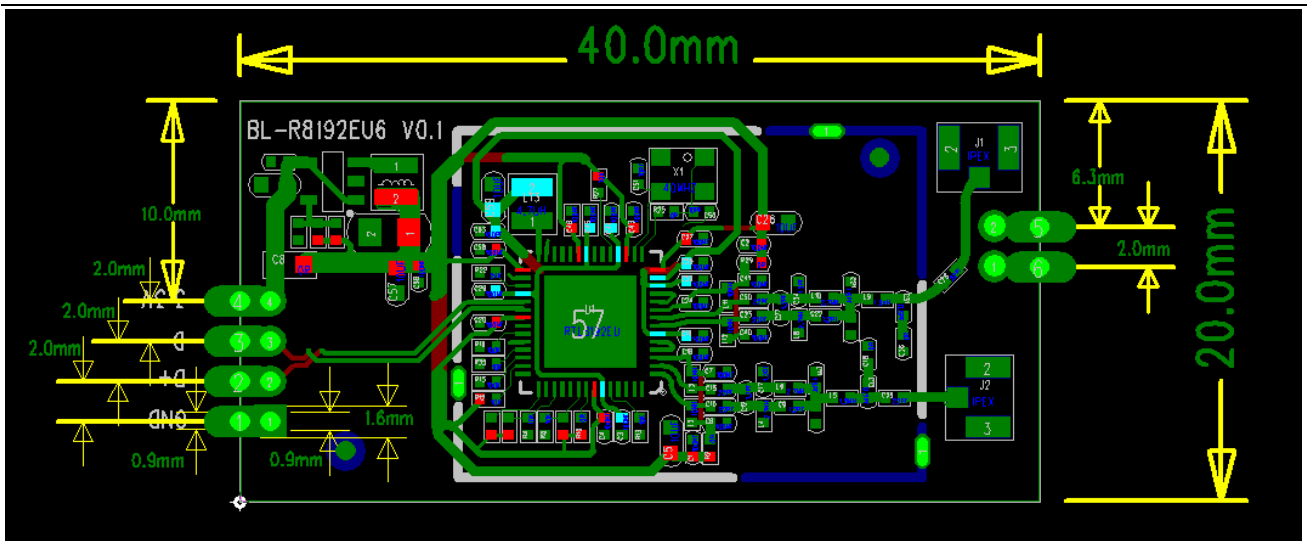


Bottom

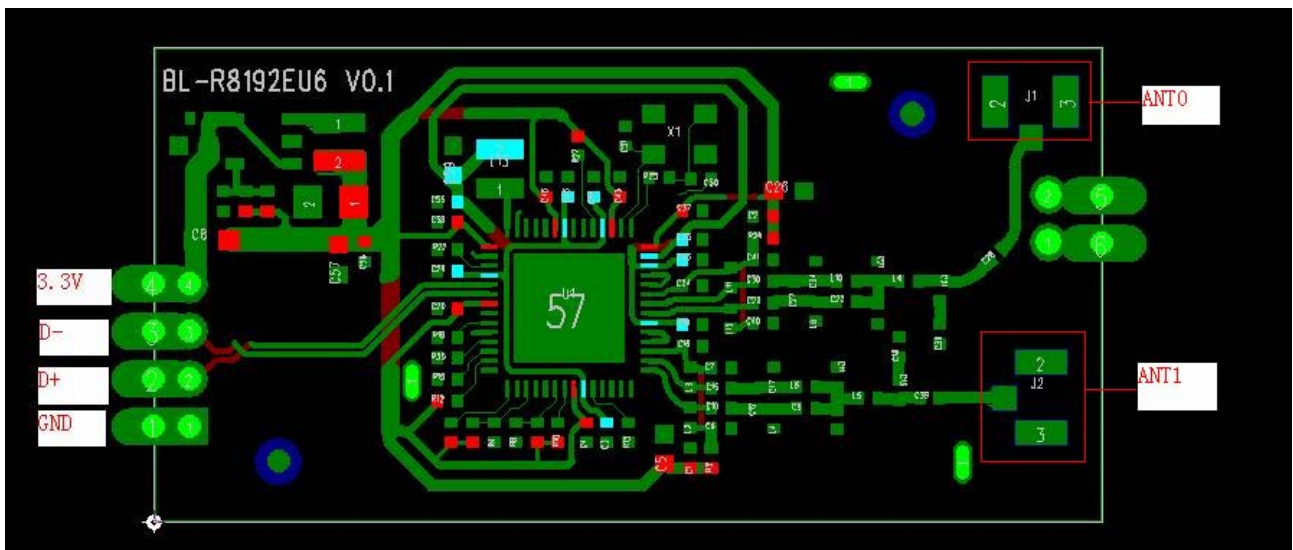


### 3.5 Mechanical Specification

Module dimension: Typical (W x L x H): 40.0mmx20.0mm x3.2mm    Tolerance : +/-0.2mm

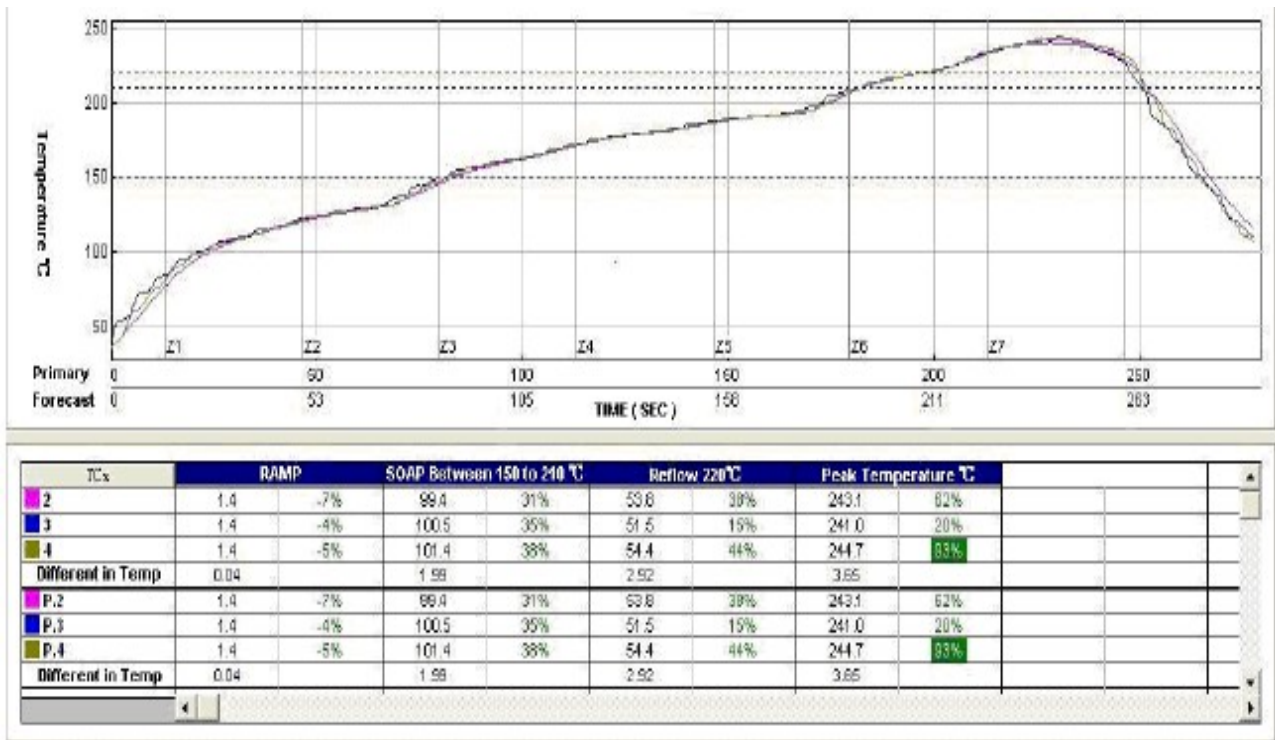


### 3.6 Product Pin Definition





## 4. Typical Solder Reflow Profile



## 5. Precautions for use

1. Pls handle the module under ESD protection.
2. Reflow soldering shall be done according to the solder reflow profile. Peak temperature 245°C.
3. Products require baking before mounting if humidity indicator cards reads >30% temp <30 degree C, humidity < 70% RH, over 96 hours.  
Baking condition: 125 degree C, 12 hours  
Baking times: 1 time
4. Storage Condition: Moisture barrier bag must be stored under 30 degree C, humidity under 85% RH. The calculated shelf life for the dry packed product shall be a 12 months from the bag seal date. Humidity indicator cards must be blue, <30%.