

***802.11 a/b/g/n, 2.4G/5G 2T2R
Wireless USB Module***

WN4502B

User's Manual

REGULATORY STATEMENTS

FCC Certification

The United States Federal Communication Commission (FCC) and the Canadian Department of Communications have established certain rules governing the use of electronic equipment.

Part15, Class B

This device complies with Part 15 of 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. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part15 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 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.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.



CAUTION

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. For product available in the USA market, only channel 1~11 can be operated. Selection of other channels is not possible.

IMPORTANT NOTE:

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

20cm minimum distance has to be able to be maintained between the antenna and the users for the host this module is integrated into. Under such configuration, the FCC radiation exposure limits set forth for an population/uncontrolled environment can be satisfied.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

USERS MANUAL OF THE END PRODUCT:

In the users manual of the end product, the end user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated. The end user has to be informed that the FCC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied. The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment. If the size of the end product is smaller than 8x10cm, then additional FCC part 15.19 statement is required to be available in the user manual: This device complies with Part 15 of 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.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B conforme à la norme NMB-003 du Canada.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

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

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p) is not more than that permitted for successful communication.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20cm 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: PPQ-WN4502B"

INTRODUCTION

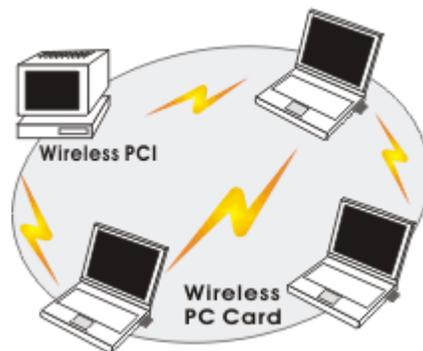
The **Broadcom 802.11n Wireless USB Adapter** is a device that allows you connect your computer to a wireless local area network (LAN). A wireless LAN allows your system to use wireless Radio Frequency (RF) technology to transmit and receive data without physically attaching to the network. The Wireless protocols that come with this product ensure data security and isolation from interference generated by other radio frequencies.

This card also allows you to take full advantage of your computer's mobility with access to real-time information and online services anytime and anywhere. In addition, this device eliminates the bother of pulling cable through walls and under furniture. It even allows you to place your system in locations where cabling is impossible. Modifying and augmenting networks has never been so easy.

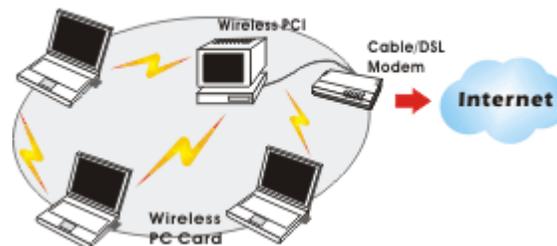
Wireless Network Options

The Peer-to-Peer Network

This network installation lets you set a small wireless workgroup easily and quickly. Equipped with wireless PC Cards or wireless PCI, you can share files and printers between each PC and laptop.

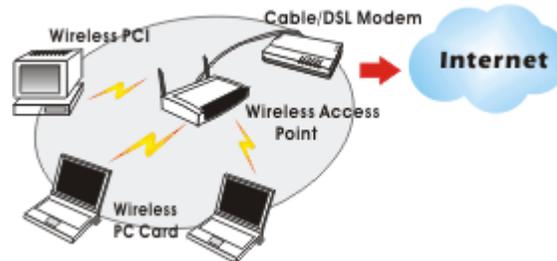


You can also use one computer as an Internet Server to connect to a wired global network and share files and information with other computers via a wireless LAN.



The Access Point Network

The network installation allows you to share files, printers, and Internet access much more conveniently. With Wireless LAN Cards, you can connect wireless LAN to a wired global network via an **Access Point**.



SOFTWARE INSTALLATION

Install the device

1. Make sure the computer is turned off. Remove the expansion slot cover from the computer.
2. Carefully slide the **Broadcom 802.11n Wireless USB Adapter** with the USB connector, Push evenly and slowly and ensure it is properly seated.
3. After the device has been connected to your computer, turn on your computer. Windows will detect the new hardware and then automatically copy all of the files needed for networking.

Install the Driver & Utility

1. Exit all Windows programs. Insert the included CD-ROM into your computer. The CD-ROM will run automatically.
2. Manually install driver from Device Manager.

HARDWARE INSTALLATION

To verify if the device exists in your computer and is enabled, go to **Start → Control Panel → System (Hardware) → Device Manager**. Expand the **Network Adapters** category. If the **Broadcom 802.11n Wireless USB Adapter** is listed here, it means that your device is properly installed and enabled.

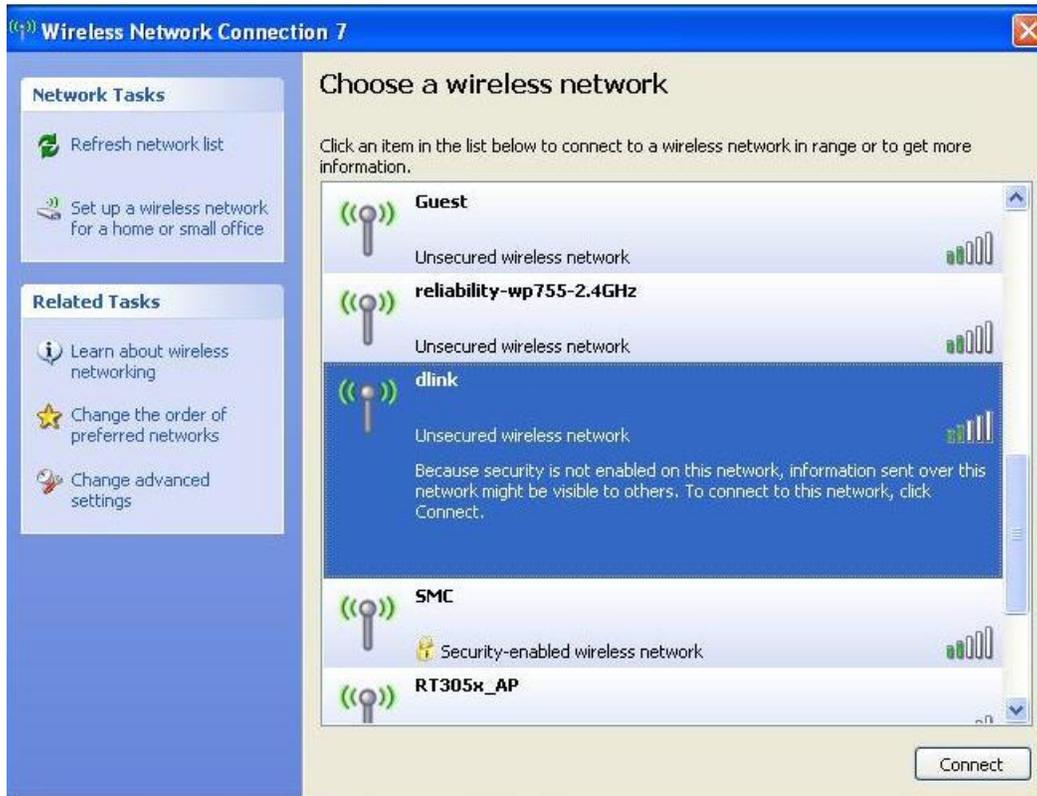
NETWORK CONNECTION

Once the device driver is well installed, a network setting described in the following should be also established.

1. Click the Wireless icon to enable Windows Zero Configure.



2. Select the AP then click the **Connect**



3. Surfing the Internet after completing connection.



This device is operation in 5.15 – 5.25GHz frequency range, then restricted in indoor use only.

This device is slave equipment, the device is not radar detection and not ad-hoc operation in the DFS band.

FCC NOTICE: To comply with FCC part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.

Only the antennas listed below are allowed to be used with the EUT output power.

Antenna List

No.	Manufacturer	Part No.	Peak Gain	NOTE
1	AmTRAN	EDB-18S with metal reflector	2.5 dBi in 2.4GHz 4.5 dBi in 5.0GHz	with metal reflector (Output power #1)
2	AmTRAN	EDB-45S with metal reflector	2.5 dBi in 2.4GHz 4.5 dBi in 5.0GHz	
3	AmTRAN	MSA-3025-25GC4 with metal reflector	4.21 dBi in 2.4GHz 4.5 dBi in 5.0GHz	
4	AmTRAN	FPA-3025-25GC4 with metal reflector	4.26 dBi in 2.4GHz 6 dBi in 5.0GHz	
5	AmTRAN	EDB-18S	2 dBi in 2.4GHz 3 dBi in 5.0GHz	without metal reflector (Output power #2)
6	AmTRAN	EDB-45S	2 dBi in 2.4GHz 3 dBi in 5.0GHz	
7	AmTRAN	MSA-3025-25GC4	2.54 dBi in 2.4GHz 4 dBi in 5.0GHz	
8	AmTRAN	FPA-3025-25GC4	2.75 dBi in 2.4GHz 4.5 dBi in 5.0GHz	

NOTE:

1. There are two different EUT output power for with ground plane antenna and without ground plane antenna.
2. About Output power, please refer to report: 113119R-RFUSP32V01 、 113119R-RFUSP32V01-A 、 113119R-RFUSP42V01 、 113119R-RFUSP42V01-A