

# **802.11b Wireless USB Adapter**

## **Quick Installation Guide**

# REGULATORY STATEMENTS

## FCC Part15, Class B Statement

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interface, and
- 2) This device must accept any interface received, including interface 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 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 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 distance between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

## CAUTION:

- 1) To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.
- 2) This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

## HARDWARE INSTALLATION

1. Plug the square end (**Type B**) of USB cable into the adapter's USB port.
2. Plug the rectangle end (**Type A**) of USB cable into the PC's USB port.

After installing the Wireless USB Adapter, follow below sections to install the adapter's software.

### In Windows 98SE

**For Windows 98SE users:** As you perform the installation, have your system operating CD-ROM at hand. You may be asked to insert the OS CD-ROM for the system to download a specific driver.

1. In **Add New Hardware Wizard**, click **Next**.
2. Select **Search for the best driver for your device (Recommended)**. Click **Next**.
3. Insert the device driver CD-ROM into the CD-ROM drive. Select **Specify a location:** and click **Browse** to provide the appropriate path (e.g. **E:\Win9xMe**). Click **Next**.
4. Click **Next**, Windows will copy all the necessary files to your system.
5. Insert **Windows 98SE** CD-ROM, and then click **OK**.
6. Click **Finish** to complete the installation.
7. When Windows prompts you to restart your computer, click **Yes**.

### In Windows ME

1. Select **Specify the location of the driver (Advanced)**, click **Next**.

2. Insert the device driver CD-ROM into the CD-ROM drive. Select **Search for the best driver for your device (Recommended)** and click **Browse** to provide the appropriate path (e.g. **E:\Win9xMe**). Click **Next**.
3. Click **Next**, Windows will copy all the necessary files to your system.
4. Click **Finish** to complete the installation.
5. When Windows prompts you to restart your computer, click **Yes**.

## In Windows 2000

1. In **Found New Hardware Wizard**, click **Next**.
2. In **Install Hardware Device drivers**, select **Search for a suitable driver for my device (recommended)**.
3. Insert the device driver CD-ROM into the CD-ROM drive. Select **Specify a location**.
4. Click **Browse** to provide the appropriate path (e.g. **E:\Win2kXP**). Click **OK**.
5. Click **Next**, Windows will copy all the necessary files to your system.
6. In **Digital Signature Not Found** window, click **Yes** to continue.
7. Click **Finish** to complete the installation.
8. Restart your computer.

## In Windows XP

1. Once the device is well connected to your computer, Windows XP will automatically detect the new device. Select **Install from a list or specific location (Advanced)** and click **Next**.
2. Insert the **Setup Utility CD-ROM** into the CD-ROM drive. Select **Include this location in the search:** and click **Browse** to provide

the appropriate path (e.g. **E:\Win2kXP**). Click **Next**.

3. Click **Continue Anyway** to proceed.
4. Click **Finish** to continue the installation.

## **INSTALL THE UTILITY**

1. Insert the **Setup Utility CD-ROM** into the CD-ROM drive and double click on **Setup.exe** to install the Configuration & Monitor Utility.
2. When the Welcome screen appears, click **Next** to continue.
3. The **Choose Destination Location** screen will show you the default destination chosen by the utility. Click **Next** to continue.
4. In **Select Program Folder**, click **Next** to continue.
5. In **Start Copying Files**, click **Next** to continue.
6. In **Setup Status**, the InstallShield Wizard will begin copying the files.
7. After the Configuration Utility has been successfully installed, select **Yes, I want to restart my computer now**, and then click **Finish** to restart.

# CONFIGURATION

**Note:** For Windows XP users, you have two options to configure the Wireless settings:

## 1) Use **Manufacturer's Configuration and Monitor Utility**

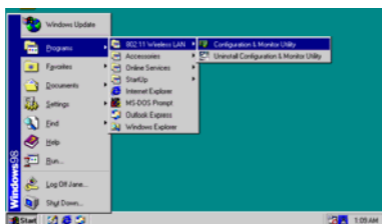
Please go to [Step 4](#) of [Use Windows XP's Wireless Configuration Utility](#) section to disable the Windows XP's wireless configuration.

## 2) Use **Windows XP's Wireless Configuration.**

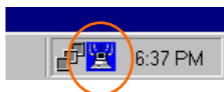
Please go to [Use Windows XP's Wireless Configuration Utility](#) section to use the configuration.

## Use Manufacturer's Configuration and Monitor Utility





After installing the device successfully, go to **Start** → **Programs** → **802.11 Wireless LAN** → **Configuration & Monitor Utility**.



The **Wireless LAN Monitor Utility** icon will appear in the taskbar every time the device is running. You can open it by double-clicking on this icon.

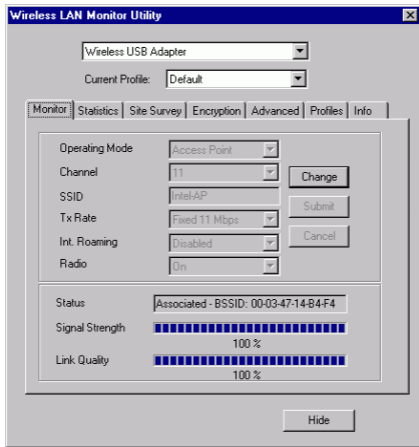


## Icon Status

Mode	Icon	Link Status
Access Point mode		<b>Red.</b> The station is not associated to an Access Point.
		<b>Blue.</b> The station associates itself to an Access Point.
Peer-to-Peer mode		<b>Red.</b> The color is red only when the card is during resetting and initialization procedure.
		<b>Blue.</b> Peer-to-Peer mode is activated.

## Monitor

The **Monitor** tab will display the current status of the Wireless USB Adapter.

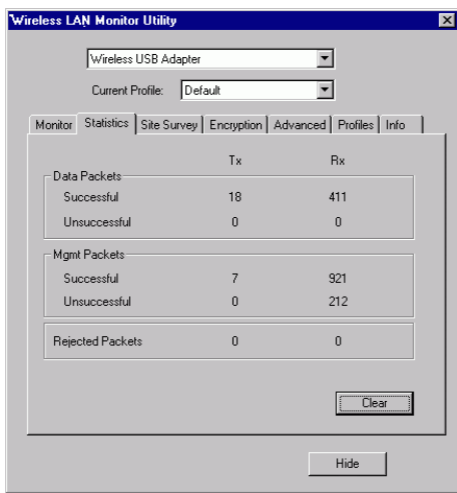


Item	Description
<b>Operating Mode</b>	It displays the current operating mode. ( <b>Access Point</b> or <b>Peer-to -Peer</b> ).
<b>Channel</b>	It shows the selected channel that is currently used. (There are 14 channels available, depends on the country.)
<b>SSID</b>	The <b>SSID</b> is the unique name shared among all points in your wireless network. The name must be identical for all devices and points attempting to connect to the same network.  It shows the current SSID setting of the Wireless USB Adapter.
<b>Tx Rate</b>	It shows the current transfer rate. ( <b>Fixed 1 Mbps, Fixed 2 Mbps, Fixed 5.5 Mbps, Fixed 11Mbps</b> or <b>Auto</b> )
<b>Int. Roaming</b>	It displays the current roaming status. ( <b>Disabled</b> or <b>Enabled</b> )
<b>Radio</b>	It displays the current status of the Radio Module of the Adapter. ( <b>On</b> or <b>Off</b> )
<b>Status</b>	It displays the information about the status of the communication (the BSSID of the Access Point to which the card is associated).
<b>Signal Strength</b>	It displays the signal strength of the connection between the Wireless USB Adapter and the Access Point it connects.
<b>Link Quality</b>	It displays the link quality of the connection between the Wireless USB Adapter and the Access Point it connects.
<b>Change</b>	Click <b>Change</b> to change the configuration parameters such as <b>Operating Mode</b> , <b>SSID</b> and <b>Tx Rate</b> . (In Peer-to-Peer mode, <b>Channel</b> button is enabled; In Access Point mode, <b>Int. Roaming</b> button is enabled).
<b>Submit</b>	Click <b>Submit</b> to save the changes.

Item	Description
<b>Cancel</b>	Click <b>Cancel</b> to ignore the previous setting.
<b>Hide</b>	Click <b>Hide</b> to exit the application.

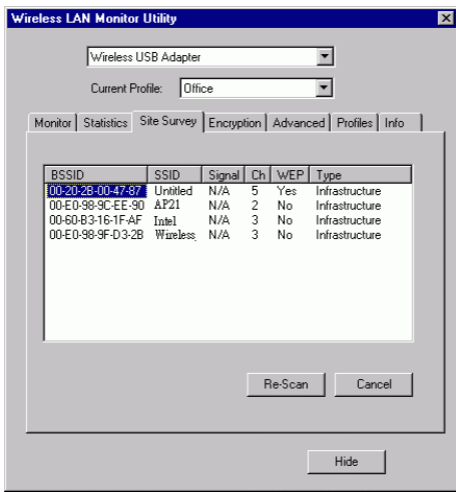
## Statistics

This option shows you to view the available statistic information (**Data packets, Management Packets and Rejected packets**). Press the **Clear** button to renew or update this list of statistics.



## Site Survey

The **Site Survey** tab shows all the available Access Points or Peer-to-Peer types and their features.

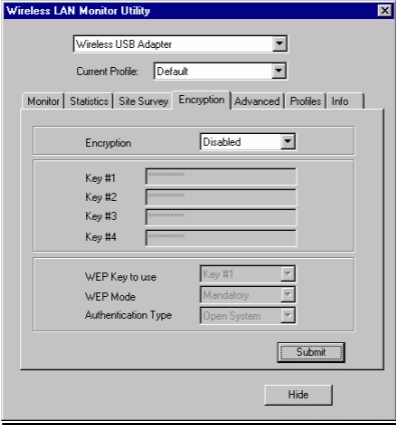


Item	Description
<b>BSSID</b>	A set of wireless stations is referred to as a Basic Service Set (BSS). Computers in a BSS must be configured with the same BSS ID.
<b>SSID</b>	The <b>SSID</b> is the unique name shared among all points in your wireless network.  The name must be identical for all devices and points attempting to connect to the same network.
<b>Signal</b>	It displays the signal strength of the connection between the Wireless USB Adapter and the Access Point it connects.
<b>Ch</b>	It shows the selected channel that is currently used.
<b>WEP</b>	It displays the status of WEP Encryption.

Item	Description
<b>Type</b>	<p>It displays the type of Basic Service Set.</p> <p><b>Access Point:</b> allows the Adapter to communicate with a wired network which employing an Access Point.</p> <p><b>Peer-to-Peer:</b> allows PC-to-PC, station-to-station communication without employing an Access Point.</p>
<b>Re-Scan</b>	Search for all available networks. Clicking on the button, the device will start to rescan and list all available sites.
<b>Cancel</b>	Click <b>Cancel</b> to ignore the previous setting. (Do not press <b>Cancel</b> while <b>Re-Scan</b> is working.)
<b>Hide</b>	Click <b>Hide</b> to exit the application.

## Encryption

**WEP (Wired Equivalent Privacy)** encryption can be used to ensure the security of your wireless network.



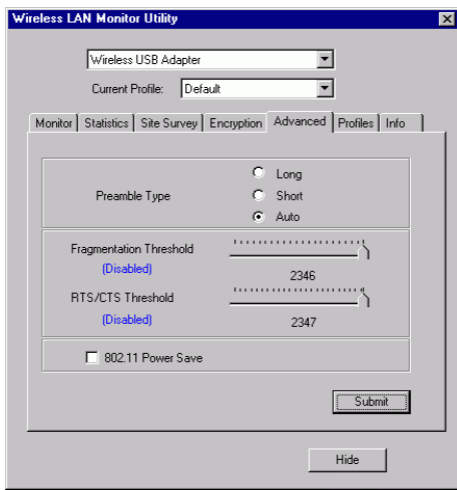
Item	Description
<b>Encryption</b>	<p><b>WEP</b> is a data privacy mechanism based on a 64-bit/128-bit shared key algorithm.</p> <p>Under the drop-down box, you can choose to have WEP encryption <b>Disabled</b>, <b>64 Bit</b>, or <b>128 Bit</b>.</p>
<b>Key #1/Key #2/ Key #3/Key #4</b>	<p>This setting is the configuration key used in accessing the wireless network via WEP encryption. To generate an encryption key:</p> <ol style="list-style-type: none"> <li>1. Select 64 Bit or 128 Bit.</li> <li>2. Click "Key1" or "Key2" or "Key3" or "key4" item, then fill in the appropriate value/phrase.</li> </ol>
<b>Default Key to use</b>	<p>You can specify up to 4 different keys to <i>decrypt</i> wireless data. Select the Default key setting from the pull-down menu.</p>
<b>WEP Mode</b>	<p>Two WEP modes are available as below: <b>Mandatory</b> and <b>Optional</b>.</p> <p><b>Mandatory:</b> WEP Encryption is required to establish connection with other stations within the wireless network.</p> <p><b>Optional:</b> Your station can communicate with other stations within the wireless network regardless if they use WEP or not.</p>
<b>Authentication Type</b>	<p>The authentication type defines configuration options for the sharing of wireless networks to verify identity and access privileges of roaming wireless network cards.</p> <p>You may choose between <b>Open System</b>, <b>Shared Key</b>, and <b>Auto</b>.</p> <p><b>Open System:</b> If the Access Point is using "Open System" authentication, then the wireless adapter will need to be set to the same authentication type.</p>

Item	Description
	<p><b>Shared Key:</b> <b>Shared Key</b> is when both the sender and the recipient share a secret key.</p> <p><b>Auto:</b> Select <b>Auto</b> for the USB adapter to select the Authentication type automatically depending on the Access Point Authentication type.</p>
<b>Submit</b>	Click <b>Submit</b> to save the changes.
<b>Hide</b>	Click <b>Hide</b> to exit the application.

**Note:** You must use the same value/phrase or WEP key settings for all wireless computers in order for the wireless network to function well.

## Advanced

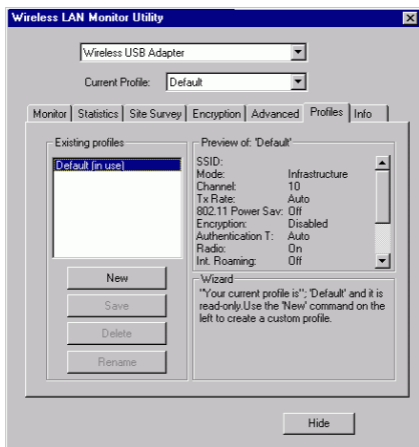
You can change advanced configuration settings, such as the **Preamble Type**, **Fragmentation Threshold** and **RTS/CTS Threshold**.



Item	Description
<p><b>Preamble Type</b></p> <p><input type="radio"/> <b>Long</b></p> <p><input type="radio"/> <b>Short</b></p> <p><input type="radio"/> <b>Auto</b></p>	<p>A preamble is a signal used in wireless environment to synchronize the transmitting timing including Synchronization and Start frame delimiter. (Please check AP's setting first.)</p> <p>If in a "noisy" network environment, the Preamble Type should be set to <b>Long</b>.</p> <p>The <b>Short</b> preamble is intended for applications where minimum overhead and maximum performance is desired. If in a "noisy" network environment, the performance would be decreased.</p> <p>Select <b>Auto</b> for the USB adapter to select the Preamble type automatically depending on the Access Point Preamble type.</p>
<p><b>Fragmentation Threshold</b></p>	<p>To fragment MSDU or MMPDU into small sizes of frames for increasing the reliability of frame (The maximum value of 2346 means no fragmentation is needed) transmission. The performance will be decreased as well, thus a noisy environment is recommended.</p>
<p><b>RTS/CTS Threshold</b></p>	<p>This value should remain at its default setting of <b>2347</b>. Should you encounter inconsistent data flow, only minor modifications of this value are recommended.</p>
<p><b>Power Save</b></p>	<p>Check the box to allow the Adapter to go to sleep mode, during which data communication could be interrupted.</p>
<p><b>Submit</b></p>	<p>Click <b>Submit</b> to save the changes.</p>
<p><b>Hide</b></p>	<p>Click <b>Hide</b> to exit the application.</p>

## Profiles

You can create frequently used setting as a profile. Then, you can select the saved Profile from the pull-down list of the **Current Profile**.



Item	Description
<b>New</b>	Click <b>New</b> to create a new profile.
<b>Create</b>	Click <b>Create</b> to type the name of the new profile.
<b>Cancel</b>	Click <b>Cancel</b> to ignore creating new profile.
<b>Save</b>	Once you have changed the setting of the current profile, click <b>Save</b> to save the changes.
<b>Delete</b>	Click <b>Delete</b> to delete the current profile.
<b>Rename</b>	Click <b>Rename</b> to rename the current profile.
<b>Hide</b>	Click <b>Hide</b> to exit the application.

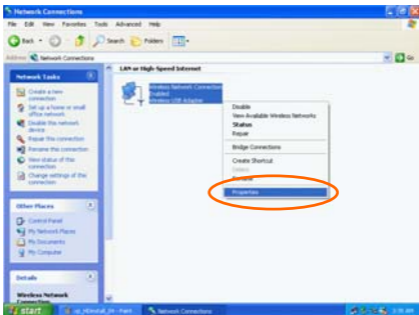
## Info

You can view basic information about the Utility like the **Driver**, **Firmware** and **Application** Version. Use the **Hide** button to exit the application.

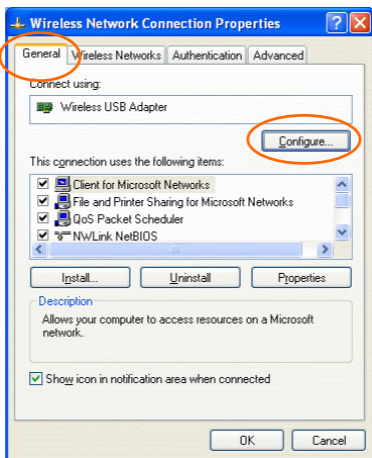


## Use Windows XP's Wireless Configuration Utility

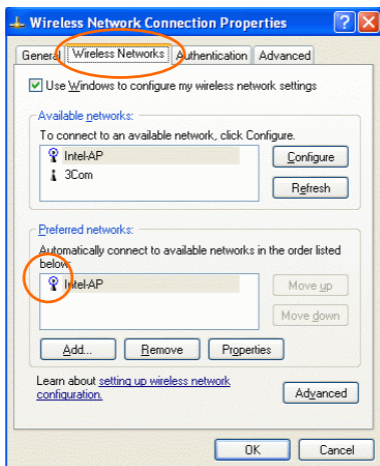
1. Go to **Start** → **Control Panel** → **Network and Internet Connections** → **Network Connections**.
2. In **Network Connections** window, right-click the **Wireless Network Connection Enabled Wireless USB Adapter** icon, and select **Properties**.



3. In **Wireless Network Connection Properties** window, select the **General** tab. Click **Configure** to enable Windows configuration.



4. In **Wireless Network Connection Properties** window, select the **Wireless Networks** tab.



## ❑ Use Windows to configure...

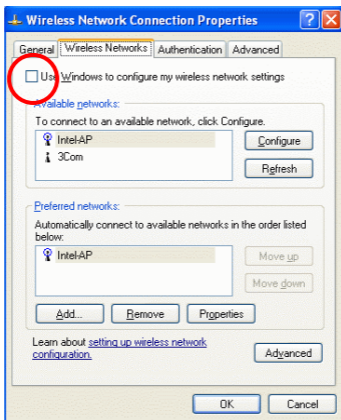
Check the box to enable Windows configuration.

### \* Use Windows to configure

**Note:** Once you enable windows configuration, you can use Windows XP's Wireless Configuration Utility to configure the wireless settings.

### \* Use Manufacturer's Configuration and Monitor Utility

**Note:** If you want to use manufacturer's configuration utility to configure the wireless settings, make sure the check box is **not** enabled then click the Network Status icon in the taskbar. (Please refer to below figure)

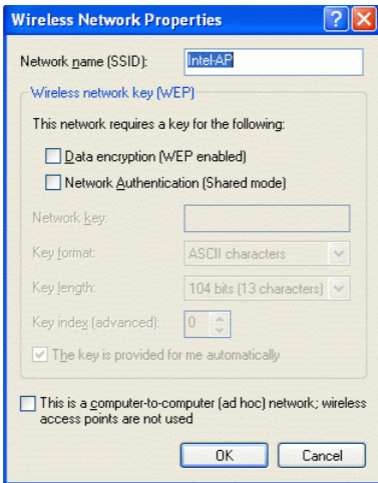


## Available networks

Displays all available networks.

## **Configure**

Click the button to set up a new network or WEP configuration as illustrated as below.



## **Refresh**

Click the button to refresh and search for all available networks.

## **Preferred networks**

From available network(s) listed above, you can select preferred one(s) in an order that you can arrange.

The marked one is the currently used network.

## **Move up**

Move the selected network forward one position.

## **Move down**

Move the selected network back one position

## **Add...**

Click the button and the **Wireless Network Properties** window will appear. In the **Network**

**name** field, enter your desired network name listed in the above **Available networks** box, and click **OK**.

*Note:* The new settings will be active only after you click on **OK** in the **Wireless Network Connection Properties** window.

### **Remove**

Highlight the unwanted network listed in the **Preferred networks** box, and click the button to remove it.

### **Properties**

Highlight the network listed in the above **Preferred networks** box, and click the button to display its properties.

Once network configuration is done, make sure to click **OK**. The new parameters will be saved and active only after doing so.