WUSB54AGP

Wireless A/G Portable USB Adapter

User Manual

Rev 0.8

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.

For operation within 5.15 ~ 5.25GHz frequency range, it is restricted to indoor environment, and the antenna of this device must be integral.

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 device complies with FCC RF Exposure limits set forth for an uncontrolled environment, under 47 CFR 2.1093 paragraph (d)(2).

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

This equipment has been SAR-evaluated for use in laptops (notebooks) with side slot configuration. The maximum average SAR (1g) for 802.11b is 0.474W/Kg.

 The maximum average SAR (1g) for 802.11g is 0.313W/Kg.

The maximum average SAR (1g) for 802.11a is 0.27W/Kg.

CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

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

Important

Before using the Product, please carefully read the precautions described below to ensure proper operation.

- Do not open the case or modify contents of the product. Seek the help of an authorized professional if some problem occurs with the product.

- This product and other wireless devices may cause interference on each other and as result performance of the product may be affected.

- Moving the PC during data transfer may damage the data being transferred.

- Make sure to stop all wireless data transfer prior to removing the product from the PC in order to avoid damage to transferred data, PC or the product.

- Please make sure the product will not cause hazards to other local equipment prior to operating in hospitals, airplanes, etc. or other locations susceptible to interference.

- Do not expose the product to dangerous environment such as fire, chemicals or explosives, which may damage the product.

- Unplug power and telephone cables from PCs and The product during severe thunderstorms or lightning.

- Avoid dropping the product or subjecting it to excessive impacts

- Avoid contact of the product with water since this may damage it.

- Because exposing of the product to high humidity and/or extremely variable temperatures may deteriorate its performance, avoid as much as possible operating it under such environments

- To prevent the risk of losing important data saved in the PC during installation of the product, it is advisable to backup all important files before installation.

- **This device is limited in CH1 ~ CH11 by specified Firmware controlled in U.S.A.**

Table of Contents

1. Network Implementation Using The product

There are two possible types of wireless network configurations using the product:

(1) Infrastructure (wireless network using an Access Point)

Using the Client/Server or Master/Slave concept, an Access Point is used to link a wired network with wireless clients. Not only can the wireless clients access the wired network but they can also access each other via the Access Point. Multiple Access Points can be used in the same infrastructure network in order to extend the wireless network range or share the workload of handling more wireless clients.
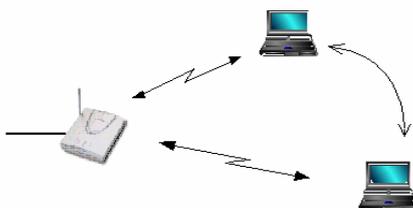
(2) *Ad-Hoc (wireless network not using an Access Point*)

Since there is no Access Point to act as a link to a wired network, wireless network nodes can only access each other but cannot access a wired network or the Internet.
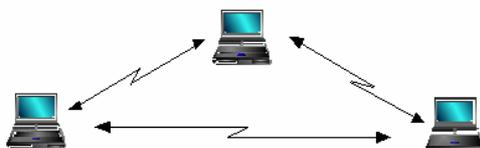
2. Before Installation

Package Contents

Unpack and confirm that the following contents (in addition to this User Manual) are included:

- Wireless A/G Portable USB Adapter (1 ea.)

- Installation CD (1 ea.)

- Quick Installation Guide (1 ea.)

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To Prepare Before Installation

- Ask your system administrator for the following information, which you may need to input during installation:

- Your SSID (group name of the wireless network)

- If you are using a fixed IP address: IP address, gateway address, and subnet mask info.

● To use the Wireless A/G Portable USB Adapter, the device must be equipped with an internal or external USB slot.

● You should have the latest drivers and utility software for the product (please visit our website for the latest drivers and utility software).

3. Installing the Wireless A/G Portable USB Adapter

The following explanation is based on installation of the Wireless A/G Portable USB Adapter into a PC running the Windows XP operation system. Installation in PCs running Windows 98SE, Me, 2000 or XP may be slightly different than shown here.

3.1. Connect the Wireless A/G Portable USB Adapter into the PC's USB slot. The PC will automatically detect the Wireless A/G Portable USB Adapter and display the [Found New Hardware Wizard] window.

3.2. Click on [Cancel] and exit the [Found New Hardware Wizard] window.

3.3. Insert the Installation CD into the PC's CD-ROM drive and run Windows Explorer to locate the file named "Setup.exe" (if CD-ROM drive is D, then the file is under the directory D:\Client). Once found, double-click on "Setup.exe" and the following screen will appear.
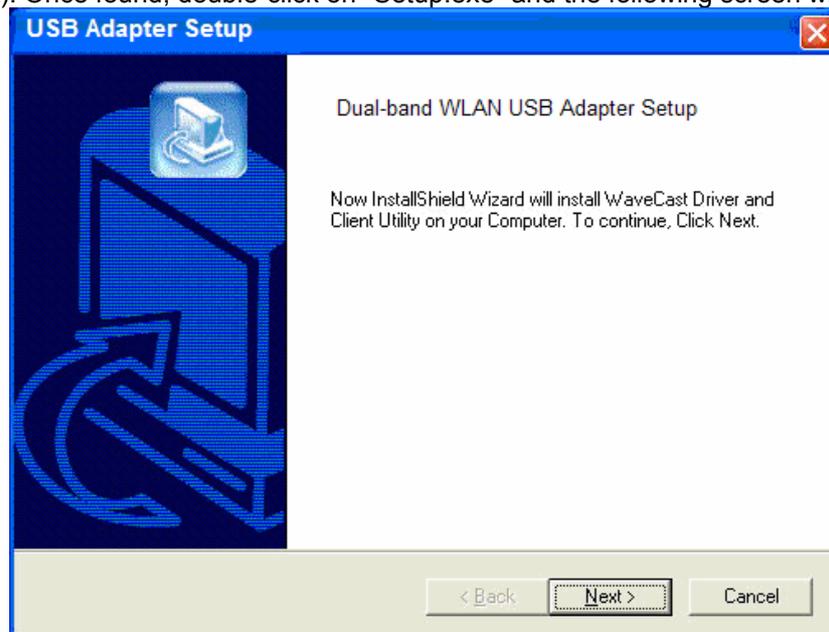
3.4. Click on [Next] and the utility program will be automatically installed as shown in the following screen.
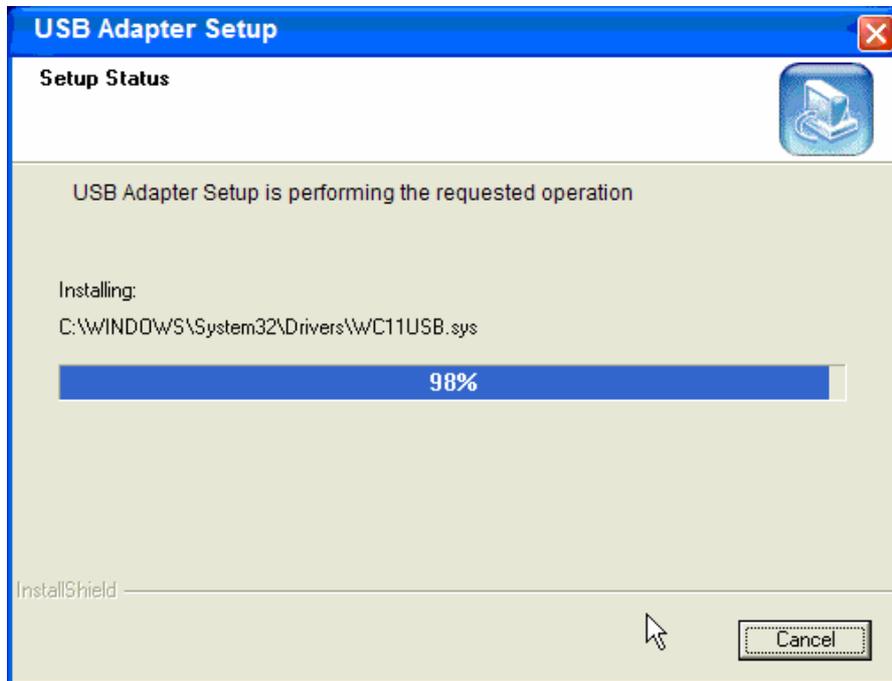
3.5. The following screen will appear when installation is completed. Click on [Finish] to successfully exit the installation process.
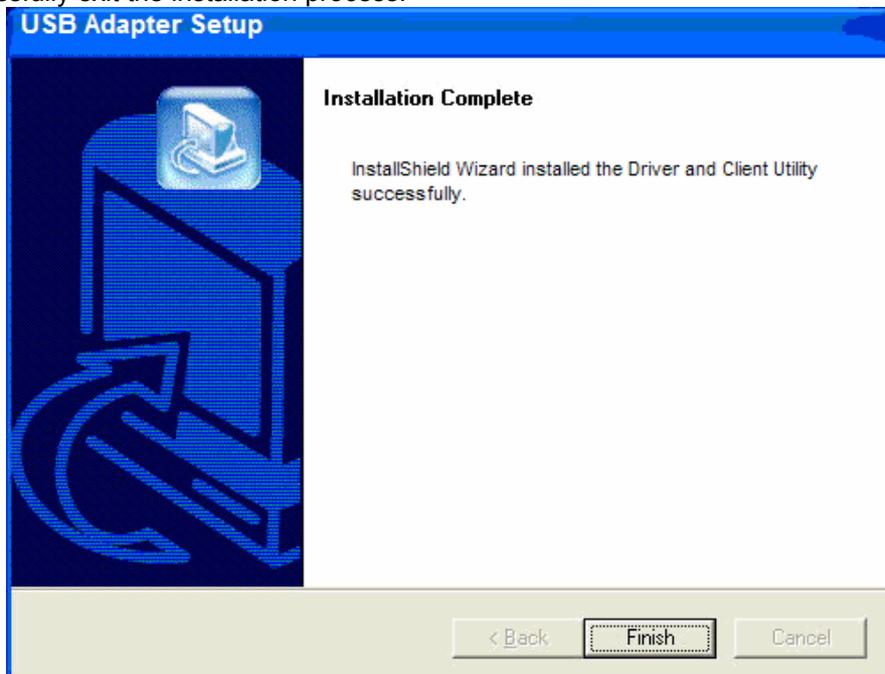
4. The Client Utility Program

The following are explanations on how to configure and use the Client Utility program.

How to Use the Utility Program

After completing the above installation and configuration procedures, a new icon as shown below will automatically appear in the lower right tray bar.

Double-clicking on the icon will display the following [Client Utility] window.
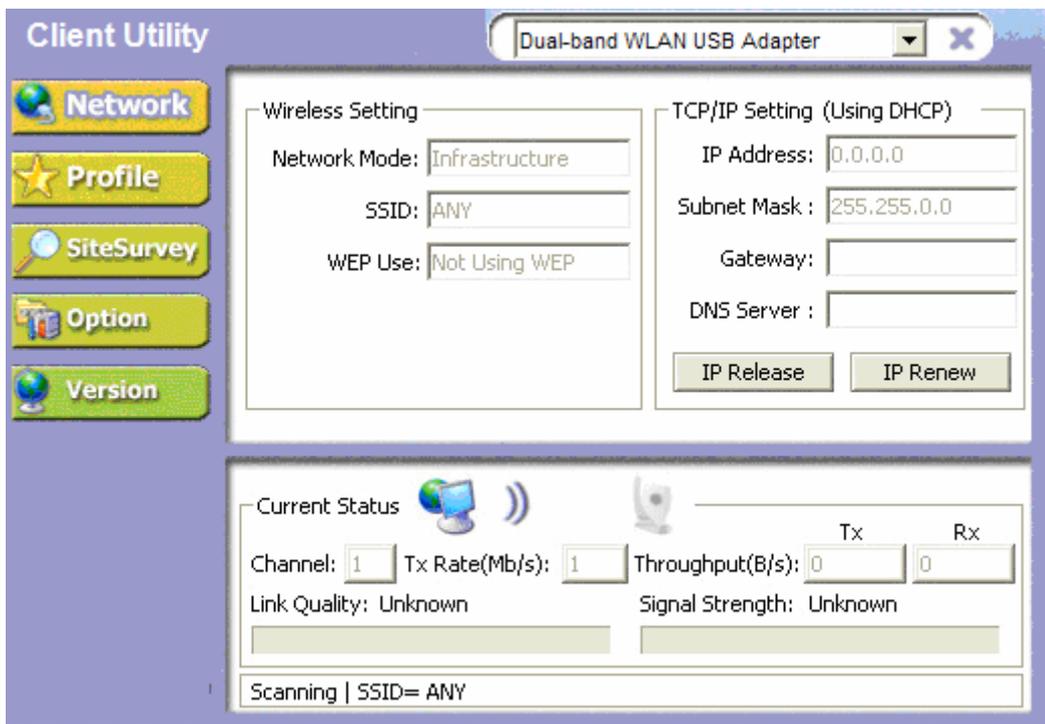
Each of the pages (Network, Profile, Search, Option, Version) presented in the Client Utility is explained in the following sections.

[Network]

This page shows how the network is presently configured: network mode, information on the connected AP, TCP/IP, etc. This information cannot be modified in the Network screen.
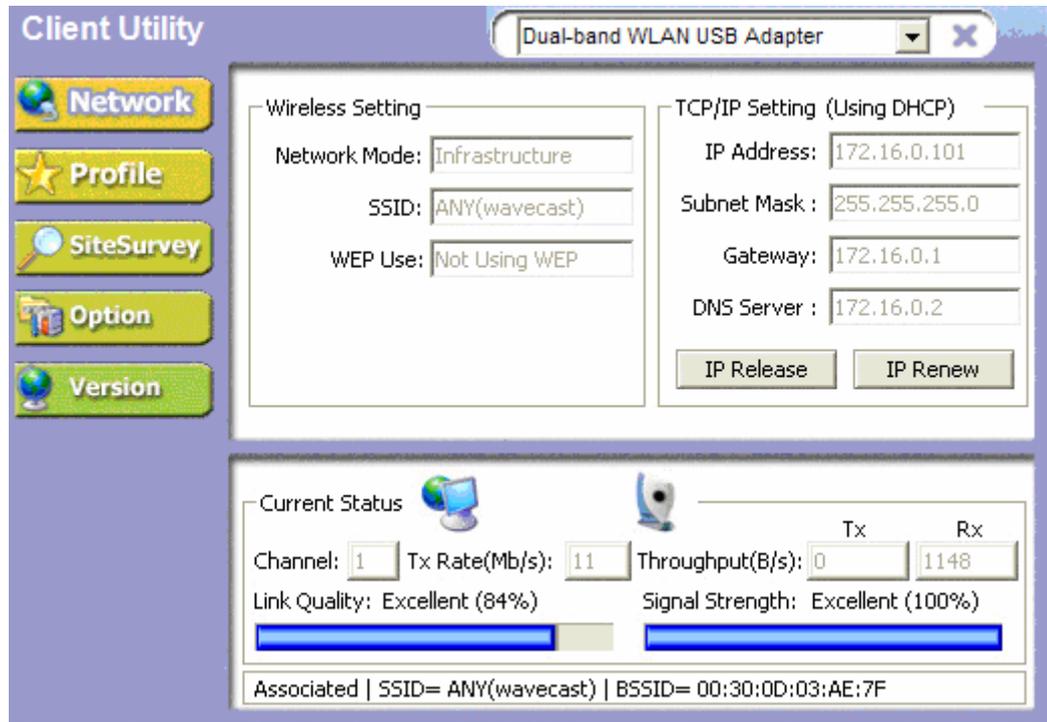
The "Current Status" window shows the signal quality, signal strength, channel, etc. between the client and AP. It is always in view regardless of which page (Network, Profile, Search, Option, Version) is selected within the Client Utility.

[Profile]

This page is used to manage connection with Access Points. You can create different configuration profiles for connections with different APs and SSIDs.

The advantage of saving different profiles is the easiness of quickly changing connections without having to configure the PC with every single variable each time a connection change is made. Also, when configuring TCP/IP via the Client Utility you do not need to reboot the PC as when TCP/IP configuration is done via Windows' Control Panel.
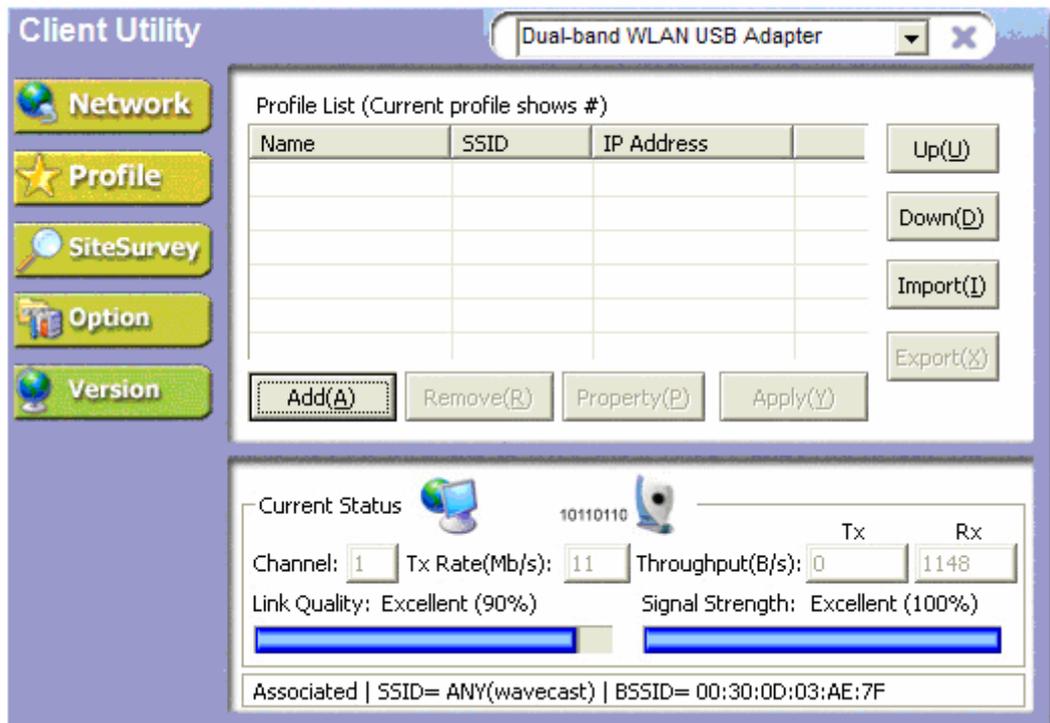
Explanation of each button in this page is shown below.

■ **Add**

Clicking on this button enables you to create a new profile. The following steps show how this can be done.

1) Click on [Add] and the following screen will appear. Select the configuration method, [Express Setup] or [Advanced Setup], and follow the on-screen instructions. The following steps are for the [Express Setup]. If you decide to select [Advanced Setup], please refer to section **Property** shown on pages 21 ~ 23
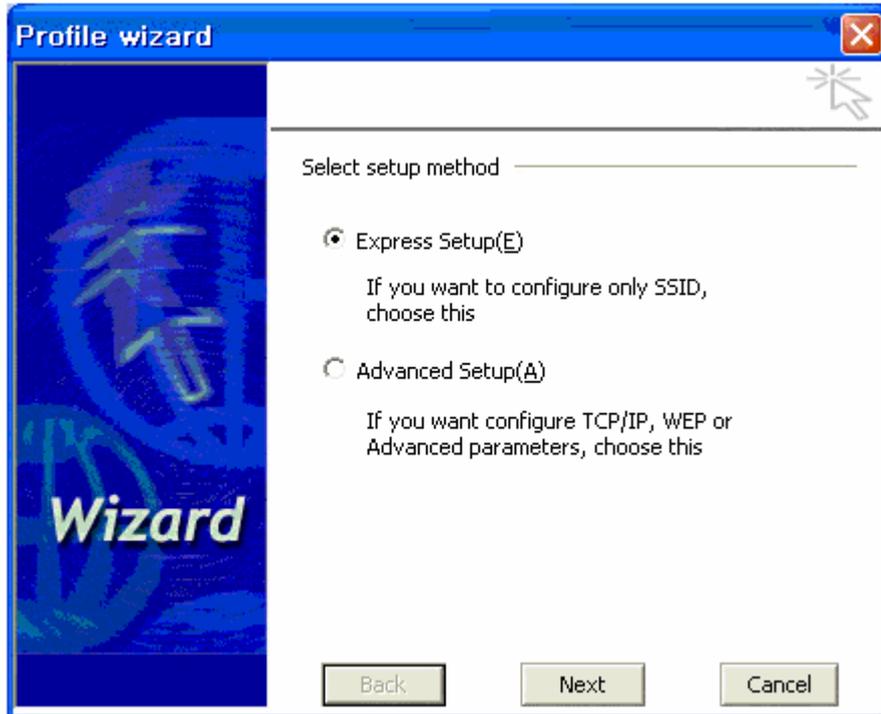
2) Select [Express Setup] and click on [Next]. The following screen will appear.

Type in the new profile name for the new wireless connection.

3) Click on [Next] and the following screen will appear.

Select a "Network Mode" (Infrastructure or Ad-Hoc) and "SSID". You do not need to change the default settings of "Power Save Mode" and "Roaming Optimization" unless there is a special need to do so. Refer below for further explanation of each mode.

◆ **Reference**

Network Mode
  Infrastructure: You will need an 802.11a/g Access Point to use the device in Infrastructure mode. Because all communication will be done via the Access Point, the Access Point's SSID must be used.

  Ad-Hoc: In Ad-Hoc mode communication is made peer-to-peer between the client PCs and without the use of an Access Point. All PCs communicating in an Ad-Hoc should use the same SSID (whatever your choice is).

SSID: The SSID is a group name used by users of a common wireless network. Only those devices using the same SSID are able to access each other. Also, you must use the same SSID as the Access Point you want to connect with.

If you do not know the SSID of the devices you want to connect with or want to know the SSIDs of any wireless LAN devices operating in the vicinity, click on [Browse] and the following [Site Survey] screen will appear. Click on [Refresh] to update the list of available SSIDs in the vicinity.
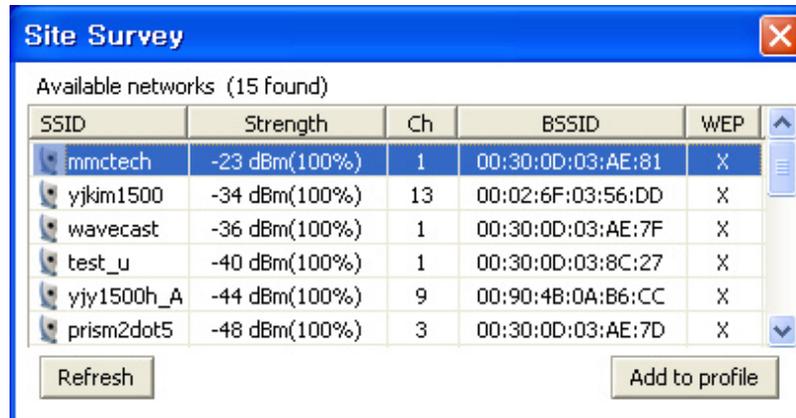
[Refresh] will scan the vicinity of a certain amount of time and display the scan results.

The site survey list will present you with information containing each device's SSID, signal strength, signal channel, BSSID (MAC address), data rate, and WEP status (on or off).

Click on a SSID in the site survey list and click on [Add to profile]. You will then be taken back to the previous [Profile wizard] screen and the selected SSID will be automatically inserted into the SSID input line (in this example: office1) as shown below.

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4. Click on [Next] and the following screen will appear.

Click on [Apply this profile now] to immediately make this profile effective as the current profile and connect to the selected SSID. If you choose to only save the new profile without making it the current profile, do not select this option.

5. Click on [Save] and you will be taken back to the [Profile] page and the new profile automatically added to the "Profile List".
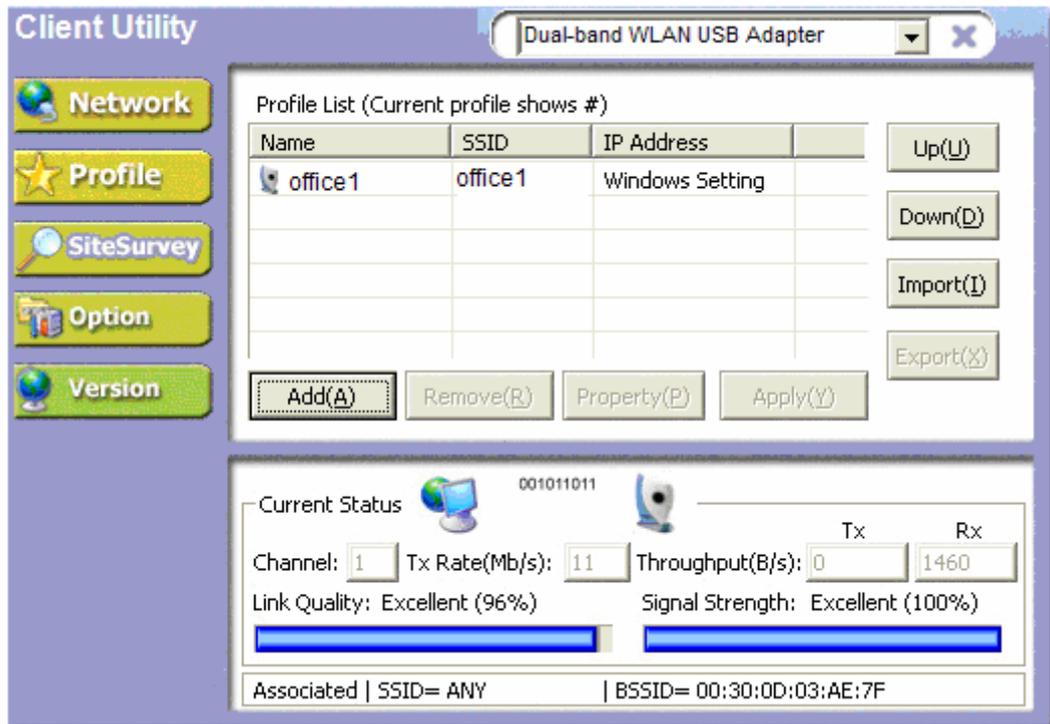
■ **Remove**

To remove a profile from the "Profile List" select it and then click on [Remove].

■ **Apply**

If you want to change the current profile with another profile from the "Profile List", select the desired profile and click on [Apply]. The new profile will immediately become the current profile and you will be connected with its SSID.

■ **Property**

Selecting a profile from the "Profile List" and clicking on [Property] will allow you to check and/or modify the properties of the selected profile. Clicking on [Property] will take you to the following screen. Each page in [Property] is explained below.

General: In this page, you can verify the profile name of the current profile.
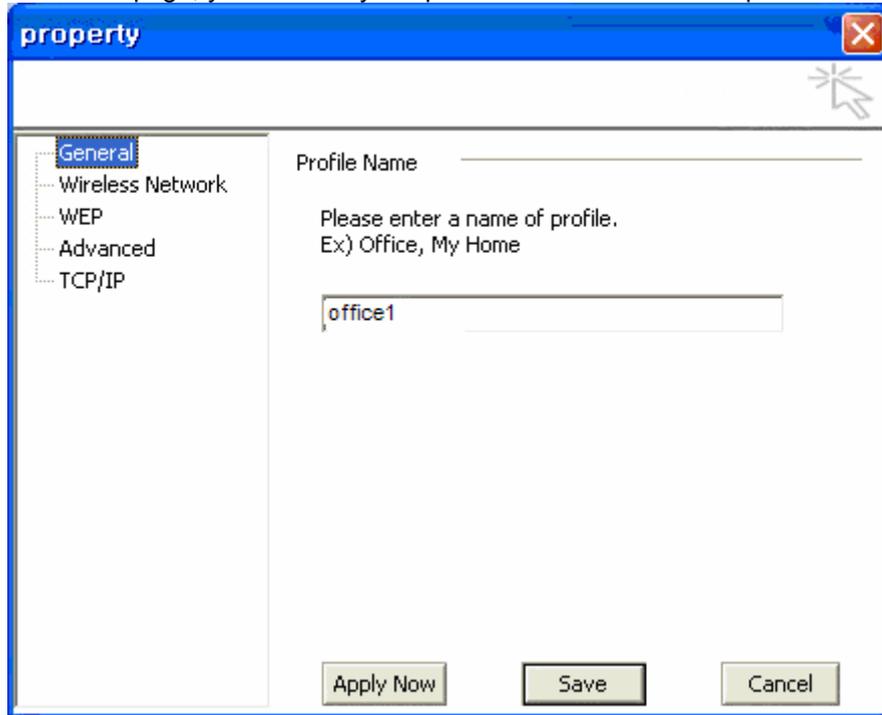
Wireless Network: In this page, you can configure parameters such as Network Mode, SSID, and others.
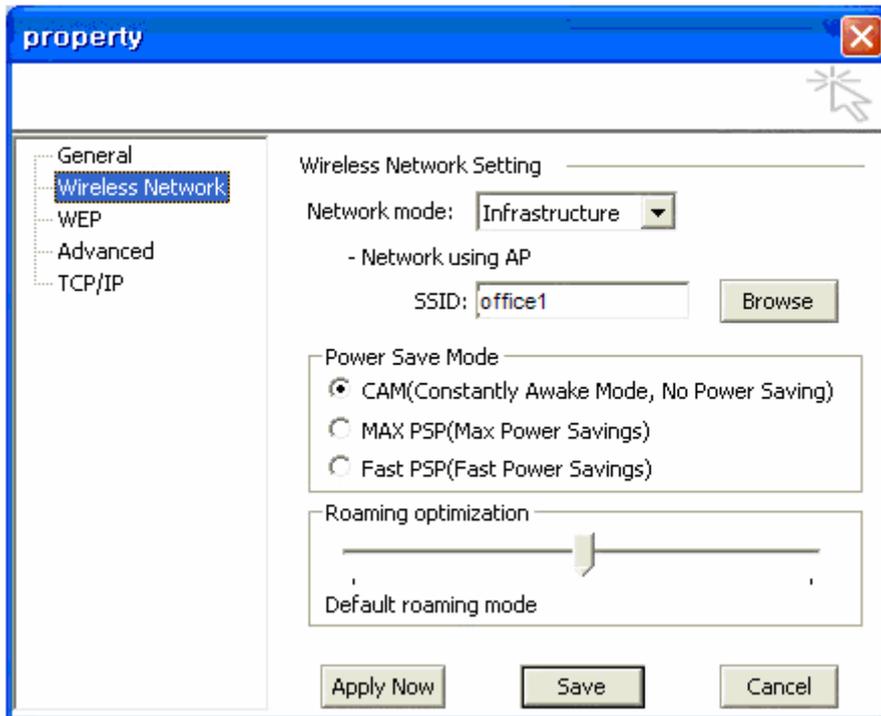
WEP (Wired Equivalent Privacy): In this page, you can modify features of the WEP encryption system such as WEP Key, 64 or 128-bit encryption, etc.
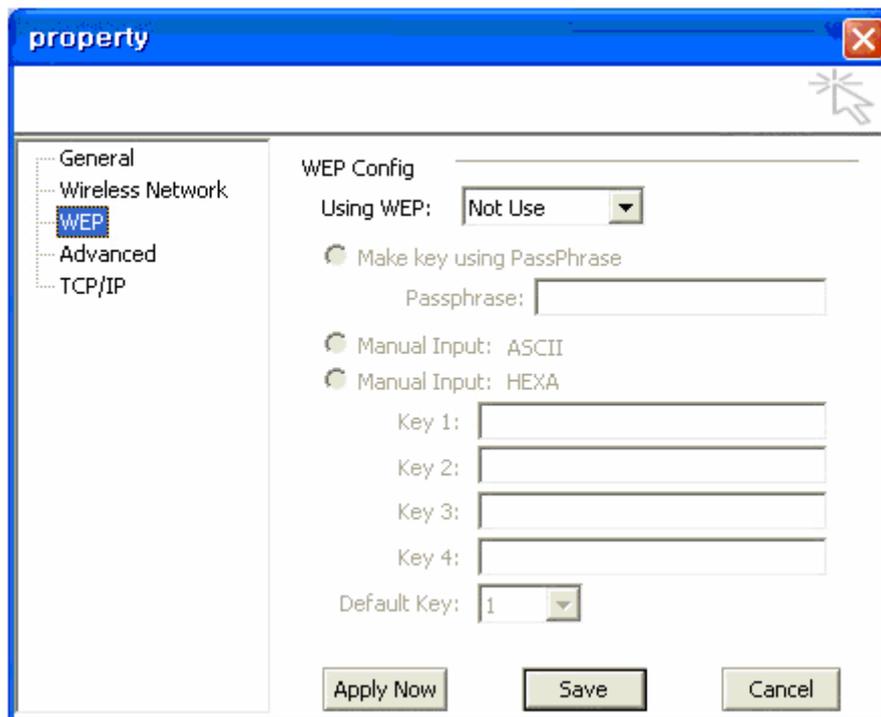
When using WEP encryption (available in 64 or 128-bit), only those APs and PCs using the same WEP Key are allowed to communicate with each other.

There are three ways of generating a WEP Key:

- *Make key using PassPhrase:* a WEP Key is automatically generated as you type in any PassPhrase of your choice.

- *Manual Input (ASCII):* You generate your own WEP Key using ASCII characters (5 characters for 64-bit and 13 characters for 128-bit).

- *Manual Input (Hexadecimal):* You generate your own WEP Key using hexadecimal characters (10 characters for 64-bit and 26 characters for 128-bit).
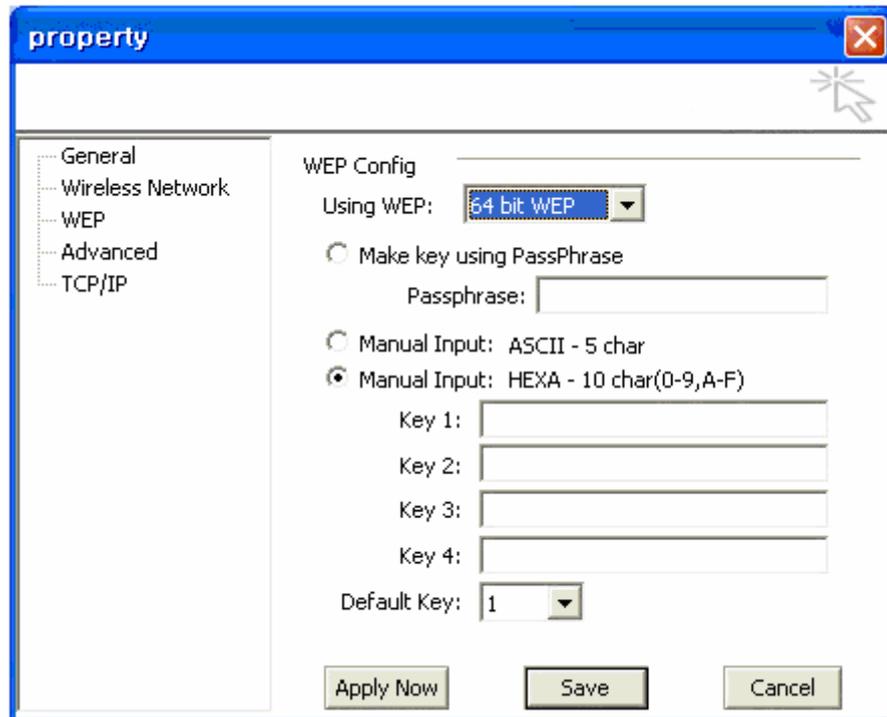
Advanced: In this page, advanced hardware properties can be modified. Unless you are an advanced user and have deep knowledge about each property in this page, it is recommended that you leave them at the default settings.
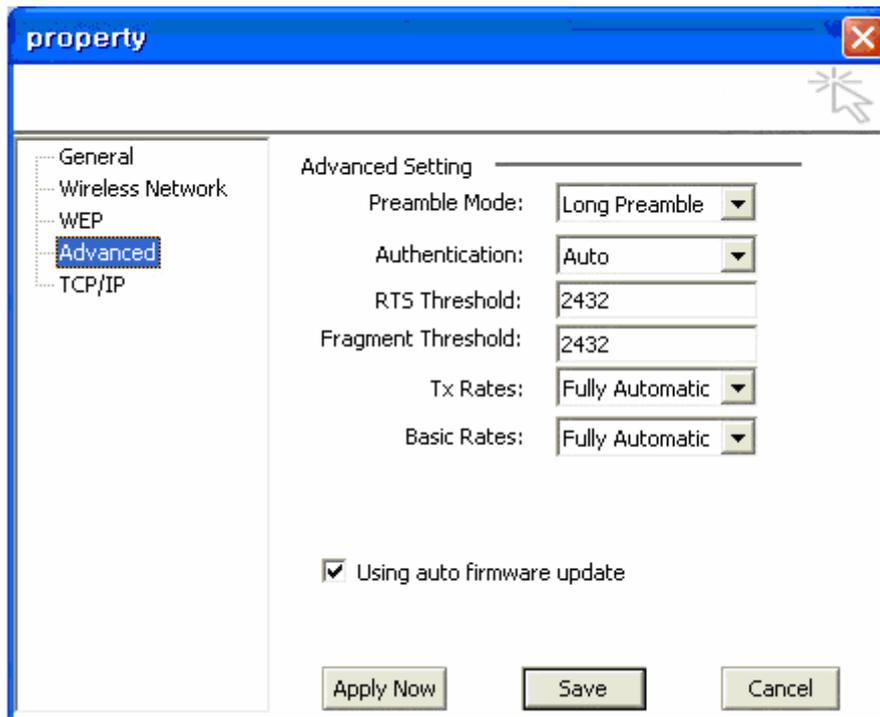
TCP/IP: In this page, you can modify the network's TCP/IP settings of your PC.
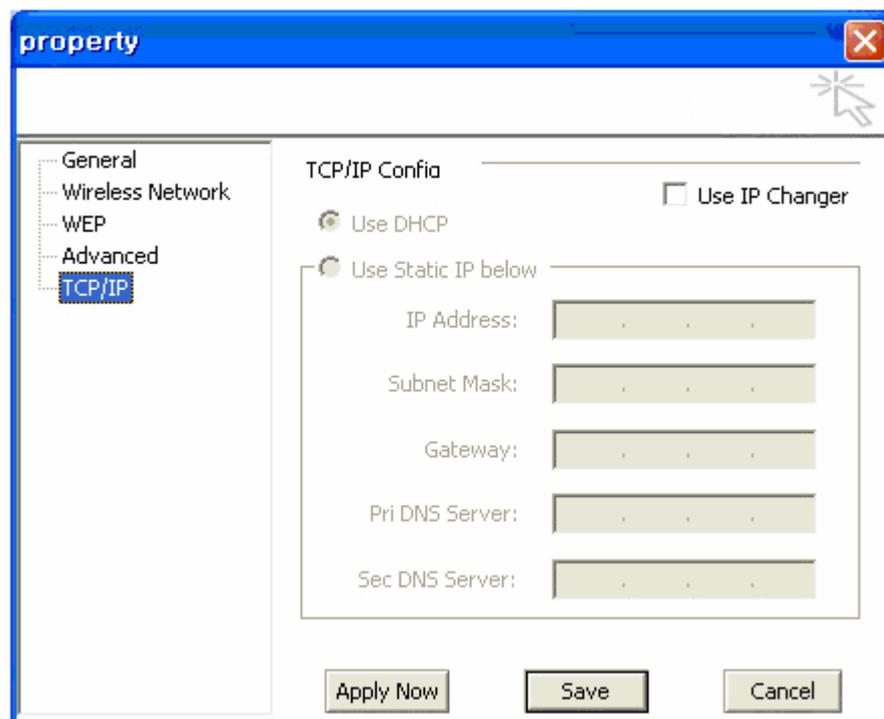
If you want to modify the TCP/IP, select the parameter "Use IP Changer" and the screen below will appear.
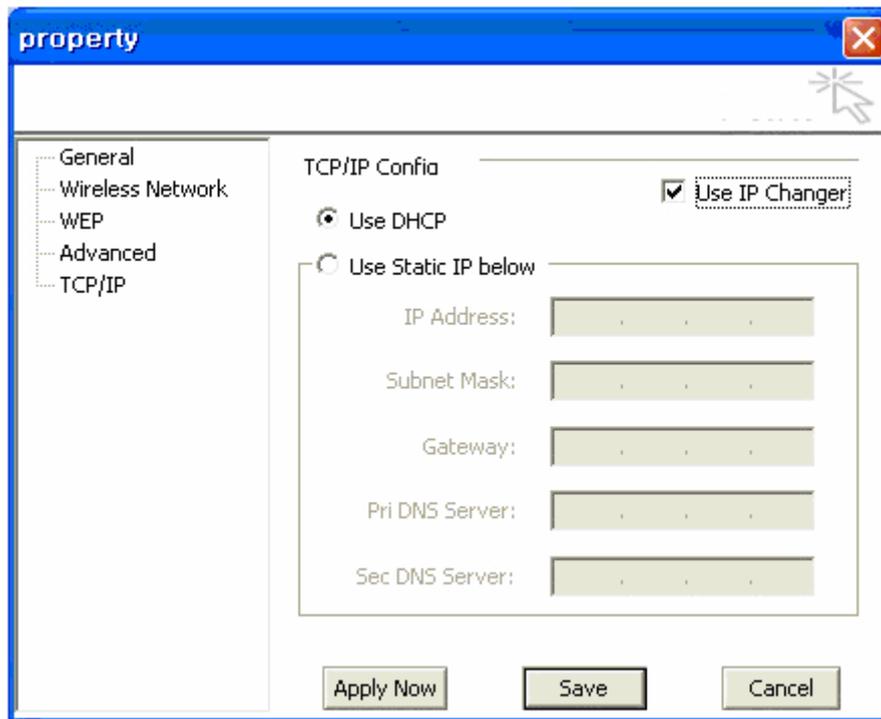
Select "Use DHCP" if a dynamic IP is automatically assigned to you each time you connect to the network.

Select "Use Static IP below" and type in the TCP/IP information if you are assigned a fixed IP address. Configuring the TCP/IP settings in this page will have the same effect as modifying the TCP/IP settings with Windows' Control Panel except the changes will immediately become effective without rebooting the PC. Consult your network manager to obtain the correct TCP/IP information.

[Site Survey]

This page shows a list of SSIDs in your vicinity. Information regarding each SSID is also shown: SSID, signal strength, signal channel, BSSID (MAC address), data rate, and WEP status (on or off).

[Refresh] will scan the vicinity of a certain amount of time and display the scan results.

[Strong Scan] will continuously scan the vicinity every 2.5 seconds until you click on [Stop], which appears in place of [Strong Scan] when scanning.
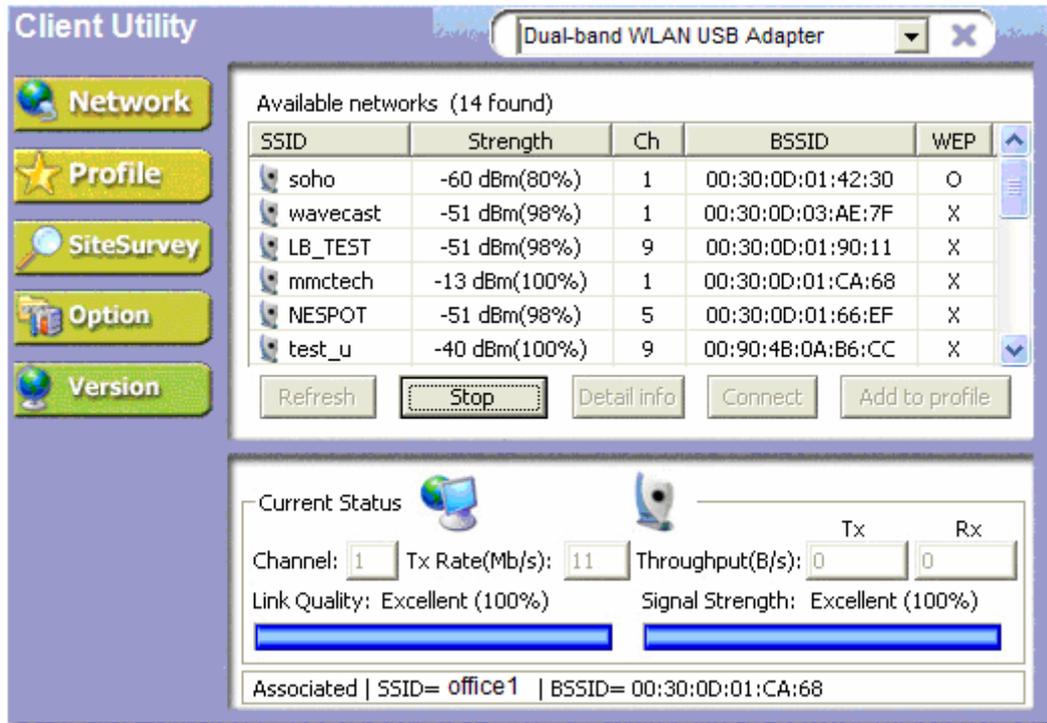
Selecting a network from the [Available Networks] list will enable the [Detail Info], [Connect] and [Add to profile] buttons.

[Detail info] will display the following screen showing the selected device's configuration information. An alternative to clicking on [Detail info] is double-clicking on the SSID of choice.
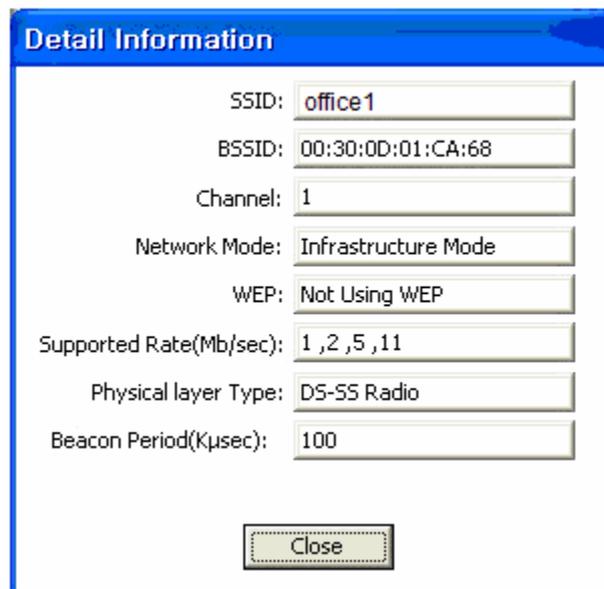
[Connect] will immediately connect you with the selected network.

[Add to profile] will have the same effect as clicking on [Add] in the [Profile] page (steps 4.8~4.12).

[Option]

In this page you can configure various parameters as shown below:

[Launch at windows startup] : Selecting this option will automatically start the Client Utility program whenever you start Windows.

[Language] : You have the option to select the interface's language between English and Korean.
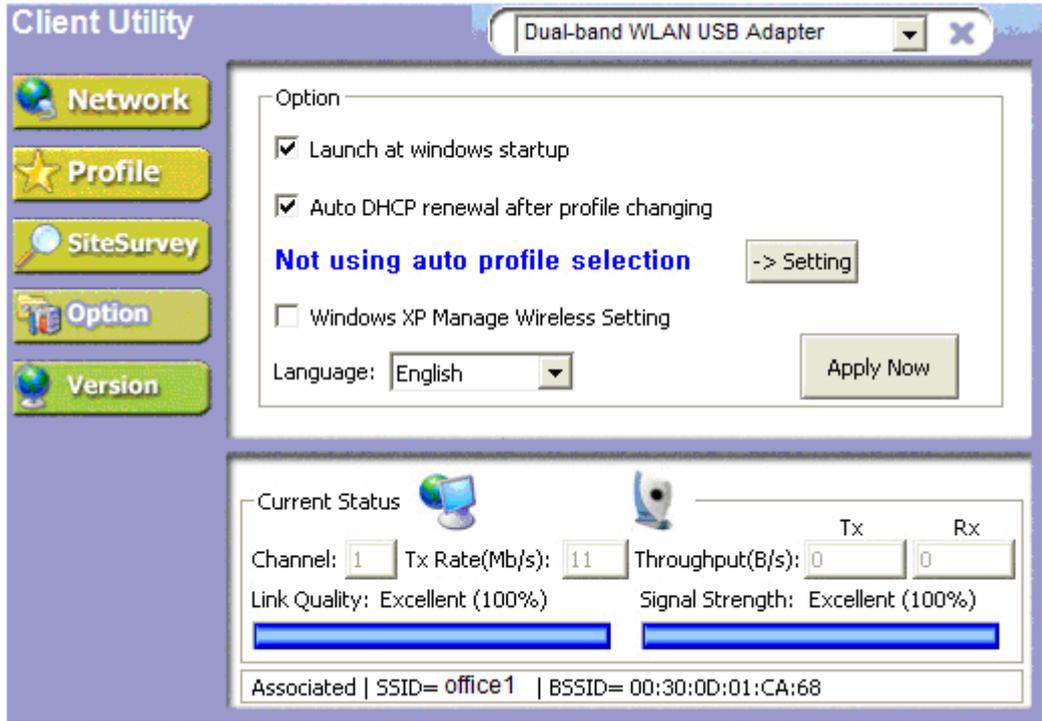
After finishing your parameter settings, click on the [Apply Now] button to immediately apply them.

[Version]

Software and Hardware information of the current client device being used by your PC are displayed in this page.