Integrated Baseband and MAC Solution
IEEE 802.11b WLAN

IPN2120 Configuration Utility User Guide

Documentation Number: TS-02-04-2200R2-UGD

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Introduction

The Wireless LAN Configuration Utility is a powerful application that helps you to configure INPROCOMM WLAN card and monitor the statistics of the communication status. Unlike the standard method of configuring the card via the operating system utilities, this application permits the dynamic modification of the configuration parameters while the card is operating. It also offers more configuration options.

INPROCOMM offers the Wireless LAN Configuration Utility for Windows 98SE/Me/2000/XP.

Evaluation Board (Cardbus and MiniPCI)
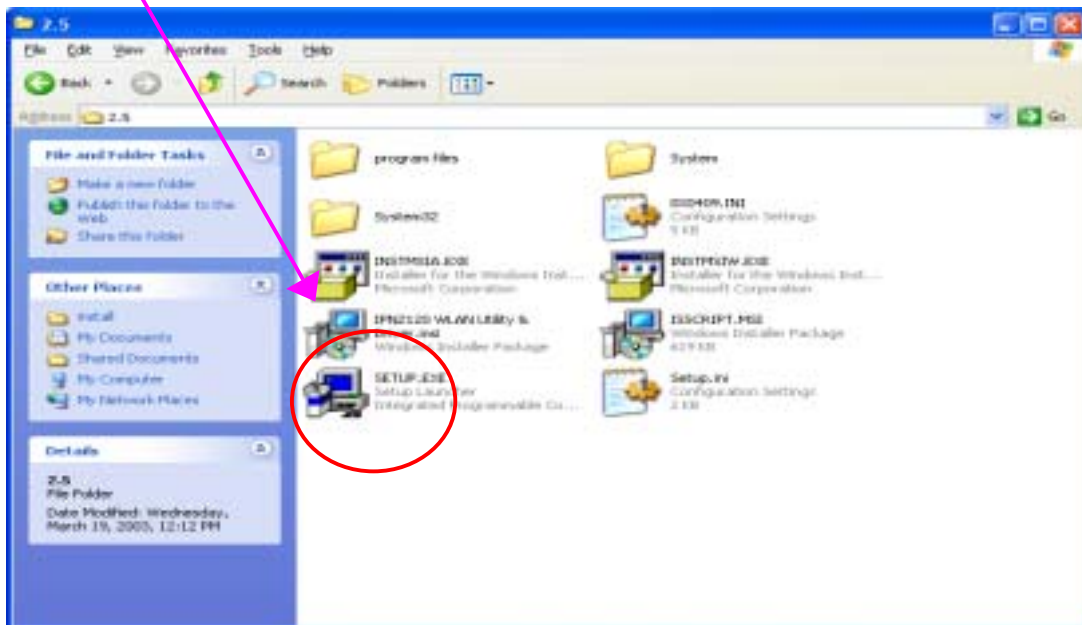

CardBus

MiniPCI

1. Read this First

If your hardware came with an installation CD or floppy disk, choose
"**Install the software automatically (Recommended)**" and press **cancel**.

1.1 How to Install IPN2120 WLAN Utility & Driver in Windows XP environment

1.1.1 Double click the **"setup"** located in "\Wireless LAN Configuration Utility\"

1.1.2 The program will automatically proceed with installing

1.1.3 Press **"Next"** to continue

1.1.4 Review "The License Agreement" then press **"Next"**
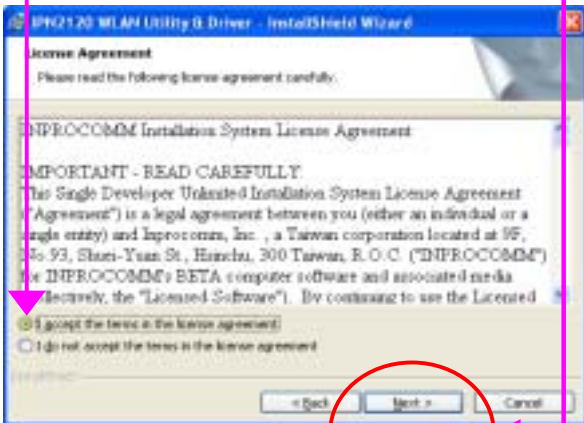
1.1.5 Press **"Install"** to continue the install program

1.1.6 Please wait for the installing

![INPROCOMM]

1.1.7 Press "**finish**" to complete the installation.

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1.2 How to Install IPN2120 WLAN Utility & Driver in Windows 2000 environment
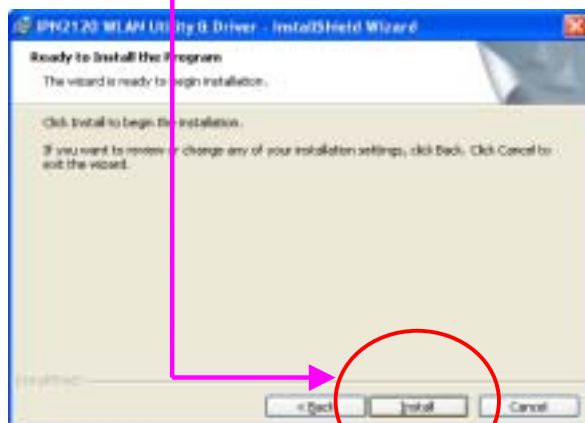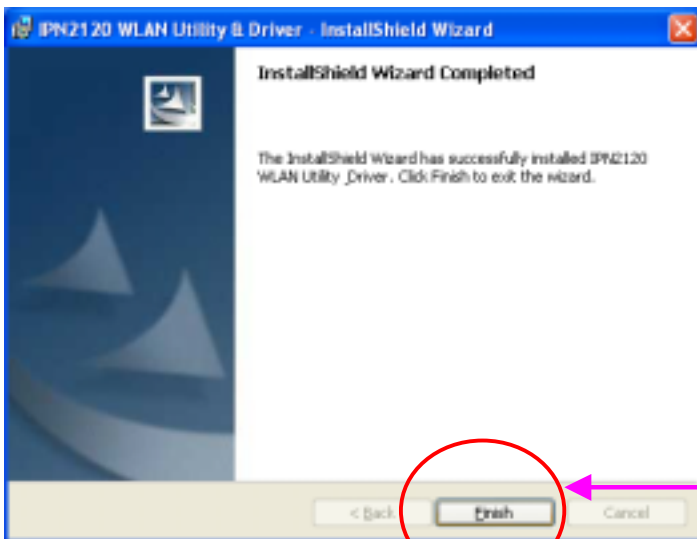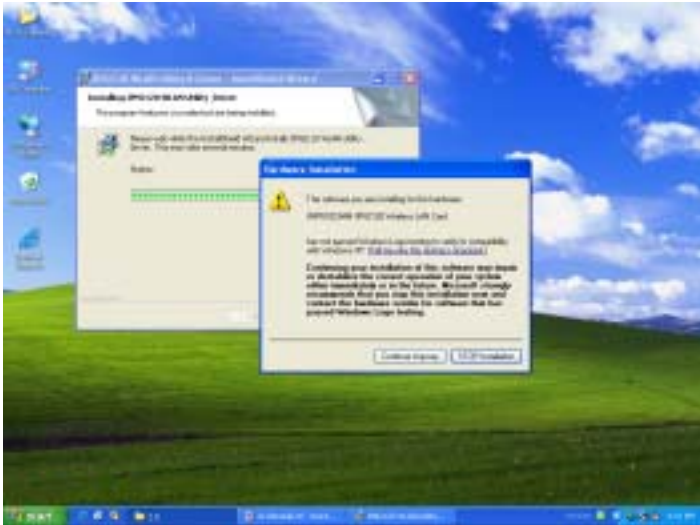
1.2.1 Detecting for a new hardware, press "**finish"** to run automatically installation
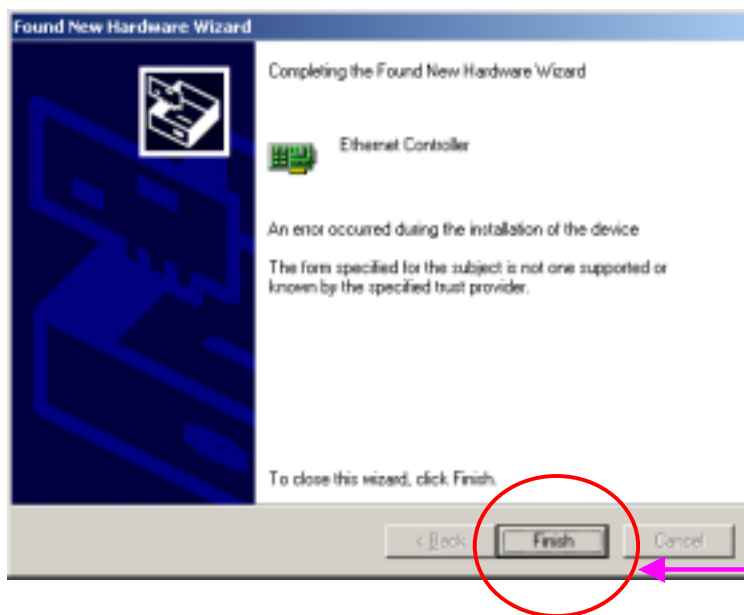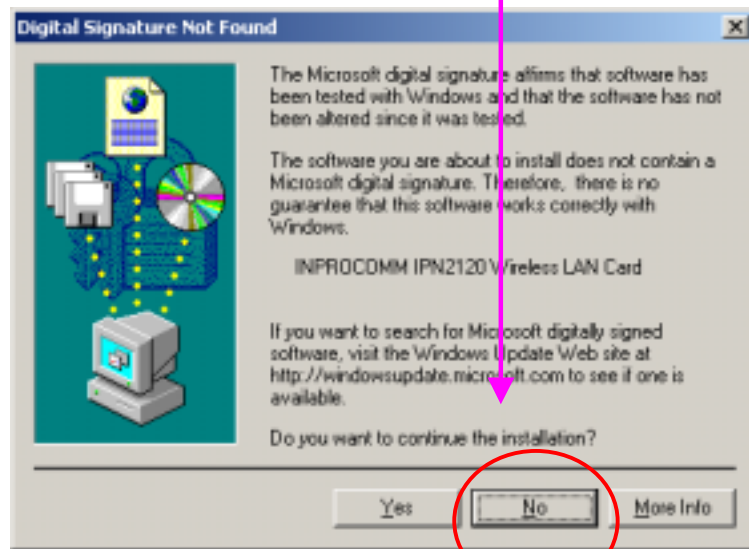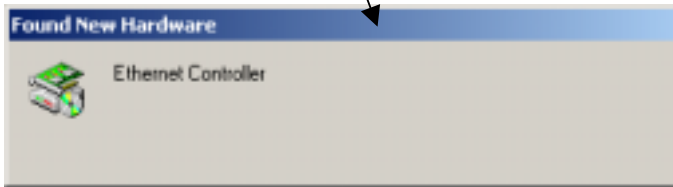
Found New Hardware

Ethernet Controller

Digital Signature Not Found

The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested.

The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.

INPROCOMM IPN2120 Wireless LAN Card

If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available.

Do you want to continue the installation?

Yes   No   More Info

Found New Hardware Wizard

Completing the Found New Hardware Wizard

Ethernet Controller

An error occurred during the installation of the device

The form specified for the subject is not one supported or known by the specified trust provider.

To close this wizard, click Finish.

< Back   Finish   Cancel

1.2.2 Double click the **"setup"** located in "\Wireless LAN Configuration Utility\"
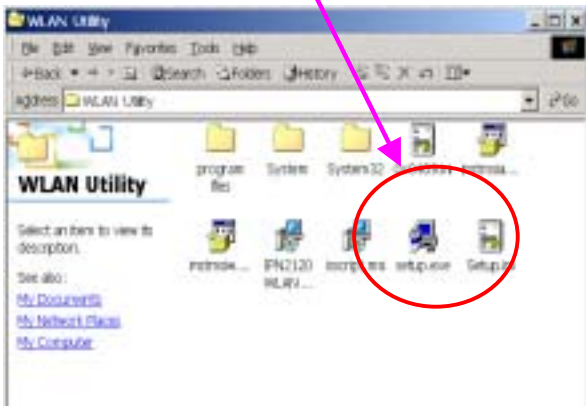
1.2.3 Install Shield is installing the program.

1.2.4 Press **"Next"** to continue

1.2.6 Press **"Install"** to continue the install program

1.2.5 Review "The License Agreement" then press **"Next"**

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1.2.7 Press **"finish"** to complete the installation

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1.3 How to Install IPN2120 WLAN Utility & Driver in Windows 98SE/ME environment

1.3.1 Press cancel to run an automatic installation
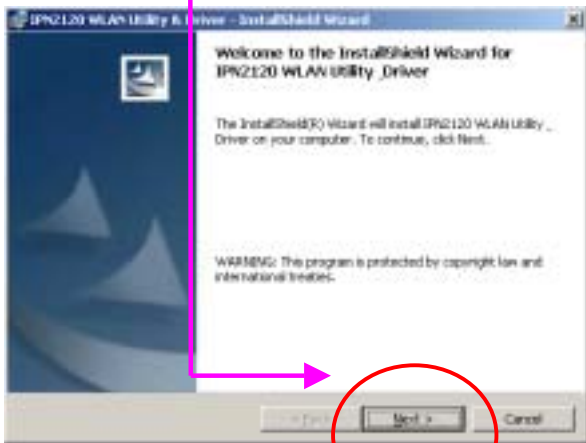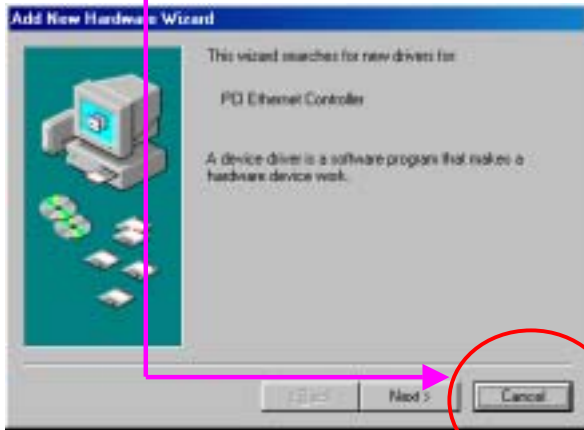

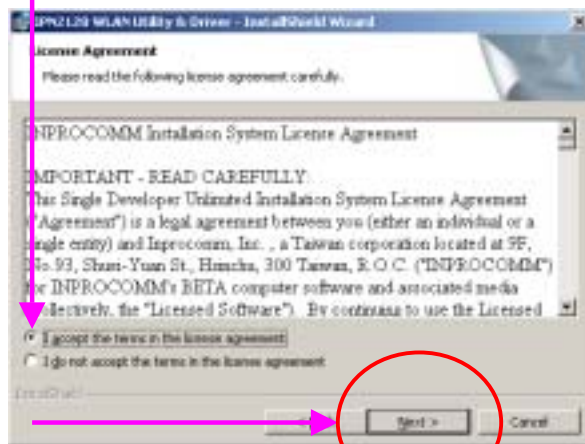1.3.2 Double click the **"setup"** located in "\Wireless LAN Configuration Utility\"
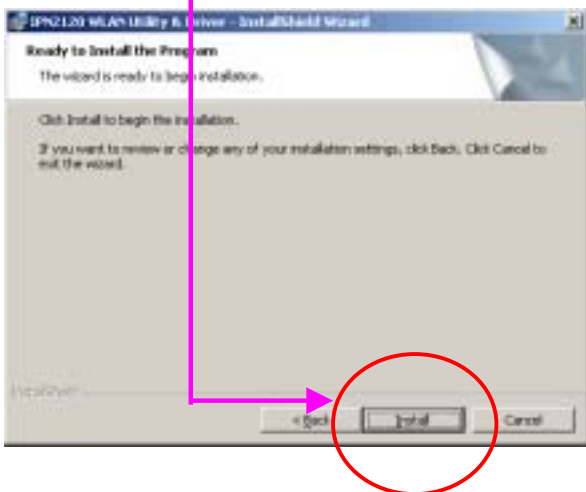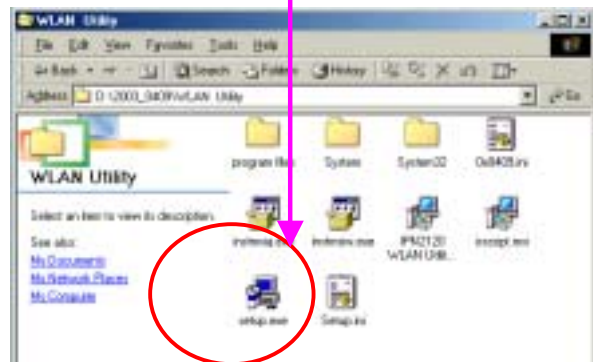

1.3.3 Install shield is installing the program
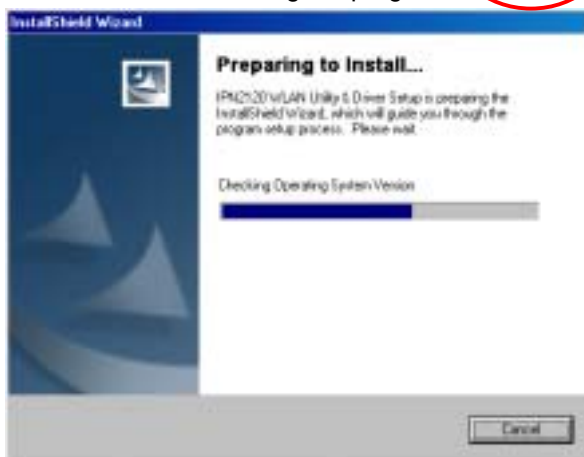
1.3.4 Press **"Next"** to continue

1.3.5 Review "The License Agreement" then press **"Next"**
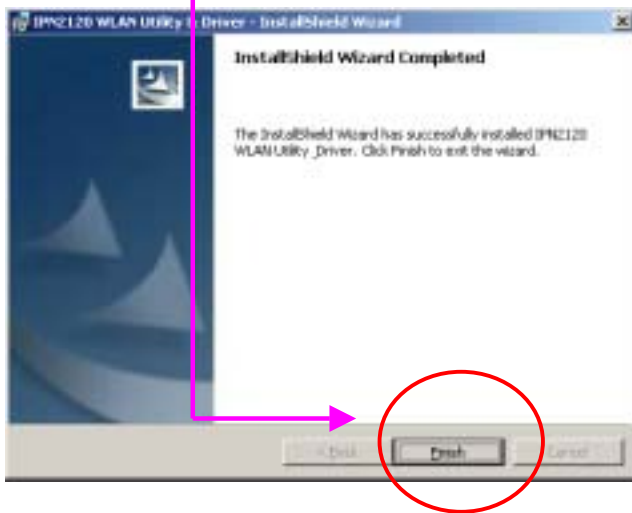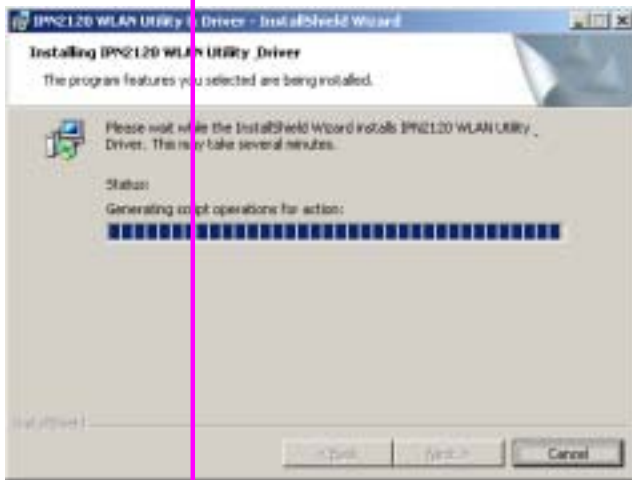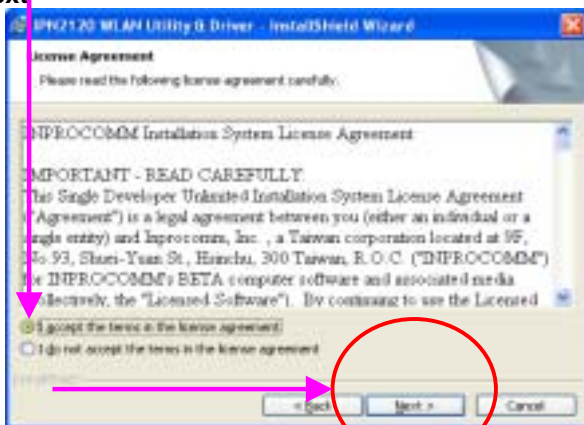
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1.3.6 Press **"Install"** to continue the install program
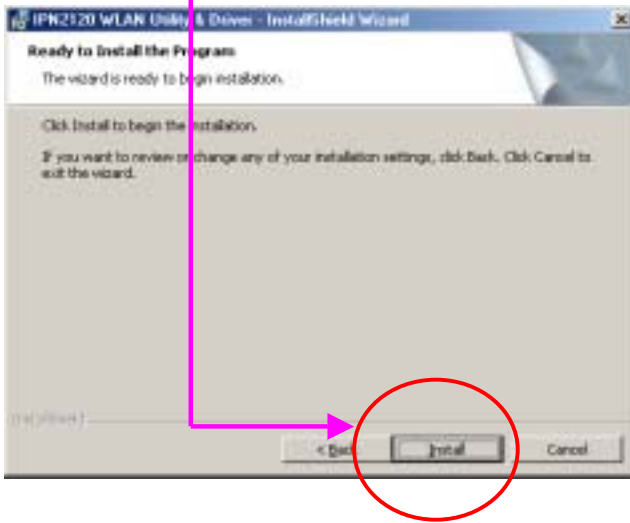
1.3.7 Press **"finish"** to complete the installation
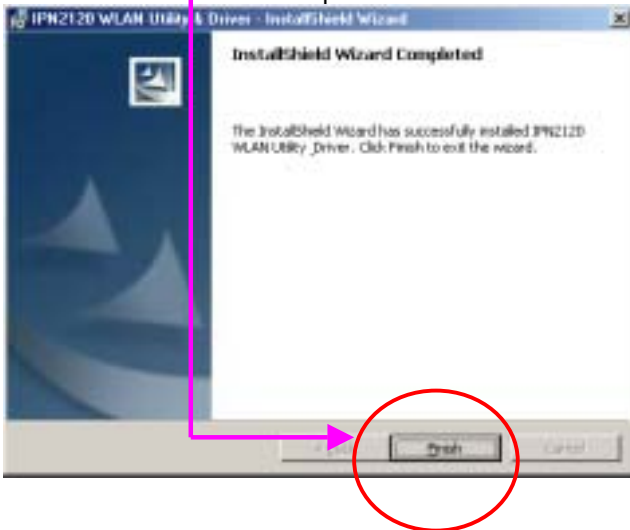
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1.4 Using the Wireless LAN Configuration Utility

The Wireless LAN Configuration Utility appears as an icon on the system tray of Windows while the card is running. You can open it by clicking on the icon.
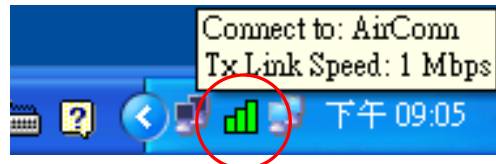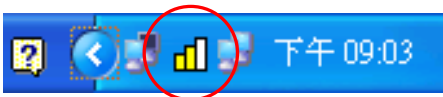
The icon is appeared as bar diagram with different color and level for representing different connection status. While the station is not associated with other STA/AP, the icon will appear as an empty (blank) bar diagram. Once it is associated, it will appear as different color for different level of signal strength (RSSI). There are 3 levels of icons to represent the signal strength, the green one (signal strength from 100%-50%), the yellow one (50%-25%), and the red one (below 25%).

The Wireless LAN Configuration Utility is a highly integrated application include the following main options (tabs),

- ▪ *Status*
- ▪ *Site Survey*
- ▪ *Statistics*
- ▪ *About*
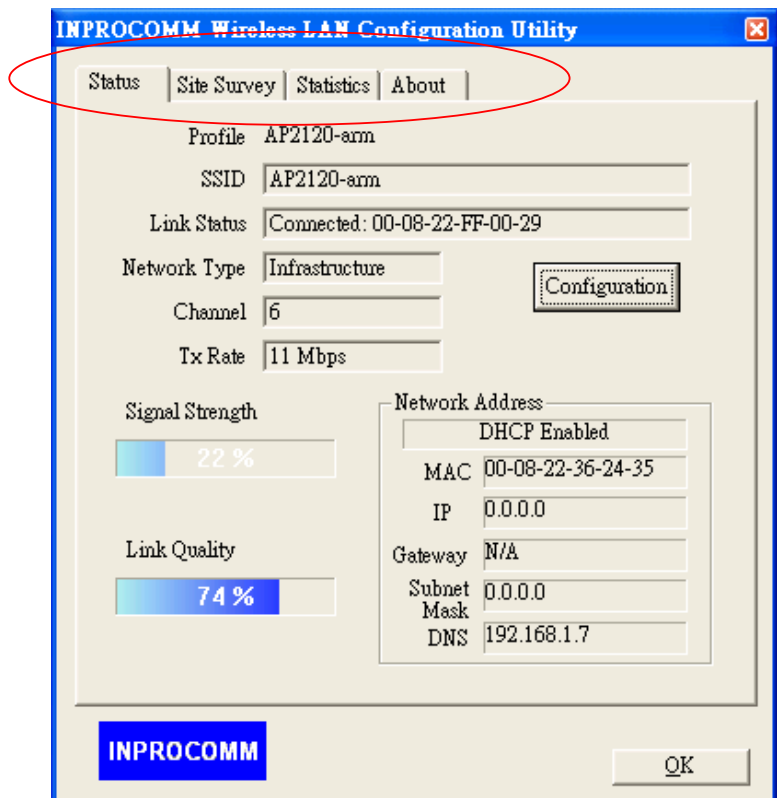
![INPROCOMM logo]

Status

A typical screen of the application in Infrastructure mode is shown in Figure 1-1. The configuration parameters are shown at the top of the screen.

In order to change the configuration parameters press the "Configuration" button, then it will pop-up a dialog for you to input your settings. (Figuration 1-3, 1-4, 1-5)

1. Profile Name
2. SSID
3. Link Status
4. Network Type
5. Channel
6. Tx Rate
7. Signal strength, link quality
8. Network Address
9. Link Quality

Network Address section shows the current Network status such as the MAC address, DHCP (Enable or not), IP address, Subnet Mask address, Gateway Address and DNS server address that you can easily monitor these settings without the "IPCONFIG" provided by Windows.

Figure 1-1. The screenshot of the Wireless LAN Configuration Utility in infrastructure mode.

![INPROCOMM logo]

Site Survey

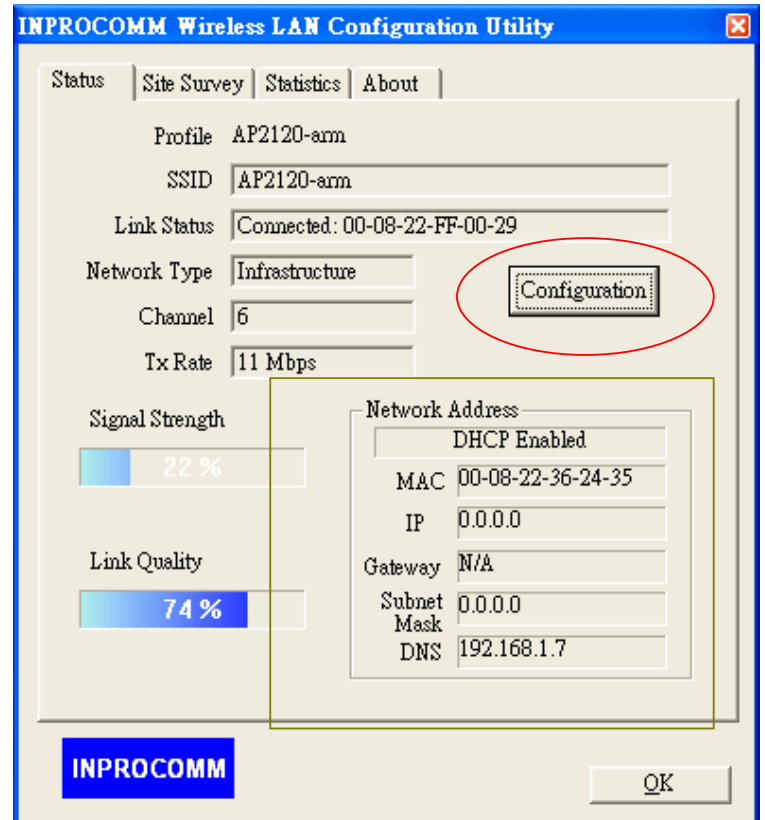By choosing the **Site Survey** option, you can scan all the channels to find all the access points/stations within the accessible range of your card. As shown in Figure 1-2, the list of the "Available Networks" includes the information about the BSSID, SSID, Mode (Network Type), Channel, WEP (On/Off), signal strength and Supports Rate. You may press the **"Rescan"** button dynamically in order to update this list and double-clicking at the one on the list once you want to associate with it. It will show the configuration property sheet (Figuration 1-3, 1-4, 1-5) and then you can press "APPLY" after complete all the settings. After this, it will switch back to the **Status** page and update the current established status.

Profiles section: INPROCOMM Wireless LAN Configuration Utility provides the easy to use profile function. It shows all the profiles **(Up to 32 sets)** with its configurations currently stored in the program, which includes Profile Name, Network Type, SSID, Desired Rate and Encryption Key and other advanced settings. User may ADD, REMOVE, EDIT anyone of it with the buttons next to the window.
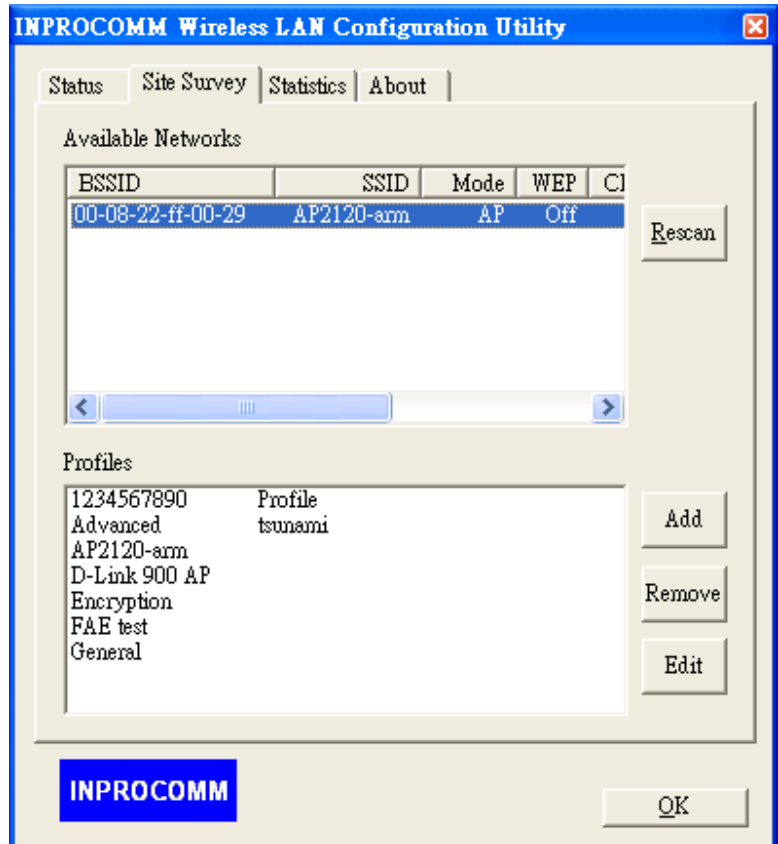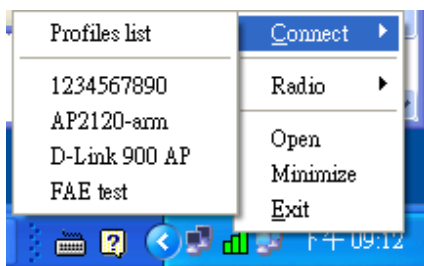

***Figure 1-2.** Site Survey page*

Users can apply the profile by double-clicking the item in the list or clicking on the one in the Profiles List of the icon in system tray.

![INPROCOMM]

There's 3 property pages in the **Configuration** property sheet, which includes *General*, *Encryption*, and *Advanced*
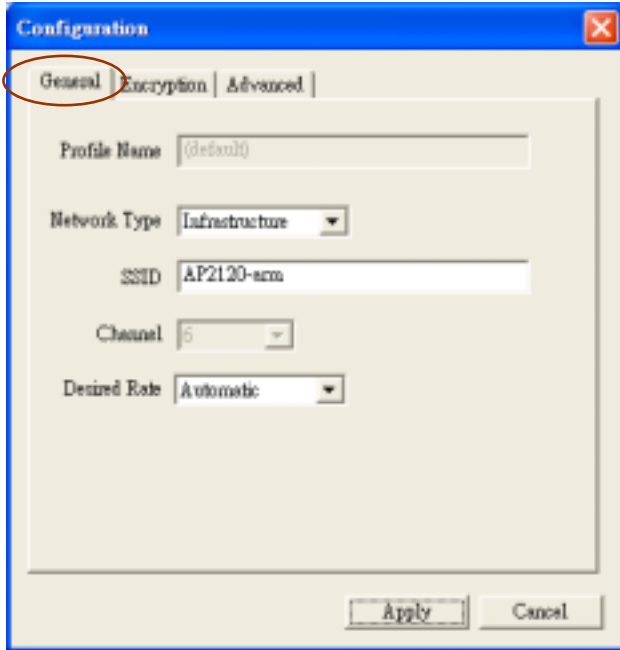

Figure 1-3. General Settings

Encryption

By choosing this option, you can set the card with its encryption mode to NONE or WEP, the authentication mode to **Open system or Shared key or Auto Switch.**

Figure 1-5. Advanced Settings

General

In this page, user can configure the station card with its Network type (Infrastructure/Ad hoc), SSID (up to 32 characters), channel (only in Ad hoc mode, and its range is according to the regulatory domain setting in the EEPROM), and the Desire Tx Rate (Automatic/ 1 Mbps/1 Mbps/ 2 Mbps/ 5.5 Mbps/ 11 Mbps)
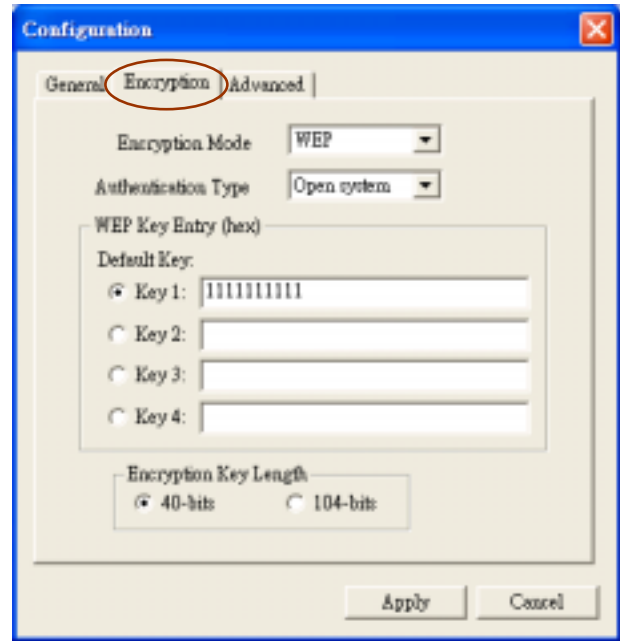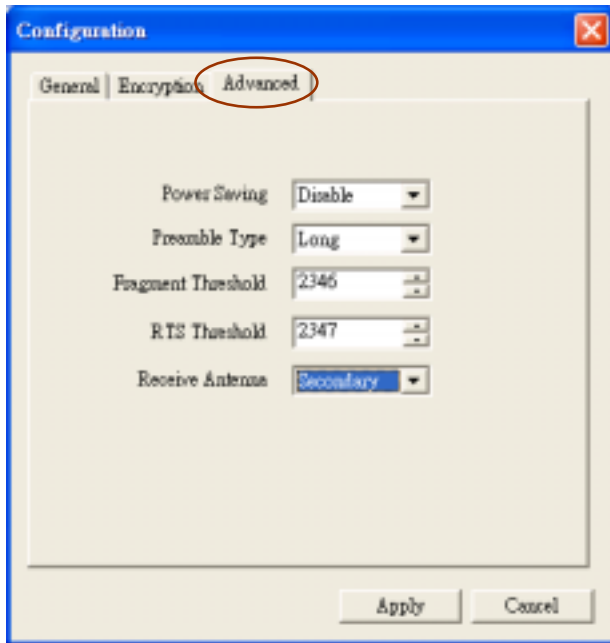

Figure 1-4. Encryption Settings

When set as WEP enabled, you have to set/complete the WEP key materials key material length and specify which one of them as the default key (1 to 4) correctly, which means 4 different keys should be in the same length or empty, and the default key radio button should be set to the set with non-empty key material. If the setting is not complete, the APPLY button will remain to be "gray" and cannot be clicked until user do correct settings of this page.

Advanced

Choosing the **Advanced** option, you can change advanced configuration settings, such as the **Power Saving mode**, **Preamble Type**, **Fragmentation Threshold**, and **RTS Threshold** (See Figure 1-5). Figure 1-5 shows the recommended configuration for the advanced settings. Before selecting Short Preamble, make sure that the other stations and APs are also supporting this feature.

![INPROCOMM]

Statistics

This option enables you to view the available statistic information with its Tx counts (Tx success, Tx error), Tx Throughput, and its Rx counts (Rx success, Rx error), Rx Throughput. You may reset the counters by pressing its RESET button.
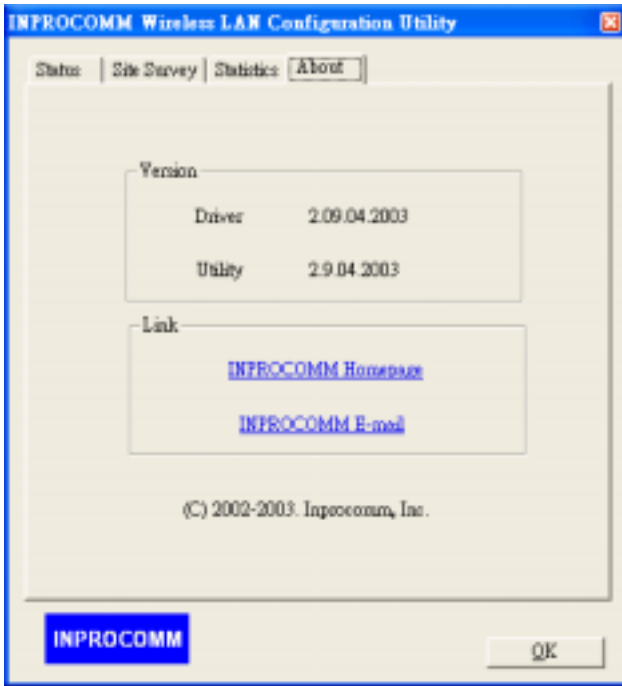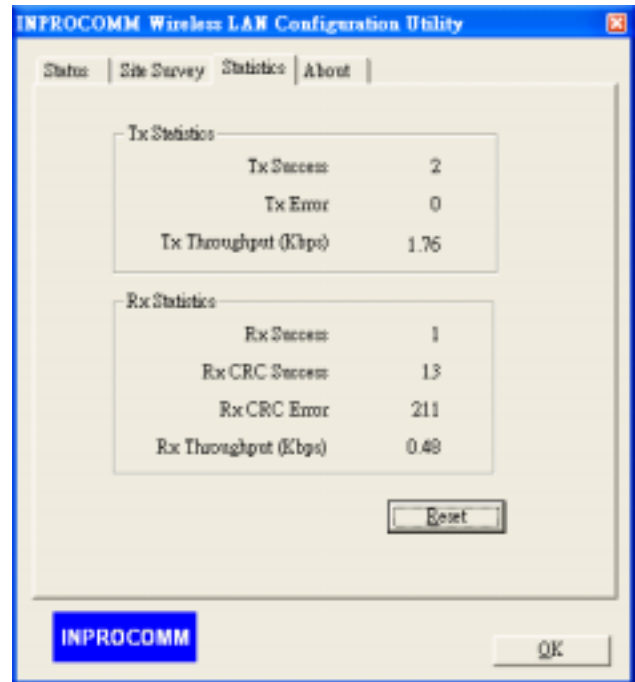

Figure 1-7. About information

Figure 1-6. Statistics page

About

By choosing this option, you can view basic information about the Utility such as the Driver and Utility Version. And you can click the hyperlink to connect the website for technical support.

About INPROCOMM

INPROCOMM, a Taiwan-based company incorporated in Taiwan with their design center located in Hsinchu, Taiwan. INPROCOMM, using its novel baseband architectures and algorithms, designs products for 802.11 and 802.15 standards. Its key founders and stakeholders have worked for numerous major US companies for many years. The company has expertise in the areas of Algorithms and DSP development, Digital & Analog IC design, Networking, System Hardware, as well as Firmware and Software.

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