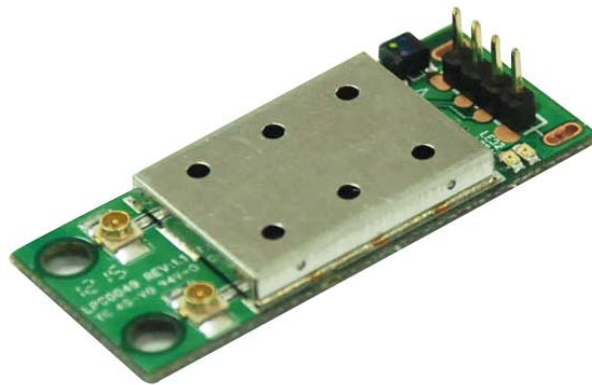


LP-8697C

802.11B/G/N(2T2R) Wifi Module

USER MANUAL 1.0.0



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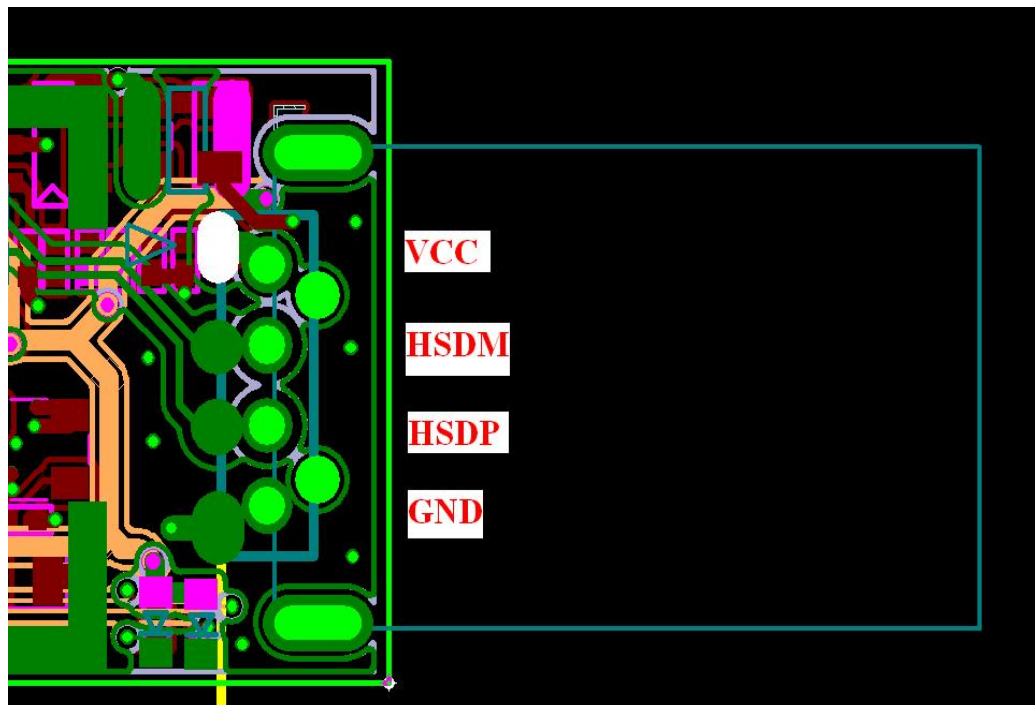
1. Overview

LP-8697C Wireless LAN Module is a perfect combination of both performance and cost-effective product introduced. LP-8697C is a highly integrated single-chip Realtek RTL-8192CU MIMO Wireless LAN USB 2.0 network interface controller complying with the IEEE 802.11n specification. It combines a MAC, 2T2R capable baseband and RF in a single chip. The RTL8192 provides a complete solution for a high-performance wireless client. baseband implements MIMO, OFDM with 2T2R, and support for both 20MHz and 40MHz channel bandwidth. Provide the higher data rates of 54Mbps and 300Mbps for IEEE802.11g and 802.11n MIMO OFDM respectively.

2. Product Spec

Standards	IEEE802.11b/g/n
Antenna interface	IPEX connector
Chip Set	Realtek RTL8192CU
Frequency Band	2.400~2.484 GHz unlicensed ISM band
Modulation Technology	Orthogonal frequency division multiplexing(OFDM), Direct Sequence Spread Spectrum(PBCC,CCK,DQPSK, DBPSK)
Data Rate	802.11b : 11,5.5,2 and 1 Mbps with auto-rate fall back 802.11g : 54,48,36,24,18,12,9 & 6 Mbps 802.11n : (20MHz) : up to 72/144 Mbps 802.11n : (40MHz) : up to 150/300 Mbps
Sensitivity	-95dBm @802.11b/-89dbm @802.11g/-89 dbm @802.11n
Security	64/128 bit WEP/WPA/WPA2(TKIP/AES)
Driver support	Windows ® XP 32/64, Vista 32/64,Win 7 32/64
Working mode	Infrastructure/Ad-Hoc/Soft AP
Operation Voltage	5V DC
Host Interface	USB 2.0 / 4 Pins header
Frequency Stability	<±5ppm @ Room Temperature +25℃
OFDM Output Power	15dBm (Typ.) @EVM<3%, all channel
CCK Spectral Mask @Pout=18dBm	-37dBc (Typ.) @ 11~22MHz -60dBc (Typ.) @ 22~33MHz
2f Harmonics	-55dBm (Typ.)
LO Leakage Peak Power	-64dBm (Typ.) @Transmit State
Receiver sensitivity (PER<10%)	-65dBm [Typ.] @ HT40M, MCS7 -70dBm [Typ.] @ 54M, OFDM -73dBm [Typ.] @ 11M, CCK -95dBm [Typ.] @ 1M, CCK
RF Port Impedance	50Ω±10%
USB Differential Port Impedance	90Ω±10%
Temperatures(AMBIENT)	Operation: 0℃~60℃, Storage:-20℃~70℃

3. Pin Configurations



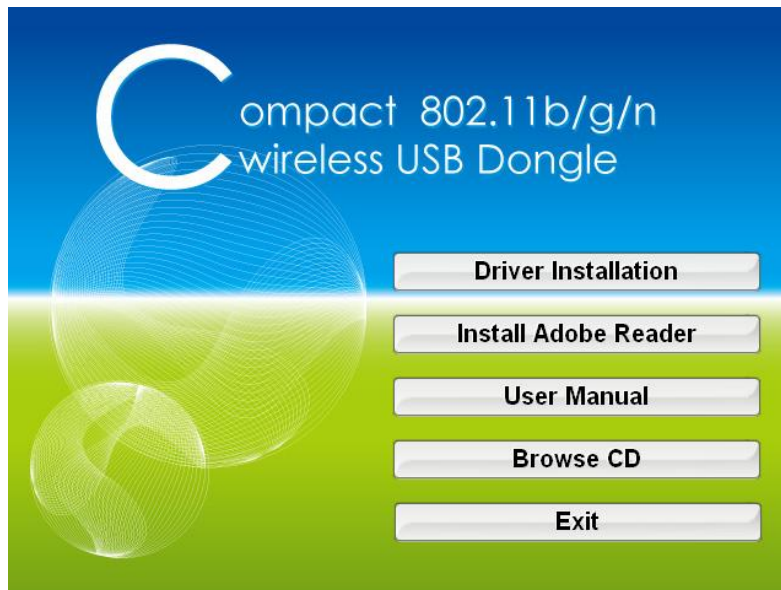
4. Software Installation

Step 1: Software Installation

Insert product CD to your PC. At the welcome screen, please click “Driver Installation” to install the device driver & utility.

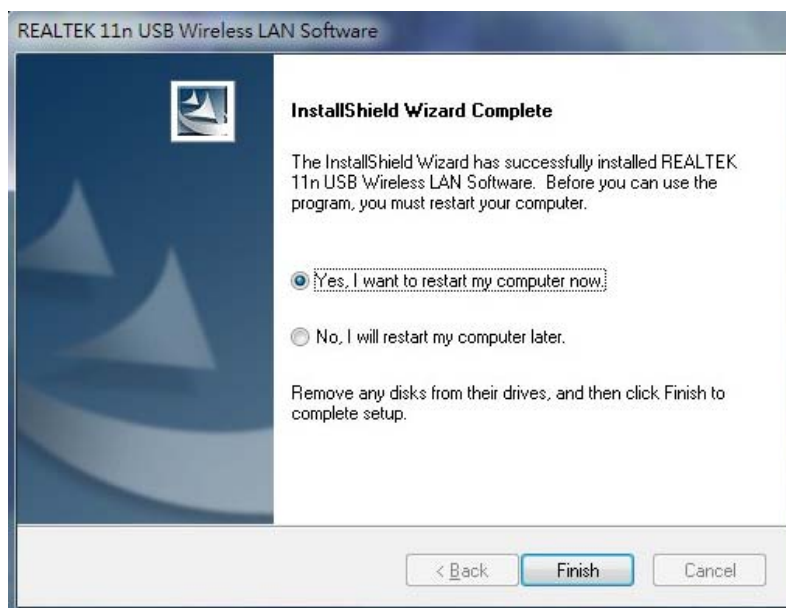
If you do not see the welcome screen, go to Start > My Computer and click to open CD-ROM drive.

Then double click autorun.exe and wait a few seconds for the welcome screen to show up.



Step 2: Restart your computer

Once the installation is finished, click Finish button to restart your computer.



Step 3: Connect the USB adapter

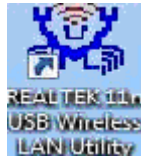
Plug the USB Dongle into a USB port on your Laptop or Desktop computer.

Step 4: Connect to Wireless Network

To connect to a wireless network, double click on the Wireless Utility icon in the system tray or on the desktop.



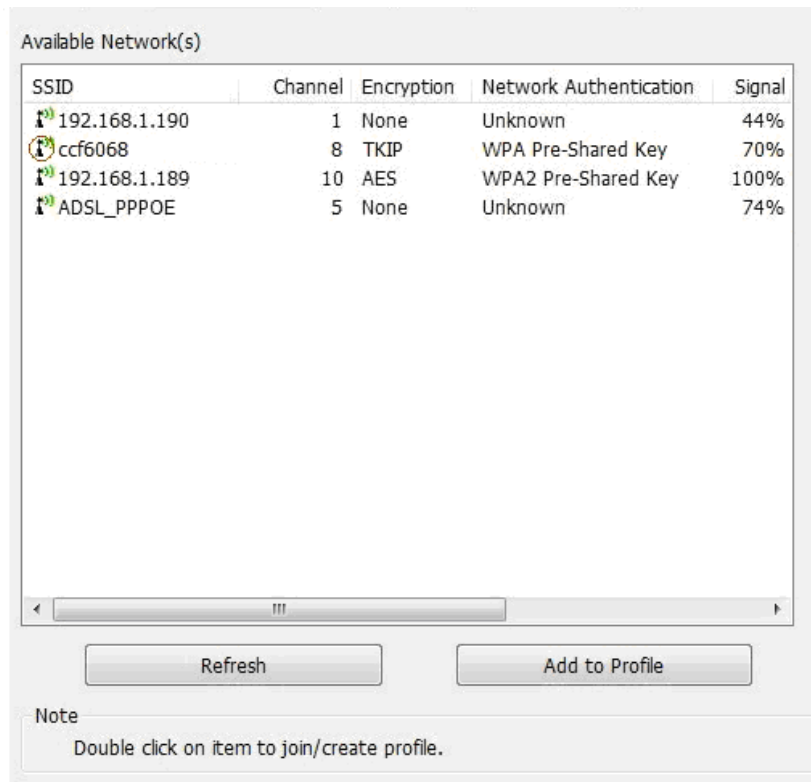
Icon in system Tray



Icon on Desktop

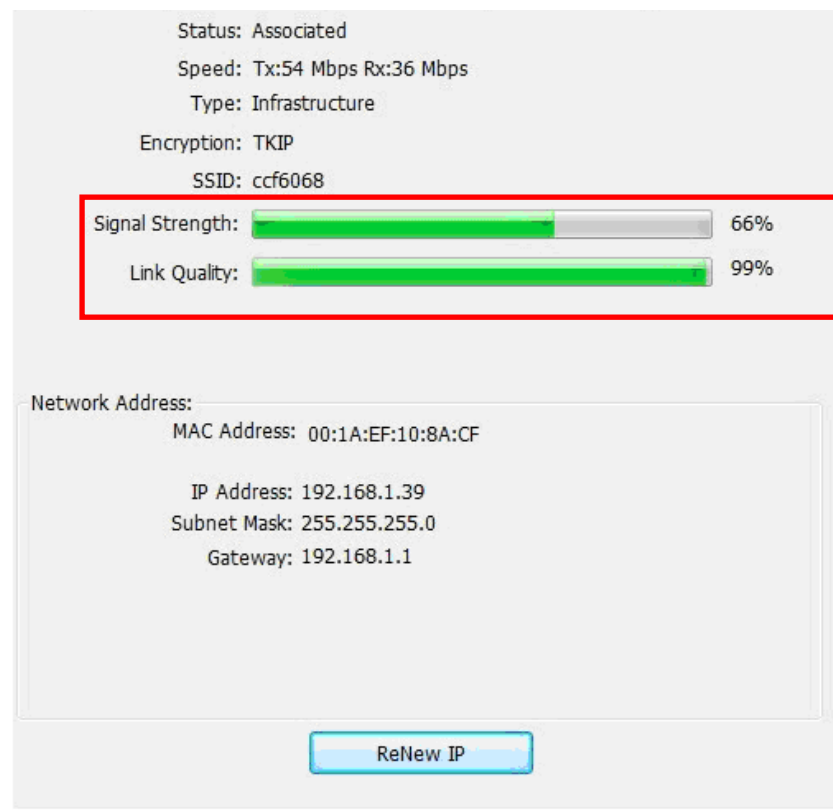
Click on Available Network tab to view all the access points within range of the adapter.

Double Click on the Access Point's SSID to join the network. If the wireless Network you selected requires security, the utility will guide you through the appropriate security setup.



Available Network tab

After the signal strength is indicated, you have successfully set up your wireless network on your PC or Laptop.



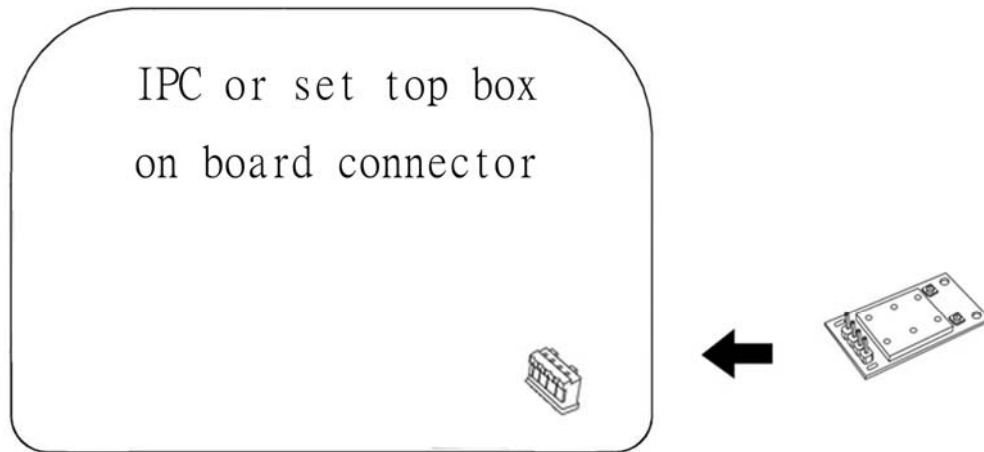
General tab

Unable to connect to a wireless network?

1. Ensure that the LEDs of your router are correctly lit.
 - ✓ Check whether your Wireless LAN settings (e.g. SSID, Channel Number) are the same as the routers.
 - ✓ Check whether you use the same encryption key (e.g. WEP or WPA) for both Dongle and the router.
2. Make sure that your USB Dongle is correctly installed.
 - ✓ Check that your Dongle is plugged in properly to the USB port or try to plug the Dongle into another USB port if available.
 - ✓ The LED on Dongle should be lit. if not, (i) there could be a hardware problem, or (ii) Dongle is disabled or (iii) device driver is not installed properly.

5. Hardware Installation

➤ Connect the on board connector with pin header module.



Federal Communication Commission Statement (FCC, U.S.)

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.

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.

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.

IMPORTANT NOTES

FCC Radiation Exposure Statement:

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.

Co-location warning:

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Limited Channels fixed for use in the US:

IEEE 802.11b or 802.11g or 802.11n(HT20,HT40) operation of this product in the U.S. is firmware-limited to Channel 1 through 11.

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 transmitter or antenna. The module shall be only used with the external antenna(s) that has been originally tested and certified with this module.

For all products market in US, OEM has to limit the operation channels in Channel 1 to Channel 11 as specified above by the supplied firmware programming tool. OEM shall not supply any tool or info to the end-user regarding to Regulatory Domain change.

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 requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

Validity of using the module certification:

In the event that these conditions cannot be met (for example certain laptop configurations 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 circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

Custom design antennas may be used, however the OEM installer must following the FCC 15.21 requirements and verify if new FCC approval will be necessary.

End product labeling:

This transmitter module is authorized 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 FCC ID: ORSLP-8697C".

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.