RL-UM02

Product Specifications

WLAN 11b/g/n USB module (1T1R)

Version: 1.0

Overview

UM02 is a WLAN 11n USB module, which fully supports the features

and functional compliance of IEEE 802.11n,e and i standards.

It supports up to 150Mbps high-speed wireless network connections.

It is designed to provide excellent performance with low power

Consumption and enhance the advantages of robust system and

cost-effective.

It is targeted at competitive superior performance, better power

Management applications.

Features

* Operates in 2.4 GHz frequency bands

* Data rates: up to 150Mbps

* 802.11e-compatible bursting and I standards

* BPSK, QPSK, 16 QAM, 64 QAM modulation schemes

* WEP, TKIP, and AES, WPA, WPA2 hardware encryption **schemes**

General Specification

| Model	RL-UM02
Product Name	WLAN 11n USB module
Major Chipset	Realtek RTL8188CTV
Standard	802.11b/g/n, 802.3, 802.3u
Data Transfer Rate	1,2,5.5,6,11,12,18,22,24,30,36,48,54,60,90,120 and maximum of 150Mbps
Modulation Method	BPSK/ QPSK/ 16-QAM/ 64-QAM
Frequency Band	2.4~2.4835 GHz ISM Band
Spread Spectrum	IEEE 802.11b: DSSS (Direct Sequence Spread Spectrum) IEEE 802.11g/n:OFDM (Orthogonal Frequency Division Multiplexing)
RF Output Power	< 13dBm@11n,< 18dBm@11b,< 14dBm@11g
Operation Mode	Ad hoc, Infrastructure
Receiver Sensitivity	11B 11Mbps -86dBm@8%, 5.5Mbps -88dBm@8%, 2Mbps -90dBm@8% 1Mbps -91dBm@8% 11G 54Mbps -73dBm@10%, 48Mbps -73dBm@10% 36Mbps -76dBm@10% 24Mbps -79dBm@10% 18Mbps -82dBm@10% 12Mbps -85dBm@10% 9Mbps -87dBm@10% 6Mbps -88dBm@10% 11N HT20 MCS0 -88dBm@10% MCS1 -85dBm@10% MCS2 -82dBm@10% MCS3 -79dBm@10% MCS4 -76dBm@10% MCS5 -73dBm@10% MCS6 -70dBm@10% MCS7 -68dBm@10% 11N HT40 MCS0 -86dBm@10%

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	MCS1 -84dBm@10% MCS2 -81dBm@10% MCS3 -78dBm@10% MCS4 -75dBm@10% MCS5 -72dBm@10% MCS6 -69dBm@10% MCS7 -66dBm@10%
Operation Range	Up to 180 meters in open space
LED	
OS Support	Windows 2000,XP32-64,Vista 32/64,Win7 32/64,Linux,Mac, Android, WIN CE
Security	WEP, TKIP, AES, WPA, WPA2
Interface	USB 2.0
Power Consumption	DC3.3V Normal Internet maximum power dissipation in 120MA
Operating Temperature	-20 ~ +60°C ambient temperature
Storage Temperature	-10 ~ 70°C ambient temperature
Humidity	5 to 90 % maximum (non-condensing)
Dimension	30.4x 15.4 x 14mm (LxWxH) +-0.2MM

Dimensions:
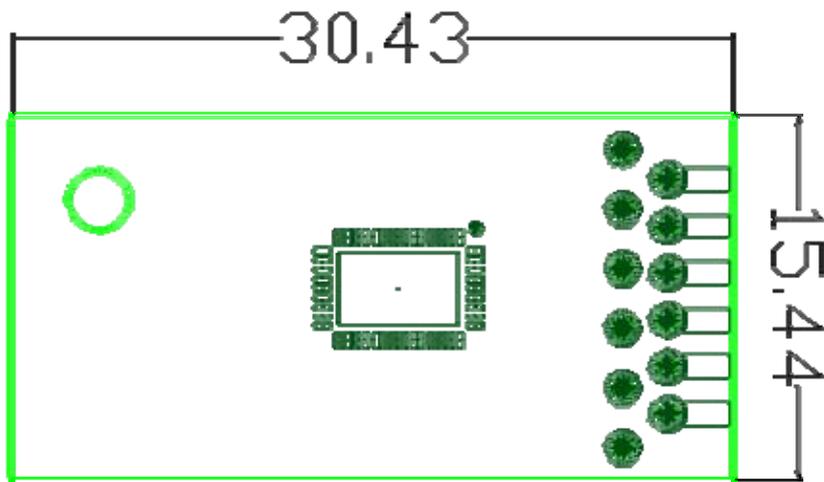
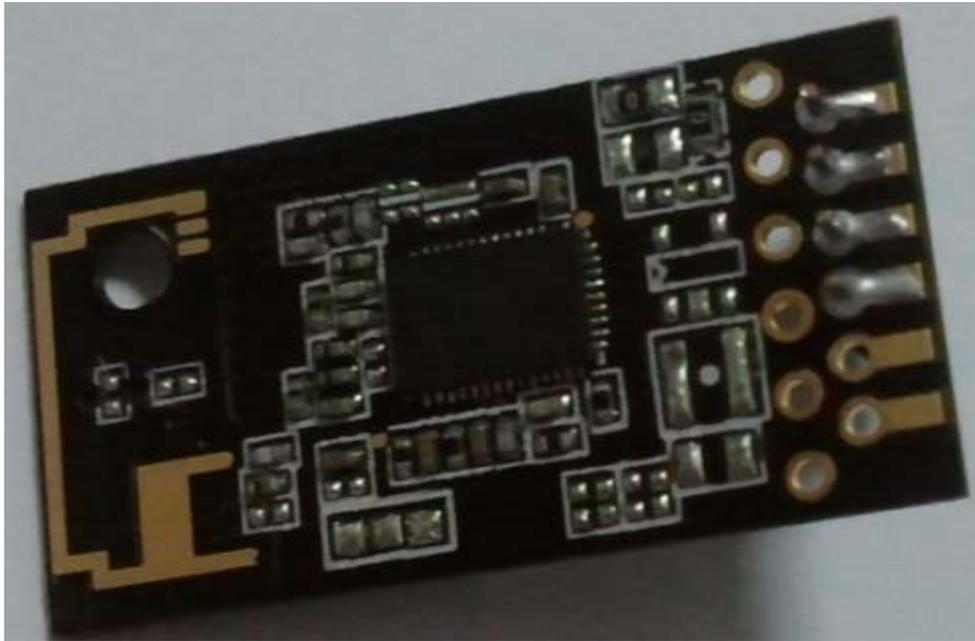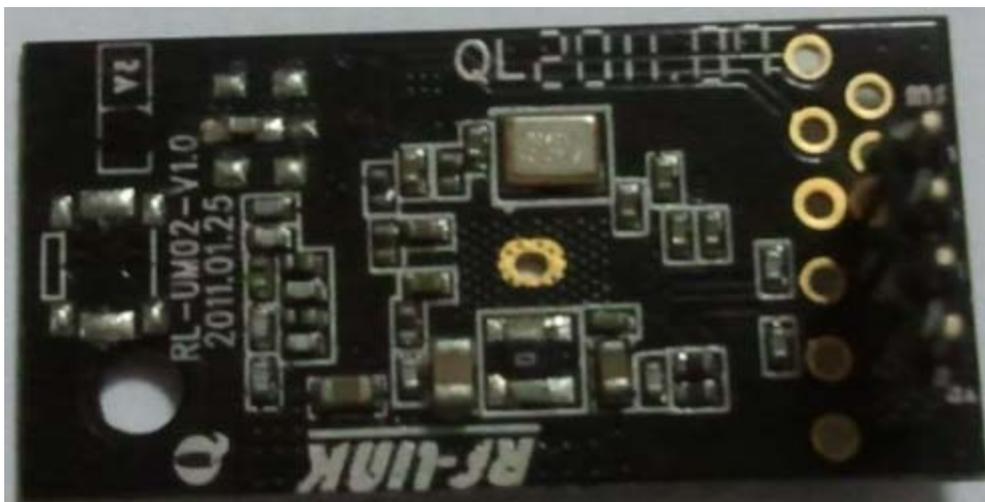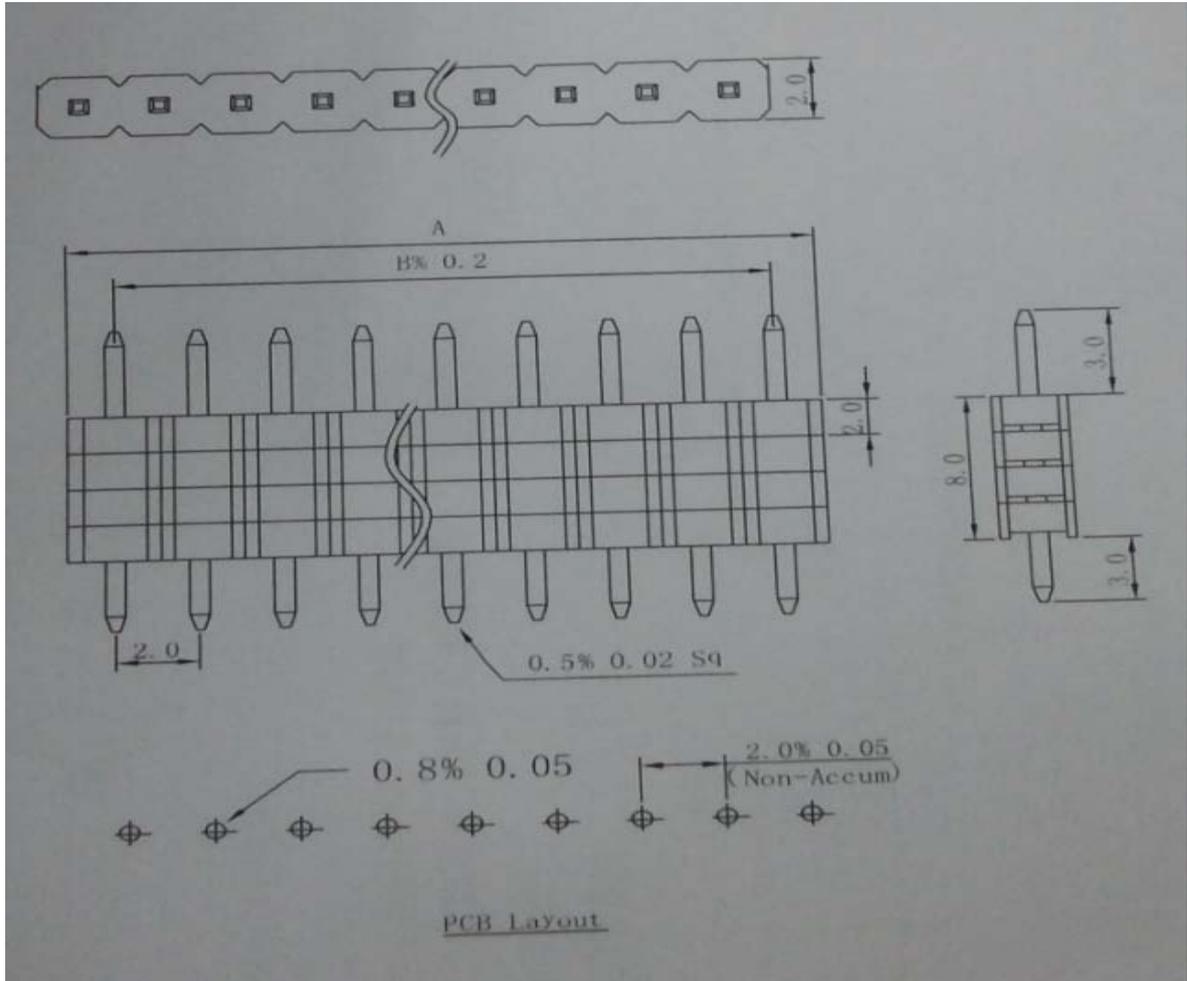**The PCB tolerances within + / -0.2 or so**

PIN Definition
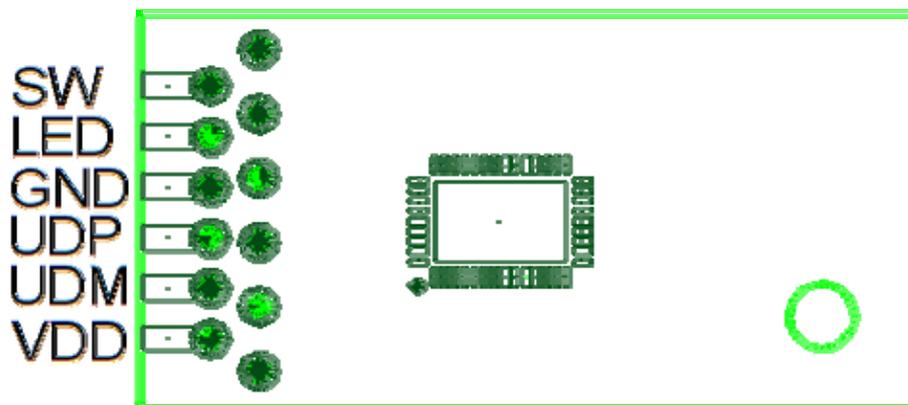
TOP

BOT

排针规格

DC Characteristics

Symbol	Parameter	Minimum	Typical	Maximum	Units
VD3.3A, VD3.3D	3.3V I/O Supply Voltage	3.1	3.3	3.5	V
VD15A, VD15D	1.5V Supply Voltage	1.4	1.5	1.6	V
IDD3.3V	3.3V Rating Current	-	-	500	mA

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Power Consumption

Parameters	Sym	Conditions	Min	Typ	Max	Unit
3.3V Supply Voltage	Vc33		3.1	3.3	3.5	V
1.5V Supply Voltage	Vc15		1.4	1.5	1.6	V
Receiving Tests the biggest receive						
3.3V Current Consumption	Icc33rx	H40MCS7		113		MA
3.3V Current Consumption	Icc33rx	OFDM 54M		125		MA
Transmission Biggest transmission test						
3.3V Current Consumption	Icc33tx	H40 MCS7		138		MA
3.3V Current Consumption	Icc33tx	OFDM 54M		152		MA
The depth waits for an opportunity	**Icc33tx/rx**			**2**		**MA**
Deep sleep	**Ic33tx/rx**			**2**		**MA**

USB interface electrical characteristics

USB_A-PLUG

CON3A

90ohm

HSDP
HSDM

HSDP
HSDM

C68 NC
C69 NC

4
3
2
1

5V

Two root go line do difference, but also required to make 90 0 the impedance test
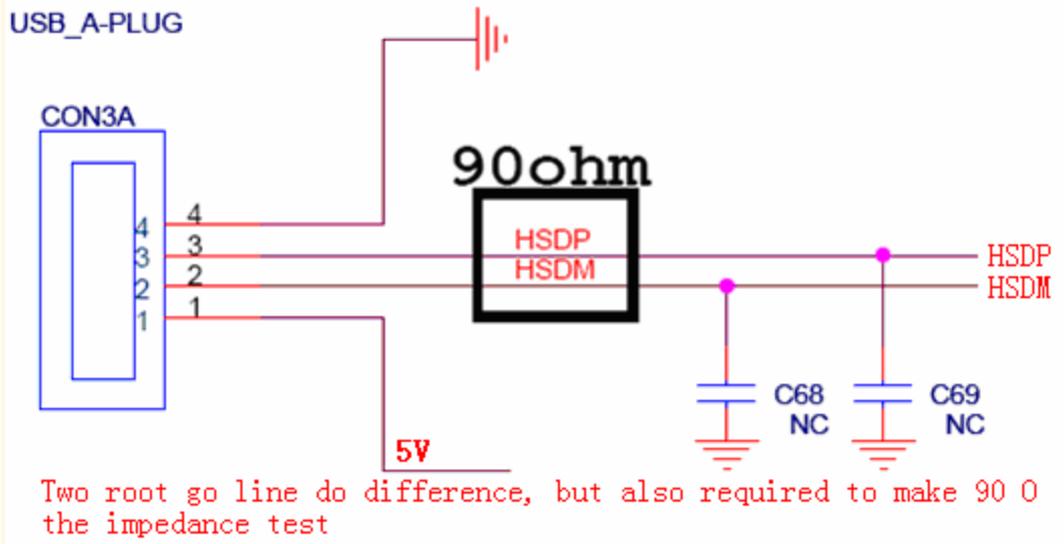
Regulatory Information

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.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module.
This exterior label can use wording such as the following:
"Contains Transmitter Module FCC ID: A5LRL-UM02

When the module is installed inside another device, the user manual of this device must contain below warning statements;
1. 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.
(2) This device must accept any interference received, including interference that may cause undesired operation.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This modular could be installed in the fix or mobile devices only, installed in the portable device, like USB dongle like transmitters is forbidden. This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

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.

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