EnGenius

Wireless 11N USB Adapter

User's Manual

Version: 1.0

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1. Introduction

The high-speed wireless USB 2.0 client adapter is the most convenient way to let you put a desktop/laptop computer almost anywhere without the hassle of running network cables. Now you don't need to suffer from drilling holes and exposed cables. Once you are connected, you can do anything, just like the wired network. This USB client adapter operates seamlessly in 2.4GHz frequency spectrum supporting the 802.11b, 802.11g, and 802.11n wireless standards. It's the best way to add wireless capability to your existing wired network or simply surf the web.

To protect your wireless connectivity, the high-speed wireless USB 2.0 client adapter can encrypt all wireless transmissions through 64/128-bit WEP, WPA and WPA2 security allowing you to experience the most secure wireless connectivity available.

The EnGenius 802.11n USB Adapter 11N technology which extremely improves wireless signal for your computer than existing wireless 802.11g technology. The incredible speed of EnGenius USB adapter makes heavy traffic networking activities more flexible and takes the wireless into practical road. You could enjoy the racing speed of wireless connection, surfing on Internet without string wires.

Adding EnGenius USB Adapter to your Laptop or desktop PC, it provides an excellent performance and cost-effective solution for doing media-centric activities such as streaming video, gaming, and enhances the QoS (WMM) without any reduction of performance.



1.1. Features & Benefits

Features	Benefits		
Racing Speed up to 150Mbps data	Enjoy the Internet connection in crazy-		
rate (2.4GHz 11N technology)	fast speed, without the bottleneck of		
	stringing wires.		
Advanced power management	Low power consumption		
WPA/WPA2 (IEEE 802.11i), WPA-	Powerful data security.		
PSK, WPA2-AES, WEP 64/128			
Support			
WMM (IEEE 802.11e) standard	Wireless Multimedia Enhancements		
support	Quality of Service support (QoS) /		
	enhanced power saving for Dynamic		
	Networking		
	USB 2.0 interface and compatible with		
030 2.0/1.1	USB 1.1		

1.2. USB Adapter Description

LED shows the Power and Link (traffic) status. Antenna RSMA connector allows you to upgrade to higher gain antenna.

EUB9603 EXT







EUB9603H



1.3. System Requirements

The following are the minimum system requirements in order to use the USB adapter.

- PC/AT compatible computer with a USB interface.
- Windows 7/Vista/XP or Mac OS operating system.
- 30MB of free disk space for installing the USB adapter driver and utility program.

1.4. Applications

The wireless LAN products are easy to install and highly efficient. The following list describes some of the many applications made possible through the power and flexibility of wireless LANs:

a) Difficult-to-wire environments

There are many situations where wires cannot be laid easily. Historic buildings, older buildings, open areas and across busy streets make the installation of LANs either impossible or very expensive.

b) Temporary workgroups

Consider situations in parks, athletic arenas, exhibition centers, disasterrecovery, temporary offices and construction sites where one wants a temporary WLAN established and removed.

c) The ability to access real-time information

Doctors/nurses, point-of-sale employees, and warehouse workers can access real-time information while dealing with patients, serving customers and processing information.

d) Frequently changed environments Show rooms, meeting rooms, retail stores, and manufacturing sites where frequently rearrange the workplace.

e) Small Office and Home Office (SOHO) networks SOHO users need a cost-effective, easy and quick installation of a small network.

f) Wireless extensions to Ethernet networks

Network managers in dynamic environments can minimize the overhead caused by moves, extensions to networks, and other changes with wireless LANs.

g) Wired LAN backup

Network managers implement wireless LANs to provide backup for mission-critical applications running on wired networks.

h) Training/Educational facilities

Training sites at corporations and students at universities use wireless connectivity to ease access to information, information exchanges, and learning.



2. Installation for Windows (7/Vista/XP/2000)

2.1. Before You Begin

During the installation, XP may need to copy systems files from its installation CD. Therefore, you may need a copy of the Windows installation CD at hand before installing the drivers.

2.2. Installing the Drivers

Follow the steps below in order to install the USB adapter drivers:

- 1. Insert the CD that was provided to you in this package. The setup should run automatically. If the setup does not run automatically, then must manually select the **index.htm** file from the CD/DVD-ROM drive.
- 2. A list of drivers will be given on the screen. Please choose the driver for your current operating system.

EnGenius 11n USB Wireless LAN Driver and Utility
EnGenius 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 Install Cancel

3. Click on **Windows Driver** to start the install process.

4. Click on the **Install** button to begin the installation.





5. Wait for a few seconds until the driver and client utility is installed.

EnGenius 11n USB Wireless LAN Driver and Utility				
InstallShield Wizard Complete The InstallShield Wizard has successfully installed EnGi 11n USB Wireless LAN Driver and Utility. Before you of the program, you must restart your computer.				
	Remove any disks from their drives, and then click Finish to complete setup.			
	< <u>B</u> ack Finish Cancel			

- 6. The installation is complete. Click on the **Finish** button.
- 7. Carefully insert the USB adapter into the USB port. Windows will then detect and install the new hardware.

If you are given a cable with three USB plugs, please make sure both P1 and P2 USB plugs are inserted into available slots.





8. An **EG** icon will then appear in the system tray. Double click on EG icon to open utility window.



2.3. General

😤 EnGenius 11n USB Wireless LAN Utility 📃 🗆 🗙							
Refresh(\mathbb{R}) $\forall iew(\underline{\mathbb{V}})$ About($\underline{\mathbb{A}}$)							
E WyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup						
W Realier K ILOIO							
	Status: Associated						
	Speed: Tx:150 Mbps Rx:150 Mbps						
	Type: Infrastructure						
	Encryption: WEP						
	SSID: SENAOWL						
	Signal Strength:						
	Link Quality. 100%						
	Network Address:						
	MAC Address: 00:60;40:71:00:28						
	Subnet Mask: 255,255,254.0						
	Gateway: 10.0.191.254						
	ReNew IP						
F Badio Off		ose					
Ready							

This page delivers information of Status, Speed, Type, Encryption, SSID, Signal Strength and Link Quality.

Click on Renew IP to re-establish wireless connection with the chosen AP.



2.4. Profile

😤 EnGenius 11n USB Wireless LAN Utility 🛛 🗖							
Refresh(<u>R</u>) View(<u>V</u>) Abou	t(<u>A</u>)						
E MyComputer	General Profile Available Networ	k Status Statistics Wi-Fi Protect S	etup				
, The second sec	Available Profile(s)						
	Profile Name SSID		Add				
	SENAOWL SENA	OWL					
			Remove				
			Edit				
			Duplicate				
			Set Default				
]						
•							
Show Tray Icon	Dis	able Adapter	Close				
Radio Off	□ w	indows Zero Config					
Ready							

Options:

Show Tray Icon: show/hide Utility icon in system tray.
Radio Off: temporary turn off wireless radio
Disable Adapter: temporary disable wireless adapter
Windows Zero Config: switch to Windows default wireless configuration

tool



Functional Button:

Add:	Mar	nual	to key in	Profile name,	SSID and	encryption	keys as b	below.	

HOROT ACTIVITY I TOPOTHON.	
Profile Name:	⊤802.1x configure
Network Name(SSID):	EAP TYPE :
	GTC
	Tunnel :
\square This is a computer-to-computer(ad hoc) network; wireless access points are not used.	
Channel: 1 (2412MHz)	Use saved user credential
	Username :
This network requires a key for the following:	Identity :
Network Authentication: Open System 💌	
Data encryption: Disabled	Domain :
🗖 ASCII 🗖 PASSPHRASE	Password :
Key index (advanced):	Certificate :
Network key:	
	PAC : Auto Select PAC
Confirm network key:	



Wireless Network Properties:	×
Profile Name: SENAOWL	- 802.1x configure
Network Name(SSID): SENAOWL	EAP TYPE :
	GTC
This is a computer-to-computer(ad hoc) network; wireless	Tunnel : Privision Mode :
Channel: 1 (2412MHz)	Use saved user credential
Wireless network security This network requires a key for the following: Network Authentication: Open System	Identity :
	Password :
Key index (advanced): 1 Network key: ********	Certificate :
Confirm network key: ********	×
QKCancel	

Edit: You can modify the configuration and settings.



Duplicate: to clone a profile.

🎨 EnGenius 11n USB Wireless LAN Utility 💶 🗆									
$\operatorname{Refresh}(\underline{R}) \forall iew(\underline{V}) \operatorname{About}(\underline{A})$									
🖃 🚽 MyComputer 🤤 Realtek R TL818	General Profile Available Network Status Statistics Wi-Fi Protect Setup								
Ť	Available Profile(s)								
	Profile Name	SSID	Add						
		SENAOWL							
			Remove						
			Edit						
			Duplicate						
			Set Default						



S EnGenius 11n USB Wireless LAN Utility _							
Refresh(<u>R</u>) View(<u>V</u>) Abou	ut(<u>A</u>)						
MyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup						
Keanek K ILolo	Available Profile(s)						
	Profile Name SSID	1 II					
	Provide Marine SSID	┘║					
	Remove	тII					
		-					
	Edit	1					
		.					
	Duplicate	J					
	Set Default						
		-1					
•							
Show Tray Icon	Disable Adapter Close						
🗖 Radio Off	🧮 Windows Zero Config	-					
Ready		//.					

Set Default: Reset all saved setting.



2.4.1.Available Network

This tab allows user to scan APs in proximity. The information includes SSID, Channel, Encryption, Authentication and signal.

號 EnGenius 11n USB Wireless LAN Utility 💶 🗖 🗙					
Refresh(<u>R</u>) View(V) Abou	t(<u>A</u>)				
🖃 😼 MyComputer	General Profile Available	Network Status Statist	ics Wi-Fi Protect Setup		
Realtek RTL818	Available Network(s)				
	SSID	Channel Encryptic	n Network Authentication	Signal 🔺	
	1 ³⁰ SENAOVIP	1 None	Unknown	50%	
	1 ³⁰ SENAOWL	1 WEP	Unknown	64%	
	1 ³⁰ SENAOWL	1 WEP	Unknown	72%	
	1 ³⁰ SENAOWL	1 WEP	Unknown	48%	
	1 ²⁹ SENAOWL	1 WEP	Unknown	62%	
	1 ²⁹ SENAOWL	1 WEP	Unknown	74%	
	1 ²⁹ SNADSL	3 WEP	Unknown	64%	
	linksys_g	3 TKIP/AE	S WPA Pre-Shared Key/	62%	
	1 ²⁰ SENAOWL	4 WEP	Unknown	64%	
	k ²⁰ sqa183	4 AES	WPA2 Pre-Shared Key	62%	
	R"EnGenius445566	5 WEP	Unknown	72%	
	R"PPPOE_test	5 WEP	Unknown	64%	
	RD2_test_EG	5 TKIP/AE	S WPA Pre-Shared Key/	64%	
		5 WED	Unknown	700%	
	Refr	esh	Add to Profile		
	Note Double click on iter	n to join/create profile.			
✓ Show Tray Icon ✓ Radio Off		 Disable Adapter Windows Zero Conf 	Ìg	Close	
Ready					

Refresh: Scan available networks again.

Add to Profile: Select any available SSID to save in profiles.



2.5. Status

😤 EnGenius 11n USB 🛛	Fireless LAN Utility	- 🗆 🗙
Refresh(<u>R</u>) View(V) Abou	tt(<u>A</u>)	
🖃 🚽 MyComputer 	General Profile Available Network Status Statistics Wi-Fi Protect Setup	
	ManufacturerEnGeniusNDIS Driver Version5.1063.324.2009Short Radio HeaderYesEncryptionWEPAuthenticateOpen SystemChannel SetFCCMAC Address00:E0:4C:71:00:28Data Rate (AUTO)TX:150 Mbps Rx:150 MbpsChannel (Frequency)11 (2462 MHz)StatusAssociatedSSIDSENAOWLNetwork TypeInfrastructurePower Save ModeNoneAssociated AP MAC00:02:6F:54:87:F4Up Time (hh:mm:ss)0:09:08	
Show Tray Icon	Disable Adapter	
Radio Off	↓ Windows Zero Config	iose
Ready		

In Status tab, you can find the information, included Manufacturer, NDIS Driver Version, Radio Header, Encryption type, Authenticate type, Channel Set, MAC Address, Data Rate, Channel used, SSID, Network Type and so on.



2.6. Statistic

😤 EnGenius 11n USB Wireless LAN Utility 💶 🗖 🗙		
Refresh(<u>R</u>) View(V) About(<u>(A)</u>	
- 🚽 MyComputer 😽 Realtek RTL818	General Profile Available Network Status Statistics Wi-Fi Protect Setup	
	Counter Name Value	
	Tx OK 855	
	Tx Error 0	
	Rx OK 2146	
	Rx Packet Count 2147	
	RX Retry 1/U	
	Reset	
•		
Show Tray Icon	Disable Adapter	Close
Radio Off	↓ Windows Zero Config	CIOSE
Ready		

This page shows the information on Tx and Rx transmission and receiving condition.



2.7. Wi-Fi Protected Setup

😚 EnGenius 11n USB Wi	ireless LAN Utility	- 🗆 🗙
$Refresh(\underline{R}) \forall iew(\underline{V}) About(\underline{V}) About(\underline{V}) $	(<u>A</u>)	
- V 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.	
	PIN Code: 44855970	
	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	🔽 Disable Adapter	ise
🔲 Radio Off	☐ Windows Zero Config	
Ready		

There are two ways to setup connection through WPS.

Pin Input Config (PIN): enter PIN code to establish connection Push Button Config (PBC): this is the software button for WPS button

PIN Input Config:

Click on the button to start the PIN code process

Wi-Fi Pro	tected Setup (WPS)	×
?	Do you want to select a speci	fic AP ?

If select Yes, AP scanning will run automatically.



i-Fi Protected Setup - Se	lect AP
WPS AP Name	WPS AP MAC
SENAOWL	00:02:6F:54:87:F4
linksys_g	00:21:29:CA:E5:C0
6670xxx	00:02:6F:5C:DD:AC
EnGeniusCCDD10	00:AA:BB:CC:DD:10
SQA-Raider106	00:1B:11:62:71:5B
EnGenius445566	00:02:6F:11:22:AA
RD2DLink	00:AA:CC:22:44:88
EnGenius975388	00:02:6F:97:53:88
ENCORECCDD10	00:AA:BB:CC:DD:10
ENCORE53001C	00:BB:97:53:00:1C
sqa183	00:02:6F:59:3D:76
SMC	00:22:2D:0A:EF:83
Sitecom462212	00:0C:F6:46:22:12
	Refresh
Select	<u>C</u> ancel

Select the target AP, Choose one AP to key in PIN code.

Wi-Fi Protected Setup - PIN method	×
Wi-Fi Protected Setup - PIN method	
Please enter the following PIN code into your AP .	
PIN Code: 41385678	
Status : [SENAOWL] WPS Protocol Communication	

Enter generated PIN code in AP your selected. The synchronization will start shortly.



Press WPS Button on USB directly and then click the button "**Push Button Config**" shown above.



Push Button Config:

Click on the [Push Button Config] button

Press WPS button on the AP

The connection will be established in a few seconds..



3. Software AP

3.1. Introduction

This is a Windows only feature. You can turn your PC / laptop to an AP and share Internet connection among multiple users by switching to Access Point mode. This mode is known as Software AP.

Note that your wireless adapter can only either be under station mode or AP mode. That is, you will be disconnected from the AP immediately after you enable Software AP.





3.2. General (Quick Setup Example)

This example shows how to share an Internet connection among multiple users. Let's assume you would like to setup an environment shown below. Computer **A** has internet access through Network Card named "Connection 1". Laptop **B**, **C** & **D** are going to access Internet through **A**.



- 1. Make sure your computer A has the Internet access environment ready.
- 2. Under menu item **Mode(M)**, click on **Access Point** to enable Software AP.
- 3. It may take a while before switching to AP mode.

Waiting Setup Up 🗴	Setting Internet Connection Sharing 🗙
Switching from Station mode to AP	Please wait

- 4. The icon \square will appear when the transition is completed.
- 5. Double-click on the icon \mathbb{P} to open the configuration window.

6. Under tab **General** click on **Config** button to configure AP settings.

General Advanced Stat	istics ICS MAC Fi	lter	
SSI	D: ABCD_AP		
BSSI	D: 00:02:6F:66:77:89	9	
Association 7	Table		
AID M/	AC Address	Life Time	
1			
	Cc	onfig	



- 7. Enter your preferred SSID name into Network Name (SSID) field. The default name is ABCD_AP.
- 8. Select a channel for your AP. The default channel is channel **1**.
- 9. Under **Wireless network security** section, change your network security setting which supports WEP, WPA-PSK and WPA2-PSK. The default is **Open System** with Encryption **Disabled**.
- 10. When **Network Authentication** and **Data encryption** are selected. You have to type in your **Network Key**. This key will be to grant client access.

Wireless Network Properties:
Profile Name: Access Point Mode
Network Name(SSID): ABCD_AP
This is a computer-to-computer(ad hoc) network; wireless access points are not used.
Channel: 1 (2412MHz) 💌
Wireless network security This network requires a key for the following: Network Authentication: WPA2-PSK
Data encryption: AES
Key index (advanced): 1
Confirm network key:
<u>Q</u> K <u>C</u> ancel



3.3. Advanced

General Advanced Statistics ICS MAC Filt	ter
General	
Beacon Interval	
100	
DTIM Period:	
3	
Preamble Mode	
Short	
Cot Dofuilts	toolu [
Set Delauits	

Beacon Interval: is the interval of time that this wireless router broadcasts a beacon. Beacon is used to synchronize the wireless network.

DTIM Period: Enter a value between 1 and 255 for the Delivery Traffic Indication Message (DTIM). A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages

Preamble Mode: The "**Long**" preamble can provide better wireless LAN compatibility while the "**Short**" preamble can provide better wireless LAN performance.



3.4. Statistics

The statistics section displays the latest traffic status and related information.

General Advanced Statistics ICS MAC Filter				
				_
	Counter Name		Value	
	Tx OK		16765	
	Tx Error		0	
	Rx OK		2736	
	Rx Packet Count		2736	
	Rx Retry		52	
	Rx ICV Error		0	_
				_
				_
				_
				_
				_
				_
				_
				_
				_
				_
				_
		Decet	1	
		Keset		



3.5. ICS (Internet Connection Sharing)

ICS shows a list of network interfaces. Select the interface which connects to your Internet and click on **Apply** to activate the setting.

General Advanced Statistics IC	S MAC Biller
Setting Internet Connection	n Sharing (ICS)
ConnName	Device Name
Connection1	Realtek RTL8139 Family PCI Fast Ethernet NIC
HiNet (PPPOE)	WAN Miniport (PPPOE)
•	
, <u></u>	
Dublic Notwork	
	Earnik DCI East Ethorpot NIC
Keallek KTLOID9	ranning PCI Fast Eurien iet NIC
Г	
	Apply
Setting Internet Connection Sh	aringX
Please wait	



3.6. MAC Filter

Filter Type

Disabled: disable MAC filter Accept: accept clients that have the MAC address listed Reject: reject clients that have the MAC address listed

Click **Add** to add a new MAC address Click **Remove** to delete the selected MAC address Click **Apply** to activate the new setting

General Advanced Statistics ICS MAC Filter	
Filter Type: Accept	
Please Input MAC Address:	
00:11:02:3C:AA:BB	
MAC Address	Add
00.11.02.3C.AA.88	
	Remove
	Apply



4. Installation for Mac OS

4.1. Installing the Drivers

Follow the steps below in order to install the USB adapter drivers:

- 1. Insert the CD that was provided to you in this package. The setup should run automatically. If the setup does not run automatically, then must manually select the **index.htm** file from the CD/DVD-ROM drive.
- 2. A list of drivers will be given on the screen. Please choose the driver for your current operating system.
- 3. Introduction stage: Click on the **Continue** button to configure the next step.



4. **Read Me** Stage: Read the Important Information and then click on the **Install** button.



	Important Information
Introduction Read Me License Destination Select Installation Summary 4 5	This is the Mac OS X driver for EnGenius 11n Wireless USB Adapter. I you have already installed an older version of software, please uninstall it first by executing "uninstall.command". Then you can install this version of software successfully. Otherwise, this software can not be upgraded successfully. The system is required to reboot after the driver is installed, so please close all the other applications before installing this software. After the system boots up and you enter the system, please follow the following steps to configure the network: 1. Select the "System Preference" from the system menu. 2. Select and launch the "Network" item in the "System Preference" folder. 3. From the "Configure" list, select the correct adapter and configure it. 4. Configure the settings. 5. Click the "Save" button. Then you can connect to the WLAN.

5. License stage: You can choose the language and then click on the Continue button to configure the next step.

Introduction	English 🛟
Read Me Copy	right (c) 2009 EnGenius Technologies. All rights reserved
License	
Destination Select	
Installation Type	
Installation	
Summary and and and	

After click on the **Continue** button, a agreement window will be opened for your confirm. Click on the **Agree** button to configure the next step.



$\Theta \odot \odot$	🝃 Install EnGenius 11n Wireless USB Adapter Driver
	To continue installing the software you must agree to the terms of the software license agreement.
() Int	
🖯 Rea	Click Agree to continue or click Disagree to cancel the installation
🖯 Lic	and guit the Installer.
🔿 Des	Read License Disagree Agree
Inst	Liteau License Agree Agree
un M.Summ	ary a s

6. **Installation Type** stage: Click on the **Install** button to install the driver on Macintosh HD.



Click on the **Continue Installation** to configure the next step.



	Installing this software requires you to restart your computer when the installation is done. Are you sure you	
Introduct	want to install the software now?	er
 Read Me License Destination 	Cancel Continue Installation	of
Installation Type	e	-
Installation Summary	undimition and and and and and and and and and an	
1 Infinite A		
Tomas		

7. Summary stage: The installation is complete. Click on the Restart button.
 O O Install EnGenius 11n Wireless USB Adapter Driver



8. Carefully insert the USB adapter into the USB port. MAC OS X will then detect and install the new hardware.





9. The Client Utility is installed in the **Applications** folder.



4.2. WLAN Client Utility - Link Status

The **Link Status** tab displays the current status of the wireless radio. The following information is included in this tab, as the image depicts below.

EnGenius WLAN Client Utility
tus Profiles Available Network Information
00e04c710028
EnGenius
00026f5cdd84
WEP (64 bits)
Connected
Infrastructure
3
99%
(turn Radio OFF)

- > MAC Address: This displays the MAC address of EUB-9703
- > SSID: Show the SSID what you select to connect.
- **BSSID:** Display the MAC address of AP which is connected with.
- Security: This displays what kind of the encryption in communication between AP and Client.
- Connection: Show the "Connected" in connection, or "Disconnected" in disconnection.
- Network Type: Infrastructure(connected between AP and client) or Adhoc(connected between one client and another)
- > Channel: Operating frequency channel that the client is using.
- Signal Strength: This bar displays the signal strength received from an AP or client.
- Turn Radio OFF: When you click on the button. The radio will be turn off.



4.3. WLAN Client Utility - Profiles

The **Profile** tab is used to store the settings and configurations of multiple Access Points for different application. In the profiles table, it list all saved profiles and some information, included Profiles Name, SSID, Network Type. You can click Add to add a new profile, or click Remove to delete a profile. And also you can click Edit to modify a exist profile, or click Duplicate to copy the settings of a exist profile to a new profile. Click Apply after all modification is done.

	Link Status	Profiles Available N	letwork Information
Default	Profile Name	SSID	Network Type
*	200PM EnGenius	200PM EnGenius	Infrastructure Infrastruct <mark>ure</mark>
_			

- > Profile Name: Show all you created profile names.
- SSID: Displays the SSID of the Access Point. The SSID is a unique name shared among all points in your wireless network. The SSID must be identical for all points in the network, and is case-sensitive.
- Network Type: Indicates whether the SSID is Ad-hoc mode or Infrastructure mode.



4.3.1.Profile Properties

	Profile Properties
Profile Name :	
SSID :	
This is a computer-to-	-computer (AdHoc) network; woreless access points are not used.
Channel : 1: 2412 MHz	
Wireless Network Security Prope	erties
This network requires a ke	ey for the following :
Network Authentication :	OPEN_SYSTEM
Data Encryption :	No Encryption
ASCII	
Network key :	
Confirm network key :	
Key index (advanced) :	1 1
	OK Cancel

When adding a profile you are required to enter a profile name and SSID as well as configure the network type and encryption/authentication settings. A profile can be configured as **Infrastructure** or **Ad-hoc** mode. The configuration settings for each mode are described below.

Profile Name: Input the profile name you want. And the name can not be the same with each other of all profiles. If have reduplicate profile name, it will have a warning message.

	Warning
EG	The profile already exists. Do you want to overwrite it?
	No Yes

- **SSID**: Input the SSID of available AP
- Ad-Hoc: A computer to computer network, and wireless access point is not used. When enable this function, you can select the channel to connect. (This is the simplest network configuration with several computers equipped with the PC Cards that form a wireless network whenever they are within range of one another. In ad-hoc mode, each client is peer-to-peer, would only have access to the resources of the



other client and does not require an access point. This is the easiest and least expensive way for the SOHO to set up a wireless network).

		Profile Properties
Profile	Name :	
This is	SSID :	omputer (AdHoc) network: woreless access points are not used
Channel : Wireless Net This netw Network / D.	✓ 1: 2412 MHz 2: 2417 MHz 3: 2422 MHz 4: 2427 MHz 5: 2432 MHz 6: 2437 MHz 6: 2437 MHz 7: 2442 MHz 8: 2447 MHz 9: 2452 MHz 10: 2457 MHz 11: 2462 MHz	or the following : EN_SYSTEM \$ Encryption \$
Confirm Key inde	Network key : network key : ex (advanced) : 1	1
		OK Cancel

Wireless Network Security Properties

 Network Authentication: It allows you to configure 3 kinds of authentication and encryption settings, SHARED_KEY(WEP), WPA_PSK and WPA2_PSK.

>	
	✓ OPEN_SYSTEM
	SHARED_KEY
	WPA_PSK
	WPA2_PSK

> SHARED_KEY



Wireless Network Security Prope	rties
This network requires a k	y for the following :
Network Authentication :	SHARED_KEY
Data Encryption :	WEP 🛟
Network key :	
Confirm network key :	
Key index (advanced) :	1

• Network Authentication: Select OPEN_SYSTEM or SHARED_KEY from the drop-down list.

• Data Encryption: Select WEP from the drop-down list.

• ASCII: You can type the WEP key, 5 or 13 character string, into the field when you enable this.

• **Network Key:** Type a character string into the field. For 64-bit enter 10 hexadecimal characters. For 128-bit enter 26 hexadecimal characters.

- Confirm network Key: Type your network key again for confirmation.
- Key index: You can save different keys to different key index.

> WPA_PSK

Wireless Network Security Prope	erties		
This network requires a k	ey for the foll	owing :	
Network Authentication :	WPA_PSK	-	
Data Encryption :	TKIP		
ASCII			
Manual Inc.	-		
Network key :			
Confirm network key :			
Key index (advanced) :	1	÷)	

- Network Authentication: Select WPA_PSK from the drop-down list.
- Data Encryption: Select TKIP or AES from the drop-down list.
- **Network Key:** Enter a WPA Pre-shared key which is between 8 and 32 characters long.
- Confirm network Key: Type your network key again for confirmation.
- > WPA2_PSK



Wireless Network Security Prope This network requires a k	erties ey for the follo	owing :
Network Authentication :	WPA2_PSK	
Data Encryption :	ТКІР	•
C ASCII		
Network key :		
Confirm network key :		
Key index (advanced) :	1	

- Network Authentication: Select WPA2_PSK from the drop-down list.
- Data Encryption: Select TKIP or AES from the drop-down list.
- Network Key: Enter a WPA Pre-shared key which is between 8 and 32 characters long.
- Confirm network Key: Type your network key again for confirmation.
- > Click on the **OK** button if you have made any changes.



4.4. WLAN Client Utility - Available Network

The **Available Network** displays a list of Access Points in the area, and allows you to connect to a specific one. The following information is included in this tab, as the image depicts below.

	Link Status	Profiles	Available Network	Information]
Associated	SSID	Channel	Network Type	Encryption	BSSID
	Ashley EnGenius	11	Infrastructure	WPA-PSK TKIP WPA(2)-PSK AES	001349a50d63 00026f5cdd84

- > SSID: The SSID of AP which has scanned
- > Channel: Display the channel AP used.
- Network Type: Indicates whether the SSID is Ad-hoc mode or Infrastructure mode.
- > Encryption: Show what kind of the used encryption on AP.
- BSSID: Display the MAC address of AP
- Refresh: when click this button, it will re-scan the AP list and refresh the AP table.
- **Connect**: Choose an AP you want to connect, and then click this button.
- Add to Profile: Choose an AP you want to save to profile, and then click this button.



4.5. WLAN Client Utility - Information

The **Information** tab displays information about the network driver version and date.





Appendix A – FCC Interference Statement

Federal Communication Commission Interference Statement

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.

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.

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.

IMPORTANT NOTE:

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.

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

