Wireless Network Adapter User Manual

Package Contents

The following items should be found in your package:

- Wireless network USB adapter
- > CD for wireless network adapter
- Quick Installation Guides

Make sure that the package contains above items. If any of the listed item are damaged or missing, please contact with your distributor.

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1 Introduction

Thank you for choosing this 11N Wireless Network Adapter.

1.1 Product Overview

The Wireless Network Adapter is a powerful 32-bit USB 2.0 Adapter that installs quickly and easily into PCs. The Adapter can be used in Ad-Hoc mode to connect directly with other cards for peer-to-peer file sharing or in Infrastructure mode to connect with a wireless access point or router for access to the Internet in your office or home network.

The Wireless USB Adapter connects with 802.11n networks at up to an incredible 150Mbps! And for added versatility, it can also interoperate with all the up to 54Mbps 802.11g or 11Mbps 802.11b products found in homes, businesses, and public wireless hotspots around the country. And in every mode, your wireless communications are protected, so your data stays secure.

1.2 Main Features

- > Complies with IEEE 802.11b, 802.11g and 802.11n standard for 2.4GHz Wireless LAN
- ➢ Compliant with USB2.0 Standard
- Capable of up to 128-Bit WEP, TKIP and AES
- Supports Windows98/ME/2000/XP/Vista/7
- Supports MIMO technology with 1 transmit and 1 receive.
- Lower power consumption
- ► Easy to install and configure
- Support WPS

1.3 Standards

- ➤ 802.11b/g/n
- ➤ 802.11i

1.4 Working Environment

Temperature

- > 0° to 50° C (operating),
- → -40° to 70° C (storage)

Humidity

- > 10% to 90 % non-condensing (operating),
- ➣ 5% to 90% non-condensing (storage)

1.5 System Requirement

You must have at least the following

- > A laptop computer/desktop PC with an available 32-bit USB slot
- > At least a 300MHz processor and 32MB of memory
- Windows 98SE, ME, 2000, XP, Vista/7
- ➤ A CD-ROM Drive
- > USB controller properly installed and working in the computer
- A 802.11n 、 802.11g or 802.11b Access Point (for infrastructure Mode) or another 802.11n、
 802.11g or 802.11b wireless adapter (for Ad-Hoc; Peer-to-Peer networking mode).

2 Driver and Utility Installation

- > Insert the Driver and Utility CD-ROM into the CD-ROM driver.
- The Wizard should run automatically. If not, click the Start button and choose Run. In the field that appears, enter D:\autorun.exe (if "D" is the letter of your CD-ROM drive).
- Click Install Driver & Utility for USB Adapter on the Wireless Client Configuration Utility dialogue box, and then select the installing language from the next screen and click Next button.

Wireless LAN - InstallShield Wizard	_ 🗆 ×
Choose Setup Language Select the language for the installation from the choices below.	
Basque Bulgarian Catalan Chinese (Simplified) Chinese (Traditional) Croatian Czech Danish Dutch English Finnish French (Canadian) French (Standard) German Greek	
InstallShield	> Cancel

Figure 2-1

Click Next



Figure 2-2

Click **Install** to start installing

11n USB Wireless LAN Driver and Utility
11n USB Wireless LAN Driver and Utility
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< <u>B</u> ack <u>I</u> nstall Cancel

Figure 2-3

> Follow the InstallShield Wizard steps, and click **Finish** when done.



Figure 2-4

Now your PC or notebook will restart automatically.

3 Install Wireless Adapter

The wireless USB Adapter supports up to 150 Mbps wireless connection. This card is fully compliant with the specifications defined in IEEE802.11n standard. It is designed to complement USB2.0 computers and supports Windows98SE/Me/2000/XP/Vista.

The status LED indicators of the USB wireless adapter

- Lnk/Act ON (Green): Indicates a valid connection
- Lnk/Act Flashing: Indicates the adapter is transmitting or receiving data.



Figure 3-1

Install USB adapter

- > Power on your PC, let the operating system boot up completely, and log in as eeded.
- ▶ Hold the adapter and insert it into a USB slot.



Figure 3-2

> If the Welcome to Found New Hardware Wizard displays, choose install the software

automatically (Recommended), and click Next button. The driver will be installed automatically.



Figure 3-3

Now you have completed the driver and hardware installation for the adapter.

4 System Configuration

This wireless network adapter provides two modes: Station mode and Access Point mode, the default is Station mode. You can select remote wireless AP to connect to Internet in station mode. But in the AP mode, the wireless network adapter act as a wireless access point which wireless client can connect to share an Internet connection with others

Use the Wireless LAN Utility to check the link information, search for available wireless networks, or create profiles that hold different configuration settings. You can double-click the icon (the following picture) on your desktop to run it. Another way to start the Configuration Utility is to click Start>Programs> 11n USB Wireless LAN Utility> 11n USB Wireless LAN Utility.

If you are using Windows XP, you can use either the Zero Configuration Utility or the Wireless Client Configuration.



Figure 4-1

4.1 General

The General tab (the following picture) displays current basic wireless connection information.

🏴 11n USB Wireless LAN Utility 📃 🗖 🔀						
Refresh(R) Mode(M) View(V) About(A)						
General Profile Available Network Status Statistics Wi-Fi Protect Setup						
Wireless LAN 80.						
	Status: Associated					
	Speed: Tx:150 Mbps Rx:300 Mbps					
	Type: Infrastructure					
	Encryption: None					
	SSID: 802.11bgn-SSID					
	Signal Strength: 100%					
	Link Quality:					
	100%					
	Network Address:					
	MAC Address: 00:E0:4C:72:11:12					
	IP Address: 192.168.1.100					
	Subnet Mask: 255.255.255.0					
	Gateway: 192.168.1.254					
	PaNew ID	_				
	Kenew Tr					
Show Tray Icon	Disable Adapter	Close				
Radio Off						
Ready	1	NUM Let				

Figure 4-2

General Information

- Status: Wireless network Associated, Ad-hoc Mode or Not Associated.
- Speed: The data Tx rate and Rx rate of the current connection.
- > Type: The type of the current wireless connection, Infrastructures or ad hoc
- Encryption: Current encryption.
- SSID: The unique name of the wireless network to which the wireless adapter is connecting
- Signal Strength: The signal quality of the current connection.
- Link Quality: The link quality of the current wireless connection.

Network Address

- > MAC Address: The MAC Address of the Adapter.
- > IP Address: The IP Address of the Adapter.
- Subnet Mask: The Subnet Mask of the Adapter.
- > Default Gateway: The Default Gateway address of the Adapter.

Others

- Show Tray Icon: Show USB Wireless LAN Utility icon in the windows taskbar notification area.
- > Disable Adapter: Disable the wireless adapter.
- > Radio off: Turn off the radio of the wireless adapter.

4.2 Profile

🏴 11n USB Wireless LA	N Utility	$\mathbf{\mathbf{x}}$
Refresh(<u>R</u>) Mode(<u>M</u>) View((<u>V</u>) About(<u>A</u>)	
MyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup	
WIEless LAN 80.	Available Profile(s)	
	Profile Name SSID Add	
	Remove	
	Edit	
	Duplicate	
	Set Default	ן נ
Show Tray Icon	Disable Adapter Close	<u>ן</u>
Ready	NUM	1.3

Using the Profile tab (the following picture), you can add, remove, edit, duplicate, and set default a profile.

Figure 4-3

4.2.1 Add

> Create a new Infrastructure mode profile

If you want your wireless computers to communicate with other computers on your wired network via a wireless access point. Click the **Add** button to create a new infrastructure profile.

Wireless Network Properties:	
Profile Name: 802.11bgn-SSID	
Network Name(SSID): 802.11bgn-SSID	
	- 802.1x configure
This is a computer-to-computer(ad hoc) network; wireless access points are not used.	EAP TYPE :
Channel: 1 (2412MHz) V	GTC
Wireless network security	Tunnel :
This network requires a key for the following:	
Network Authentication: Shared Key 💉	Username :
Data encryption: Shared Key WPA-PSK WPA2-PSK WPA2-PSK WPA2-802.1X WPA2 802.1X	Identity :
Key index (advanced): 1	Password :
Network key:	
******	Certificate :
Confirm network key:	

QK Cancel	

Figure 4-4

When the Network Info dialog box appears (the former picture), enter a name for the new profile. Enter the Network SSID. Choose the Network Authentication Mode and Data encryption from the drop-down menu and import the network key. Then click OK button.

Create a new ad-hoc mode profile

If you want your wireless computers communicate with each other directly, click the Add button to create a new ad-hoc profile. Then, mark

Figure 4-5

and select the correct operating channel for your network from the Channel drop-down menu.

Wireless Network Properties:	
Profile Name: 802.11bgn-SSID	
Network Name(SSID): 802.11bgn-SSID	
This is a computer-to-computer(ad hoc) network; wireless access points are not used.	802. 1x configure EAP TYPE :
Channel: 1 (2412MHz)	GTC 🗸
Wireless network security	Tunnel :
This network requires a key for the following:	
Network Authentication: WPA-None 🛛 🖌	Username :
Data encryption: Open System WPA-None	
ASCII PASSPHRASE	Identity :
	Password :
Key index (advanced):	
*****	Certificate :
Confirm network key:	

<u>O</u> K <u>C</u> ancel	

Figure 4-6

Choose the Network Authentication Mode and Data encryption from the drop-down menu. And import the network key. Then click OK button.

You have successfully created a profile.

4.2.2 Remove

Select a profile and click **Remove** button to delete this profile (the following picture).

General Profile Available 1	Network Status S	Statistics	Wi-Fi Protect S	Setup
Available Profile(s)				
Profile Name	SSID			Add
2802.11bgn-SSID	802.11bgn-SSID	D		
				Remove
				Edit
				Duplicate
				Set Default

Figure 4-7

4.2.3 Edit

Select a profile and click **Edit** button to edit this profile (the following picture).

Profile Name	SSID	Add
2 802.11bgn-SSID	802.11bgn-SSID	
		Remove
		Edit
		Duplicate
		Set Default

Figure 4-8

Wireless Network Properties:	
Profile Name: 802.11bgn-SSID	
Network Name(SSID): 802.11bgn-SSID	
,	
This is a computer-to-computer(ad hoc) network; wireless access points are not used.	802. 1x configure EAP TYPE :
Channel: 6 (2437MHz) V	бтс
Wireless network security	Tunnel :
This network requires a key for the following:	
Network Authentication: Open System 👻	Username :
Data encryption: WEP	
	Identity :
	Password :
Key index (advanced): 1 🗸	
Network key:	Certificate :
Confirm network key:	
<u>OK</u> <u>C</u> ancel	



Modify the profile information according to your demand.

4.2.4 Duplicate

Select a profile which you want to copy and then click **Duplicate** (the following picture)

Profile Name	SSID	Add
🕐 802.11bgn-SSID	802.11bgn-SSID	
		Remove
		Edit
		Duplicate
		Set Default

Figure 4-10



Import the new profile name in the popup window blank (the following picture)

Figure 4-11

4.2.5 Set default

When you want to make one profile as a default wireless connection, you should select the profile and click **Set default** button. The wireless adapter will use this profile to connect to wireless network automatically when the utility running next time.



Figure 4-12

4.3 Available Network

The Available Network tab displays a list of infrastructure and ad-hoc networks for available wireless connection (the following picture)

💷 11n USB Wireless LAN Utility					
Refresh(<u>R</u>) Mode(<u>M</u>) View	(V) About(A)				
🖃 🚽 MyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup				
Wireless LAN 80	Available Network(s)				
	SSID Channel Encryption Network Authentication	Signal T			
	X[™]802.11bgn-SSID 6 None Unknown	100% Ir			
		>			
	Refresh Add to Profile]			
	Note Double click on item to join/create profile.				
 Show Tray Icon Radio Off 	Disable Adapter	Close			
Ready		NUM			

Figure 4-13

Double-click the network to which you wish to connect.

Wireless Network Properties:	×
Profile Name: 802.11bgn-SSID	_
Network Name(SSID): 802.11bgn-SSID	-
,	
This is a computer-to-computer(ad hoc) network; wireless access points are not used.	802.1x configure EAP TYPE :
Channel: 6 (2437MHz) 🗸	бтс 🗸
Wireless network security	Tunnel :
This network requires a key for the following:	
Network Authentication: Open System 💊	Username :
Data encryption: WEP	
	Identity :
	Password :
Key index (advanced):	
**********	Certificate :
Confirm network key:	
QK Cancel	



Refer to the former picture choose the Authorization modes and Encryption modes in the drop-down box. If the wireless network uses a Passphrase, enter the Passphrase in the Passphrase field. If the wireless network uses a WEP key, enter the WEP key in the Key field. Click the **OK**

button to complete the network connection.

4.4 Status

The Status tab displays the detailed information of current device and wireless connection.

🏴 11n USB Wireless LA	N Utility	🛛 🔀
Refresh(<u>R</u>) Mode(<u>M</u>) View	(V) About(A)	
WyComputer Wireless LAN 80:	General Profile Available Network Status Statistics Wi-Fi Protect Setup	
	Manufacturer= OEMNDIS Driver Version= 5.1075.417.2009Short Radio Header= YesEncryption= DisabledAuthenticate= Open SystemChannel Set= FCCMAC Address= 00:E0:4C:72:11:12Data Rate (AUTO)= Tx:150 Mbps Rx:300 MbpsChannel (Frequency)= 6 (2437 MHz)Status= AssociatedSSID= 802.11bgn-SSIDNetwork Type= InfrastructurePower Save Mode= NoneAssociated AP MAC= 00:22:80:91:A1:23Up Time (hh:mm:ss)= 0:16:18	
✓ Show Tray Icon ■ Radio Off	Disable Adapter	Close
Ready		NUM .st

Figure 4-15

4.5 Statistics

The Statistics tab display the stat. value of current wireless connection Tx and Rx, you can click **Reset** button to reset value and restart to count.

🏴 11n USB Wireless LA	N Utility	×
Refresh(<u>R</u>) Mode(<u>M</u>) View(V) About(<u>A</u>)	
🖃 🍃 MyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup	
Wireless LAN 80		
	Counter Name Value	
	Tx OK 1815	
	TX Error 0	
	Rx Packet Count 630	
	Rx Retry 100	
	Rx ICV Error 0	
	Poset	
	Keset	
<		
Show Tray Icon	Disable Adapter	Class
Radio Off		Close
Ready		NUM

Figure 4-16

4.6 Wi-Fi Protect Setup

Wi-Fi Protect Setup (WPS) function can let you create a safety network easily. You can through 'PIN Input Config (PIN)' to encrypt your network. The router which support WPS function, then the router will be encrypted to WPA2-AES mode automatically

Note:

1. The status of WPS in the router must be enabled

2. If you have configured encryption mode in your router, then when you use this WPS function, please configure encryption mode to NONE, then it will be encrypted to WPA2-AES mode automatically. If you don't want to change your encryption mode, then when you use this function, the router will be encrypted to the mode that you have configured.

🏴 11n USB Vireless	: LAN Utility
Refresh(R) Mode(M) Vie	:w (V) About (<u>A</u>)
🖃 闍 MyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup
	Wi-Fi Protected Setup (WPS) An easy and secure setup solution for Wi-Fi network
	Pin Input Config (PIN) After pushing the PIN button.Please enter the PIN code into your AP.
	Input PIN from AP PIN Code: 35229155
	Pin Input Config (PIN)
	Push Button After pushing the PBC button.Please push the physical button on your AP or visual button on the WPS config page.
	Push Button Config (PBC)
Show Tray Icon Radio Off	Disable Adapter Close Windows Zero Config
Ready	NUM

Figure 4-17

WPS can connect the wireless adapter and the router in a safe way. you may set up a safe network via the following methods.

Noted :WPS button(no built-in function)

Method 1 :

1. Input the PIN code of the adapter's WPS page into the router's WPS configure page, then click 'connect'

	Wi-Fi Protected Setup (WPS)
	An easy and secure setup solution for Wi-Fi network
	Pin Input Config (PIN) After pushing the PIN button.Please enter the PIN code into your AP.
	PIN Code: 35229155
	Figure 4-18
٨P	S PIN Settings
	Wireless Host PIN Code 35229155
	Connect

Figure 4-19

2. Push the 'PIN Input Config (PIN)' in the Wi-Fi protect setup of the adapter



Figure 4-20

3. Select the AP that you want to connect in the pop-up window, then click 'Select'

Vi-Fi	Protecte	d Setup	- Select	AP	
WP	6 AP Name ault		WPS A	P MAC 09:00:0F	
S	elpçt	Refre	sh	<u>C</u> ancel	

Figure 4-21

4. Please wait until the following window appears, the connect between the adapter and the router will connect automatically



Figure 4-22

Method 2:

1. Select 'Input PIN from AP' in WI-FI protect setup page, input PIN of the router that you want to connect, then click 'PIN Input Config (PIN)'



2. Select the AP that you want to connect in the pop-up window, then click 'Select'

Vi-Fi	Protected	Setup	- Sele	et AP	
WPS Defa	3 AP Name ult		WPS 00:02:10	AP MAC 0:09:00:0F	
S	elpçt	Refr	esh		e

Figure 4-24

3. Please wait until the following window appears, the connect between the adapter and the router will connect automatically



Figure 4-25

5 The Access Point mode

We can use the wireless USB adapter to build an access point apart from the station mode. The wireless client can connect to it if the wireless USB adapter is set to access point mode, then you can share an Internet connection with others

Click Mode in the menu bar and select Access Point, then it will change to Access Point mode automatically

5.1 General

General displays the basic information of this AP

🏴 🛛 11n USB Wireless LAI	l Utility	- • ×
Refresh(R) Mode(M) View	/(V) About(A)	
🖶 💡 MyComputer	General Advanced Statistics ICS	The second se
	SSID: PC1_AP	
	BSSID: 00:E5:4C:81:85:93 Association Table	
	AID MAC Address Life Time	
	Config	
Show Tray IconRadio Off	📄 Disable Adapter	Close
Ready		1

Figure 5-1

SSID:

The SSID of this AP

BSSID:

The MAC address of this AP

Association Table:

It displays the PC's MAC address and life time that connect to this AP

➤ Config

Configure this AP. Click config, display the following picture

/ireless Network Proper	ties:			
Profile Name:	Access Po	int Mode		
Network Name(SSID):	PC1 AP			
This is a computer-to access points are no Channel:	o-compute t used. 1 (2412)	r(ad hoc) ni MHz)	etwork; w	ireless
Wireless network security This network requires	a key for	the followin	g:	
Netw	vork Authe	ntication: O	ipen Syste	em 💌
	Data er	ncryption: D	isabled	-
ASCII PAS	SPHRASE			
Key index (advanced) Network key:); 1			
Confirm network key:				
<u>Ok</u>			Gancel	

Figure 5-2

• Profile name:

The default is Access Point Mode and can't be modified

• Network name (SSID):

The name of this AP and can be modified

- Channel:
- You can select channel 1 to 14, which provides a choice of avoiding interference
- Network authentication:

It contains open system, shared key, WPA-PSK and WPA2-PSK. You can configure safe encryption mode for this AP. If you select encryption mode, then you will need to enter key

5.2 Advanced

Refresh(E) Mode(M) Vie	IS LAN Utility
NyCosputer Vireless LAN	Oeneral Advanced Statutica ACS General Beacon Interval Image: Constraint of the state of the stateo
Show Tray Icon Radio Off	Disable Adapter Close
Ready	

Figure 5-3

Beacon Interval:

This represents the amount of time between beacon transmissions. Before a station enters power save mode, the station needs the beacon interval to know when to wake up to receive the beacon (and learn whether there are buffered frames at the access point)

DTIM period:

The DTIM period is set on the TIM information element on the DTIM period field. This field is one byte and represents the number of beacon intervals that must go by before a new DTIM is sent.

Preamble Mode:

"Short" is suitable for heavy traffic wireless network. "Long" provides much communication reliability; the default setting is "Short"

Set defaults:

Set the options in advanced to default

> Apply:

Save the options

5.3 Statistics

11n US8 Wireless LAN Ut	ility		
Refresh(R) Mode(M) View(V) A	bout(<u>A</u>)		
ByComputer	ral Advanced Statistics ICS		
	Counter Name	Value	
	Tx OK	3134	
	Tx Error	0	
	Rx OK	528	
	Rx Packet Count	529	
	Rx ICV From	332	
			- 11
	Read		
	nese		
Show Tray Icon Radio Off	Disable Adapter	Cio	88
Ready			

Figure 5-4

It display receive and transmit information

5.4 ICS

🏴 11n US8 Wireless L	AN Utility		- DIX
Retresh(B) Mode(M) View(Y) About(A)		
Sycomputer Vireless LAN	General Advanced St	tatistics KS	
	Secong Internet Ci	onnection sharing (ICS)	
	Connhiame	Device Name	
	2 one	Broadcom Metune (TM) Goubt Etheman WAN 微型端口 (PPPCE)	
Show Tray Icon	Public Network 초:네르포 Broadcor	m NetLink (TM) Gigabit Ethernet	Coor
Radio Off			
Ready			4

Figure 5-5

You can set internet connecting sharing (ICS), select the network you want to share in the list, then click 'apply', the following picture appears. When you connect successfully, you can share network with others

Setting Internet Conne	
Please wait	

Figure 5-6

6 FAQ

This chapter provides solutions to problems that may occur during the installation and operation of the Wireless USB Adapter. Read the descriptions below to solve your problems.

1. The Wireless USB Adapter does not work properly.

Reinsert the Wireless USB Adapter into your PC's slot slot/USB slot. Right click My Computer and select Properties. Select the device manager and click on the Network Adapter. You will find the Adapter if it is installed successfully. If you see the yellow exclamation mark, the resources are conflicting. You will see the status of the Adapter. If there is a yellow question mark, please check the following:

Make sure that your PC has a free IRQ (Interrupt ReQuest, a hardware interrupt on a PC.) Make sure that you have inserted the right adapter and installed the proper driver. If the Adapter does not function after attempting the above steps, remove the adapter and do the following: Uninstall the driver software from your PC.

Restart your PC and repeat the hardware and software installation as specified in this User Guide.

2. I cannot communicate with the other computers linked via Ethernet in the Infrastructure configuration.

Make sure that the PC to which the Adapter is associated is powered on.

Make sure that your Adapter is configured on the same channel and with the same security options as with the other computers in the Infrastructure configuration.

3. What should I do when the computer with the Adapter installed is unable to connect to the wireless network and/or the Internet?

Check that the LED indicators for the broadband modem are indicating normal activity. If not, there may be a problem with the broadband connection.

Check that the LED indicators on the wireless router are functioning properly. If not, check that the AC power and Ethernet cables are firmly connected.

Check that the IP address, subnet mask, gateway, and DNS settings are correctly entered for the network.

In Infrastructure mode, make sure the same Service Set Identifier (SSID) is specified on the settings for the wireless clients and access points.

In Ad-Hoc mode, both wireless clients will need to have the same SSID. Please note that it might be necessary to set up one client to establish a BSS (Basic Service Set) and wait briefly before setting up other clients. This prevents several clients from trying to establish a BSS at the same time, which can result in multiple singular BSSs being established, rather than a single BSS with multiple clients associated to it.

Check that the Network Connection for the wireless client is configured properly.

If Security is enabled, make sure that the correct encryption keys are entered on both the Adapter and the access point.